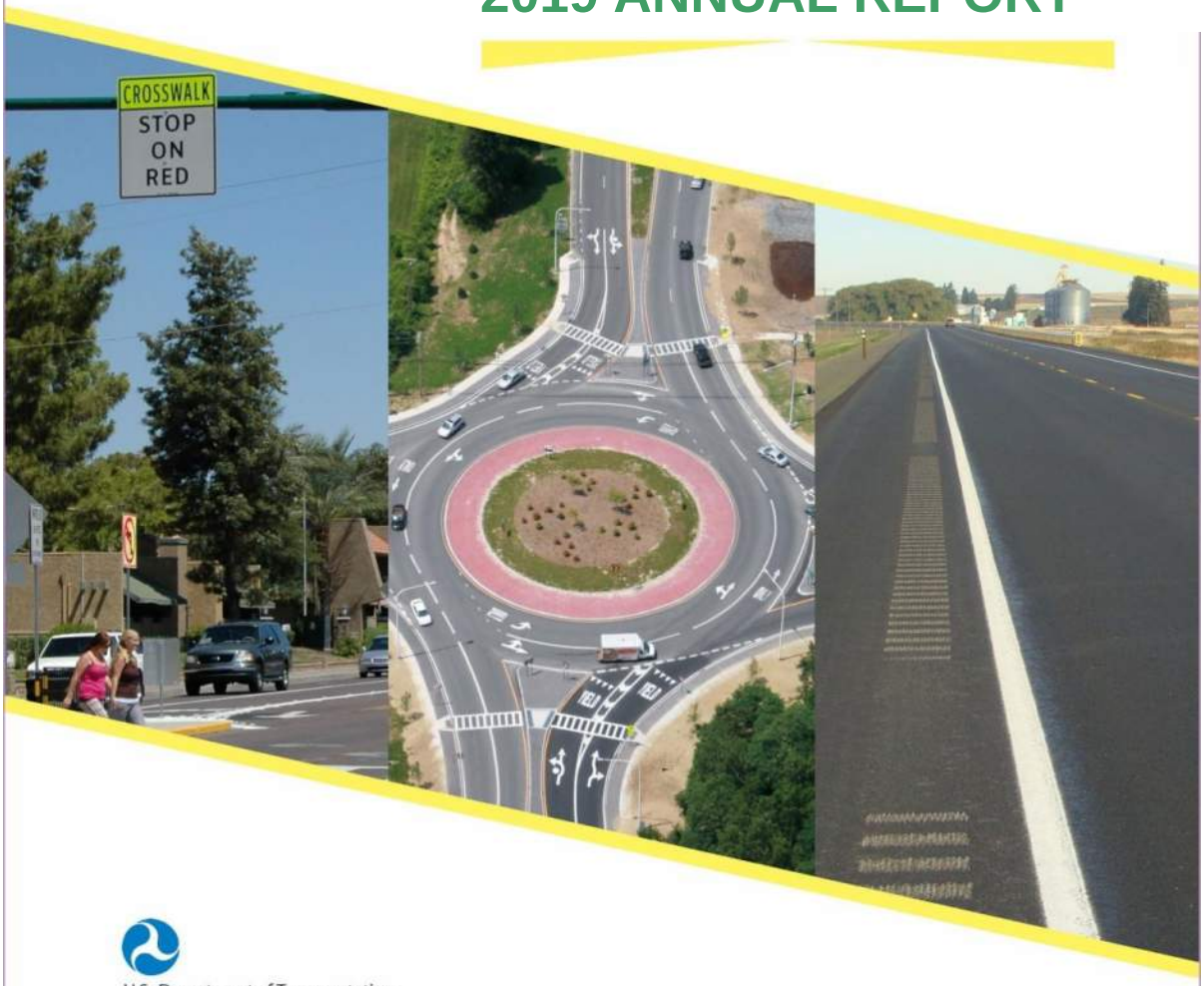
CONNECTICUT

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2019 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

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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. 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 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 2019 is from October 1, 2017 to September 30, 2018. Connecticut's (5 year rolling average) fatalities and fatal crash rates have increased in 2017. Both (5 year rolling average) serious injuries and the serious injury crash rate have seen little change in 2017. 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 implementation plan 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. In the next fiscal year, CTDOT hopes to solicit a greater number of off system (non-state highway) locations with high potential for crash reduction with the help of local agencies partners and stakeholders.

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, implement HSIP projects. The spot improvement approach, known as High Frequency Crash Locations (HFCL) results in safety investments at specific locations while the systemic approach leads to widespread implementation of treatments to reduce the potential for fatalities and/or serious injuries, whether or not crashes have occurred at any 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 improvement projects are 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) are being prepared for each of the nine regional councils of government (COG). The RTSPs identify key safety issues for all public roads. The plans utilize a similar to the Connecticut’s Strategic Highway Safety Plan (SHSP) but focused instead on the local and regional level needs of the individual

communities and region as a whole. Since RTSPs include all public roads, communities will be made aware of potential or emerging safety issues on locally owned and maintained roadways and recommendations on how to address them. Once all nine RTSPs have been finalized, there will be a new application process for HSIP projects off 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 made available at a later date.

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

- Design
- Maintenance
- Operations
- Traffic Engineering/Safety

Describe coordination with internal partners.

The Operations' Section within the Department's Division of Traffic Engineering reviews specific spot locations on the state highway system for possible highway safety improvements. The study locations typically originate from internal databases, such as High Frequency Crash Locations (HFCL) lists or via appointed and elected officials, town officials, or the public. Depending on the cost and scope of the countermeasure, the 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 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 undertaken by the Department's Division of Highway Design.

Identify which external partners are involved with HSIP planning.

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

Describe coordination with external partners.

Regional Transportation Safety Plans (RTSP) are being prepared for all nine Council of Governments (COGs) in CT. Once the plans are complete, the COGS will 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 COG's will inform the member towns accordingly.

The Department's Safety Section works in partnership with the 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's), 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

Program Methodology

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

Yes

FileName:
HSIP Safety Program.pdf

Select the programs that are administered under the HSIP.

- Horizontal Curve
- 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	Exposure	Roadway
All crashes	Traffic	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.

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

2019 Connecticut Highway Safety Improvement Program

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
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
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

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?

- 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	Exposure	Roadway
All crashes	Traffic	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

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?

- 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	Exposure	Roadway
All crashes	Traffic	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?

Yes

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

2019 Connecticut Highway Safety Improvement 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?

- 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
All crashes	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?

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?

- 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?

13.6

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

- Add/Upgrade/Modify/Remove Traffic Signal
- Horizontal curve signs
- Rumble Strips
- Upgrade Guard Rails
- 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

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 are able to 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.

Describe program methodology practices that have changed since the last reporting period.

The CT Roadway Safety Management System (CRSMS) is constantly being updated to provide more features and better user experience.

https://crsms.uconn.edu/dashboard

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

October 1, 2017 to September 30, 2018.

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$38,891,478	$46,076,968	118.48%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$123,857	$123,857	100%
Penalty Funds (23 U.S.C. 154)	$5,658,242	$6,596,682	116.59%
Penalty Funds (23 U.S.C. 164)	$0	$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$83,889	$83,889	100%
State and Local Funds	$0	$0	0%
Totals	$44,757,466	$52,881,396	118.15%

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

21%

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

21%

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

20%

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

20%

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

$3,000,000

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

$0

Funding was transferred into HSIP to partially fund Project No.170-3455 (CHAMP Safety Service Patrol)

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.

														RELATIONSHIP TO SHSP	
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**	**EMPHASIS AREA**	**STRATEGY**
0017-0182CN+	Roadway	Roadway widening - add lane(s) along segment	1.42	Miles	$938440	$938440	Penalty Funds (23 U.S.C. 154)	Urban	Principal Arterial-Interstate	26,800	40	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3487PL	Roadway	Pavement surface - high friction surface	25	Locations	$275000	$275000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Keep Vehicles on Road
0093-0213PL	Non-infrastructure	Transportation safety planning	1	Plan	$1540000	$1540000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		not applicable	not applicable	Data	Records
0093-0214PL	Non-infrastructure	Transportation safety planning	1	Plan	$781000	$781000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		not applicable	not applicable	Data	Records
0170-3501PL	Non-infrastructure	Transportation safety planning	1	Plan	$1400000	$1400000	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		not applicable	not applicable	Data	Records
0170-3360PL	Non-infrastructure	Transportation safety planning	1	Plan	$1496018	$1662242	Penalty Funds (23 U.S.C. 154)	Multiple/Varies	Multiple/Varies	0		not applicable	not applicable	Data	Records
0034-0345CN+	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	1	Intersections	$117960	$131067	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	14,300	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0382CN+	Pedestrians and bicyclists	Pedestrian signal	50	Intersections	$181889	$181889	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Pedestrians	Reduce Conflicts
0148-0200CN+	Interchange design	Interchange design - other	1	Interchanges	$250051	$277834	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0173-0438CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	3	Intersections	$93530	$93530	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0360CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	6	Intersections	$106517	$106517	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0399PE+	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$50000	$50000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts

														RELATIONSHIP TO SHSP	
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**	**EMPHASIS AREA**	**STRATEGY**
0173-0455CN	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$754840	$754840	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	16,000	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0102-0285RW+	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	2	Intersections	$634500	$705000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	23,000	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3350CN+	Roadway	Rumble strips - center	18	Miles	$30223	$30223	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0173-0442CN	Roadside	Barrier- metal	36.39	Miles	$3990660	$3990660	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		State Highway Agency	Spot	Roadway Departure	Keep Vehicles on Road
0174-0406CN	Roadway signs and traffic control	Curve-related warning signs and flashers	411	Curves	$1207080	$1207080	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		Other Local Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0171-0393PE+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$15000	$15000	HSIP (23 U.S.C. 148)	Urban	Minor Collector	36,400	45	State Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0396CN+	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	660	Locations	$71149	$71149	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Bicyclists	Reduce Conflicts
0174-0391PE+	Intersection traffic control	Intersection traffic control - other	2	Intersections	$20000	$20000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0355CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	3	Intersections	$15122	$15122	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0102-0285RW+	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	2	Intersections	$472500	$525000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	23,000	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0053-0193CN	Intersection traffic control	Modify control - no control to roundabout	1	Locations	$2160100	$3502100	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	7,200	30	Town or Township Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0372CN+	Pedestrians and bicyclists	Pedestrian signal	45	Intersections	$438718	$438718	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Pedestrians	Reduce Conflicts
0170-3480PL+	Non-infrastructure	Transportation safety planning	1	Report	$27000	$30000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Pedestrians	Reduce Conflicts

														RELATIONSHIP TO SHSP	
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**	**EMPHASIS AREA**	**STRATEGY**
0173-0455PE+	Intersection traffic control	Modify traffic signal - modernization/replacement	1	Intersections	$20000	$20000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	16,000	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0377CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$54207	$54207	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0172-0450PE	Intersection traffic control	Modify traffic signal - modernization/replacement	17	Intersections	$270000	$270000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0173-0460PE+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$30000	$30000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,300	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0399CN	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$793360	$793360	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0172-0477PE	Roadway signs and traffic control	Curve-related warning signs and flashers	2225	Curves	$2220000	$2220000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Keep Vehicles on Road
0174-0360CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	6	Intersections	$36409	$36409	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0172-0450RW	Intersection traffic control	Modify traffic signal - modernization/replacement	17	Intersections	$290000	$290000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0399CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	2	Intersections	$32597	$32597	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0172-0443CN	Intersection traffic control	Modify traffic signal - modernization/replacement	7	Intersections	$2157260	$2157260	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0173-0468PE	Intersection traffic control	Modify traffic signal - modernization/replacement	17	Intersections	$270000	$270000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0173-0468RW	Intersection traffic control	Modify traffic signal - modernization/replacement	17	Intersections	$220000	$220000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0102-0285CN	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	2	Intersections	$6145452	$6828280	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	23,000	35	State Highway Agency	Spot	Intersections	Reduce Conflicts

														RELATIONSHIP TO SHSP	
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**	**EMPHASIS AREA**	**STRATEGY**
0106-0126RW+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$45000	$50000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	35,500	45	State Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0440PE	Roadway signs and traffic control	Curve-related warning signs and flashers	1686	Curves	$1050000	$1050000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Keep Vehicles on Road
0102-0346CN+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$584690	$649656	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,750	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3455OTH	Non-infrastructure	Non-infrastructure - other	1	Safety Patrol	$4083300	$4537000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Safety Patrol	Other
0173-0412CN+	Intersection traffic control	Modify traffic signal - modernization/replacement	4	Intersections	$32790	$32790	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0173-0460CN	Intersection traffic control	Intersection traffic control - other	1	Intersections	$489500	$489500	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,300	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0144-0196PE	Intersection traffic control	Intersection traffic control - other	1	Intersections	$149500	$166000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,750	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0144-0196RW	Intersection traffic control	Intersection traffic control - other	1	Intersections	$45000	$50000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,750	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0088-0191CN	Intersection geometry	Intersection geometry - other	1	Locations	$972000	$1080000	HSIP (23 U.S.C. 148)	Urban	Major Collector	5,800	25	Town or Township Highway Agency	Spot	Intersections	Reduce Conflicts
0102-0285CN+	Intersection geometry	Auxiliary lanes - add two-way left-turn lane	2	Intersections	$91246	$101384	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	23,000	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0102-0346RW+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$58500	$65000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,750	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0170-3360PL	Non-infrastructure	Transportation safety planning	1	Plan	$305782	$339758	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		not applicable	not applicable	other	Records
0173-0460PE+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$148485	$148485	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,300	30	State Highway Agency	Spot	Intersections	Reduce Conflicts

														RELATIONSHIP TO SHSP	
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**	**EMPHASIS AREA**	**STRATEGY**
0174-0405RW	Intersection traffic control	Modify traffic signal - modernization/replacement	17	Intersections	$295000	$295000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0405PE	Intersection traffic control	Modify traffic signal - modernization/replacement	17	Intersections	$270000	$270000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0437CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	467	Locations	$1431620	$1431620	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Town or Township Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0015-0335RW	Roadway	Roadway widening - travel lanes	1	Locations	$45000	$50000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	11,000	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0015-0335PE+	Roadway	Roadway widening - travel lanes	1	Locations	$503694	$559660	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	11,000	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0106-0126RW+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$31500	$35000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	35,500	45	State Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0372CN+	Pedestrians and bicyclists	Pedestrian signal	45	Intersections	$21300	$21300	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Pedestrians	Reduce Conflicts
0106-0126CN	Intersection traffic control	Intersection traffic control - other	1	Intersections	$1830384	$2035460	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	35,500	45	State Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0401CN	Intersection traffic control	Intersection traffic control - other	1	Intersections	$584640	$584640	HSIP (23 U.S.C. 148)	Urban	Major Collector	18,600	35	State Highway Agency	Spot	Intersections	Reduce Conflicts
0171-0440PE+	Roadway signs and traffic control	Curve-related warning signs and flashers	1686	Curves	$1335000	$1335000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Keep Vehicles on Road
0172-0477PE+	Roadway signs and traffic control	Curve-related warning signs and flashers	2225	Curves	$735000	$735000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Keep Vehicles on Road
0173-0460CN+	Intersection traffic control	Intersection traffic control - other	1	Intersections	$30000	$30000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,300	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0172-0474CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	208	Locations	$834220	$834220	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Town or Township Highway Agency	Systemic	Pedestrians	Reduce Conflicts

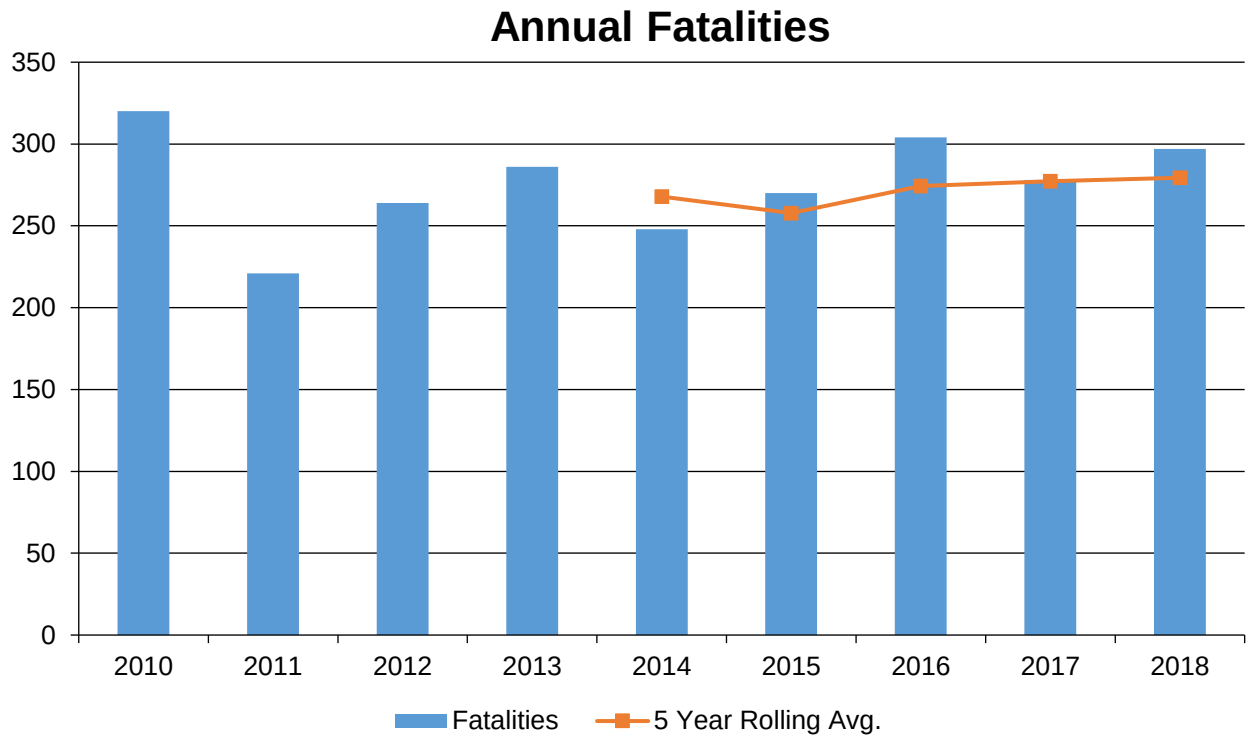
														RELATIONSHIP TO SHSP	
PROJECT NAME	**IMPROVEMENT CATEGORY**	**SUBCATEGORY**	**OUTPUTS**	**OUTPUT TYPE**	**HSIP PROJECT COST($)**	**TOTAL PROJECT COST($)**	**FUNDING CATEGORY**	**LAND USE/AREA TYPE**	**FUNCTIONAL CLASSIFICATION**	**AADT**	**SPEED**	**OWNERSHIP**	**METHOD FOR SITE SELECTION**	**EMPHASIS AREA**	**STRATEGY**
0173-0491CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	407	Locations	$1313720	$1313720	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Town or Township Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0172-0443PE+	Intersection traffic control	Modify traffic signal - modernization/replacement	7	Intersections	$20000	$20000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Spot	Intersections	Reduce Conflicts
0173-0442CN+	Roadside	Barrier- metal	36.39	Miles	$434953	$434953	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		State Highway Agency	Systemic	Roadway Departure	Keep Vehicles on Road
0102-0346RW+	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$90000	$100000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	19,750	30	State Highway Agency	Spot	Intersections	Reduce Conflicts
0174-0422CN	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	519	Locations	$1860980	$1860980	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		Town or Township Highway Agency	Systemic	Pedestrians	Reduce Conflicts
0170-5002PL	Non-infrastructure	Training and workforce development	1	training	$123857	$123857	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Multiple/Varies	0		Town or Township Highway Agency	Spot	Work Zones	Other
0144-0196PE	Intersection traffic control	Intersection traffic control - other	1	Intersections	$75500	$83889	Other Federal-aid Funds (i.e. STBG, NHPP)	Urban	Minor Arterial	19,750	35	State Highway Agency	Spot	Intersections	Reduce Conflicts

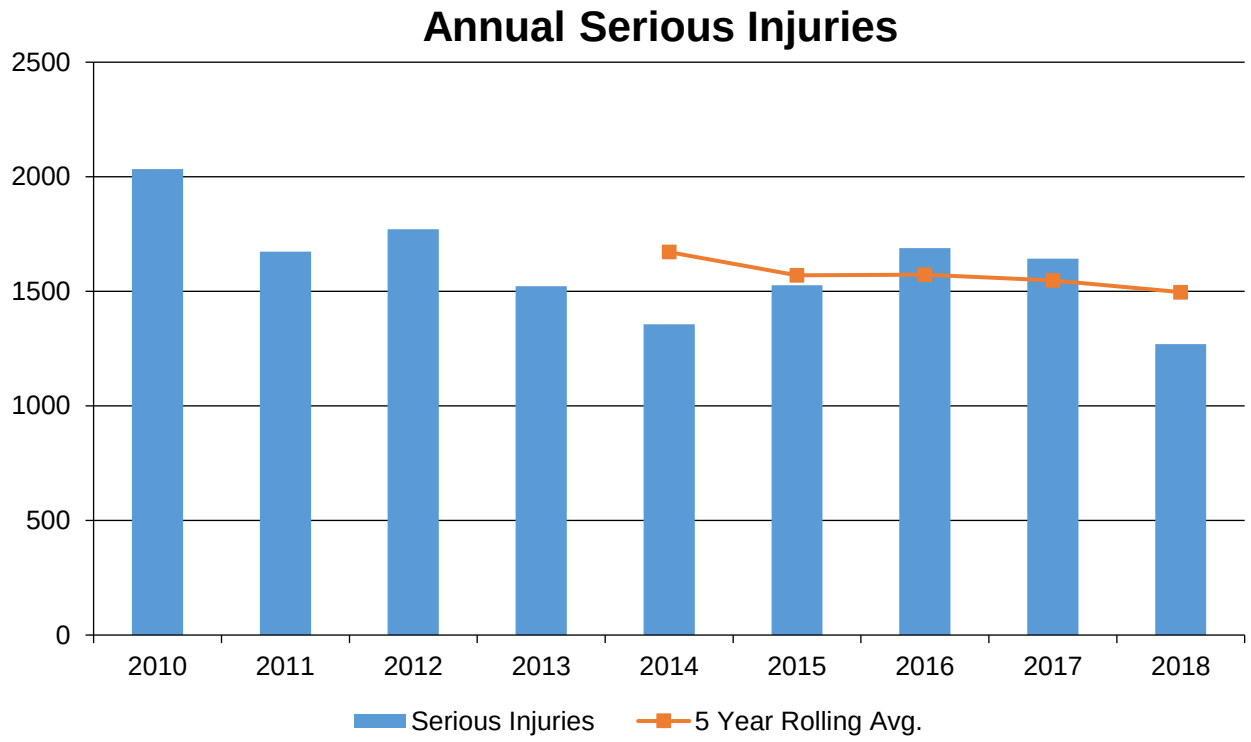
Safety Performance

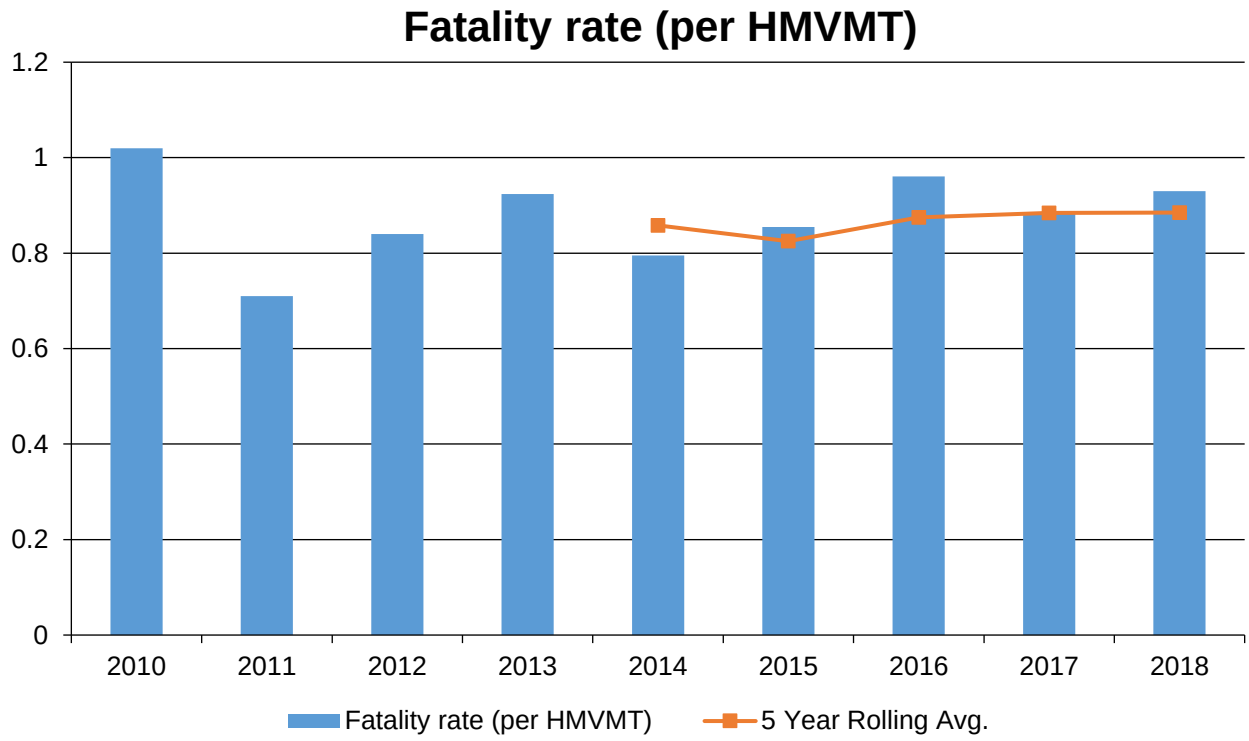
General Highway Safety Trends

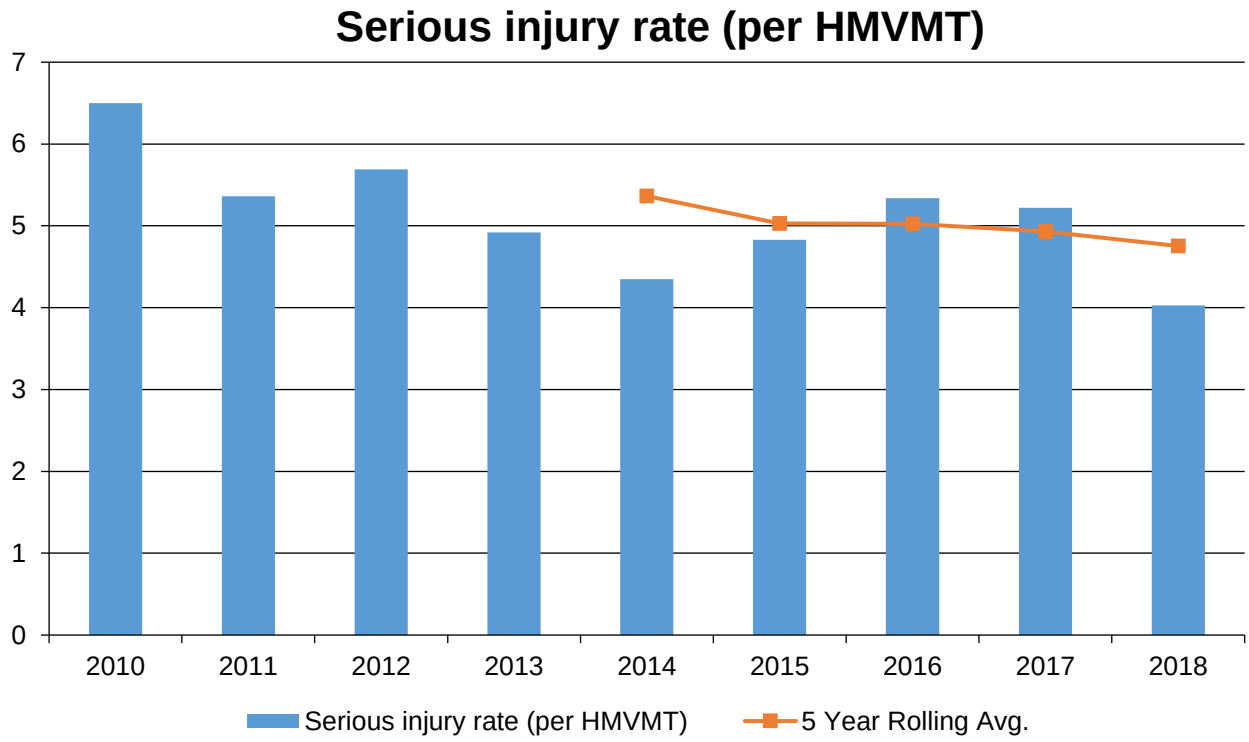
Present data showing the general highway safety trends in the State for the past five years.

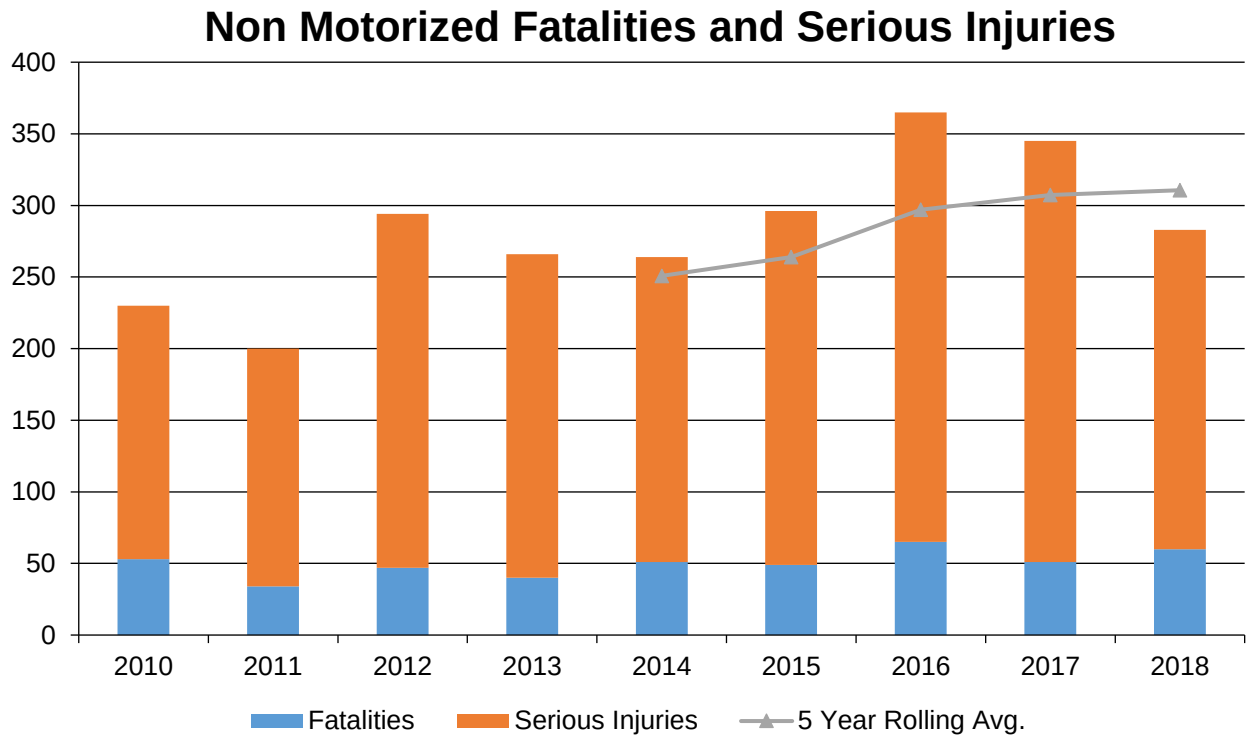
PERFORMANCE MEASURES	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fatalities	320	221	264	286	248	270	304	278	297
Serious Injuries	2,033	1,673	1,771	1,523	1,356	1,526	1,689	1,643	1,269
Fatality rate (per HMVMT)	1.020	0.710	0.840	0.924	0.795	0.855	0.961	0.883	0.930
Serious injury rate (per HMVMT)	6.500	5.360	5.690	4.920	4.350	4.830	5.340	5.220	4.030
Number non-motorized fatalities	53	34	47	40	51	49	65	51	60
Number of non-motorized serious injuries	177	166	247	226	213	247	300	294	223


Annual Fatalities
350
300
250
200
150
100
50
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
2500
2000
1500
1000
500
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.2
1
0.8
0.6
0.4
0.2
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
7
6
5
4
3
2
1
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Annual data for the number of fatalities, fatality rate, and number of non-motorized fatalities between 2010 and 2017 was updated from the latest available FARS data. Annual data for the number of serious injuries, serious injury rate and number of non-motorized serious injuries between 2010 and 2017 was updated from the UCONN crash data repository. Also, the 2018 performance measures data for fatalities and serious injuries is from the UCONN crash data repository and is preliminary.

Describe fatality data source.

FARS

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

Year 2017

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	7.4		1.26	
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	13.6		3.03	

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 Minor Arterial	12.2		2.79	
Rural Minor Collector	1.6		1.09	
Rural Major Collector	13		1.55	
Rural Local Road or Street	13.4		2.05	
Urban Principal Arterial (UPA) - Interstate	35		0.35	
Urban Principal Arterial (UPA) - Other Freeways and Expressways	20.2		0.5	
Urban Principal Arterial (UPA) - Other	44.8		1.19	
Urban Minor Arterial	60.4		1.18	
Urban Minor Collector				
Urban Major Collector	15.8		0.61	
Urban Local Road or Street	27		1.06	
Other				

Year 2018

Roadways	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)
State Highway Agency	196.4	749.4		
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				

FARS is the source for the number of fatalities based on functional class. The source of data for HMVMT is FHWA Table VM-2. Table VM-2 was not available for 2016 & 2017 when data was entered into the OLT so 2015 data was used instead. HMVMT has not varied much in the last several years.
The state's crash file does not have serious injury crash data broken down by functional class so those columns are blank.
The state's crash file is the data source for the number of fatalities and serious injuries on roadway ownership in 2018.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2020 Targets *

Number of Fatalities 277.0

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

• There were 278 Fatalities in 2017, a single year decrease from the 304 recorded in 2016. • Although the single year fatality total decreased, the five-year average continued to rise to 277 in 2017. • The most current preliminary data show there were 297 Fatalities in 2018, a single year increase from the 278 recorded in 2017. The 2018 five-year moving average value of 279 also represents an increase from the previous year. This figure is also the highest five-year moving average recorded during the reporting period. • The projected five-year moving average predicts an increase in fatalities for the period for which this target will be set. • TARGET: Based on the recent and projected increases in fatalities, Connecticut chooses to set a target to maintain the five-year moving average of 277. The target in the SHSP for this performance metric is combined with the number of serious injuries. If we meet this target, or fall below it, the goal for the combined performance measure in the 2017-2021 SHSP will be achieved.

Number of Serious Injuries 1547.0

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

• There were 1,643 Serious (A) Injuries in 2017, a single year decrease from the 1,689 recorded in 2016. • The 2017 five-year moving average of 1,547 Serious (A) Injuries in 2017 also decreased from the 1,574 recorded in 2016. • The most current preliminary data show there were 1,269 Serious (A) Injuries in 2018, a single year decrease from the 1,643 recorded in 2017. The 2018 Serious (A) Injury total could be an anomaly, based on recent single year totals and trends. It is the lowest single year value recorded during the reporting period. The 2018 five-year moving average value of 1,497 also represents a decrease from the previous year and is the lowest recorded during the reporting period. • The projected five-year moving average projects a decrease in Serious (A) Injuries for the period for which this target will be set. • TARGET: Although there have been recent decreases in Serious (A) injuries, the preliminary 2018 figure and projected moving average may be an anomaly. Based on current data, Connecticut chooses to set a target to maintain the five-year moving average of 1,547 Serious (A) Injuries. The target in the SHSP for this performance metric is combined with the number of fatalities. If we meet this target, or fall below it, the goal for the combined performance measure in the 2017-2021 SHSP will be achieved.

Fatality Rate 0.883

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

• There were 0.883 Fatalities per 100M VMT in 2017, a single year decrease from the 0.961 recorded in 2016. • Although the single year fatality rate decreased, the five-year average continued to rise to 0.883 in 2017. • The most current preliminary data show the fatality rate of .930 for 2018, a single year increase from the .883 recorded in 2017. The 2018 five-year moving average value of 0.885 also represents an increase from the previous year. This figure is also the highest five-year moving average recorded during the reporting period. These rate projections are based on 2017 VMT data. • The projected five-year moving average predicts an increase in the fatality rate per 100M VMT for the period for which this target will be set. • TARGET: Based on the recent and projected increases in fatalities, Connecticut chooses to set a target to maintain the five-year moving average of .883 Fatalities per 100M VMT. The 2017-2021 SHSP does not use rates as a performance metric.

Serious Injury Rate	4.931

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

• There were 5.216 Serious (A) Injuries per 100M VMT in 2017, a single year decrease from the rate of 5.338 recorded in 2016. • The 2017 five-year moving average of 4.931 Serious (A) Injuries per 100M VMT in 2017 also decreased from the 5.025 recorded in 2016. • The most current preliminary data show a rate of 4.029 Serious (A) Injuries per 100 M VMT in 2018, a single year decrease from the 5.216 recorded in 2017. The 2018 Serious (A) Injury total and rate could be an anomaly, based on recent single year totals and trends. It is the lowest single year rate recorded during the reporting period. The 2018 five-year moving average value of 4.752 also represents a decrease from the previous year and is the lowest recorded during the reporting period. • The projected five-year moving average projects a decrease in Serious (A) Injuries for the period for which this target will be set. • TARGET: Although there have been recent decreases in Serious (A) injuries, the preliminary 2018 figure and projected moving average may be an anomaly. Based on current data, Connecticut chooses to set a target to maintain the five-year moving average of 4.931 Serious (A) Injuries per 100M VMT. The 2017-2021 SHSP does not use rates as a performance metric.

Total Number of Non-Motorized Fatalities and Serious Injuries	307.2

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

• There were 345 Fatalities and Serious (A) Injuries in 2017, a single year decrease from 365 recorded in 2016. • The 2017 five-year moving average of 307.2 Fatalities and Serious (A) Injuries in 2017 increased from the 294.4 average number in 2016. • The most current preliminary data show 283 Fatalities and Serious (A) Injuries in 2018, a single year decrease from the 345 recorded in 2017. The 2018 five-year moving average value of 310.6 represents an increase from the previous year. This figure is also the highest five-year moving average recorded during the reporting period. • The projected five-year moving average for 2013-2017 predicts an increase in Fatalities and Serious (A) Injuries for the period for which this target will be set. • TARGET: Based on the trend line, the five-year moving average of non-motorist fatalities and serious (A) injuries is expected to remain relatively the same or increase slightly. The new target is proposed to maintain the current five-year moving average of 307.2 Fatalities and Serious (A) Injuries for the 2020 HSP planning period. If we meet this target, or fall below it, the goal in the 2017-2021 SHSP will be achieved.

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

Internal coordination between HSO and Traffic Engineering began in the spring of 2019. 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 June 4, 2019 meeting, there was a presentation and discussion on Federal reporting requirements, deadlines, and an assessment on past and current trends. Following the meeting, CTDOT sent a letter to all the MPOs requesting a resolution from their policy board no later than 2/27/2020 stating that they either support CTDOT's targets or that they plan to set their own. At the time this report was prepared, CTDOT has not received any resolutions.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2018 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.

Number of Fatalities:
2012-2016 baseline = 274
CY 2018 target = 257
2014-2018 actual performance = 279
Preliminary data suggests that target will not be achieved and is worse than baseline

Fatality Rate (per 100 M VMT):
2012-2016 baseline = 0.876
CY 2018 target = 0.823
2014-2018 actual performance = 0.885
Preliminary data suggests that target will not be achieved and is worse than baseline

Number of Serious Injuries:
2012-2016 baseline = 1574
CY 2018 target = 1571
2014-2018 actual performance = 1497
Preliminary data suggests that target will be achieved and is better than baseline

Serious Injury Rate (per 100 M VMT):
2012-2016 baseline = 5.02
CY 2018 target = 5.033
2014-2018 actual performance = 4.75
Preliminary data suggests that target will be achieved and is better than baseline

Number of Non-Motorized Fatalities and Serious Injuries:
2012-2016 baseline = 294
CY 2018 target = 280
2014-2018 actual performance = 311
Preliminary data suggests that target will not be achieved and is 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.

PERFORMANCE MEASURES	2012	2013	2014	2015	2016	2017	2018
Number of Older Driver and Pedestrian Fatalities	44	30	35	38	50	53	40

Number of Older Driver and Pedestrian Serious Injuries	139	113	112	124	120	132	117

Data source for the number of older drivers and pedestrian fatalities is FARS with the exception of 2018 data which is from the UCONN crash data repository. Data source for the number of older drivers and pedestrian serious injuries in the UCONN crash data repository.

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.

- Since the number of fatalities and serious injuries trends have not changed much since last year, it is difficult to evaluate the State's HSIP program. CT finalized its SHSP in July 2017 and it is anticipated that many of the infrastructure related strategies will be implemented resulting in fewer fatalities and serious injuries.
- A safety effectiveness evaluation module is planned for the CT Roadway Safety Management System (CRSMS) which will allow users to evaluate a individual project(s). Features such as lives saved and injuries prevented are being considered to help inform decision makers of the return on past investments and help make a case for future funding.

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

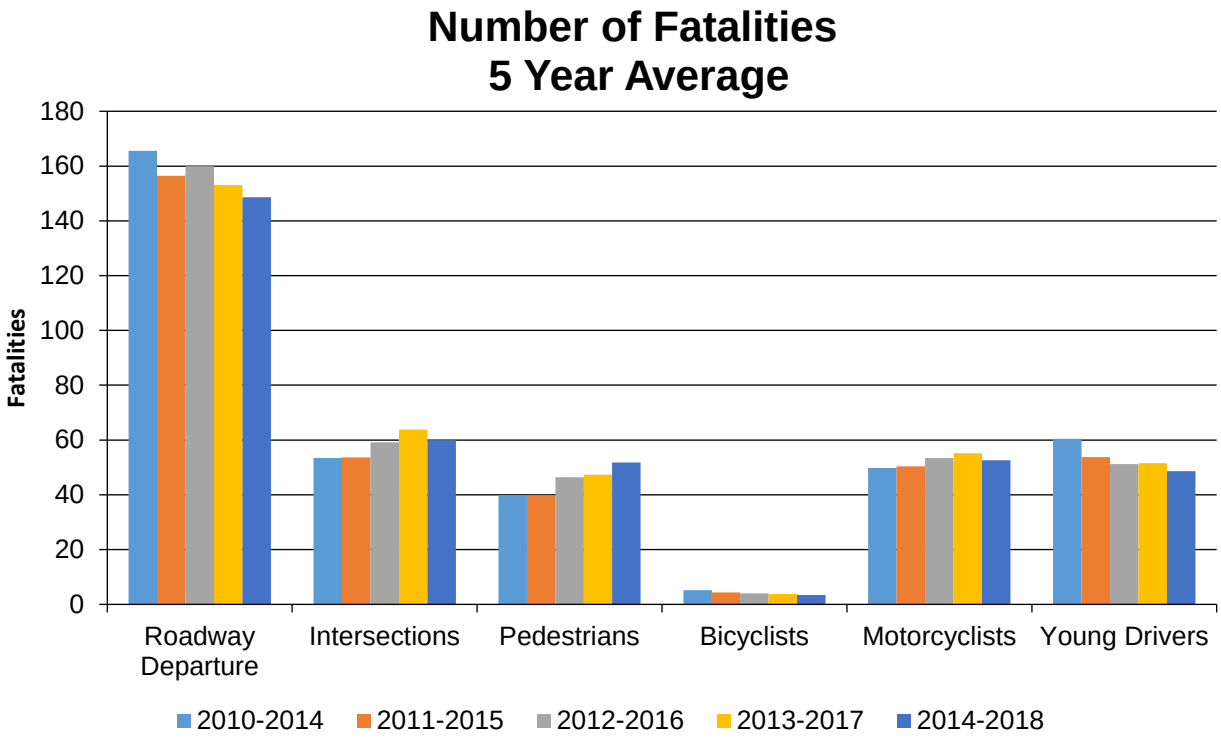
Effectiveness of Groupings or Similar Types of Improvements

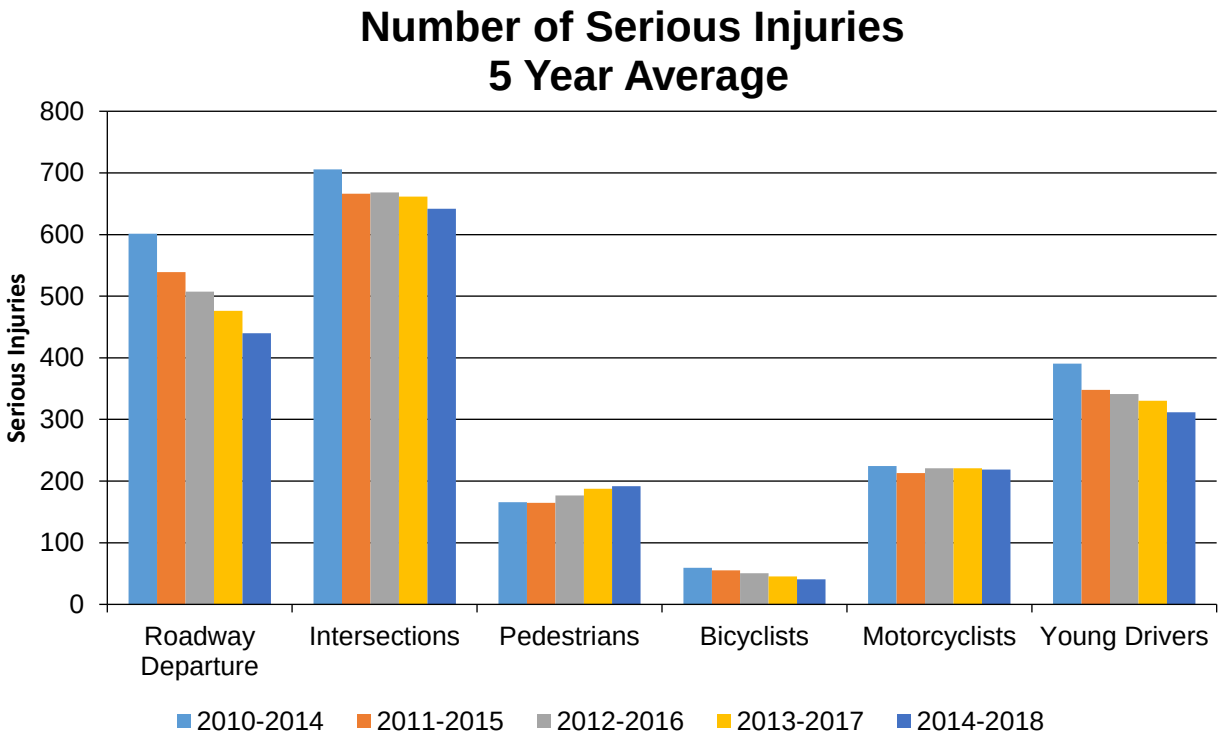
Present and describe trends in SHSP emphasis area performance measures.

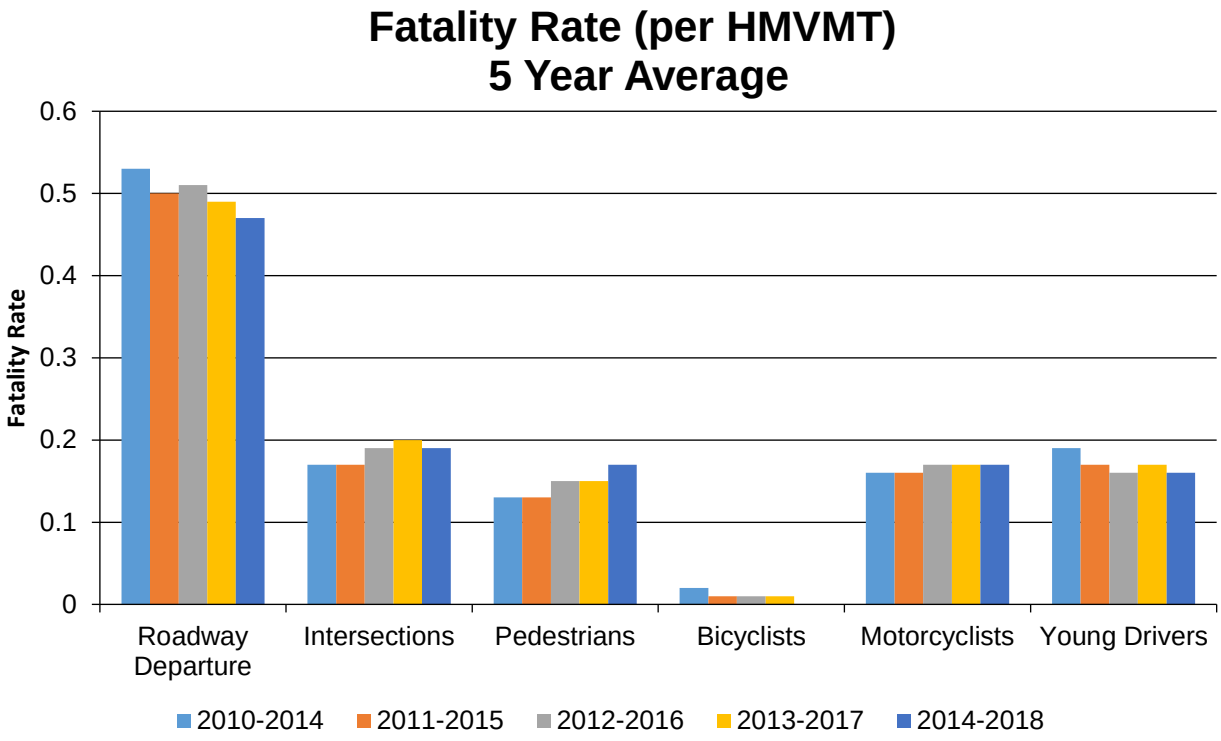
Year 2018

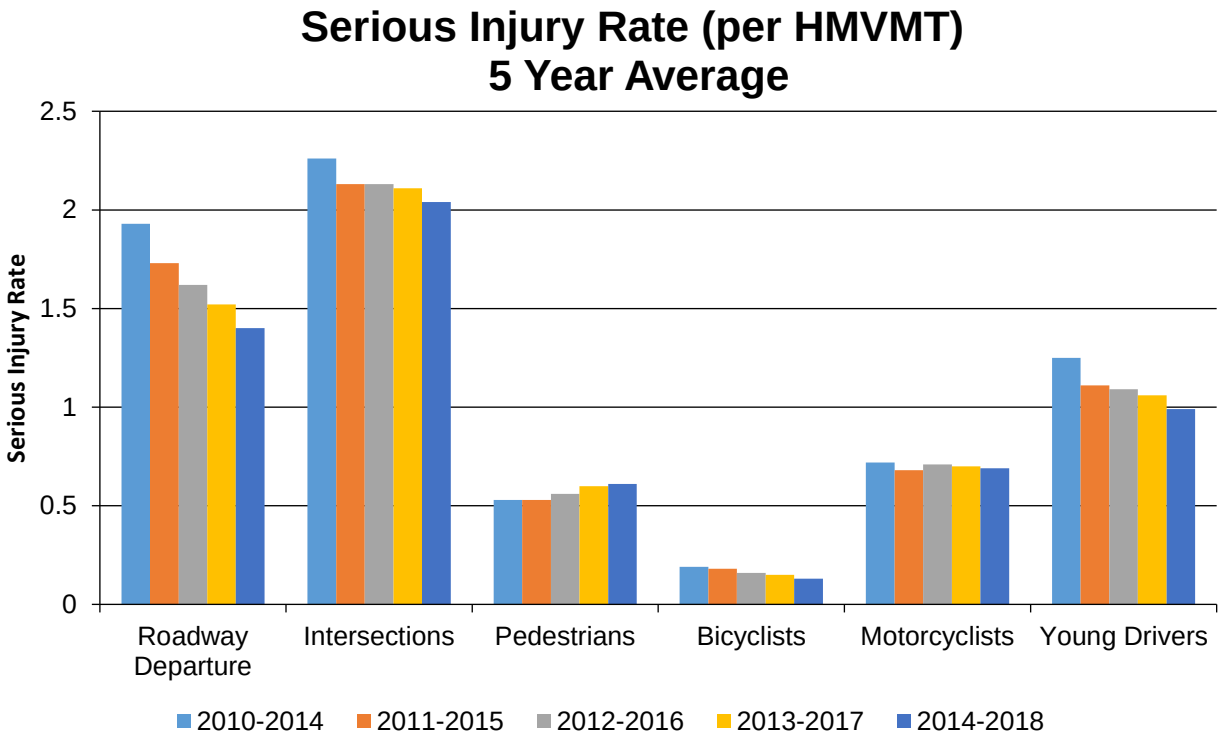
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Roadway Departure	Run-off-road	148.6	440	0.47	1.4	0	0	0

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)	Other 1	Other 2	Other 3
Intersections	All	60	641.8	0.19	2.04	0	0	0
Pedestrians	All	51.8	191.6	0.17	0.61	0	0	0
Bicyclists	All	3.4	40.6	0	0.13	0	0	0
Motorcyclists	All	52.6	218.8	0.17	0.69	0	0	0
Young Drivers	All	48.6	311.6	0.16	0.99			


Number of Fatalities
5 Year Average
Fatalities
180
160
140
120
100
80
60
40
20
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Motorcyclists
Young Drivers
2010-2014
2011-2015
2012-2016
2013-2017
2014-2018


Number of Serious Injuries
5 Year Average
Serious Injuries
800
700
600
500
400
300
200
100
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
Motorcyclists
Young Drivers
2010-2014
2011-2015
2012-2016
2013-2017
2014-2018





- For 2014-2017, FARS was used for the number of fatalities for all SHSP emphasis areas except for young drivers. All other crash data is from the UCONN crash data repository.
- The HMVMT data source for 2010-2017 is FARS. 2018 data is not available so 2017 was used.

- In some cases, data was updated from previous years in order to reflect the most up-to-date information.
- Lane departure cannot be accurately separated from roadway departure data so all the crash data is combined on a single line.

Has the State completed any countermeasure effectiveness evaluations during the reporting period?

No

Project Effectiveness

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

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
0														

Compliance Assessment

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

05/18/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2021

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

2022

CT recently hired a contractor to update the SHSP and the work will begin later this calendar year.

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

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					80	99	60	90
Route Number (8)	100	100								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100	100								
Rural/Urban Designation (20)	100	100					100	99		
Surface Type (23)	100	100					90	99		
Begin Point Segment Descriptor (10)	100	100					90	99	65	90
End Point Segment Descriptor (11)	100	100					90	99	65	90
Segment Length (13)	100	100								
Direction of Inventory (18)	100	100								

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**
Functional Class (19)	100	100					100	99	100	90
Median Type (54)	95	50								
Access Control (22)	100	100								
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	100					90	99		
Average Annual Daily Traffic (79)	100	100					90	99		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	100					100	99	100	90
INTERSECTION										
Unique Junction Identifier (120)			100	100						
Location Identifier for Road 1 Crossing Point (122)			100	100						
Location Identifier for Road 2 Crossing Point (123)			100	100						
Intersection/Junction Geometry (126)			100	100						
Intersection/Junction Traffic Control (131)			100	100						
AADT for Each Intersecting Road (79)			100	100						
AADT Year (80)			100	100						
Unique Approach Identifier (139)			100	100						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	100				

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**	**STATE**	**NON-STATE**
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	100				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	100				
Ramp Length (187)					100	100				
Roadway Type at Beginning of Ramp Terminal (195)					100	100				
Roadway Type at End Ramp Terminal (199)					100	100				
Interchange Type (182)					100	100				
Ramp AADT (191)					100	100				
Year of Ramp AADT (192)					100	100				
Functional Class (19)					100	100				
Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):	**99.72**	**97.22**	**100.00**	**100.00**	**100.00**	**100.00**	**92.22**	**99.00**	**78.00**	**90.00**

*Based on Functional Classification

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.

go to https://portal.ct.gov/DOT/Programs/Traffic-Records
Select TRCC Traffic Records Strategic Plan
MIRE FDE section begins on page 123

Did the State conduct an HSIP program assessment during the reporting period?

No

When does the State plan to complete its next HSIP program assessment.

2021

Optional Attachments

Program Structure:

HSIP Safety Program.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.