

ROSSWALK STOP ON RED

NEW YORK

HIGHWAY SAFETY IMPROVEMENT PROGRAM 2017 ANNUAL REPORT

U.S. Department of Transportation Federal Highway Administration

Photo source: 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

This report is intended to satisfy reporting requirements under Section 148 of the Title 23, United States Code (23 U.S.C. 148) regulated under 23 CFE 924. MAP-21 and the FastAct reinforce the importance of the Highway Safety Improvement Program (HSIP). The goal of the program is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Emphasis Areas

The New York State Department of Transportation continues to concentrate on the emphasis areas outlined in the Strategic Highway Safety Plan (SHSP). Site specific projects at high accident locations and systemic improvement projects to decrease lane departure crashes and improve pedestrian safety are being implemented to meet crash goals. The Strategic Highway Safety Plan was updated in 2017. The emphasis areas in the updated plan include intersections, lane departures, driver behavior, vulnerable users, speed and older and younger drivers. The plan also emphasizes emergency response, data and automated/connected vehicles as cross cutting issues that affect all crash types. The first ever statewide New York Pedestrian Safety Action Plan (PSAP) was released in June 2016. The plan adds pedestrian locations to the state's annual regional work program; implements pedestrian improvements systemically at approximately 2,400 signalized intersections and 1,350 uncontrolled crosswalks and provides for pedestrian improvements on 5 pedestrian corridors. The PSAP also includes statewide pedestrian education and enforcement initiatives.

HSIP Fund Administration

NYSDOT is using a hybrid approach to manage the Highway Safety Improvement Program funds which were essentially doubled under MAP-21. Approximately half of the funds are provided to the NYSDOT regions according to a formula that includes crashes, population and center line miles. The remaining half of the funds are administrated centrally by the NYSDOT Main Office and the Safety and System Optimization (SSO) team. These funds are primarily used to fund a statewide call for projects program as well as the statewide Pedestrian Safety Action Plan (PSAP). The call for projects program funds the most cost effective safety projects and directs HSIP funds where they are the most needed regardless of ownership, mode or geographic restriction. In FFY13 and FFY14, the call for projects program funded 10 local and 27 state projects for a total of approximately \$83M. The FFY15-17 call for projects funded 14 local projects and 25 state projects for a total of approximately \$82M. The FFY16-20 program, funded 38 projects; both local and state for a total of approximately \$82M. The FFY16-20 program, funded 38 projects; both local and state for a total of approximately \$112.3M. The Pedestrian Safety Action Plan includes approximately \$110M in HSIP funds to improve pedestrian safety at locations in New York State outside of New York City.

All Public Roads

The mandate to address the safety of *all public roads* has broadened the scope of work of the Department of Transportation and our partners, requiring a greater focus on emphasis areas in order to meet crash goals. The following initiatives support the "all public roads" mandate.

Locally owned and state owned projects are eligible for the call for projects program.

Crash data on the local system is available through New York's Safety Information Management Systems (SIMS).

A local GIS route system is being developed.

Enhancements to the Accident Location Information System (ALIS), the Safety Information Management System (SIMS) and a new Enterprise Linear Referencing System (ELRS) will enhance the states ability to analysis crash data on the local system.

Additional traffic counts are being taken on local roads.

Performance Indicators

The FastAct further integrates performance into the HSIP program. The FastAct requires that states report five annual safety performance targets beginning in 2018. The 2018 safety targets for New York State are shown below.

Performance Measures for 2018 Target (5 year average)

Number of Fatalities 1,086

Fatality Rate (Fatalities/100M VMT) .87

Number of Serious Injuries 10,854

Serious Injury Rate (Serious Injuries/100M VMT) 8.54

Number of Non-motorized Fatalities and Serious Injuries 2,843

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.

Approximately 50% of HSIP funds in NYS are provided to the Regions according to a safety planning target formula. The other 50% of the funding are administered by the NYSDOT Main Office for the implementation of statewide programs.

Where is HSIP staff located within the State DOT?

Operations

Enter additional comments here to clarify your response for this question or add supporting information.

HSIP administrators are located in the Safety Program Management Bureau within the Office of Traffic Safety and Mobility in the Main Office. There are traffic offices in both the Main Office in Albany and in each of the 11 regional offices throughout New York State. The regional traffic offices are responsible for program delivery.

How are HSIP funds allocated in a State?

SHSP Emphasis Area Data Formula via Districts/Regions Other-Periodic call for Safety Projects

Enter additional comments here to clarify your response for this question or add supporting information.

Approximately 50% of HSIP funds in NYS are provided to the Regions according to a safety planning target formula. The other 50% of the funding are administered by the NYSDOT Main Office for the implementation of statewide programs.

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

Safety projects on all public roads in New York State including local roads and roads on tribal lands are eligible to receive HSIP funds. In FFY16 approximately 50% of the available HSIP funds were allocated to the 11 regions in New York state based on a formula that included VMT, population and crashes. The regions work with the Metropolitan Planning Organizations to decide which projects to include in the capital program, including state and local roads. Fifty percent of the Region 11 allocation was provided to New York City for safety projects on local roads owned by New York City. The statewide call for safety projects awarded HSIP funding to 16 local projects to be let between FFY16 - FFY20 for a total of about \$40.5M in HSIP funding. The pedestrian safety action plan also includes \$40M in HSIP funding for local municipalities to implement systemic treatments that improve safety for pedestrians.

All crashes on public roads, regardless of ownership are included in New York's crash data systems and are available for review and analysis. High crash locations on the state system are identified via an annual network screening process. Improvements to New York's data systems are underway that will provide similar analysis capabilities to identify local roads.

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

Traffic Engineering/Safety Design Planning Operations Districts/Regions Local Aid Programs Office/Division Governors Highway Safety Office

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with internal partners.

The New York State Department of Transportation formed a Statewide Safety System and Optimization team (SSO) with expertise in highway safety and system optimization. The multi disciplinary team is comprised of members from various Division and Regional Offices including Safety Programs Management and Coordination Bureau, System Optimization Bureau, Local Programs Bureau, Office of Modal Safety and Security, Policy and Planning Division, Office of Transportation Maintenance and Office of Design. The SSO team is responsible for the following:

- Providing long term guidance on safety and system optimization to ensure consistency with program update strategies;
- Providing clarification and guidance to the 11 NYSDOT regions;
- Developing technical guidance for safety strategies described in the program update;
- Developing support materials for NYSDOT Regions in preparing safety program proposals;
- Reviewing safety program proposals; and

• Monitoring regional programs over the life of the program to ensure safety and optimization goals are met.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs) Governors Highway Safety Office Local Government Agency Tribal Agency Law Enforcement Agency FHWA Other-New York State Department of Health

Enter additional comments here to clarify your response for this question or add supporting information.

Describe coordination with external partners.

New York State coordinates regularly with external partners on safety initiatives. For example in 2016:

- NYSDOT led the development of an update to the Strategic Highway Safety Plan in 2016 and 2017. The plan was developed in coordination with local, state, federal, tribal and private organizations throughout the state.
- NYSDOT coordinated with the Governors Traffic Safety Committee, and the MPO's to define the 2018 safety targets. The coordination includes several presentations as well as a target setting workshop.
- Monthly conference calls are held with the MPO Directors and the MPO Safety Working Group to coordinate and communicate ongoing safety efforts.
- The core team that developed the statewide Pedestrian Safety Action Plan included members from NYSDOT, FHWA, GTSC, DOH and the MPOs.

Have any program administration practices used to implement the HSIP changed since the last reporting period?

No

Are there any other aspects of HSIP Administration on which the State would like to elaborate?

No

Program Methodology

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

Yes

To upload a copy of the State processes, attach files below.

File Name: <u>RED BOOK Highway_Safety_Improvement_Program Procedures__Techniques.pdf</u>

Select the programs that are administered under the HSIP.

Intersection Safe Corridor Horizontal Curve Bicycle Safety Rural State Highways Skid Hazard Roadway Departure Low-Cost Spot Improvements Sign Replacement And Improvement Local Safety Pedestrian Safety Right Angle Crash

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Bicycle Safety
i i ugi aini.	Dicycle Salety

Date of Program Methodology: 1/1/2010

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes

Exposure

All crashes Other-Priority Investigation Locations (PILS)

Volume Population Functional classification Roadside features

Roadway

2017 New York Highway Safety Improvement Program What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions 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. Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Location process mentioned above.

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 : 2 Available funding : 1 Cost Effectiveness : 2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:

Horizontal Curve

Date of Program Methodology: 11/1/1989

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
All crashes Other-Priority Investigation Locations	Volume	Median width Horizontal curvature Roadside features

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions 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. Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Location process mentioned above.

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 : 2 Available funding : 1 Cost Effectiveness : 2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:

Intersection

2017 New York Highway Safety Imp	provement Program	
Date of Program Methodology:	11/1/1989	
What is the justification for this pro	ogram? [Check all that apply]	
Addresses SHSP priority or emphasis	sarea	
What is the funding approach for t	his program? [Check one]	
Competes with all projects		
What data types were used in the p	rogram methodology? [Check all tha	at apply]
Crashes	Exposure	Roadway
All crashes Other-Priority Investigation Locations (PILS)	Volume	Functional classification

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions 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.

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Process mentioned above.

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 :2Available funding :1Cost Effectiveness :2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Local Safety	
Date of Program Methodology:	1/1/2013	
What is the justification for this pro	ogram? [Check all that apply]	
Addresses SHSP priority or emphasis	area	
What is the funding approach for th	his program? [Check one]	
Competes with all projects		
What data types were used in the p	rogram methodology? [Check all that apply]	
Crashes	Exposure	Roadway
All crashes	Volume	
What project identification method	ology was used for this program? [Check all that apply]	
Crash frequency		
Are local roads (non-state owned ar	nd operated) included or addressed in this program?	
Yes		
Are local road projects identified us	sing the same methodology as state roads?	
No		
	dentify local road projects as part of this program. SIP. Local roads are typically identified via local authorities or	

How are projects under this program advanced for implementation?

selection committee

municipalities.

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 : 2 Available funding : 1 Cost Effectiveness : 2

Locations (PILS)

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Low-Cost Spot Improvements			
Date of Program Methodology:	1/1/1999			
What is the justification for this pro	What is the justification for this program? [Check all that apply]			
Addresses SHSP priority or emphasis area				
What is the funding approach for this program? [Check one]				
Competes with all projects				
What data types were used in the program methodology? [Check all that apply]				
Crashes	Exposure	Roadway		
All crashes Other-Priority Investigation	Volume	Median width Horizontal curvature Functional classification		

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions of specific crash types Other-A project review and windshield survey is conducted as required by the SAFETAP program. Qualified staff decide upon the safety work to be done before, during and after construction to ensure safety is incorporated into maintenance projects.

Roadside features

Other-Low cost spot improvements are often recommended as a result of a highway safety investigation.

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.

Local road projects are typically identified via local municipalities or through the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other- Many nominal safety improvements are incorporated into maintenance work Other-The Priority Investigation Location process mentioned above.

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 : 2 Available funding : 1 Cost Effectiveness : 2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Pedestrian Safety

Date of Program Methodology: 11/1/1989

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Funding set-aside

What data types were used in the program methodology? [Check all that apply]

Crashes

Exposure

Other-Crashes involving pedestrians Other-Priority Investigation Locations (PILS)

Volume Population Median width Horizontal curvature Functional classification Roadside features Other-Intersection features; crosswalk features; pedestrian islands etc.

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions 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. Local road projects are typically identified via local municipalities or through the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Location process mentioned above.

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 :2Available funding :1Cost Effectiveness :2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:

Right Angle Crash

2017 New York Highway Safety Improvement Program **Date of Program Methodology:** 1/1/1989

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes

Exposure

Roadway

All crashes		Functional classification
Other-Priority Investigation	Volume	Other-Intersection features; speed
Locations (PILS)		limit etc.

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions 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. Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Location process mentioned above.

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

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Roadway Departure
i i ogram.	Roadway

Date of Program Methodology: 1/1/1989

What is the justification for this program? [Check all that apply]

Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway
All crashes Other-Priority Investigation Locations (PILS)	Volume	Median width Horizontal curvature Functional classification Roadside features

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions of specific crash types Other- CARDs are recommended for projects that will put >=40 mm of asphalt and meet the following: 1) there is no raised median or TWLTL, 2) the CARD quantity is >=1500'; 3) the posted speed >=45 mph; 4) the AADT >=2,000; and 4) the roadway width >=13'. Other-High risk factors for roadway departure crashes were identified in a statewide systemic analysis. Additional systemic programs will be investigated in the upcoming years to decrease roadway departures. Other-New York is currently working on a Lane Departure Action Plan. The plan will identify specific countermeasures for implementation under specific roadway conditions to decrease the number of lane

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

Yes

departure crashes.

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.

Local projects are usually identified when a municipality informs DOT of a safety issue or through the MPO planning. Data that shows a safety issue is required to receive funding however a detailed analysis that identifies high accident locations is not.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Location process mentioned above. Other-CARDS are an approved systemic treatment

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 :2Available funding :1Ranking based on net benefit :2Cost Effectiveness :2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Rural State Highways
Date of Program Methodology:	1/1/2010

What is the justification for this program? [Check all that apply]

Other-The State of New York's evaluation of HRRR aligns with 23 USC 148 (a)(1) and defines significant safety risks as having 'an accident rate per mile above the average crash rate per mile established for the region'

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

All crashes Other-Priority Investigation Locations (PILS)

Volume

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions 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.

Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Location process mentioned above.

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 :2Available funding :1Cost Effectiveness :2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Safe Corridor

Date of Program Methodology:	1/1/2012
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What is the justification for this program? [Check all that apply]

2017 New York Highway Safety Improvement Program Addresses SHSP priority or emphasis area

What is the funding approach for this program? [Check one]

Competes with all projects

What data types were used in the program methodology? [Check all that apply]

Crashes	Exposure	Roadway					
All crashes Other-Priority Investigation Locations (PILS)	Volume	Functional classification					
What project identification methodology was used for this program? [Check all that apply]							

Crash frequency Relative severity index Crash rate Excess proportions 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. Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

selection committee Other-The Priority Investigation Location process mentioned above.

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 :2Available funding :1Cost Effectiveness :2

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Sign Replacement And Improvement
Date of Program Methodology:	1/1/1995
What is the justification for this prog	gram? [Check all that apply]
Addresses SHSP priority or emphasis a	area
What is the funding approach for th	is program? [Check one]
Competes with all projects	
What data types were used in the pr	ogram methodology? [Check all that apply]

Crashes	Exposure	Roadway		
All crashes Other-Priority Investigation Locations (PILS)	Volume	Functional classification		

What project identification methodology was used for this program? [Check all that apply]

Crash frequency Relative severity index Crash rate Excess proportions of specific crash types Other-Signs needing improvement can be identified during a SAFETAP review or a Highway Safety Investigation. Some regions have implemented a replacement program where signs are replaced on a defined schedule.

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. Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

2017 New York Highway Safety Improvement Program selection committee Other-The Priority Investigation Location process mentioned above.

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 :	2
Available funding : 1	
Cost Effectiveness : 2	

Enter additional comments here to clarify your response for this question or add supporting information.

Program:	Skid Hazard	
Date of Program Methodology:	1/1/1995	
What is the justification for this pro-	gram? [Check all that apply]	
Addresses SHSP priority or emphasis a	area	
What is the funding approach for th	is program? [Check one]	
Competes with all projects		
What data types were used in the pr	ogram methodology? [Check all tl	hat apply]
Crashes	Exposure	Roadway
All crashes Other- Locations are identified where the percentage of wet road accidents is twice the normal proportion for the same county and facility type. Other-Priority Investigation Locations (PILS)	Volume	Functional classification

Crash frequency Relative severity index 2017 New York Highway Safety Improvement Program Crash rate Excess proportions 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?

No

Describe the methodology used to identify local road projects as part of this program. Local road projects are typically identified via local municipalities and the MPO planning process.

How are projects under this program advanced for implementation?

Other-Locations with \geq twice the normal percentage of wet road crashes are identified and friction tested. Tested locations which demonstrate one or more low friction test numbers (FN40 of 32) are treated.

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

Other-Locations with low friction test numbers (FN40 of 32) require treatment. : 1

Enter additional comments here to clarify your response for this question or add supporting information.

What percentage of HSIP funds address systemic improvements?

20

HSIP funds are used to address which of the following systemic improvements? Please check all that apply.

Rumble Strips

Other-Pedestrian Countdown Timers

Other-The Pedestrian Safety Action Plan includes systemic improvements at thousands of intersections and mid block crosswalks. Therefore the percentage of funds that address systemic improvements is expected to increase between 2017-2021.

Other-The Pedestrian Safety Action Plan includes systemic pedestrian improvements at over 3,700 uncontrolled crosswalks and signalized intersections at locations outside NYC.

Enter additional comments here to clarify your response for this question or add supporting information.

What process is used to identify potential countermeasures? [Check all that apply]

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

Enter additional comments here to clarify your response for this question or add supporting information.

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

Describe how the State HSIP considers connected vehicles and ITS technologies.

The future vision is that Connected Vehicle and Automated Vehicle technology will provide the opportunity to dramatically improve safety by decreasing the number and severity of crashes caused by human error and environmental factors on New York State roads. While guidance, testing, standards, legislation and best practices continue to evolve, it is important for transportation operating agencies to be involved in the national issues and take advantage of the technology as it is deployed.

New York State strategies noted in the 2017 SHSP include:

- 1. Remain involved in national activities that support the development of CAV technologies, standards and best practices, including the National Pooled Fund Study Group.
- 2. Express support for the pending NHTSA Notice of Proposed Rule Making for V2V communications utilizing 5.9 GHz dedicated short range communications for light vehicles.
- 3. Urge NHTSA to follow up with a similar Notice of Proposed Rule Making for heavy vehicles.
- 4. Support, encourage and participate in the development of a New York State legislative and regulatory framework that allows for the testing and deployment of Connected and Autonomous Vehicles.
- 5. Support the development of national regulations for both light and heavy vehicles.
- 6. Continue the networking of existing traffic signals and other roadside systems in a flexible, standardized framework.
- 7. Improve and standardize GIS mapping and spatial capabilities using the New York State GIS Platforms.
- 8. Continue to develop an understanding of the technology and short term and long term implications.
- 9. Support the fusion of the latest generation of automobile based sensor systems that provide advanced safety features such as automated braking, driver attention detection, forward collision warning, blind spot warning, lane departure assistance, etc. with V2V real time communications between vehicles to increase the vehicle's situational awareness.

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.

The states Safety Information Management system is used to identify High Accident Locations on the state system every year. The regions use the Highway Safety Manual as an additional source of information when performing Highway Safety Investigations.

Have any program methodology practices used to implement the HSIP changed since the last reporting period?

No

Are there any other aspects of the HSIP methodology on which the State would like to elaborate?

Yes

Describe other aspects of the HSIP methodology on which the State would like to elaborate.

New York State updated the Strategic Highway Safety Plan in 2016-2017. The vision and mission statements as stated in the New York State Strategic Highway Safety Plan are:

Vision: Roads in New York will be safer to travel for all users.

Mission: New York safety partners will advocate for those who travel by any mode, and deliver data driven safety programs to decrease the number of injuries and fatalities that occur on public roads in New York state. Together we will work to ensure safety is a top priority in all engineering, education, enforcement and emergency medical service activities.

The 2017 Strategic Highway Safety Plan includes the following emphasis areas and cross cutting issues:

Emphasis Areas

- Intersections
- Lane Departures
- Vulnerable Users
- Age-related (older and younger drivers)
- Road User Behavior
- Speed

Cross Cutting Issues

- Emergency response
- Improvement to Data

• Automated and Connected Vehicles

Intersections

From 2011-2015, 46 percent of fatalities and serious injuries in New York State were intersection-related. New York will take a multifaceted approach to solving intersection-related issues that considers the intersection design, accommodates users from all modes, and implements improvements both systemically and at intersections with a crash history. Examples of strategies include developing an Intersection Safety Action Plan, implementing intersection treatments systemically, improving the enforcement of traffic laws at intersections and supporting the use of technology and traffic incident management to improve safety at intersections.

Travel Lane Departures

Lane departure fatalities and serious injuries made up almost one-fourth of the total fatalities and serious injuries in New York (24 percent) between 2011-2015. To address the wide array of contributing factors to lane departure crashes, New York will take an approach that considers both site-specific and systemic countermeasures, as well as opportunities for education and enforcement. Strategies include the development of a Lane Departure Action Plan, and the implementation of systemic improvements that decrease the number and severity of lane departure crashes.

Centerline Audible Roadway Delineators

Engineering Instruction EI-13-021 lays out the framework and criteria for installing centerline rumble-strips on eligible roads across the state. Any project that places at least .75" of asphalt and meets the geometric/operating criteria is required to install CARDS as part of the project. Because of the low cost and proven effectiveness of centerline rumble strips, this new policy is an important tool in reducing both head-on and run-off road crashes. As of end March 2017, approximately 3,641 miles of CARDS have been installed.

Skid Accident Reduction Program (SKARP)

The SKARP program incorporates safety considerations into pavement maintenance activities. SKARP identifies sections of pavement experiencing an unusually high proportion of wet road accidents; friction tests them and schedules treatment for sections experiencing both high wet road accidents and low friction numbers. The frictional quality of NYSDOT owned pavements has improved since the programs inception. A summary of PIL testing from 1996 through 2014 shows a decline in the number of sites requiring treatment, from 91 sites in 1996 to 18 sites in 2016.

Vulnerable Users

Vulnerable users include pedestrians, bicyclists, motorcyclists, and those who work on the roadway. New York will consider infrastructure improvements, as well as opportunities to enhance education, enforcement, emergency response, and data processes in its approach to reduce fatalities and serious injuries of vulnerable users of the roadway network.

In June of 2016, NYSDOT announced its first ever statewide Pedestrian Safety Action Plan. The plan includes Engineering, Education and Enforcement measures to improve pedestrian safety. Engineering improvements include the implementation of systemic countermeasures at thousands of signalized intersections and mid-block crosswalks in urban areas between 2016 and 2021. The plan also includes pedestrian improvements at 5 new pedestrian corridors in the state (locations to be determined) as well as adding a pedestrian focus to NYSDOT's annual regional work program. The work programs study 20% of the identified Priority Investigation Locations (PILs) each year in order to determine what improvements can be made to improve safety.

Safer Corridors for Pedestrians

In 2012 NYSDOT began developing a process to evaluate corridors to improve pedestrian safety. To maximize

effectiveness, the process emphasizes coordination among the Department and other local, state and federal partners. Solutions involve not only engineering measures, but also enforcement campaigns and educational efforts.

Corridor projects have or are being been conducted on Hempstead Turnpike, Sunrise Highway (Route 27) and Route 110 corridors in Long Island; Route 5/Central Avenue and Hoosick Street (Route 7) in the Albany Capital District and Route 59 in Rockland County. The PSAP includes projects to implement safety improvements at 5 additional corridors by the end of 2021.

Complete Streets

On a statewide basis, the New York State Department of Transportation continues to apply Complete Street provisions in its project planning, programming and delivery processes.

Pedestrian and Bicycle Unit

The Pedestrian and Bicycle Unit has been reorganized within the Office of Traffic Safety to further align coordination of these alternative modes with the core safety programs and mission. The Pedestrian and Bicycle Unit has been expanded to three FTE. The Unit has been working to develop a strategic planning dialogue with the Pedestrian and Bicycle Coordinators in 11 Regions. The Unit provides coordination and staff support for the pedestrian safety initiatives and is managing an over-haul of the NY bicycle map. The project will integrate the existing bicycle network information in a single data layer and engage stakeholders in defining specific data and system requirements that will enable a more flexible and efficient management of bicycle travel options. The Unit also provides coordination/facilitation and technical/management support for the Pedestrian Safety Action Plan and the Empire State Trail statewide project.

Pedestrian Countdown Timers

Pedestrian crashes account for about 25% of all fatal crashes in New York and remain an emphasis area in New York State's Strategic Highway Safety Program. The goal for pedestrian countdown timers is to ensure that they are installed at ALL eligible state owned signals. As of end March 2017, countdown timers have been installed at approximately 2,654 (80.9%) of the 3,172 eligible signals.

Age Related

The SHSP identifies young drivers as those that are 20 and younger. Drivers that are 65 and older represent the older driver group. From 2011-2015, 7,881 drivers in both age groups were killed or seriously injured in a motor vehicle crash. During the 5-year period, 28 percent of fatal and serious injury crashes involved a young or older driver. Decreasing the number of age-related fatalities and serious injuries will be achieved through a multidisciplinary approach incorporating engineering designs to accommodate users of all ages as well as education and enforcement initiatives.

Road User Behavior and Speed

As advancements in vehicle and roadway design continue to improve safety, human behavior continues to be the biggest variable in crash risk. Creating a culture of responsible road users is essential to making a significant impact in the reduction of crashes, fatalities, and injuries. New York will implement roadway improvements that decrease the incidence of distracted and drowsy driving such as flashing beacons, and centerline and edgeline rumblestrips as well as improvements that influence driver speed such as signing and speed feedback devices, roundabouts, complete streets and road diets. Education and Enforcement efforts are most important to build awareness and promote safer driving habits.

Emergency Response and Traffic Incident Management

A traffic incident is any non-recurring event (such as a vehicle crash, a vehicle breakdown, work zone, or a special event) that causes a reduction in roadway capacity or an abnormal increase in traffic demand that disrupts the normal operation of the transportation system. Traffic incidents are an important concern in New York State because they can result in a safety issue and are a significant cause of congestion delays. In response to this problem, NYSDOT has fostered the development of a Statewide Traffic Incident Management (TIM) Program. A TIM Steering Committee was formed to guide the advancement of the statewide TIM Program in New York State. This Committee has been meeting regularly for 8 years to foster relationships among agencies, determine issues of statewide significance relating to TIM, and to develop training and guidelines for the emergency responder community to use as their everyday efforts to keep themselves and the public safe. The TIM Steering Committee assisted in the advancement of the Move Over law and also provided education on the law to executives and safety stakeholders. The Committee will continue to support similar efforts in the future.

Data Analysis Tools and Capabilities

This report is based on crash data from the Fatality Accident Reporting System (FARS), NYSDOT's Safety Information System (SIMS) and NYSDMV's Accident Information System (AIS). Crash records and roadway characteristics are analyzed to identify Priority Investigation Locations (PILs). A subset of PILS are investigated every year for the purpose of identifying safety improvements. Crash data has traditionally included fatal, injury, property damage crashes over \$1,000 (reportable PDO) and property damage accidents under \$1,000 (non-reportable). Additional factors used in developing the Priority Investigation Locations list are traffic volumes, divided or undivided and the number of travel lanes. All PIL's studied are on the State System with the exception of some New York City locations.

Status of Crash Data

The Department continues to partner with the NYS Department of Motor Vehicles (NYSDMV), the GovernorsTraffic Safety Committee, State Police and other key stakeholders to mutually re-engineer the accident and traffic violation records systems to address safety data information needs. The State continues to use a strategic planning approach to improve its various information systems as articulated in the Traffic Safety Information Systems Strategic Plan. The status of improvements that directly affect the Safety Information Management System (SIMS) are:

Crash Records

The fatal, injury, and electronically submitted Property Damage Only (PDO) crash data is complete through 12/31/16. The policies surrounding the processing of PDO crashes have changed from year to year. Therefore, it is not possible to compare PDO crash data from year to year.

Traffic and Criminal Software (TraCS)

New York State continues as an active participating state in the development and further refinement of the nationally developed software for electronic collection of ticket and traffic records. Use and Dissemination Agreements for use of the software have been signed by more than 487 different police agencies across the state in 57 counties. This represents more than one-third of all law enforcement agencies in NYS who have committed to using the software. As of December 3, 2016, 487 agencies are transmitting data through the TraCS system. This number will increase steadily as the software is deployed to additional agencies in future years. Consistent funding will be vital to achieving this goal. The software will reduce the workload at NYSDMV decreasing the time it takes to process each crash report. An upgrade was implemented to the "Spider" process which improves the data transmittal and processing between the State Police and all ticket and crash data users. In addition, there is an ongoing upgrade to the TraCS software which should help to improve data quality and reduce errors.

Post-Implementation Evaluation System (PIES)

The Post-Implementation Evaluation System (PIES) allows for actual before and after project evaluations. The system allows for: verification that projected accident reductions reported as part of the Department safety goal are reasonable and accurate; quantitative measurements of the effectiveness of the our overall capital program in improving highway safety (reducing accidents and safety benefit cost ratio); continued development of new accident reduction factors for accident countermeasures (shoulder rumble strips, roundabouts, and pavement surface treatments); and ensures that the mandated requirements are met. Updated PIES reduction factors were published this year.

Accident Location Information System (ALIS)

ALIS is a GIS web based accident location analysis tool that allows for geographic based crash analysis. This tool is available to all DOT employees, MPO rsquo;s, and county and local governments. All the MPO rsquo;s as well as New York City are using the analysis tool. In 2015 the analysis tool was upgraded to improve performance and update the reporting functions to better align with the Highway Safety Improvement Program process. New functionality for creating collision diagrams was added in 2015. The application allows users to access crash data on both the state and the local system and create Ad-Hoc queries on any public road for any time period; review MV104 data and diagrams, and produce a number of different types of reports. There are additional statistical filters available to allow the user to generate average frequency or expected percentages from a comparison area to assist in identifying "hot spots" for further analysis.

An ALIS data production project coded 343,671 intersections into the ALIS system. All sixty-two counties are complete. The data and the maintenance tool for the intersections is now in production. Reports are being designed to work with the new data and should be available by the end of the summer of 2017.

ALIS Upgrades: NYSDOT continues to add functionality and update reports to better suit the user needs. A collision diagram application within ALIS was released. An accident rate tool has been designed and built and waiting on a final LRS to conflate legacy data for use with the new tool. When in production, new crashes will automatically be located to the linear referencing system and highway attributes will be captured for any future analysis or datasets.

A new Safety Data transfer has been designed and is in development. This will move data from DMV to DOT more efficiently and accurately. An RFP will be released in July, 2017 to replace the ALIS/SIMS/PIES applications with a new Safety System that will utilize the new Safety Data Warehouse and Integrate with the other NYSDOT Enterprise systems.

Enterprise Linear Referencing System (ELRS)

The roads and highways implementation contract was approved in July 2013. The goal of the project is to build a statewide linear referencing network with maintenance workflows that are sustainable and integrate NYS business systems with the Enterprise Linear Referencing System. This will enhance the ability to perform crash analysis on all public roads. This has been moved to production with the Federal Aid Eligible roads built in the LRS.

All Public Roads

FastAct requires that as part of a State's Highway Safety Improvement Program, a State shall have in place a safety data system with the ability to perform safety problem identification and countermeasure analysis to improve the timeliness, accuracy, completeness, uniformity, integration, and accessibility of the safety data on all public roads, including non-State owned public roads and roads on tribal land. A major element toward reaching this goal is the development of local crash rates in order to conduct equitable safety analysis for both the state and local systems. In addition, NY needs to address the issue of advancing the capabilities of our traffic records system for data collection, analysis, and integration with other sources of safety data. The State continues to use a number of methods to evaluate how to reach the goal of developing and maintaining crash

data for all public roads. The ALIS system does allow users to access crash data on both the state and the local system and create Ad-Hoc queries on any public road.

Traffic Counts

Traffic count AADTs are required in order to develop crash rates for the state and local system. The Department has complete traffic volume data for almost 44,000 miles of the approximately 117,000 miles of highway in New York. The remaining 73,000 miles are primarily local streets.

The Department and counties continue to partner in a statewide county traffic count program designed to capture traffic volume data on county owned roads.

Between 2015 and 2016, the Department took 10,207 traffic counts on over 6,944 miles of non federal aid roads. These include a fair number of counts collected as part of a one-time project to help predict overall travel on the local roads for the FHWA annual HPMS report. New York State is attempting to have a 10% representation in each Municipality on the Local Roads System between this project and other counts we collect regularly.

Local Highway Route System

At this point in time, the Department does not have a complete and actively maintained Geographic Information System (GIS) for local roads. Without a local road based GIS route system, it is difficult to conduct an analysis of crash data on the local system with any parity to the state system. A project is currently underway to build a local GIS system.

Compatibility of State and Local Crash Data Analysis

The current analysis tools in the Departments Safety Information Management System (SIMS) need to be redesigned to work with a uniform GIS route system covering both state and local highways. The new analysis tools will need to be able to handle both local and state traffic volume data and highway characteristic information for all highways. Funding is in place to build these tools (SIMS-RIS-ALIS Integration Project). The redesigned system will be an interoperable system able to link crash and highway information to perform safety problem identification and countermeasure analysis on the local system as is currently being done with the State system.

New Data Projects

The New York State Department of Transportation is currently initiating several new projects designed to support our Highway Safety Improvement Program by expanding our analysis capabilities and methods to include all public roads in the state and to improve the accuracy and completeness of the safety data used. Much of this work is being accomplished through Section 402 grants received from the Governors Traffic Safety Committee (GTSC).

The first project involves modifications to the Departments existing Accident Location Information System (ALIS). These changes will integrate the ALIS system with the Departments Enterprise Linear Referencing System to provide the necessary traffic volume and highway characteristics needed for the network screening analysis that identifies High Accident Locations (HALS). Additional functionality will be added to incorporate analysis techniques being developed by Federal Highway Administration to identify systemic opportunities for improving safety in addition to the HAL locations being treated.

The second project involves the collection of up to date, accurate, reference marker and intersection locations and attributes. This data will be used to support the new crash querying and analysis processes being developed for the Accident Location Information System (ALIS).

The third project is a long term, multi-agency effort to analyze opportunities to create a more complete safety dataset that is accessible to all the partner agencies. This project would determine what data could be linked between agencies, where redundant datasets or resources could be eliminated, and how access for additional users could be created. This project is designed to establish a strategic vision for the Safety related programs in New York State.

Other

Safety Appurtenance Program (SAFETAP)

The SAFETAP, based on a Road Safety Audit approach, is a Department Program designed to ensure that roadside safety considerations are incorporated in the Departments Preventive Maintenance single course overlay projects. Under SAFETAP, a team of agency experts conduct a project review of Preventive Maintenance Paving project sites for the purpose of deciding upon simple, low cost safety improvements to be implemented at the time of construction, or soon after construction. Over 9,800 safety recommendations have been made since SFY 12/13 and approximately 5,400 of the recommendations have been completed. 31% of the work identified in SFY 15-16 is reported as completed.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

Enter additional comments here to clarify your response for this question or add supporting information.

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

FUNDING CATEGORY PROGRAMMED		OBLIGATED	% OBLIGATED/PROGRAMMED		
HSIP (23 U.S.C. 148)	\$127,987,565	\$109,977,565	85.93%		
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$0	\$0	0%		
Penalty Funds (23 U.S.C. 154)	\$0	\$0	0%		
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)	\$79,951,878	\$71,740,878	89.73%		
State and Local Funds	\$119,862,062	\$114,608,062	95.62%		
Totals	\$327,801,505	\$296,326,505	90.4%		

Enter additional comments here to clarify your response for this question or add supporting information.

Obligated Funds include Obligations and Advanced Construction dollars.

Data Source: NY PSS System. Obligation amounts include status of actual and approved. Programmed amounts include status of actual, approved and planned.

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

\$60,045,451

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

\$58,268,451

Enter additional comments here to clarify your response for this question or add supporting information.

Source: NY PSS System

Funds reported include fund source Code E09 - local government unit

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

\$7,628,294

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

\$6,278,294

Enter additional comments here to clarify your response for this question or add supporting information.

The worktypes included in this question included accident investigations, corridor studies and promotion/public education.

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?

\$0

Enter additional comments here to clarify your response for this question or add supporting information.

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

Impediments to obligating HSIP funds include project delays for reasons not limited to just safety projects such as environmental approvals, right of way/easement issues, community issues, other funding needs, resource issues, historic issues, NYS permit issues etc. In addition, the Federal Obligation Limitation that exists on all Federal funding also serves as an impediment to obligating safety funds. The following describes some of the approaches used to overcome those obstacles for HSIP projects.

Statewide Call for Projects

The application process for the statewide HSIP call for projects, requires an applicant to identify all potential barriers to a timely implementation. The barriers are one of the factors taken into consideration during the

project selection process. Thus, a project with good safety benefits but significant impediments to a timely implementation may be denied funding in favor of another safety project with less risk.

Design Services Agreement

Design resources are sometimes limited at the regional level especially for larger projects. The department implemented a statewide regional design services agreement that can be used to fund contract services to assist with design or other urgent safety project needs. The contract is funded via HSIP dollars specifically set aside for that purpose. Design services agreements are also being used for PSAP field assessments and design.

<u>Marchiselli</u>

The department will continue to support programs such as the Marchiselli Highway Improvement Program which provides funding assistance to local municipalities for approved projects. The Marchiselli program requires state and local governments to share in the cost of approved local projects. The projects are typically funded in shares of 80% Federal, 15% State and 5% local.

Low Cost Counter Measures

The NYSDOT is encouraging and implementing more low cost and systemic safety counter measures which typically have less impediments to a timely implementation and are often easier for local municipalities to implement.

Does the State want to elaborate on any other aspects of it's progress in implementing HSIP projects?

No

General Listing of Projects

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

													RELATIONS	HIP TO SHSP
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	EMPHASIS AREA	STRATEGY
See attachment									0					

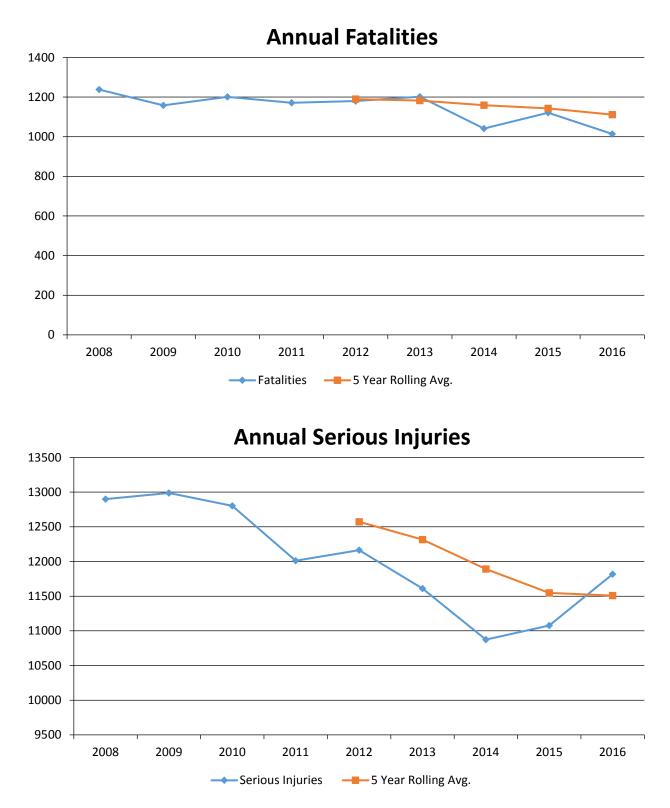
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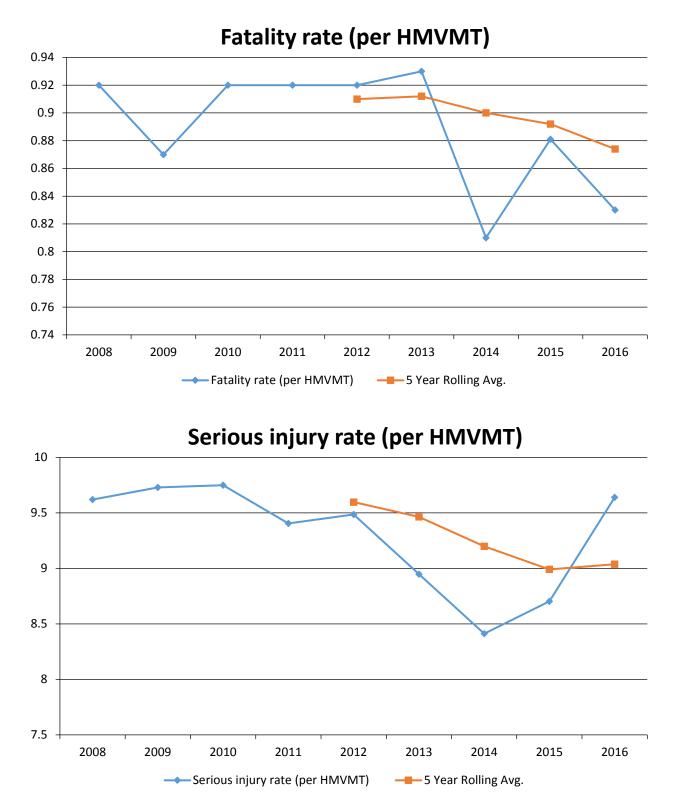
Projects are uploaded in General Listing of Projects file HSIP-HRRR 2006-Present Report.xlsx on 6/13/2017 8:59:42 AM

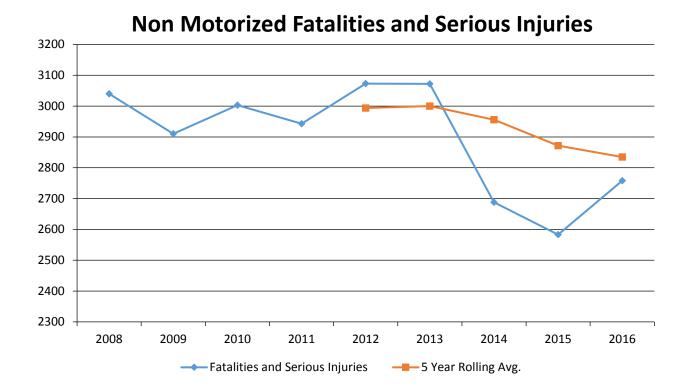
Safety Performance

General Highway Safety Trends

PERFORMANCE MEASURES	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fatalities	1,238	1,158	1,201	1,171	1,180	1,202	1,041	1,121	1,014
Serious Injuries	12,900	12,988	12,802	12,012	12,163	11,609	10,874	11,077	11,818
Fatality rate (per HMVMT)	0.920	0.870	0.920	0.920	0.920	0.930	0.810	0.881	0.830
Serious injury rate (per HMVMT)	9.620	9.730	9.750	9.405	9.486	8.948	8.412	8.703	9.640
Number non-motorized fatalities	343	338	347	344	348	376	310	343	354
Number of non-motorized serious injuries	2,697	2,572	2,656	2,599	2,725	2,696	2,378	2,240	2,404







Enter additional comments here to clarify your response for this question or add supporting information.

Describe fatality data source.

FARS

Enter additional comments here to clarify your response for this question or add supporting information.

Fatalities Data Source

FARS was used as the data source through 2015. TSSR was used as the data source for 2016 fatalities since it is not available in FARS at this time.

Serious Injuries Data Source

AIS and TSSR

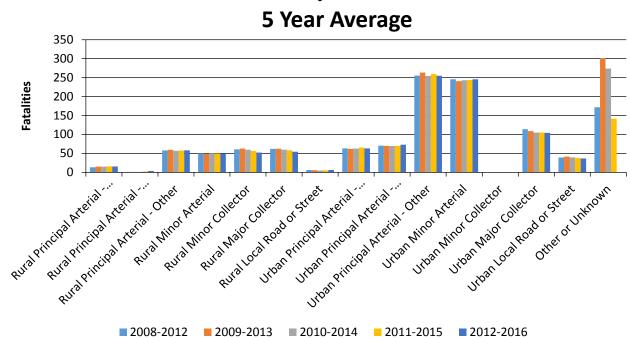
To the maximum extent possible, present this data by functional classification and ownership.

Year 2016

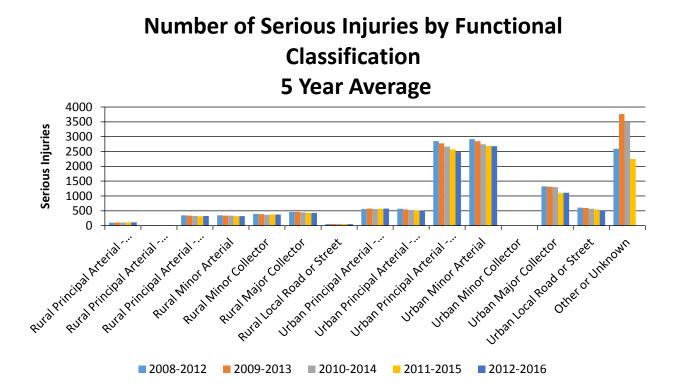
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Interstate	15.4	110.4	0.01	0.09
Rural Principal Arterial - Other Freeways and Expressways	3.8	14	0	0.01
Rural Principal Arterial - Other	58.4	323.8	0.05	0.25
Rural Minor Arterial	50.2	320.8	0.04	0.25
Rural Minor Collector	52.4	377.2	0.04	0.3
Rural Major Collector	54.2	429.4	0.04	0.34
Rural Local Road or Street	6.4	51.6	0.01	0.04
Urban Principal Arterial - Interstate	63.4	575.4	0.05	0.45
Urban Principal Arterial - Other Freeways and Expressways	73	515.8	0.06	0.4
Urban Principal Arterial - Other	255	2,480.8	0.2	1.95
Urban Minor Arterial	245.6	2,680.4	0.19	2.1
Urban Minor Collector	0	0		
Urban Major Collector	104.2	1,109.8	0.08	1.04
Urban Local Road or Street	36.6	518.4	0.04	0.41

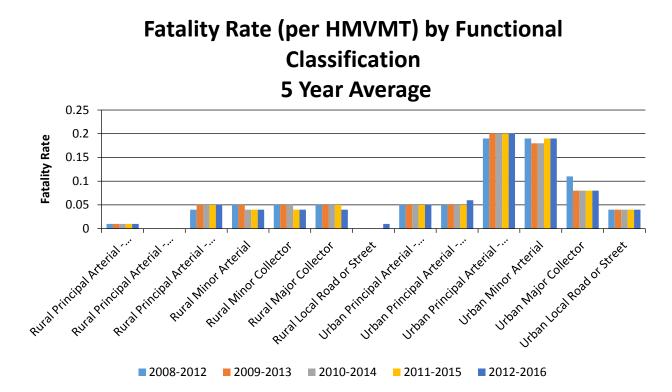
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	461.4	3,530.2	0.36	2.77
County Highway Agency	203.6	1,632.6	0.16	1.28
Town or Township Highway Agency	50.8	480	0.04	0.38
City of Municipal Highway Agency	275.4	3,856.8	0.22	3.03
State Park, Forest, or Reservation Agency	0.6	4.8	0	0
Local Park, Forest or Reservation Agency	0	0	0	0
Other State Agency	0	1.2	0	0
Other Local Agency	0.2	1.8	0	0
Private (Other than Railroad)				
Railroad				
State Toll Authority	21.8	195.4	0.02	0.15
Local Toll Authority	0.2	18	0	0.02
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation	1.2	6.4	0	0
UNKNOWN	127.8	2,149.6	0.1	1.69

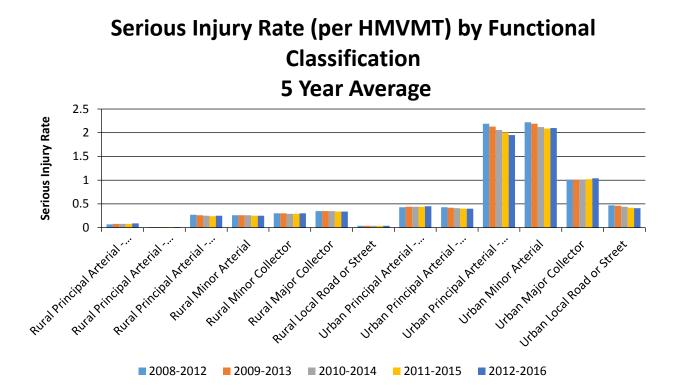
Year 2016

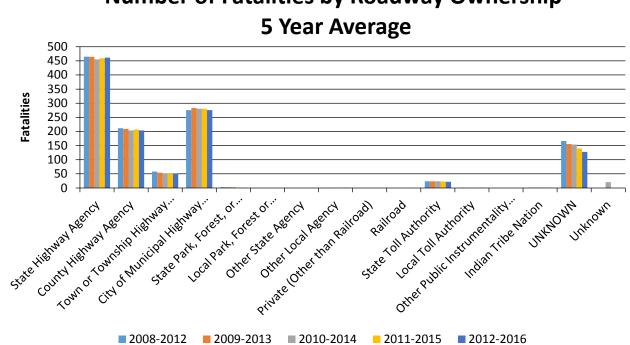


Number of Fatalities by Functional Classification 5 Year Average

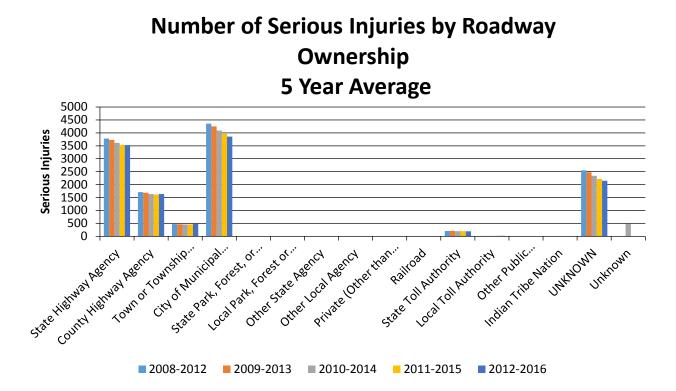


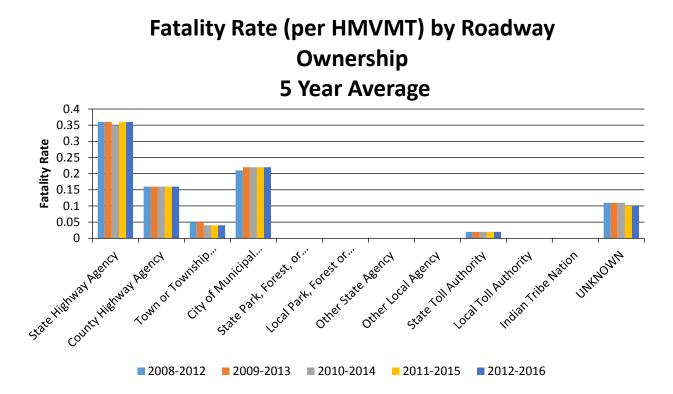


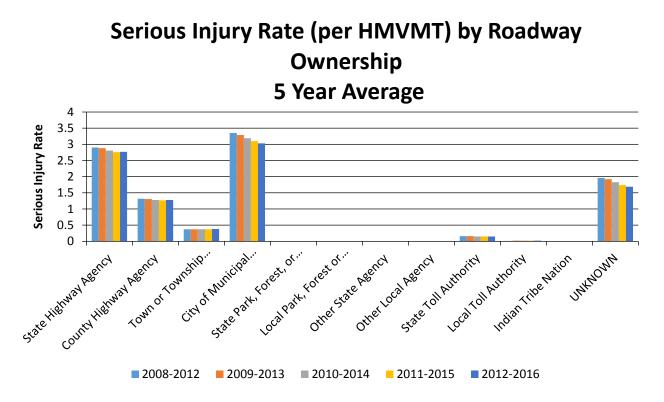




Number of Fatalities by Roadway Ownership







Enter additional comments here to clarify your response for this question or add supporting information.

The number of crashes by functional classification and ownership are general estimates. Functional classification and ownership are not available on crash reports therefore a spatial join was used to join the crash data to the inventory data using GIS. Since the linear referencing system is not fully available for the local system or the non-primary direction, many of the crashes on the local system or in the non-primary direction are included in the "Other" category using this method.

Are there any other aspects of the general highway safety trends on which the State would like to elaborate?

No

Safety Performance Targets Safety Performance Targets

Calendar Year 2018 Targets *

Number of Fatalities

1086

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

NYSDOT's Target Setting Framework 1. Estimate existing trend. A linear trendline is

used as the forecasting method. It is a clear, straightforward method recommended by FHWA. 2. The five year moving average (current year plus four preceding years) is used as the data point for each year. 3. Adjust forecast for reasonability. The percent change was rounded. 4. Adjust forecast based on external and other factors where necessary.

Number of Serious Injuries 10854

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

NYSDOT's Target Setting Framework 1. Estimate existing trend. A linear trendline is used as the forecasting method. It is a clear, straightforward method recommended by FHWA. 2. The five year moving average (current year plus four preceding years) is used as the data point for each year. 3. Adjust forecast for reasonability. The percent change was rounded and a cap of 6% increase was used between 2015-2018. 4. Adjust forecast based on external and other factors where necessary.

Fatality Rate

0.87

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

NYSDOT's Target Setting Framework 1. Estimate existing trend. A linear trendline is used as the forecasting method. It is a clear, straightforward method recommended by FHWA. 2. The five year moving average (current year plus four preceding years) is used as the data point for each year. 3. Adjust forecast for reasonability 4. Adjust forecast based on external and other factors where necessary

Serious Injury Rate

8.54

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

NYSDOT's Target Setting Framework 1. Estimate existing trend. A linear trendline is used as the forecasting method. It is a clear, straightforward method recommended by FHWA. 2. The five year moving average (current year plus four preceding years) is used as the data point for each year. 3. Adjust forecast for reasonability 4. Adjust forecast based on external and other factors where necessary.

Total Number of Non-Motorized	2843
Fatalities and Serious Injuries	2043

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

NYSDOT's Target Setting Framework 1. Estimate existing trend. A linear trendline is used as the forecasting method. It is a clear, straightforward method recommended by FHWA. 1. The five year moving average (current year plus four preceding years) is used as the data point for each year. 2. Adjust forecast for reasonability 3. Adjust forecast based on external and other factors where necessary

Enter additional comments here to clarify your response for this question or add supporting information.

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

NYSDOT communicated regularly with the SHSO and the Metropolitan Planning Organizations during the target setting process via regularly held meetings. The state also hosted a safety performance management workshop that was provided by FHWA and attended by the SHSO, Metropolitan Planning Organizations and other safety stakeholders.

Does the State want to report additional optional targets?

No

Enter additional comments here to clarify your response for this question or add supporting information.

Applicability of Special Rules

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

No

Enter additional comments here to clarify your response for this question or add supporting information.

New York Data

	2008	2009	2010	2011	2012	2013	2014	2015
VMT rural collectors and rural local (in millions)	18,264	18,268	18,168	18,094	18,058	17,795	17,469	17,293

Fatalities	214	208	244	256	252	250	173	197
1 atantics	417	200	277	250	232	230	175	177

Fatalities/100M VMT 1.171704 1.138603 1.343021 1.414834 1.395503 1.404889 0.990326 1.139189

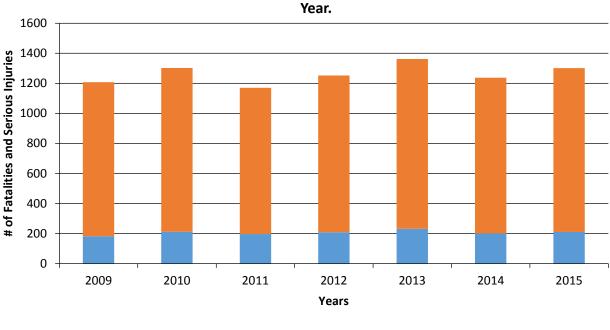
5 year average

1.013632 1.292733 1.33937 1.309714 1.268948

The HRRR rule does not apply this year since the rate for 2015 is less than rate for 2013

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

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015
Number of Older Driver and Pedestrian Fatalities	182	212	197	209	232	201	211
Number of Older Driver and Pedestrian Serious Injuries	1,026	1,091	973	1,043	1,130	1,036	1,090



Number of Older Driver and Pedestrian Fatalities and Serious Injuries by



Enter additional comments here to clarify your response for this question or add supporting information.

For purposes of this calculation, the terms "Annual rate, year XXXX" (or AR, year XXXX") means the following

F + SI for drivers and pedestrians 65 years of age and older. year XXXX / Pop. of drivers and pedestrians 65 years of age and older, year XXXX

1. Calculate Rate for 2015

Calculate the following to two decimal places, then round to the nearest tenth:

AR 2015 + AR 2014 + AR 2013 + AR 2012 + AR 2011

2. Calculate Rate for 2013:

Calculate the following to two decimal places, then round to the nearest tenth

AR 2013 + AR 2012 + AR 2011 + AR 2010 + AR 2009

3. Compare Rates for 2015 to Rate for 2013

If the rate for 2015 (under step #1) exceeds the rate for 2012 (under step #2), then the Special Rule applies

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries

Enter additional comments here to clarify your response for this question or add supporting information.

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

The 2010 SHSP set goals to reduce motor vehicle fatalities from 1,231 in 2008 to 1,035 in 2014 and to reduce the fatal crash rate per 100 million vehicles traveled from .87 in 2008 to .74 in 2014. In 2014, the state reported a decrease in both fatalities (1,041) and the rate of fatalities (.81). Although the number of fatalities and the fatality rate was short of the goal set in the 2010 SHSP, the 5-year rolling averages show steady downward trends. The fatality rate in New York has been below 1.0 per 100M VMT since 2007. Serious injuries decreased over 12% between 2008 and 2015 and also show a consistent downward trend.

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

miles improved by HSIP
More systemic programs
RSAs completed
Policy change
Increased awareness of safety and data-driven process
Increased focus on local road safety
HSIP Obligations

Enter additional comments here to clarify your response for this question or add supporting information.

Are there any significant programmatic changes that have occurred since the last reporting period?

Yes

Describe significant program changes that have occurred since the last reporting period.

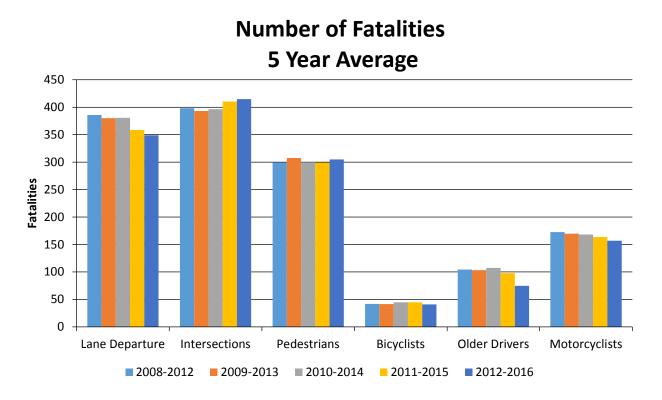
The most significant changes in the program in 2016 were the establishment of 2018 targets, the update of the SHSP and a renewed focus on pedestrian safety.

Effectiveness of Groupings or Similar Types of Improvements

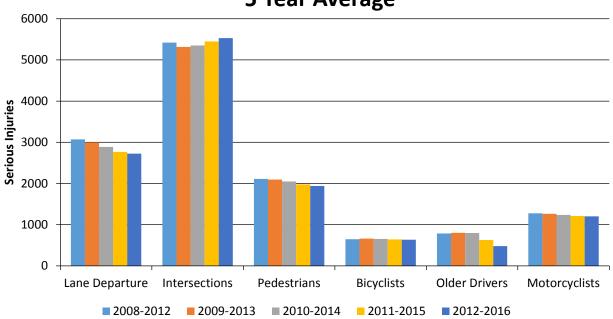
Present and describe trends in SHSP emphasis area performance measures.

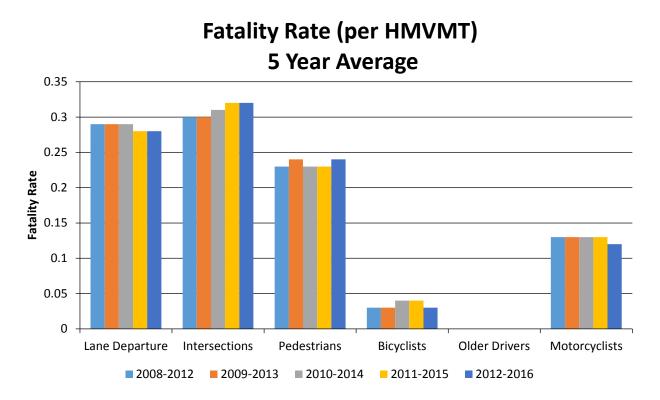
SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Lane Departure		348.8	2,724.6	0.28	2.14			
Intersections		414.8	5,531.6	0.32	4.35			
Pedestrians		304.8	1,941	0.24	1.52			
Bicyclists		41	634.4	0.03	0.5			
Older Drivers		74.6	481.6					
Motorcyclists		156.8	1,201.2	0.12	0.94			

Year 2016

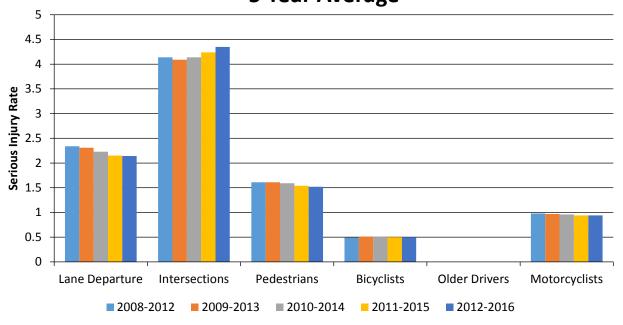








Serious Injury Rate (per HMVMT) 5 Year Average



Enter additional comments here to clarify your response for this question or add supporting information.

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

No

Enter additional comments here to clarify your response for this question or add supporting information. NYSDOT has a Post Implementation Evaluation System (PIES) that provides information such as crash modification factors and before and after crash statistics on safety projects. Reports can be run at the project level or for specific countermeasures to see before and after and crash modification factors. Regions review the information on a regular basis.

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 INJURY BEFORE	ALL INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
Question is optional.														

Enter additional comments here to clarify your response for this question or add supporting information.

Are there any other aspects of the overall HSIP effectiveness on which the State would like to elaborate?

No

Compliance Assessment

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

06/13/2017

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?

2021

Enter additional comments here to clarify your response for this question or add supporting information.

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

	NON LOC/ ROADS - S	AL PAVED SEGMENT		CAL PAVED TERSECTION		CAL PAVED - RAMPS	LOCAL PAV	ED ROADS	UNPAVE	DROADS
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					100	100	0	0
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	100		
Surface Type (23)	100	100					100	100		
Begin Point Segment Descriptor (10)	100	100					100	100	0	0
End Point Segment Descriptor (11)	100	100					100	100	0	0
Segment Length (13)	100	100								
Direction of Inventory (18)	100	100								
Functional Class (19)	100	100					100	100	0	0
Median Type (54)	100	100								

2017 New Tork High	NON LOCA ROADS - S	AL PAVED	NON LOCA ROADS - INT	AL PAVED ERSECTION	NON LOC/ ROADS -	AL PAVED RAMPS	LOCAL PAV	ED ROADS	UNPAVEI	ROADS
MIRE NAME (MIRE NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Access Control (22)	100	100								
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	100					100	100		
Average Annual Daily Traffic (79)	100	100					100	100		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	100					100	100	0	0
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				
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				

	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 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)					70	70				
Type of Governmental Ownership (4)					70	70				
Totals (Average Percent Complete):	100.00	100.00	100.00	100.00	94.55	94.55	100.00	100.00	0.00	0.00

Enter additional comments here to clarify your response for this question or add supporting information.

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.

NYSDOT currently has counts and year of the count on approximately 3,700 of 5,400 ramps. The plan is to count the remaining ramps in the next two rounds of three-year traffic counting contracts starting in 2019.

Provide the suspected serious injury identifier, definition and attributes used by the State for both the crash database using the table below. Please also indicate whether or not these elements are compliant with the MMUCC 4th edition criteria for data element P5. Injury Status, suspected serious injury.

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
Crash Report Form	several fields - see comments	No	N/A	No	N/A	No
Crash Report Form Instruction Manual	several fields - see comments	No	see comments	No	see comments	No
Crash Database	several fields - see comments	No	N/A	No	N/A	No
Crash Database Data Dictionary	several fields - see comments	No	see comments	No	see comments	No

Please describe the actions the State is taking to become compliant by April 15, 2019.

The Suspected Serious injury definition includes two injury types (crush injuries and paralysis) that do not exist on the Police Accident Report. Including those injuries in the definition requires that they be added to the Police Accident Report paper form as well as to the electronic TraCS form and the Accident Information System (AIS). Because of the process involved and the IT resources needed to add the additional injury types, it will be problematic for New York to fully comply with the MMUCC 4th Edition definition of "suspected serious injury (A)" by April 15, 2019. The state is currently investigating methods that will make it easier to upgrade and change the NY crash applications as requirements change. For example there is an RFP out to replace the Safety Information Management System (SIMS), the Accident Locations Information System (ALIS) and the Post Implementation Evaluation System (PIES). There is also an RFI to seek input on the possibility of outsourcing the processing of crash data.

Enter additional comments here to clarify your response for this question or add supporting information.

There are 3 fields on the Police Accident Report that are used to identify whether an injury is a serious injury of type A. The fields are Location of Most Serious Complaint, Type of Physical Complaint, and Victims Physical and Emotional Status.

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

Yes

Describe the purpose and outcomes of the State's HSIP program assessment.

The states Strategic Highway Safety Plan was updated in 2017. The update included a review of the data as well as the emphasis areas in the 2010 plan. The emphasis areas were re-organized in the 2017 plan to incorporate the states safety priorities over the next 5 years.

Optional Attachments

Program Structure:

RED BOOK Highway_Safety_Improvement_Program Procedures_Techniques.pdf

Project Implementation:

HSIP-HRRR 2006-Present Report.xlsx

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 or ial the age of 65 in a State increases during the most recent 2-year period for which data available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidan- 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.	