VIRGINIA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2018 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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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 Fiscal Year (FY) 2018 annual report to the Federal Highway Administration (FHWA) describes the Virginia Department of Transportation (VDOT)'s strategic use of FAST-ACT funding of the Commonwealth's Highway Safety Improvement Programs (HSIP) for the period July 2017 to June 2018.

FAST-ACT continued the HSIP as a core program under Sections 148 and 130 of US Code Title 23. Under Section 154, surface transportation program and national highway performance program funds are transferred to be used for HSIP eligible proposals because Virginia does not have all the required components in its Open Container legislation. As a result, VDOT's HSIP is composed of the following sub-programs utilizing the above mentioned federal funding sources (23 USC Sections):

A) Highway Safety Projects (HSP): Section 148
B) Bicycle and Pedestrian Safety Projects (BPSP): Section 148
C) Penalty Transfer-Open Container (OC) Projects: Section 154
D) High Risk Rural Roads (HRRR): Section 148

A link to the HSIP guidelines, safety proposal submission documentation, and resource information is provided on-line at http://www.virginiadot.org/business/ted_app_pro.asp

Note: Under ACTION: 23 U.S.C. 148(g) (1) Fiscal Year (FY) 2018 High Risk Rural Roads (HRRR) Special Rules. Virginia was identified as experiencing an increase in its fatality rate on rural roads over the most recent two-year period. Therefore, the State must obligate a specific amount of funds toward HRRR safety projects in the next fiscal year.

Virginia's Strategic Highway Safety Plan

In 2016, VDOT completed a multi-agency and disciplinary update of the Commonwealth's Strategic Highway Safety Plan (SHSP). In 2017, FHWA's Virginia Division approved Virginia's SHSP. VDOT continues to coordinate with its safety partners and implement the SHSP engineering strategies to drive investment decisions to improve safety and reduce deaths and injuries for this reporting period.

Many safety partners are working towards reducing the number and severity of vehicle crashes on the Commonwealth's highways. Virginia's HSIP is structured to focus on infrastructure safety emphasis areas that may be improved with low cost minimal environmental impact (no right of way) engineering countermeasures, namely:

A) Intersection geometry and traffic control
B) Roadway and roadside improvements
C) Bicycle and pedestrian risk reductions

New FY2018 Projects

The Commonwealth of Virginia is committed to developing and maintaining a safe, multimodal transportation system. The VDOT district offices spending targets are based on level FHWA funding in future years. Districts considered systemic, corridor and intersection improvements for all users on priority routes and intersections

identified in the crash data. Districts submitted safety proposals and these proposals included high crash locations, along roadway segments, and systemic highway and pedestrian risk locations. New HSIP project planning and development processes for HSIP program have been developed in consultation with FHWA given the FAST ACT guidelines, final ruling (policy) and funding provided. As such, adding new safety projects to Virginia's Six-Year Improvement Program (SYIP) and Statewide Transportation Improvement Plan (STIP) will only be considered if Virginia's Highway Safety Improvement Program Implementation Guidelines are followed.

The Virginia Department of Transportation (VDOT) emphasizes data-driven decision-making and desires to improve safety and safety data. From this desire, VDOT implemented a comprehensive set of State-specific Safety Performance Functions (SPFs) covering 98 percent of its State-maintained roadway locations. The impetus for VDOT developing their own SPFs and analytical tools arose from the decision that AASHTOWare Safety Analyst™ did not meet their needs. VDOT developed State-specific SPFs using historical crash, traffic, and roadway inventory data. SPF developers worked closely with engineers throughout the development process to see whether each SPF was implementable for all types of improvements (spot, corridor, and systemic). To date, VDOT has developed 24 SPFs covering a majority of roadway facilities, including two-lane roads, intersections, and freeways/multi-lane highways.

After performing network screening, the VDOT central office identifies the top 100 sections and top 100 miles of segments with the largest Potential for Safety Improvement (PSI). The list is then sent to the district engineers who determine which sites to prioritize based on practical experience and knowledge of their area. VDOT has noted several benefits of Virginia’s SPF implementation effort. For example, the advanced data-driven process leads to better use of funds, benefits for both systemic and spot improvements are quantifiable, VDOT can better manage public concerns, and VDOT can compare locations to prioritize projects. The SPF development team conducts training (including an annual “roadshow” to all nine districts) and hosts webinars to ensure district engineers understand the methodology and how to use the SPFs. VDOT has not mandated the use of SPFs and PSIs by the districts because the process of introducing a new methodology takes time, but the district engineers know it is the preferred method for network screening.

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.

The primary objective of the HSIP is to identify and improve locations where there is a high concentration, or risk, of vehicle crashes that results in deaths, or injuries. Each year, HSIP staff fulfills transportation safety planning requirements by producing listings of high severe crash intersections and highway sections on VDOT maintained roadways and distribute them to VDOT Traffic Engineering staff. Safety proposals are not limited to the locations that are identified by VDOT staff.

HSIP staff conducts network screening for the engineering emphasis areas in Virginia's Strategic Highway Safety Plan (SHSP). Priority SHSP emphasis area maps are generated to rank intersection-related crash locations and routes with the most severe roadway departure crashes in each district. VDOT districts use the safety data mapping information with local knowledge to initiate engineering study of the locations identified with the most severe crashes. Detailed crash analysis and site evaluation is typically conducted through a documented engineering study or Road Safety Assessment (RSA).

VDOT also utilizes the systemic approach methodology which provides a consistent framework for addressing risk using the HSIP process by focusing on identifying system-wide roadway safety concerns and strategies to address these concerns. Applying a systemic approach to addressing safety is beneficial to proactively address widespread safety issues and cost-effectively minimize crash potential. Rather than focus on specific crash locations, a systemic approach targets consistent crash trends and common risk factors in crashes throughout the roadway network.

Once projects have been programmed and funds have been allocated, HSIP staff monitors the projects from scoping through construction to the final voucher. The project monitoring process consists of tracking changes that occur to the following functions: advertisement dates, funding authorization dates, engineer’s estimates and expenditures. Two activities are monitored and measured to ensure that the HSIP projects are being delivered on time and on budget. HSIP project schedules and cost both directly affect the Federal Strategy and VDOT’s ability to meet their Obligation Authority for the HSIP Program.

Where is HSIP staff located within the State DOT?

Engineering

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

In Virginia the Traffic Engineering Division falls under the direction of the Chief Engineer who is responsible for all Engineering and Operations Management for VDOT.

How are HSIP funds allocated in a State?

Central Office via Statewide Competitive Application Process
Formula via Districts/Regions

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

HSIP funding target amounts based on the combination of each District's proportion of Equivalent Property Damage Only values and rates. The Equivalent Property Damage Only (EPDO) method allows crash severities to be weighted to give more weight to serious crashes. EPDO weights are determined by FHWA's estimated costs to society of the various crash severity levels. The highway safety funding target formula for each VDOT District based on the EPDO method is the following:

% Funds Per District = .5*(% of Statewide EPDO Crashes + % of Statewide EPDO Crash Rate)

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

Local roads safety proposals are required to follow the same prioritization method as VDOT proposals. The proposed project must fit into their safety prioritization and they are encouraged to develop systemic safety projects. In order to assist localities with their prioritization of strong safety proposals VDOT publishes the known locations of all reportable crashes which have occurred within the last 12 months. It should be data driven as well as have the support of the local governing body. Localities submit their proposals through the VDOT Smart-Portal intake system the same as VDOT submittals. The local VDOT District Office will include the localities proposals as part of the district submittal for review. As part of the submittal process workflow VDOT district offices must validate all safety proposals submitted by the localities before submitting for evaluation. The locality is responsible for providing all supporting documentation pertaining to the proposed safety improvement application including but not limited to crash history and local support for the proposal. Local roads account for approximately 40 percent of all crashes and 20 percent of all fatal and serious injury crashes on Virginia's highways. Therefore, local safety projects are targeted to received up to 20 percent of Virginia's HSIP funds for implementation and completion of their safety projects. VDOT has been providing the state match to these safety projects for the past several years.

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

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

Describe coordination with internal partners.

VDOT provides statewide data analysis to develop the Potential for Safety Improvements (PSI) locations for all state routes. This information is provided to the Districts and local agencies through avenues such as webinars and the Virginiadot.org website Safety Portal. VDOT also utilizes its Strategically Targeted Affordable Roadway Solutions (STARS) Program managed by the Transportation Mobility and Planning Division to address congestion and safety concerns throughout the state.

The HSIP projects are programmed through Virginia's Six-Year Improvement Program. Projects were programmed with the appropriate FY allocations needed for a specific phase to be delivered.

Central Office Traffic Engineering HSIP staff shared information with each District regarding FAST-ACT requirements, the SHSP Emphasis Areas, and all related safety data. Each district is provided target spending that is align with fatality and serious injuries. As part of this outreach program, HSIP staff presented the target of allocating ten percent to bike and pedestrian safety projects. At least ninety percent of HSIP Section 148 of the previously unallocated future funds would be programmed on existing and new highway safety projects.

Identify which external partners are involved with HSIP planning.

Local Government Agency
FHWA
Other-District/Design/Pe and Planning Staff

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

Describe coordination with external partners.

Traffic Engineering presented the HSIP to local government representatives at the Local Programs Workshop held in Virginia Beach in 2017. The focus of the workshop was to communicate with our external stakeholders on the various tools of the HSIP. Review on how to apply for the appropriate safety funds. We provided information on clarification of eligibility, the application and project selection process through the SMART-Portal and the availability of funding resources for their proposals. Using the Tableau software VDOT HSIP team developed both a Crash Analysis Tool and HSIP Project Tracking Tool that is available to our external partners for developing their HSIP safety proposals. These tools are available to our external partners once they have requested an OutsideVDOT logon from any HSIP Team member. The main role of our external partners such as MPOs, and PDCs are the coordination with local government to set or established obtainable target that coincide with the Department's SHSP goal. To achieve this objective VDOT has held a series of meetings and webinars with local government entities as well as with 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?

Yes

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

Pedestrian fatalities in Virginia have increased by 19 percent since 2012, according to the 2017 Virginia Department of Transportation (VDOT) Pedestrian Crash Assessment: Analysis of Pedestrian Crashes Occurring Between 2012-2016. In response to the continuing increase in pedestrian fatality rates, the VDOT Traffic Engineering Division completed an inaugural statewide Pedestrian Safety Action Plan (PSAP) in early 2018. This report documents the process VDOT followed to complete the PSAP, considers ways to improve pedestrian safety, and ultimately reduce pedestrian fatalities throughout the Commonwealth. VDOT worked with a multidisciplinary group of stakeholders to identify and address pedestrian safety concerns through a data driven approach. This approach included identifying and addressing locations with a history of pedestrian safety crashes along with proactively addressing pedestrian crash risk through the identification of priority corridors. This report complements other pedestrian safety efforts in the state, including the Virginia 2017–2021 Strategic Highway Safety Plan, VDOT Highway Safety Improvement Program, SMART SCALE, Transportation Alternatives Program, and Safe Routes to School program. Local, regional, and state agencies should review this report to identify and implement potential counter-measures, update design policies, and supplement other state pedestrian safety initiatives.

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:
FINAL VDOT HSIP Implementation Manual.pdf
FINAL VDOT RSA Manual.pdf
VDOT_Crash_Data_Manual_Nov2017.pdf
Final_Pedestrian_Study.pdf

Select the programs that are administered under the HSIP.

Intersection
Bicycle Safety
Roadway Departure
Pedestrian Safety
HRRR

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

Program: Bicycle Safety

Date of Program Methodology: 7/1/2003

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	Traffic	Functional classification
Other-Risk Reduction	Volume	Roadside features

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

Crash frequency
Other-Available facilities

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Competitive application process

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).

Relative Weight in Scoring

Cost Effectiveness : 10

Other-Community Support and comprehensive network plan : 15
Other-Problem identification inc crashes and risk : 30
Other-Solution study and selection to mitigate risk : 45

Total Relative Weight : 100

Program: HRRR

Date of Program Methodology: 8/22/2018

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

FHWA focused approach to safety

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	Roadway
Fatal and serious injury crashes only	Traffic Volume	Functional classification

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

Equivalent property damage only (EPDO Crash frequency)
Excess expected crash frequency using SPFs

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Competitive application process

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 : 1
Cost Effectiveness : 3

Other-Targeted K+A crashes : 2

Program: Intersection

Date of Program Methodology: 7/1/2003

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	Traffic Volume	
Fatal and serious injury crashes only		

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

Crash frequency
Crash rate
Excess expected crash frequency with the EB adjustment

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Competitive application process

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 : 1
Available funding : 3

Other-Targeted K+A crashes/people : 2

Program: Pedestrian Safety

Date of Program Methodology: 7/1/2003

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-Risk Reduction	Traffic Volume Population	Median width Functional classification Roadside features

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

Crash frequency
Other-Community Support and Missing sidewalk

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Competitive application process

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).

Relative Weight in Scoring

Cost Effectiveness : 10

Other-Communitysupport, benefit-need and pedestrian accessability : 15
Other-Problem identification inc crashes and risk : 30
Other-Solution proposed for improvement to mitigate risk : 45

Total Relative Weight : 100

Program: Roadway Departure

Date of Program Methodology: 7/1/2010

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	Roadway
		Median width
All crashes	Traffic	Horizontal curvature
Fatal and serious injury crashes only	Volume	Functional classification
		Roadside features

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

Crash frequency
Crash rate
Excess expected crash frequency using SPFs
Excess expected crash frequency with the EB adjustment

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Competitive application process

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 : 1
Available funding : 3

Other-Targeted K+A crashes and people : 2

What percentage of HSIP funds address systemic improvements?

30

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

Rumble Strips
Pavement/Shoulder Widening
Add/Upgrade/Modify/Remove Traffic Signal
Horizontal curve signs
High friction surface treatment

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)
Add/Upgrade/Modify/Remove Traffic Signal
High friction surface treatment

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.

To maximize the benefit of the new technology available. VDOT launched several Advance Traffic Signal Systems (ATS) safety projects in all nine of its construction districts. These projects consisted of advance communication technology for the traffic controllers as well hardware and software to manage pre-emption and conflict monitors. The ITS technology was deployed for Flashing Yellow Arrow (FYA) technology to ensure that the agency was using the most current technology on its safety projects.

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.

VDOT emphasizes data-driven decision-making and makes safety data improvement a focus of continuous effort and long-term planning. From this desire, VDOT implemented a comprehensive set of State-specific Safety Performance Functions (SPFs) covering 98 percent of its State-maintained roadway locations. VDOT developed State-specific SPFs using five-years of historical crash, traffic, and roadway inventory data. To date, VDOT has developed 24 SPFs covering a majority of roadway facilities , including two-lane roads, intersections, and freeways/multi-lane highways. For each facility/location type, VDOT developed two separate SPFs: one for total crashes and the other for fatal + Injury crashes. Actual crash frequency for any specific location can be compared to the SPF for locations of that type to see if, for the level of traffic volume, the location has more than the predicted number of crashes.

VDOT incorporates the comparisons of actual- to predicted-crash frequencies in is network screening and provides district engineers with a list of top 100 intersections and top 100 miles of roadway segments drawn from those locations that are above the SPF. VDOT uses the most recent years three years of crash data to calculate the Potential for Safety Improvements (PSI). The PSI is the expected number of crashes for the site minus the predicted number of crashes based on the SPF for that facility type. As with SPFs, VDOT calculates

the PSI for total crashes and fatal + injury crashes. A site with a positive PSI warrants examination and those with highest PSI values should be considered high priority.

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.

VDOT's Traffic Engineering Central Office administers the HSIP program and provides the VDOT District Offices with Targeted Safety Needs (TSN) intersections and segments based in the Highway Safety Manual (HSM) network screening methodology. VDOT districts uses this information with local knowledge to initiate further engineering studies of the locations and scope projects to be submitted for inclusion in its Six-Year Program.

Depending on the scale and complexity of the projects, VDOT district offices conduct Roadway Safety Assessments (RSA) as determined by the VDOT District Traffic Engineer. To assist the District Traffic Engineer with conducting these RSAs, VDOT's Highway Safety Program developed Virginia specific guidelines for performing these assessments.

The Equivalent Property Damage Only (EPDO) method allows crash severities to be weighted to give more weight to serious crashes. EPDO weights are determined by FHWA’s estimated costs to society of the various crash severity levels. For the purpose of the funding formula, only injury crashes will be included in the EPDO formula calculation. The highway safety funding target formula for each VDOT District based on the EPDO method is the following:

% Funds Per District = .5*(% of Statewide EPDO Crashes + % of Statewide EPDO Crash Rate)

Rural areas tend to have higher severe crash rates while urban areas tend to have more total crashes and, therefore, a greater proportion of overall crashes. By including equal credit for the proportion of total EPDO crashes and crash rate in the formula, this method balances the distinct challenges of urban and rural Districts.

HSIP projects in Virginia are included as part of the Integrated Six-Year Program (iSYP). As part of the iSYP these projects are reviewed and discussions are held with each district after project submittals for re-prioritizing and scheduling compliance.

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.

The reporting period is the Virginia Fiscal Year which is July 1, 2017 to June 30, 2018.

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$38,400,998	$30,458,832	79.32%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$4,459,774	$4,459,774	100%
Penalty Funds (23 U.S.C. 154)	$12,811,307	$13,686,860	106.83%
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)	$0	$0	0%
State and Local Funds	$0	$0	0%
Totals	$55,672,079	$48,605,466	87.31%

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

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

$1,596,427

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

$1,596,427

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

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

$3,104,999

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

2018 Virginia Highway Safety Improvement Program
$3,104,999

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

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.

Having realistic and attainable project schedules may be considered as an impediment to obligating HSIP funds. Though there has been an increase in the ability of local administered projects to meet its obligation requirements, this remains an area where the department has concern. As well as a few Engineering Districts have struggled in the project development of HSIP funded safety projects. These results in some projects missing let dates and HSIP funds not being used for those projects in the planned years. To overcome these project delivery issues, the Highway Safety Section is working with the District Traffic Engineers to track the milestones of HSIP projects to ensure design project managers stay on schedule to deliver good safety improvement projects on time. A District's past project delivery track record may also become part of a weighted criteria for HSIP set aside project selection.

VDOT will continue to work through its district offices to provide guidance and support in the project development of these safety projects.

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.

													RELATIONSHIP 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**
87905	Alignment	Vertical alignment or elevation change	0.701	Miles	$477307	$2924072	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Major Collector	1,000	55	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
103503	Interchange design	Interchange design - other	.033	Miles	$350000	$2400811	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Major Collector	2,700	45	State Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
104189	Alignment	Horizontal curve realignment	.257	Miles	$4640518	$6630544	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,600	50	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
104337	Intersection geometry	Auxiliary lanes - add acceleration lane	.4	Miles	$1817119	$3040802	HSIP (23 U.S.C. 148)	Other	19,000	55	State Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
104679	Intersection traffic control	Modify control - no control to roundabout	1	Locations	$2984364	$2987545	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,600	45	State Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
105597	Pedestrians and bicyclists	Install sidewalk	.11	Miles	$712992	$920000	HSIP (23 U.S.C. 148)	Other	48,000	50	State Highway Agency	Spot	Pedestrians	Identify corridors and locations having concentrations of pedestrian activity or the potential for c
106240	Pedestrians and bicyclists	Crosswalk	11	Locations	$1817236	$1817237	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Systemic	Pedestrians	Identify corridors and locations having concentrations of pedestrian activity or the potential for c

													RELATIONSHIP 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**
106942	Intersection traffic control	Modify control - modifications to roundabout	1	Locations	$1900000	$950000	HSIP (23 U.S.C. 148)	Urban Major Collector	3,900	35	State Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
107014	Shoulder treatments	Widen shoulder - paved or other	1.86	Miles	$1690344	$1690344	HSIP (23 U.S.C. 148)	Other	11,000	60	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
107019	Shoulder treatments	Widen shoulder - paved or other			$2065100	$3000000	Penalty Funds (23 U.S.C. 154)	Rural Minor Arterial	0		State Highway Agency	Systemic	Lane Departure	Upgrade and improve shoulders to provide pavement, particularly on the Primary System, where possibl
107051	Roadway	Roadway - other	8.07	Miles	$4177593	$4205000	Penalty Funds (23 U.S.C. 154)	Rural Minor Arterial	5,200	55	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
107053	Roadway	Roadway - other	2.34	Miles	$1681569	$1681569	HSIP (23 U.S.C. 148)	Rural Minor Arterial	15,000	55	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
107072	Roadway	Rumble strips - edge or shoulder	18.95	Numbers	$3028647	$3028647	HSIP (23 U.S.C. 148)	Other	6,100	55	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
107096	Roadway	Rumble strips - edge or shoulder			$700000	$700000	HSIP (23 U.S.C. 148)	Rural Minor Collector	0		State Highway Agency	Systemic	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
107097	Intersection traffic control	Modify traffic signal - add backplates with retroreflective borders			$1211068	$2940000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	0		State Highway Agency	Systemic	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
107098	Roadway	Pavement surface - high friction surface			$1000000	$1000000	HSIP (23 U.S.C. 148)	Rural Major Collector	0		State Highway Agency	Systemic	Roadway Departure	Reduce the likelihood of vehicles leaving

													RELATIONSHIP 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**
														the travel lane(s) at locations with a history of or highe
107123	Roadway	Rumble strips - edge or shoulder	10	Miles	$1385004	$1385004	HSIP (23 U.S.C. 148)	Other	4,900	60	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
107769	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	8.8	Miles	$2850000	$6758000	Penalty Funds (23 U.S.C. 154)	Urban Principal Arterial (UPA) - Interstate	153,000	55	State Highway Agency	Spot	Other	Improve user comprehension of and compliance with intersection and interchange traffic control devic
108077	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists			$82000	$1065000	Penalty Funds (23 U.S.C. 154)	Other	0		State Highway Agency	Systemic	Bicyclists	Identify corridors and locations having concentrations of bicycle activity or the potential for cras
108793	Intersection traffic control	Modify traffic signal - add flashing yellow arrow			$410000	$410000	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Systemic	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
108896	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	.5	Miles	$250000	$7000000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	8,700	35	City of Municipal Highway Agency	Spot	Pedestrians	Identify corridors and locations having concentrations of pedestrian activity or the potential for c
109558	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	2	Locations	$21251	$21251	HSIP (23 U.S.C. 148)	Urban Major Collector	16,000	35	City of Municipal Highway Agency	Systemic	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
109562	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	2	Locations	$22561	$22561	HSIP (23 U.S.C. 148)	Urban Major Collector	23,000	35	City of Municipal Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi

													RELATIONSHIP 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**
109566	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	1	Locations	$10749	$10749	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	40,000	45	City of Municipal Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
109567	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	1	Locations	$10749	$10749	HSIP (23 U.S.C. 148)	Urban Minor Arterial	7,000	25	City of Municipal Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
109569	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	2	Locations	$22690	$22690	HSIP (23 U.S.C. 148)	Urban Minor Arterial	22,000	30	City of Municipal Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
109590	Pedestrians and bicyclists	Install new crosswalk	.217	Miles	$576774	$391590	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,100	35	City of Municipal Highway Agency	Spot	Pedestrians	Identify corridors and locations having concentrations of pedestrian activity or the potential for c
110108	Shoulder treatments	Pave existing shoulders	19.5	Miles	$4700640	$1580522	Penalty Funds (23 U.S.C. 154)	Rural Minor Arterial	4,700	55	State Highway Agency	Spot	Lane Departure	Maintain shoulders to reduce debris and edge drop offs. Use beveled pavement wedges, particularly on
110829	Roadway	Pavement surface - high friction surface	1.9	Miles	$776137	$1110000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Interstate	33,000	70	State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
111832	Roadway signs and traffic control	Curve-related warning signs and flashers			$500000	$500000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	0		State Highway Agency	Spot	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
111976	Roadway	Rumble strips - edge or shoulder	23.24	Miles	$126079	$126079	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,200	55	State Highway Agency	Spot	Lane Departure	Maintain shoulders to reduce debris and edge drop offs. Use beveled pavement

													RELATIONSHIP 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**
														wedges, particularly on
111977	Roadway	Rumble strips - center	21.52	Miles	$64625	$100000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,500	55	State Highway Agency	Spot	Lane Departure	Maintain shoulders to reduce debris and edge drop offs. Use beveled pavement wedges, particularly on
112104	Roadway signs and traffic control	Curve-related warning signs and flashers			$320000	$320000	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Systemic	Roadway Departure	Reduce the likelihood of vehicles leaving the travel lane(s) at locations with a history of or highe
112286	Non-infrastructure	Data/traffic records			$1200000	$1200000	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Other	Data	Support HSIP Program implementation and planning activities.
112302	Intersection traffic control	Modify traffic signal - modernization/replacement		Numbers	$498185	$460000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	16,000	55	State Highway Agency	Spot	Other	The areas of focus include improving roadway safety devices, speed enforcement, educating our commun
112819	Intersection traffic control	Intersection traffic control - other	2	Locations	$700000	$700000	HSIP (23 U.S.C. 148)	Other	13,000	35	State Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
107795	Interchange design	Extend existing lane on ramp	.115	Miles	$2319992	$650000	Penalty Funds (23 U.S.C. 154)	Urban Principal Arterial (UPA) - Interstate	141,000	55	State Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
113596	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	.1	Miles	$70000	$70000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	26,000	55	State Highway Agency	Spot	Intersections	Reduce the frequency and severity of crashes at intersection and interchanges through geometric desi
113229	Non-infrastructure	Road safety audits			$310500	$310500	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures

													RELATIONSHIP 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**
														at high crash locations or for systemic treatments
113230	Non-infrastructure	Road safety audits			$298856	$298857	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash locations or for systemic treatments
113231	Non-infrastructure	Road safety audits			$326025	$326025	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash locations or for systemic treatments
113232	Non-infrastructure	Road safety audits			$287213	$287213	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Arterial	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash locations or for systemic treatments
113233	Non-infrastructure	Road safety audits			$376481	$376482	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Arterial	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash locations or for systemic treatments
113234	Non-infrastructure	Road safety audits			$430819	$430819	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash locations or for systemic treatments
113235	Non-infrastructure	Road safety audits			$372600	$372600	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash locations or for systemic treatments
113236	Non-infrastructure	Road safety audits			$302738	$302738	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash

													RELATIONSHIP 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**
														locations or for systemic treatments
113237	Non-infrastructure	Road safety audits			$399767	$399767	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Minor Collector	0		State Highway Agency	Systemic	Other	To provide engineering for safety countermeasures at high crash locations or for systemic treatments

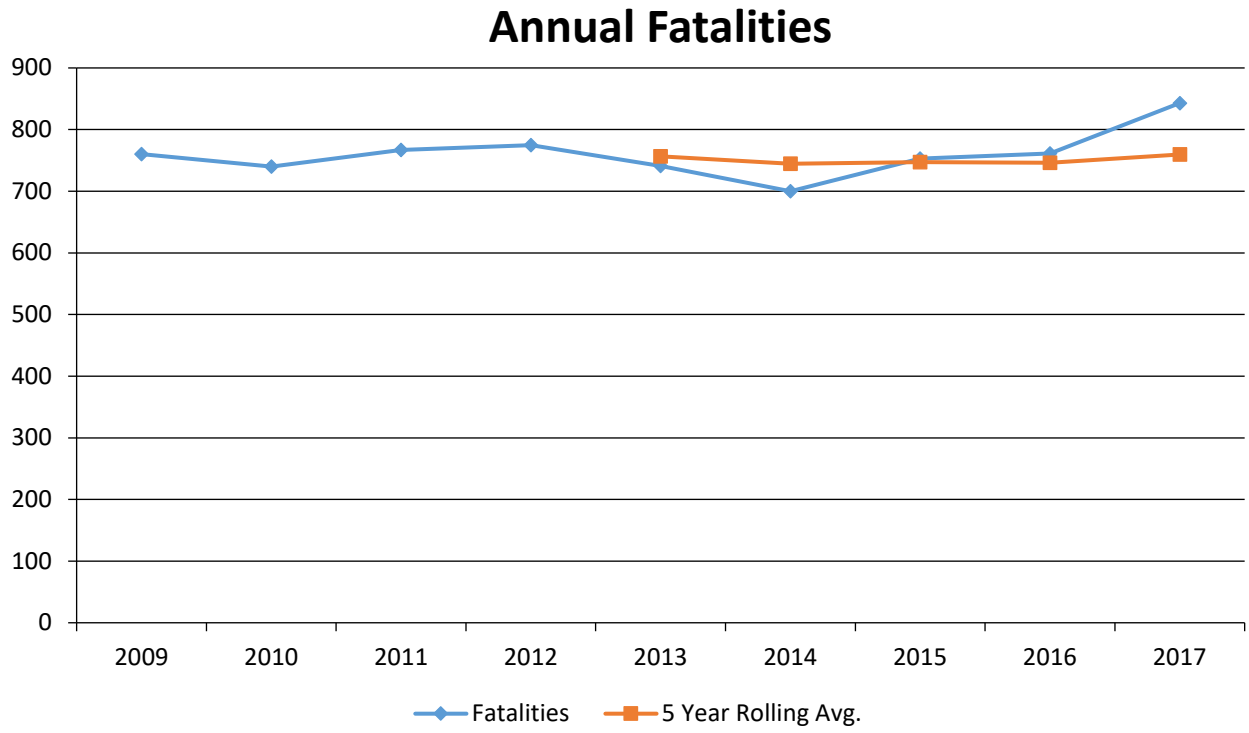
Enter additional comments here to clarify your response for this question or add supporting information.

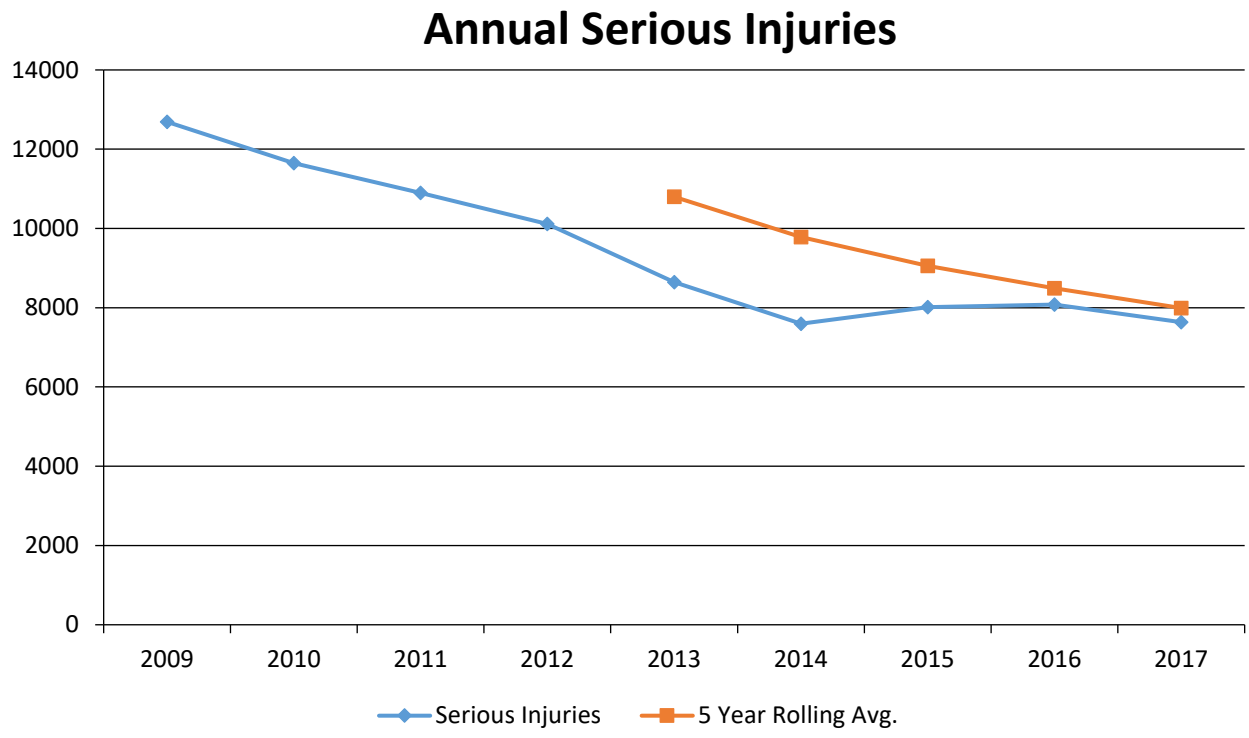
Safety Performance

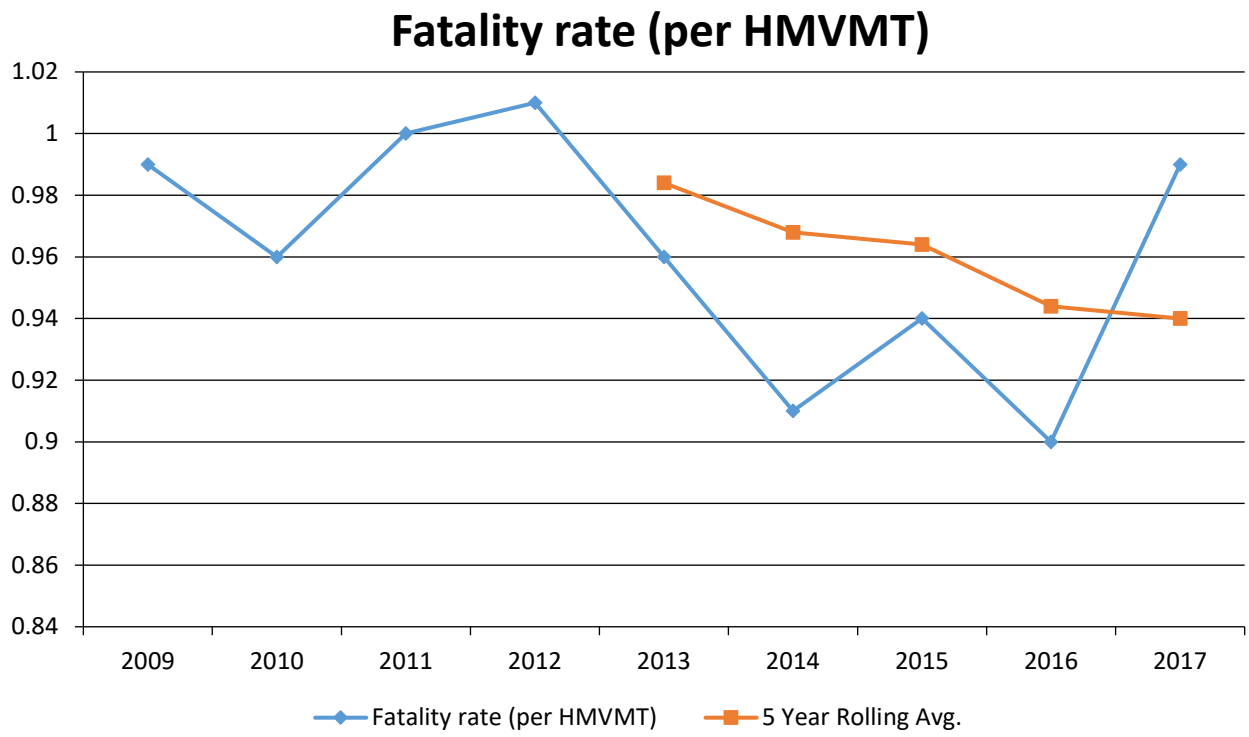
General Highway Safety Trends

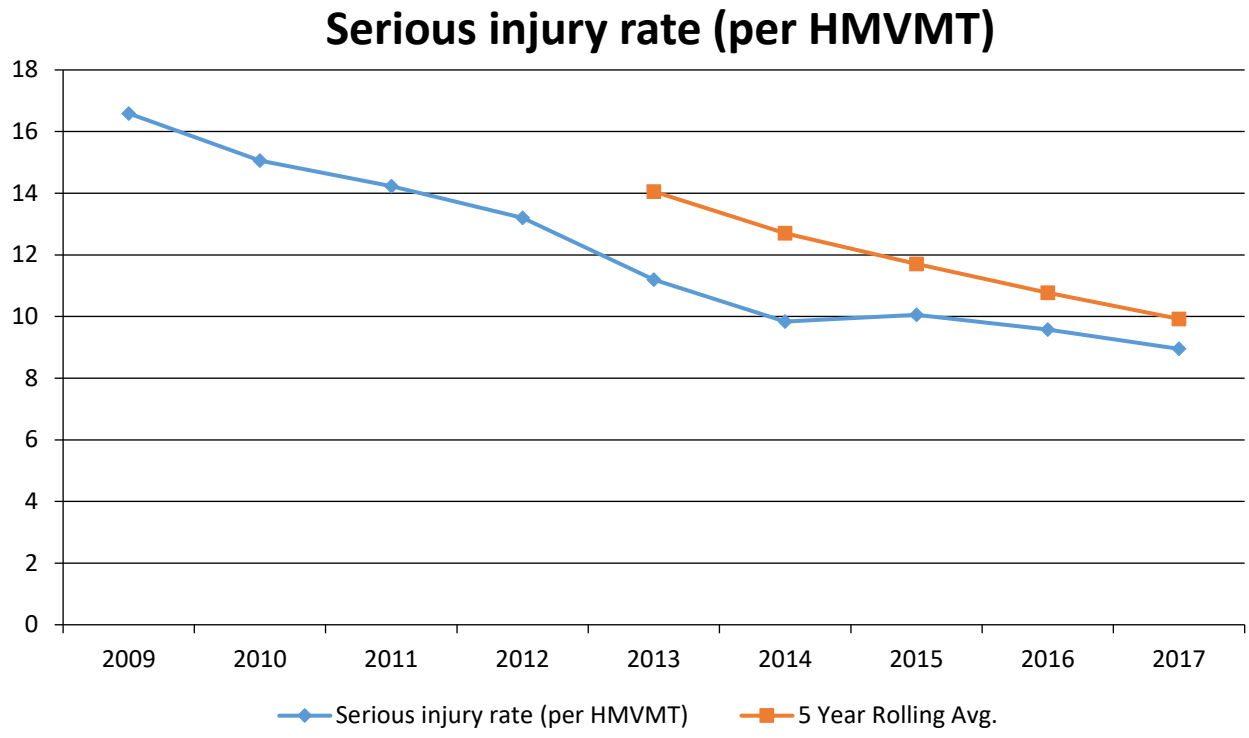
Present data showing the general highway safety trends in the State for the past five years.

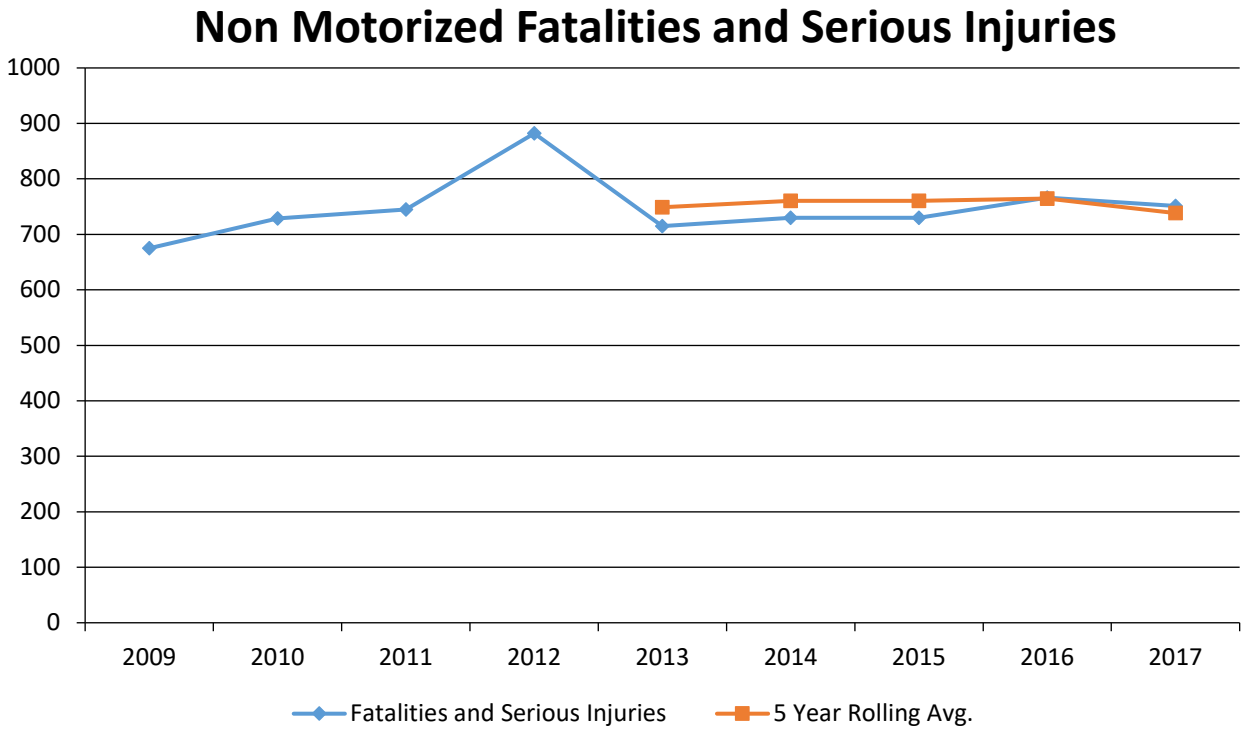
PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	760	740	767	775	741	700	753	761	843
Serious Injuries	12,690	11,649	10,897	10,114	8,643	7,597	8,011	8,075	7,634
Fatality rate (per HMVMT)	0.990	0.960	1.000	1.010	0.960	0.910	0.940	0.900	0.990
Serious injury rate (per HMVMT)	16.590	15.060	14.230	13.200	11.200	9.840	10.050	9.580	8.950
Number non-motorized fatalities	80	89	79	111	86	102	95	131	131
Number of non-motorized serious injuries	595	640	666	771	629	628	635	635	620


Annual Fatalities
900
800
700
600
500
400
300
200
100
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
14000
12000
10000
8000
6000
4000
2000
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.02
1
0.98
0.96
0.94
0.92
0.9
0.88
0.86
0.84
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
18
16
14
12
10
8
6
4
2
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



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.

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

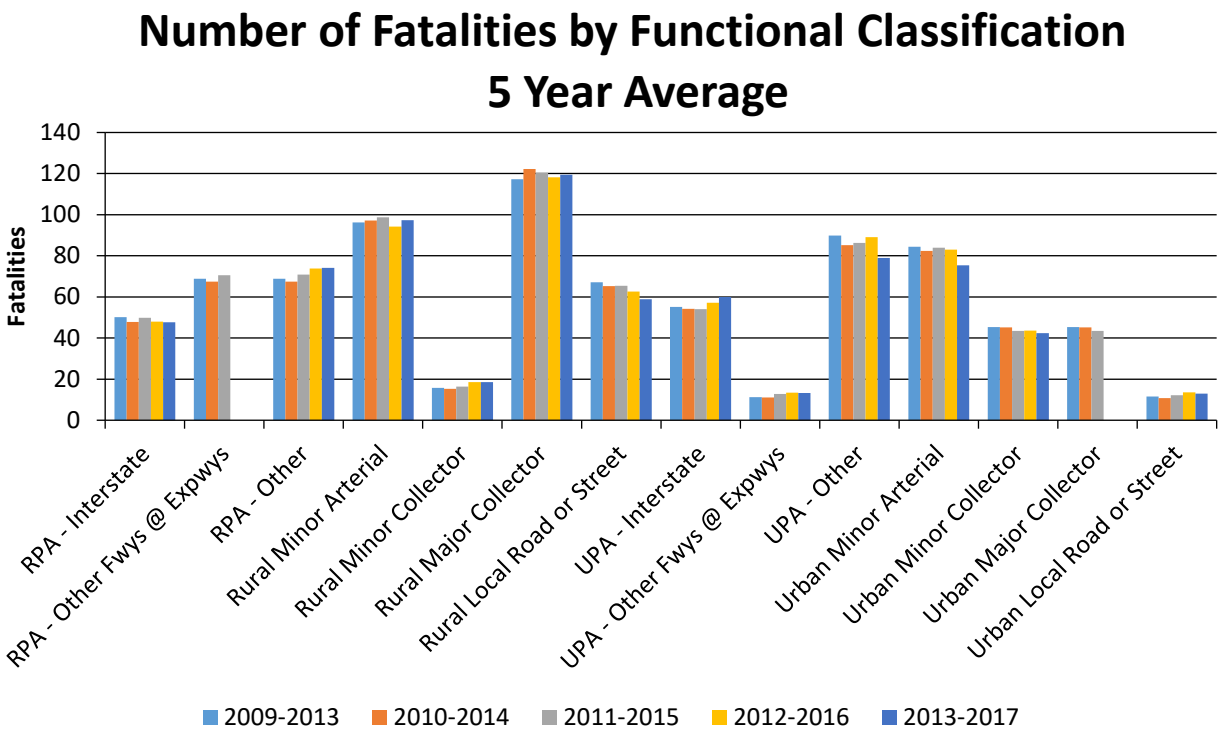
Year 2017

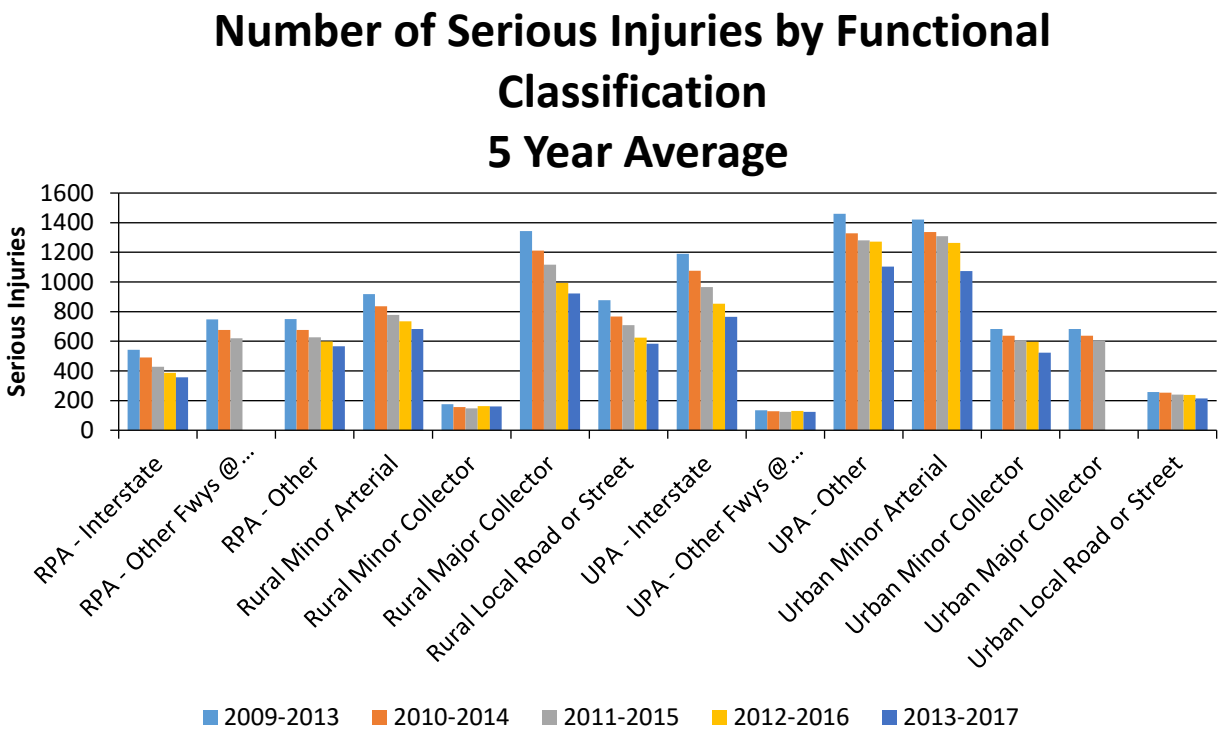
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	47.6	356.6	0.61	4.52
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	74.2	566.6	1.24	9.43
Rural Minor Arterial	97.4	684	1.93	13.68
Rural Minor Collector	18.6	160.8	2.37	20.85
Rural Major Collector	119.4	922.8	2.94	22.61

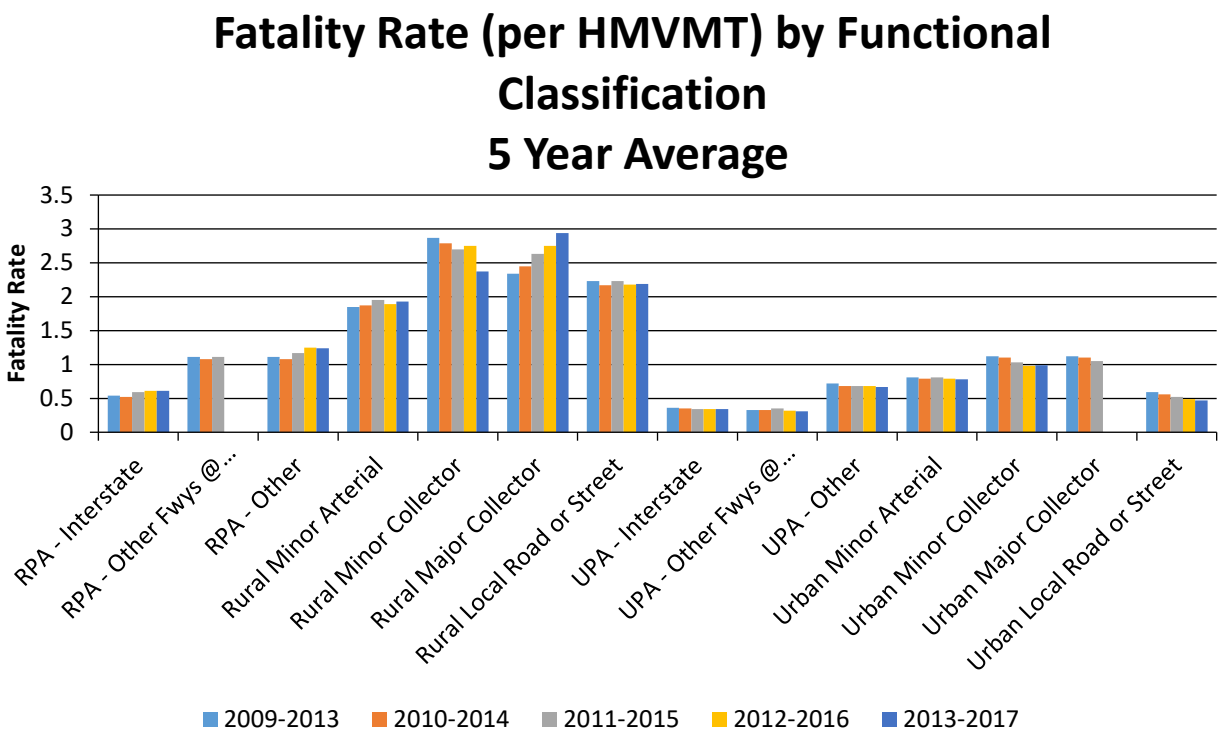
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Local Road or Street	58.8	583.6	2.19	21.62
Urban Principal Arterial (UPA) - Interstate	60	765.4	0.34	4.43
Urban Principal Arterial (UPA) - Other Freeways and Expressways	13.2	123.8	0.31	3.03
Urban Principal Arterial (UPA) - Other	79	1,104.4	0.67	9.04
Urban Minor Arterial	75.4	1,073.4	0.78	10.9
Urban Minor Collector	42.4	523.6	0.99	11.96
Urban Major Collector				
Urban Local Road or Street	13	215	0.47	8.16

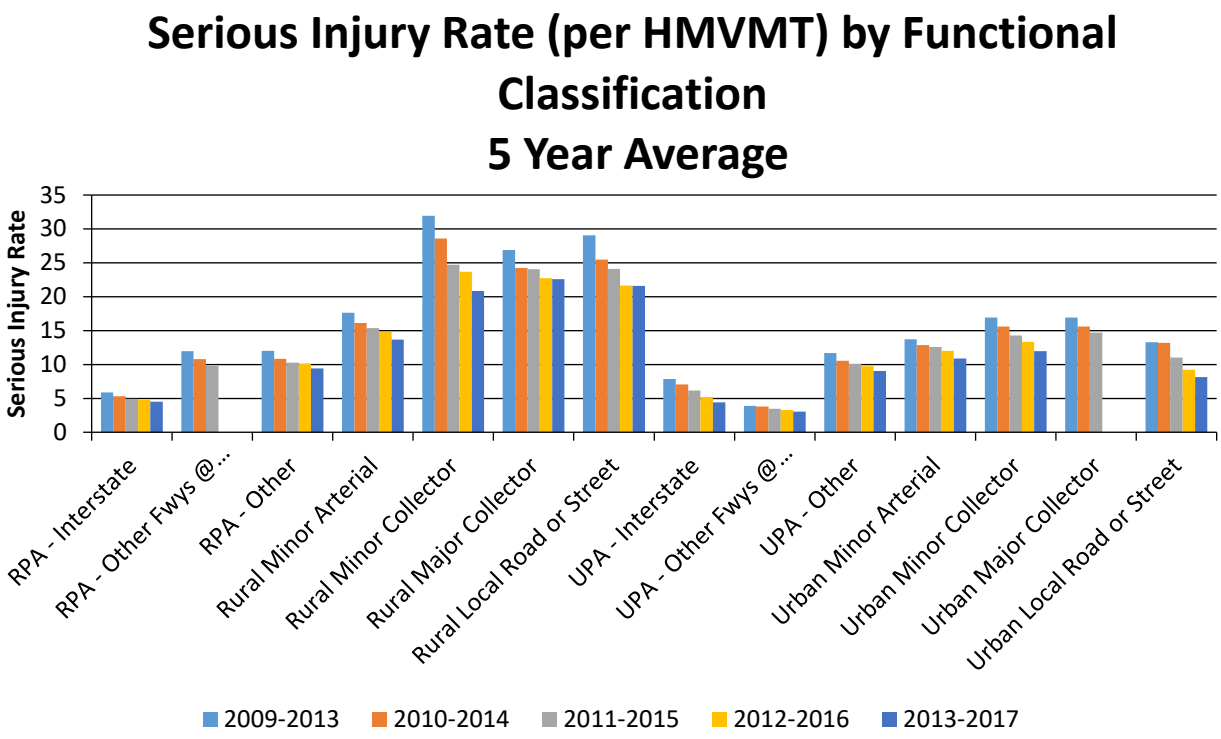
Year 2017

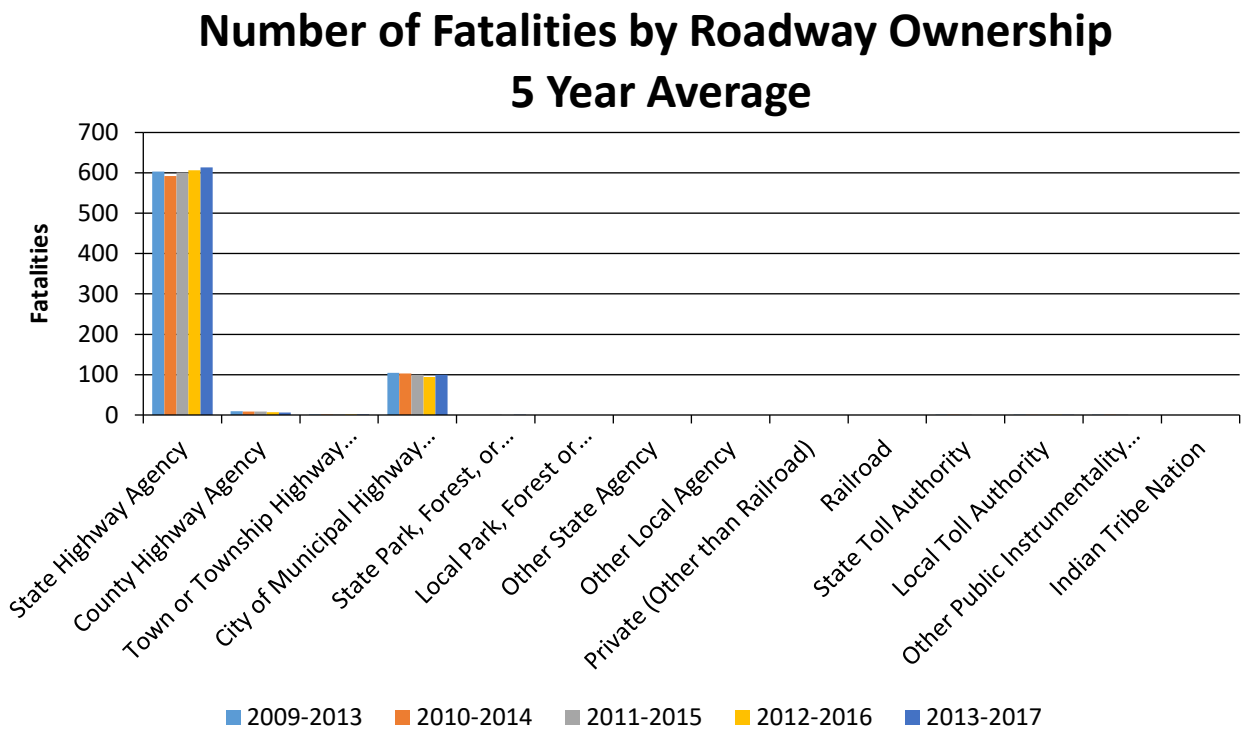
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	613.8	5,711.4	0.99	9.19
County Highway Agency	6.4	86.2	0.43	5.57
Town or Township Highway Agency	1.6	21.6	0.23	3.56
City of Municipal Highway Agency	99.8	1,482	0.59	9.03
State Park, Forest, or Reservation Agency	0.2	0.8	0.04	0.12
Local Park, Forest or Reservation Agency				
Other State Agency	0	0.6	0	0.42
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority	0.8	6.4	0.25	2.43
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

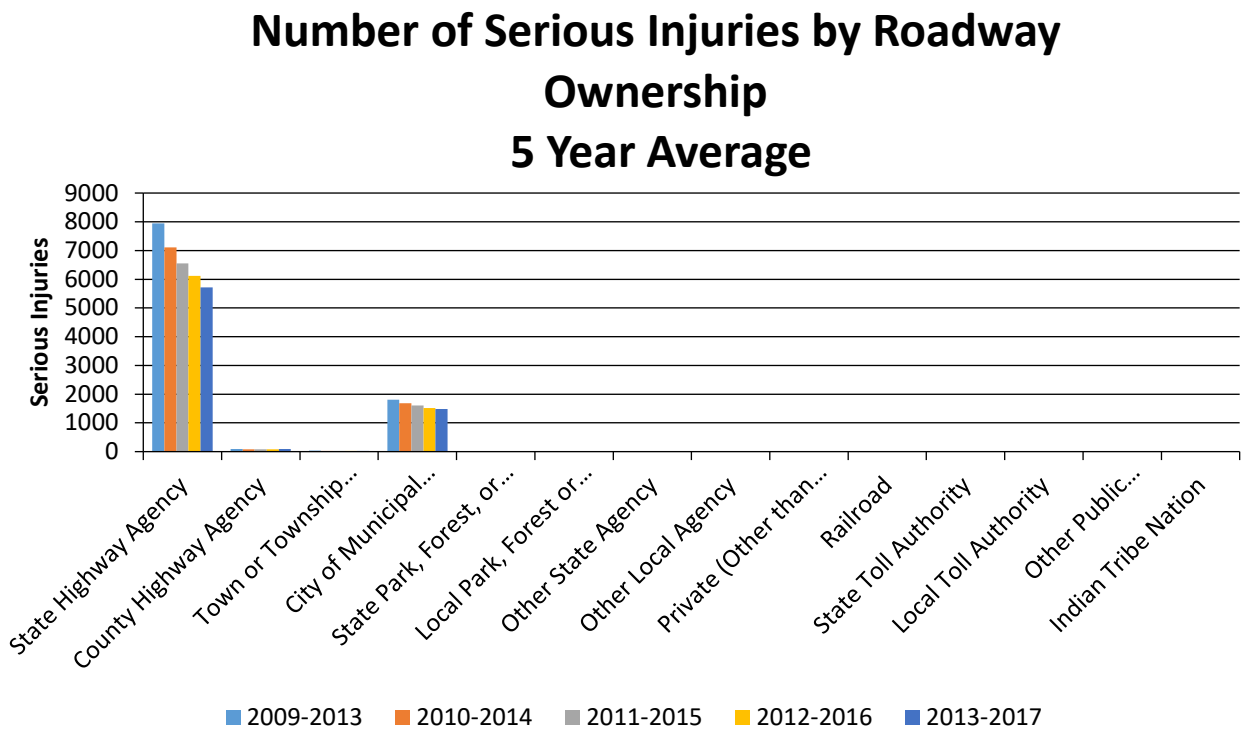

Number of Fatalities by Functional Classification
5 Year Average
Fatalities
140
120
100
80
60
40
20
0
RPA - Interstate
RPA - Other Fwys @ Expwys
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @ Expwys
UPA - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017

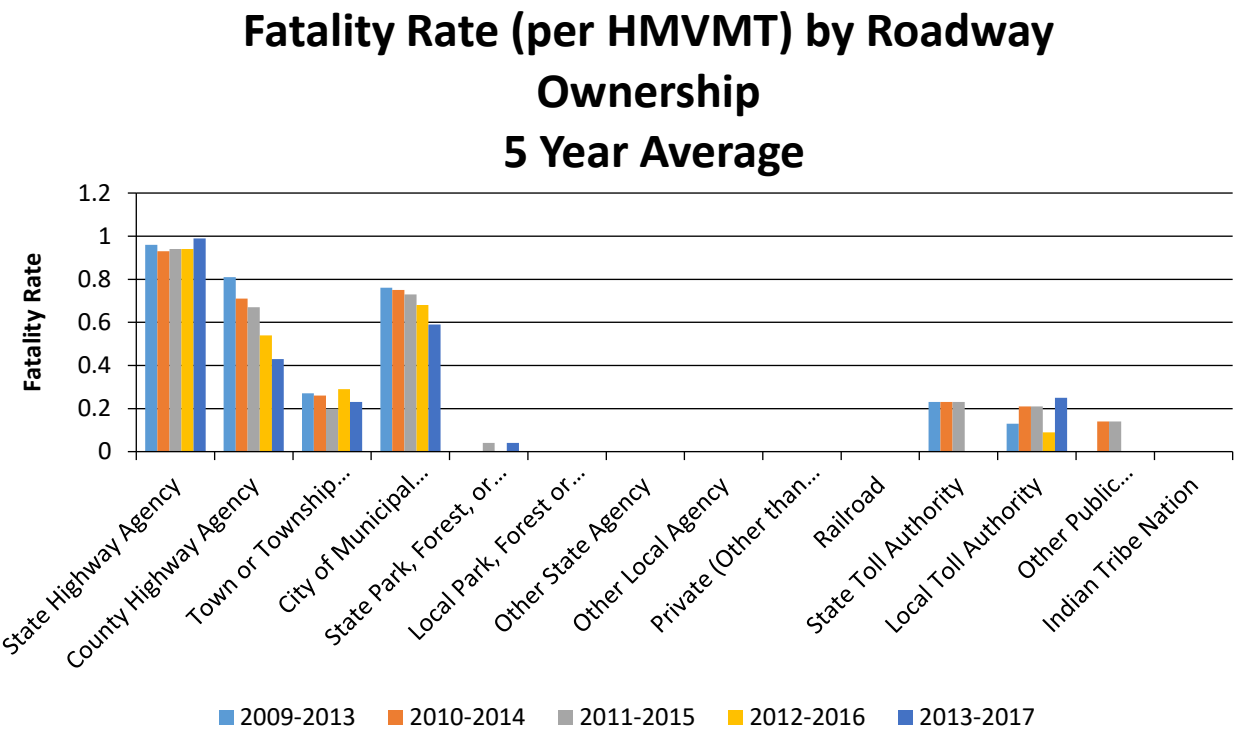

Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
1600
1400
1200
1000
800
600
400
200
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @...
UPA - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017

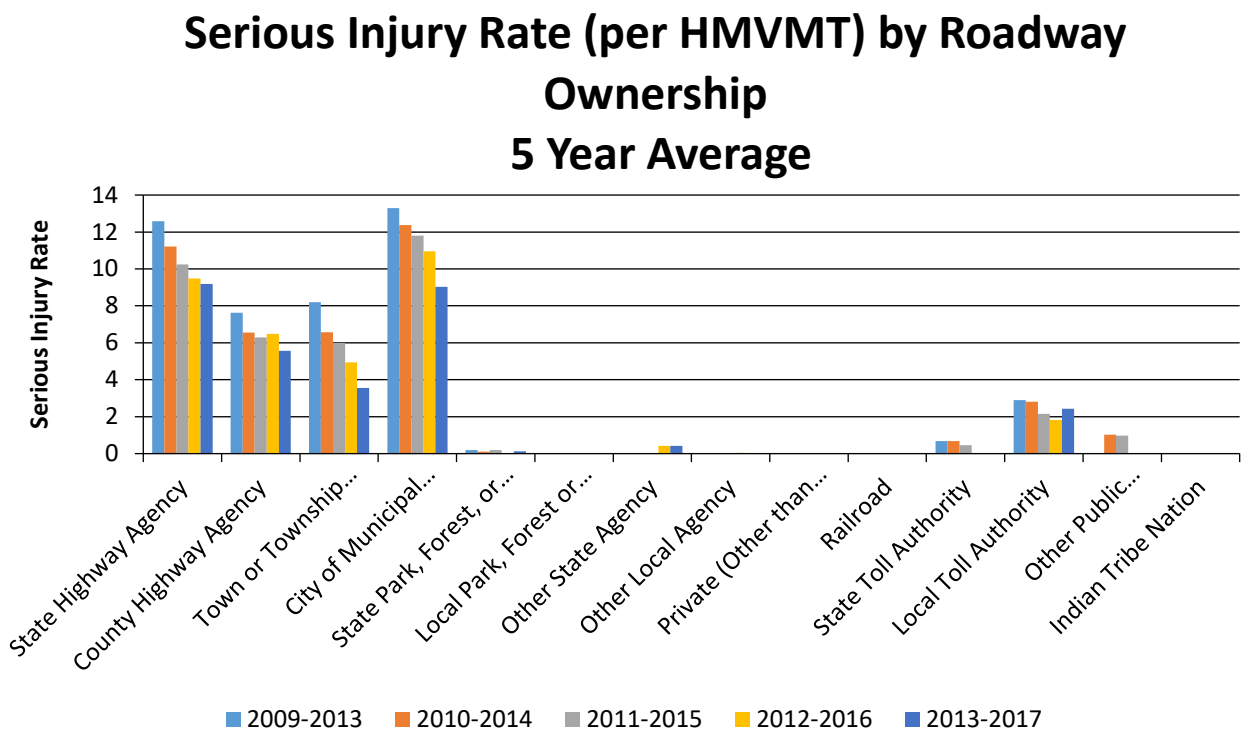

Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
3.5
3
2.5
2
1.5
1
0.5
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @...
UPA - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Serious Injury Rate (per HMVMT) by Functional Classification
5 Year Average
Serious Injury Rate
35
30
25
20
15
10
5
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @...
UPA - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Fatalities by Roadway Ownership
5 Year Average
Fatalities
700
600
500
400
300
200
100
0
State Highway Agency
County Highway Agency
Town or Township Highway...
City of Municipal Highway...
State Park, Forest, or...
Local Park, Forest or...
Other State Agency
Other Local Agency
Private (Other than Railroad)
Railroad
State Toll Authority
Local Toll Authority
Other Public Instrumentality...
Indian Tribe Nation
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries by Roadway Ownership
5 Year Average
Serious Injuries
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
State Highway Agency
County Highway Agency
Town or Township...
City of Municipal...
State Park, Forest, or...
Local Park, Forest or...
Other State Agency
Other Local Agency
Private (Other than...
Railroad
State Toll Authority
Local Toll Authority
Other Public...
Indian Tribe Nation
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Fatality Rate (per HMVMT) by Roadway Ownership
5 Year Average
Fatality Rate
1.2
1
0.8
0.6
0.4
0.2
0
State Highway Agency
County Highway Agency
Town or Township...
City of Municipal...
State Park, Forest, or...
Local Park, Forest or...
Other State Agency
Other Local Agency
Private (Other than...
Railroad
State Toll Authority
Local Toll Authority
Other Public...
Indian Tribe Nation
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017



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

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 2019 Targets *

Number of Fatalities	840.0

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

Five year average = 808 Follows annual average trend line. These annual and 5 year average targets represent an increase that began in 2017 and is anticipated in 2018 and the next year.

Number of Serious Injuries	7689.0

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

Five year average = 7808 Follows annual average trend line which represents a leveling of serious injuries in Virginia. Although there was a reduction between 2016 and 2017, the large reductions experienced as the SHSP objectives were developed have not been sustained.

Fatality Rate	0.940

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

Five year average = 0.944 Follows annual average trend line for fatalities with a 1.5 percent anticipated growth in VMT. This represents a 5 percent reduction in the annual values from 2017 but about a 1.5 percent anticipated increase in the 5 year average values in 2019.

Serious Injury Rate	8.750

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

Five year average = 9.16 Follows annual average trend line for serious injuries with a 1.5 percent growth in VMT. The represents 2.2 and 5.3 percent change from the 2017 annual and 5 year average values, respectively.

Total Number of Non-Motorized Fatalities and Serious Injuries	714.0

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

Five year average = 720 Given the large (57%) increase in 2016 pedestrian fatalities, that appears to be consistent in 2017 and 2018, our 2019 annual and 5 year average targets are essentially the same as 2017 values.

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

The strategies and action steps in each of these areas will help Virginia achieve the SHSP TZD vision and the mission “To save lives and reduce motor vehicle crashes and injuries through a data-driven strategic approach that uses enforcement, education, engineering, and emergency response after strategies.” The updated plan’s goal is to reduce fatalities and serious injuries by half by 2030, which is consistent with the National TZD Strategy on Highway Safety.

To achieve the goal, Virginia has also established measurable fatality and serious injury objectives over the next five years. These objectives will be tracked each year to determine if the SHSP remains on target to achieve the recommended reductions. For 2017 we experienced an 11 percent increase in fatalities, so the SHSP objective for the frequency and rates were not met. Serious injuries declined by almost 6 percent in 2017, but had been level in 2016, so the frequency and rate objectives were also not met. Since the SHSP is a living document, the actions in the plan can be updated if it is not meeting the stated objective.

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

VDOT HSIP staff began coordination with the DMV HSO early in the process timeline to set the 2019 annual target following 23 CFR 490. With the SHSP update the safety stakeholders at VDOT, DMV, VSP, VDH and others set five year objectives for the five required safety performance measures. Based on the percent reductions for the 2021 objectives and another year VDOT and DMV met in early 2018 to review changes in the annual and 3 and 5 year average safety performance trend lines. The agreed 5 year average based 2019 targets were consistent with the SHSP objective reductions. Presentation of the 2019 targets to the Commonwealth Transportation Board (CTB) for approval resulted in concurrence that the 5 year average trends to 2019 were not attainable based on year to date frequencies. Revised 2019 targets based on the annual trend lines (reported above) were agreed to by NHTSA Region 3 and approved by the CTB in July 2018. During the summer of 2017 VDOT decided to begin holding quarterly MPO coordination meeting for all FHWA (and optional FTA) performance measures and target setting. These continued as the MPO safety target setting Excel workbook was refined and finalized for submitting their 2018 targets. A SharePoint site was developed and introduced for obtaining the workbook and submitting the targets. The workbook update required refining the FARS geospatial data with Virginia fatality data to provide fatalities that occurred in Virginia for the multi-state MPOs. VDOT also provided a submittal letter template for MPOs to indicate if they will support the state or choose their own targets. All MPOs submittals were received by the February 27, 2018 deadline. An Excel summary workbook of all of the MPO submittals was prepared and is available to FHWA upon request. Three (of 15) of the larger MPOs decided to set independent targets from the state percent reductions.

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

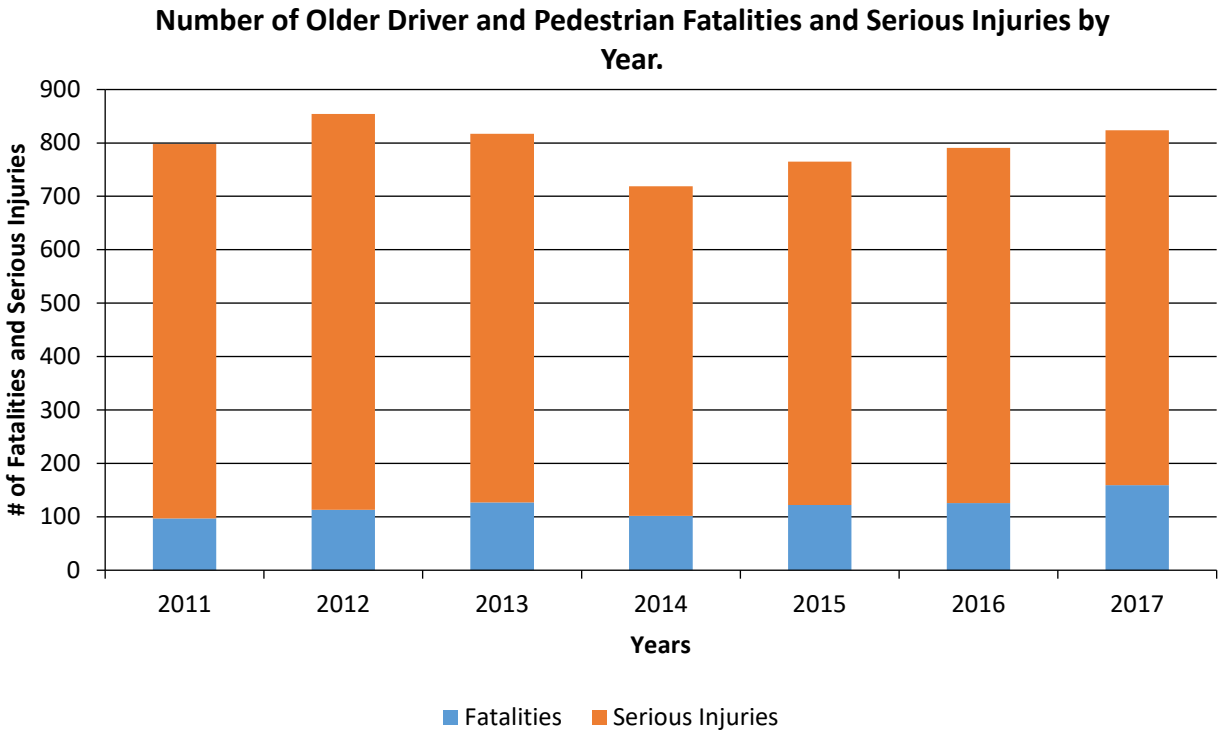
Does the HRRR special rule apply to the State for this reporting period?

Yes

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

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

PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017
Number of Older Driver and Pedestrian Fatalities	97	113	127	102	122	126	159
Number of Older Driver and Pedestrian Serious Injuries	701	741	690	617	643	665	665



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

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries
Benefit/Cost Ratio
Lives saved

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.

VDOT is programming more and more Systemic Safety Projects and increasing its efforts to track the effectiveness of these safety projects. Because of the nature of systemic projects to be deployed in several locations over a common jurisdiction it has proven to be difficult to gather accurate data on the overall effectiveness of these improvements. However, starting in 2018 VDOT has engaged in effort to developed a project tracking tool specifically designed to enable the agency to track these projects .As more and more systemic projects are being programmed the Highway Safety Staff will be able to identify the location and effect of these projects.

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
HSIP Obligations

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

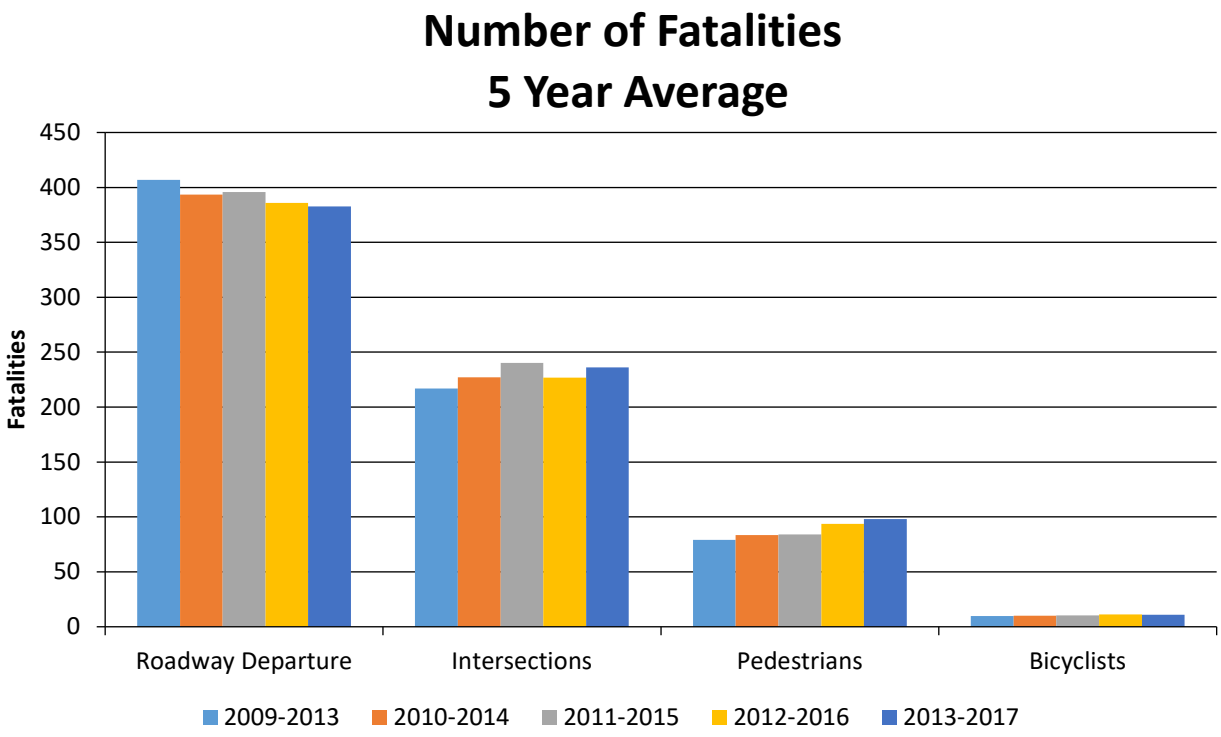
Are there any significant programmatic changes that have occurred since the last reporting period?

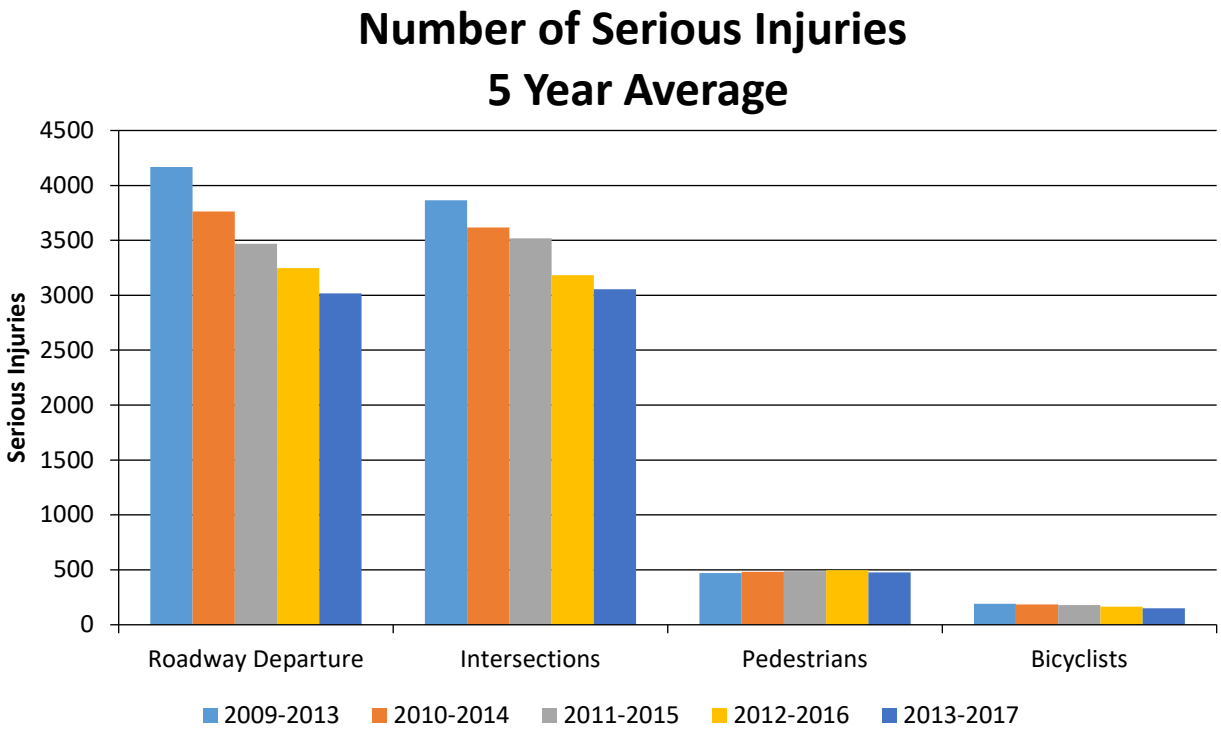
No

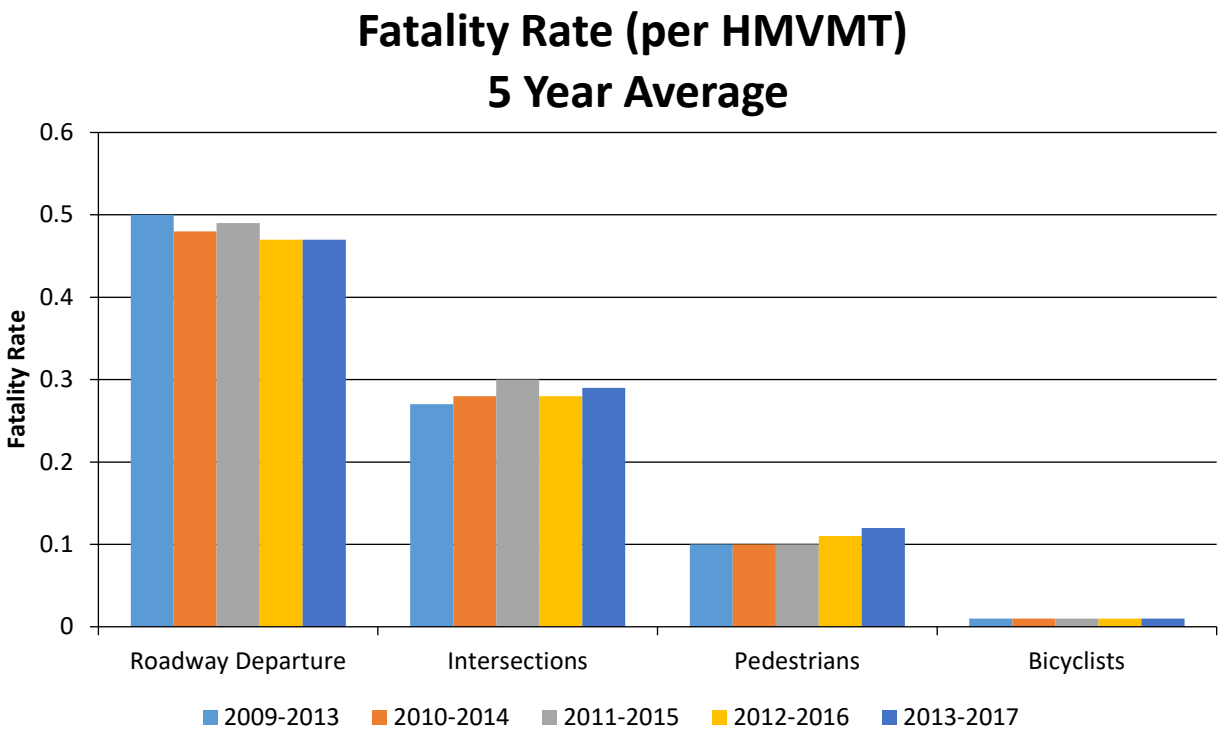
Effectiveness of Groupings or Similar Types of Improvements

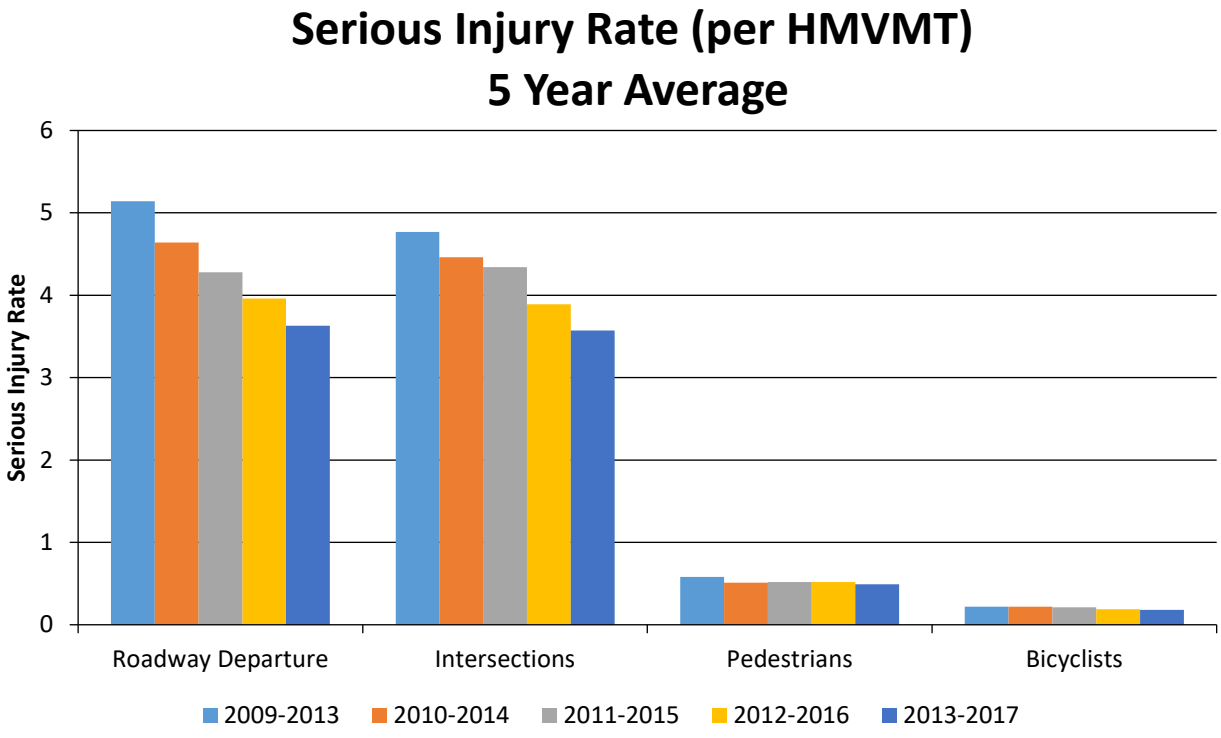
Present and describe trends in SHSP emphasis area performance measures.

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
Roadway Departure		382.6	3,018.2	0.47	3.63	0	0	0
Intersections		236.2	3,055.2	0.29	3.57	0	0	0
Pedestrians		98	476.8	0.12	0.49	0	0	0
Bicyclists		11	150	0.01	0.18	0	0	0


Number of Fatalities
5 Year Average
Fatalities
450
400
350
300
250
200
150
100
50
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries
5 Year Average
Serious Injuries
4500
4000
3500
3000
2500
2000
1500
1000
500
0
Roadway Departure
Intersections
Pedestrians
Bicyclists
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017





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.

Project Effectiveness

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

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
96370	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	9.00	6.00					1.00	1.00	10.00	7.00	1.7
104667	Urban Minor Arterial	Shoulder treatments	Pave existing shoulders	2.00	1.00			4.00	2.00	1.00	1.00	7.00	4.00	0.1
104669	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Roadway	Rumble strips - edge or shoulder	21.00	6.00	2.00			3.00	6.00	6.00	29.00	15.00	24.1
104670	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Roadway	Roadway - other	16.00	7.00	2.00		6.00	3.00	10.00	8.00	34.00	18.00	1.6
96371	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	14.00	16.00			1.00	1.00	6.00	3.00	21.00	20.00	1.1
96372	Rural Principal Arterial (RPA) - Other	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	11.00	2.00			1.00		5.00	3.00	17.00	5.00	3.3
104685	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Intersection traffic control	Intersection flashers - add advance intersection warning sign-mounted	1.00	1.00						1.00	1.00	2.00	2.9
104705	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Access management	Median crossover - unspecified	4.00				1.00		3.00	3.00	8.00	3.00	10.3
10600	Rural Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	3.00	6.00			1.00	1.00	4.00	2.00	8.00	9.00	1.3
104686	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Intersection traffic control	Modify traffic signal - modernization/replacement	1.00	2.00	1.00		1.00	3.00	5.00	1.00	8.00	6.00	1.3
86494	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	17.00	11.00			1.00	2.00	6.00	3.00	24.00	16.00	9.8
89900	Urban Minor Arterial	Non-infrastructure	Transportation safety planning	2.00	1.00			1.00		3.00	1.00	6.00	2.00	1.5
93601	Urban Local Road or Street	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	9.00	5.00			1.00		2.00	6.00	12.00	11.00	.8
93614	Urban Local Road or Street	Intersection traffic control	Modify traffic signal - modernization/replacement	3.00	4.00				2.00	3.00	1.00	6.00	7.00	1.1

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
95633	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Intersection geometry	Auxiliary lanes - add left-turn lane	7.00	4.00				1.00		4.00	7.00	9.00	2.1
95885	Urban Principal Arterial (UPA) - Other	Lighting	Intersection lighting	5.00	7.00					1.00	6.00	6.00	13.00	11.4
96900	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	1.00	5.00					2.00	13.00	3.00	18.00	98.5
96901	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	2.00	1.00					7.00	2.00	9.00	3.00	3.7
96902	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	5.00	4.00				1.00	4.00	8.00	9.00	13.00	4.7
96904	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	1.00	1.00			1.00	1.00	4.00	6.00	6.00	8.00	2.6
96905	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	5.00	5.00					10.00	4.00	15.00	9.00	4.6
96906	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	4.00	8.00			1.00	2.00	6.00	9.00	11.00	19.00	11.9
96907	Urban Minor Collector	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	1.00						7.00	3.00	8.00	3.00	1.8
96908	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	6.00	7.00			1.00		4.00	2.00	11.00	9.00	.7
97010	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	8.00	14.00			2.00		7.00	11.00	17.00	25.00	7.3
97011	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	6.00	7.00	1.00		1.00		9.00	7.00	17.00	14.00	1.3
97054	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	7.00	5.00			2.00		3.00	12.00	12.00	17.00	4.3
98279	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	8.00	7.00					6.00	2.00	14.00	9.00	3.2
98566	Urban Principal Arterial (UPA) - Other	Intersection geometry	Auxiliary lanes - extend existing left-turn lane	34.00	19.00			2.00	1.00	15.00	19.00	51.00	39.00	4.7
100540	Urban Principal Arterial (UPA) - Other	Intersection geometry	Intersection geometrics - realignment to increase cross street offset	19.00	4.00					7.00	4.00	26.00	8.00	1.0
71465	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	9.00	6.00			2.00		3.00	1.00	14.00	7.00	.4

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
86333	Urban Principal Arterial (UPA) - Other	Intersection geometry	Auxiliary lanes - extend existing left-turn lane	6.00	5.00					3.00	4.00	9.00	9.00	0
98283	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement					1.00	1.00	4.00		5.00	1.00	.5
98368	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	5.00						2.00		7.00		0
98370	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	8.00	10.00			1.00		17.00	8.00	26.00	18.00	2.1
98375	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	1.00								1.00		0
98377	Urban Minor Arterial	Roadside	Curb or curb and gutter	6.00	3.00					2.00		8.00	3.00	.7
98378	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	6.00	10.00			1.00		6.00	5.00	13.00	15.00	1.2
98379	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	2.00	4.00				1.00	3.00	1.00	5.00	6.00	.3
98380	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	4.00	6.00					14.00	8.00	18.00	14.00	1.4
98438	Urban Local Road or Street	Intersection traffic control	Modify traffic signal - modernization/replacement	4.00	5.00					2.00	2.00	6.00	7.00	.7
100641	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	12.00	2.00					10.00	2.00	22.00	4.00	1.9
100700	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	36.00	26.00			1.00		23.00	10.00	60.00	36.00	10
103436	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	3.00	2.00					9.00	9.00	12.00	11.00	.6
104002	Urban Principal Arterial (UPA) - Other	Roadside	Barrier - cable	26.00						21.00	2.00	47.00	2.00	.9
98281	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	10.00	7.00			1.00		3.00	3.00	14.00	10.00	1.9
19060	Urban Minor Arterial	Alignment	Horizontal and vertical alignment	2.00	1.00					2.00	1.00	4.00	2.00	04
81253	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	4.00	1.00			1.00	1.00	2.00	1.00	7.00	3.00	1.5
89959	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	36.00	20.00			4.00	1.00	4.00	12.00	44.00	33.00	5.7

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
91849	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modify signal mounting (spanwire to mast arm)	11.00	14.00			1.00	1.00	8.00	6.00	20.00	21.00	.5
93395	Urban Local Road or Street	Intersection traffic control	Modify traffic signal - modernization/replacement	1.00								1.00		0
93933	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	31.00	45.00			1.00	1.00	18.00	14.00	50.00	60.00	8.1
96209	Urban Minor Arterial	Intersection traffic control	Intersection flashers - add overhead (continuous)	4.00	12.00					1.00	2.00	5.00	14.00	33.8
98381	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	19.00	20.00					5.00	11.00	24.00	31.00	4.3
98382	Urban Minor Arterial	Access management	Median crossover - directional crossover	1.00	1.00					1.00		2.00	1.00	.7
98383	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	10.00	4.00			1.00	1.00	6.00	1.00	17.00	6.00	1.9
67529	Urban Principal Arterial (UPA) - Other	Alignment	Horizontal and vertical alignment	1.00				1.00	1.00			2.00	1.00	.4
93465	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Alignment	Horizontal curve realignment	2.00	1.00			4.00				6.00	1.00	.4
98384	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - modernization/replacement	1.00	6.00				2.00	5.00	5.00	6.00	13.00	11.6
100658	Urban Minor Arterial	Intersection traffic control	Modify traffic signal - modernization/replacement	11.00	11.00					4.00	12.00	15.00	23.00	7
102708	Urban Principal Arterial (UPA) - Interstate	Roadway signs and traffic control	Roadway signs (including post) - new or updated	196.00	229.00	3.00	3.00	17.00	15.00	81.00	89.00	297.00	336.00	3
102954	Urban Principal Arterial (UPA) - Interstate	Roadway signs and traffic control	Roadway signs (including post) - new or updated	37.00	63.00	1.00	1.00	5.00	9.00	15.00	22.00	58.00	95.00	2.1
102955	Urban Principal Arterial (UPA) - Interstate	Roadway signs and traffic control	Roadway signs (including post) - new or updated	31.00	31.00	1.00		5.00	3.00	8.00	14.00	45.00	48.00	.1
103478	Rural Principal Arterial (RPA) - Other	Intersection geometry	Intersection geometry - other	3.00							1.00	3.00	1.00	.4
105360	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Roadway	Roadway - other	6.00	4.00	1.00	1.00		1.00	6.00	2.00	13.00	8.00	21.3

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?

2018 Virginia Highway Safety Improvement Program

No

Compliance Assessment

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

05/12/2017

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 LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	100	0					100	0	100	0
Route Number (8)	100	0								
Route/Street Name (9)	100	0								
Federal Aid/Route Type (21)	100	0								
Rural/Urban Designation (20)	100	0					100	0		
Surface Type (23)	100	0					100	0		
Begin Point Segment Descriptor (10)	100	0					100	0	100	0
End Point Segment Descriptor (11)	100	0					100	0	100	0
Segment Length (13)	100	0								
Direction of Inventory (18)	100	0								
Functional Class (19)	100	0					100	0	100	0
Median Type (54)	100	0								
Access Control (22)	100	0								

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
One/Two Way Operations (91)	100	0								
Number of Through Lanes (31)	100	0					100	0		
Average Annual Daily Traffic (79)	100	0					100	0		
AADT Year (80)	100	0								
Type of Governmental Ownership (4)	100	0					100	0	100	0
INTERSECTION										
Unique Junction Identifier (120)			50	0						
Location Identifier for Road 1 Crossing Point (122)			100	0						
Location Identifier for Road 2 Crossing Point (123)			100	0						
Intersection/Junction Geometry (126)			100	0						
Intersection/Junction Traffic Control (131)			0	0						
AADT for Each Intersecting Road (79)			96	99						
AADT Year (80)			96	99						
Unique Approach Identifier (139)			100	0						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	0				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					100	0				
Location Identifier for Roadway at Ending Ramp Terminal (201)					100	0				
Ramp Length (187)					100	0				
Roadway Type at Beginning of Ramp Terminal (195)					100	0				
Roadway Type at End Ramp Terminal (199)					100	0				

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Interchange Type (182)					100	0				
Ramp AADT (191)					60	0				
Year of Ramp AADT (192)					60	0				
Functional Class (19)					100	0				
Type of Governmental Ownership (4)					100	0				
Totals (Average Percent Complete):	**100.00**	**0.00**	**80.25**	**24.75**	**92.73**	**0.00**	**100.00**	**0.00**	**100.00**	**0.00**

*Based on Functional Classification

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.

"To date VDOT has established a MIRE task force committee, verified the completeness and compatibility of data at state-level and collected data for new elements such as Unique Interchange Identifier (178) FDE. VDOT is in process of determining roadway characteristics of the counties, cities and towns that are collecting data on non-VDOT maintained roadways. This step is taking longer than expected due but is expected to be complete in early 2019. Once this is complete then a data collection plan can be established."

Provide the suspected serious injury identifier, definition and attributes used by the State for both the crash report form and 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	Serious Injury	Yes	N/A	Yes	N/A	Yes
Crash Report Form Instruction Manual	Serious Injury	Yes	Serious Injury	Yes	Serious Injury	Yes
Crash Database	Serious Injury	Yes	N/A	Yes	N/A	Yes
Crash Database Data Dictionary	Serious Injury	Yes	Serious Injury	Yes	Serious Injury	Yes

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

Did the State conduct an HSIP program assessment during the reporting period?
No

When does the State plan to complete it’s next HSIP program assessment.

2019

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

FHWA conducted the program assessment workshop along with VDOT and other safety stakeholders in March 27th, 2017. The Self-Assessment Tool provides a mechanism for agencies to evaluate HSIP implementation efforts and do a compliance check of the HSIP program policies and guidance. The assessment also includes the Rail Highway Grade Crossing program. The Assessment detail information’s is found in the links: VDOT HSIP Program Assessment Report

Optional Attachments

Program Structure:

FINAL VDOT HSIP Implementation Manual.pdf
FINAL VDOT RSA Manual.pdf
VDOT_Crash_Data_Manual_Nov2017.pdf
Final_Pedestrian_Study.pdf

Project Implementation:

Safety Performance:

Evaluation:

Compliance Assessment:

Glossary

5 year rolling average	means the average of five individuals, consecutive annual points of data (e.g. annual fatality rate).
Emphasis area	means a highway safety priority in a State's SHSP, identified through a data-driven, collaborative process.
Highway safety improvement project	means strategies, activities and projects on a public road that are consistent with a State strategic highway safety plan and corrects or improves a hazardous road location or feature or addresses a highway safety problem.
HMVMT	means hundred million vehicle miles traveled.
Non-infrastructure projects	are projects that do not result in construction. Examples of non-infrastructure projects include road safety audits, transportation safety planning activities, improvements in the collection and analysis of data, education and outreach, and enforcement activities.
Older driver special rule	applies if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, as defined in the Older Driver and Pedestrian Special Rule Interim Guidance dated February 13, 2013.
Performance measure	means indicators that enable decision-makers and other stakeholders to monitor changes in system condition and performance against established visions, goals, and objectives.
Programmed funds	mean those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) to be expended on highway safety improvement projects.
Roadway Functional Classification	means the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide.
Strategic Highway Safety Plan (SHSP)	means a comprehensive, multi-disciplinary plan, based on safety data developed by a State Department of Transportation in accordance with 23 U.S.C. 148.
Systematic	refers to an approach where an agency deploys countermeasures at all locations across a system.
Systemic safety improvement	means an improvement that is widely implemented based on high risk roadway features that are correlated with specific severe crash types.
Transfer	means, in accordance with provisions of 23 U.S.C. 126, a State may transfer from an apportionment under section 104(b) not to exceed 50 percent of the amount apportioned for the fiscal year to any other apportionment of the State under that section.