ARIZONA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2018 ANNUAL REPORT

U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

Table of Contents

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 annual report has been prepared by the Arizona Department of Transportation (ADOT), TSM&O Division, Traffic Safety Section (TSS) based on best available data and information collected from various internal and external sources.

Arizona DOT is continuing to make progress in the HSIP implementation on all public roads statewide. ADOT-TSS has been leading the efforts to deliver the HSIP program.

Arizona SHSP has been updated in October 2014 to reflect MAP-21 requirements and FHWA guidance. The SHSP implementation phase began in early 2015. This annual report reflects Arizona 2014 SHSP emphasis areas and performance measures.

NOTE: Data are presented by different reporting periods, e.g. funding data or project listing is given by Federal Fiscal Year (FFY) whereas annual fatality and serious injury data is by Calendar Year (CY). Fatalities and serious injury tables and charts in the output report are given in 5-year rolling average.

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 AZ ADOT HSIP Program Manager issues a call for potential HSIP projects in January of each calendar year. Agencies interested in applying must complete an HSIP application that is updated each year before the call for projects. The application process requires the agency to submit a cover/transmittal letter, a complete application, a cost estimate, a crash data spreadsheet, a B/C ratio calculation sheet, a location map, a project limits map and any warrant studies (if applicable). The documentation is evaluated by the ADOT HSIP Program Manager and staff to determine if the potential project is HSIP eligible, i.e. compliant with 26 USC 148 / 26 CFR 924, a proven safety countermeasure, identify fatal and serious injury crashes that countermeasure can potentially reduce, supports the AZ SHSP, and B/C ratio of equal to or greater than 1.5. The approved HSIP eligible project is then ranked by the HSIP Program Manager based on the B/C ratio and SHSP score." A Safety Review Committee, comprised of FHWA, ADOT staff, COG/MPO's, Inter Tribal Council and locals, reviews and approves the proposed list. The HSIP Program Manager then submits the prioritized list to the State Engineer's Office for final ranking and approval. Once the prioritized HSIP eligible list for the year is approved, the HSIP Program Manager issues the approved HSIP eligibility letters and enters the projects in the ADOT Five Year Transportation Facilities Construction Program.

Where is HSIP staff located within the State DOT?

Other-TSMO

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

The HSIP staff are members of the ADOT Traffic Safety Section (TSS) which is a component of Operational Traffic and Safety Group under the Transportation Systems Management and Operations (TSMO) Division https://www.azdot.gov/business/tsmo/operational-and-traffic-safety

How are HSIP funds allocated in a State?

Central Office via Statewide Competitive Application Process

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

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

Arizona's HSIP funds are available for all public agencies and tribes to apply for as described in the prior general structure of the HSIP in the State. Prior year commitments are first identified and set aside, then 10% of the remaining eligible funds are set aside for unforeseen safety projects, and finally the remaining funds are available for statewide call for projects. ADOT and local public agencies identify high crash locations using any acceptable screening method and develop safety improvement projects. In recent years COGs/MPOs have been provided HSIP funds to develop Strategic Transportation Plans (STSP) with projects to support the State Strategic Highway Safety Plan (SHSP). ADOT reviews all potential projects on a statewide basis and prioritize projects for funding. ADOT LPA, in consultation with MPOs and COGs, provides assistance to local agencies throughout the process of identifying and developing the projects.

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

Traffic Engineering/Safety
Design
Planning
Maintenance
Operations
Districts/Regions
Other-ADOT Traffic Safety Section (TSS) and Local Public Agency Section (LPAS)

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

Describe coordination with internal partners.

Safety analyses begin with the compilation and correlation of data elements on a statewide system. Coordination takes place within ADOT including the State Engineer’s Office, the Director’s Office, Project Managers, District Engineers and others involved in safety projects as well as the Department of Public Safety (State enforcement agency). Once the project is identified, depending on the nature of the project, justification of HSIP funding through evaluation and formal eligibility process is established by ADOT and FHWA Arizona Division Office.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
Local Government Agency
Tribal Agency
Law Enforcement Agency
FHWA

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

In addition to the direct involvement of those listed, other agencies can participate in the HSIP planning through the Road Safety Assessment application process available at https://www.azdot.gov/docs/default-source/traffic-library/rsa-application.pdf?sfvrsn=14"

Describe coordination with external partners.

External coordination involves participation and membership in COG/MPOs Safety Committee meetings and advisory groups. ADOT TSS encourages local and state agencies to submit their draft HSIP applications in advance of the final submittal date for the call for projects so the application can be reviewed and comments provided to the agencies to ensure a successful application. In addition to the direct involvement through the HSIP application process, agencies can participate in the Road Safety Assessment (RSA) program which can lead to HSIP applications. RSA applications are made available at: https://www.azdot.gov/docs/default-source/traffic-library/rsa-application.pdf?sfvrsn=14"

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

Yes

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

As described in question number 5 of this report, The AZ HSIP moved from allocating funds 80% state and 20% local to a central office statewide competitive application process.

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:
2015 HSIP Manual (RevFeb17).pdf
HSIP Appendix_A (Rev Jan18).pdf
HSIP Appendix_ B.pdf
HSIP Appendix_C.pdf

Select the programs that are administered under the HSIP.

Roadway Departure
Shoulder Improvement
HRRR
Other-RSA
Other-Tree Removal

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

Program:	HRRR
Date of Program Methodology:	5/1/2015

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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
Fatal and serious injury crashes only	Traffic Volume Lane miles	Functional classification

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

Crash frequency
Relative severity index

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?

selection committee

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

Rank of Priority Consideration

Ranking based on B/C : 1
Available funding : 2

Program: Roadway Departure

Date of Program Methodology: 6/29/2012

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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		
Fatal and serious injury crashes only		

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

Crash frequency
Relative severity index

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?

2018 Arizona Highway Safety Improvement Program
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
Other-Based on B/C Ratio and systemic projects based on crash type.

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

Program: Shoulder Improvement

Date of Program Methodology: 4/30/2010

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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
Fatal and serious injury crashes only	Volume	Functional classification

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

Crash frequency
Relative severity index

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?

Other-Based on B/C Ratio and systemic projects based on crash type.

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

Program: Other-RSA

Date of Program Methodology: 1/10/2006

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

Addresses SHSP priority or emphasis area
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
All crashes	Volume	Median width Horizontal curvature Roadside features

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

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?

Other-Based on B/C Ratio and systemic projects based on crash type.

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

Program: Other-Tree Removal

Date of Program Methodology: 6/15/2010

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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
Fatal and serious injury crashes only		

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

Crash frequency

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?

Yes

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

How are projects under this program advanced for implementation?

Other-Based on B/C Ratio and systemic projects based on crash type.

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

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
Pavement/Shoulder Widening
Install/Improve Pavement Marking and/or Delineation
Clear Zone Improvements
Add/Upgrade/Modify/Remove Traffic Signal
Horizontal curve signs

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

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.

ITS technologies are critical components in Arizona's transportation management systems and are effective at improving safety, as well as mobility. Arizona has leveraged ITS technologies for freeway traffic management with so many miles of freeways currently managed. ITS technologies are critical for providing data to travelers through the AZ511 system, including the highway road closure system. Connected vehicles are emerging as new technology that has the ability to significantly reduce crashes and save lives. ADOT is investing in connected vehicle technologies so that we can maximize the benefits as the technology becomes available in passenger vehicles. The infrastructure components of connected vehicles will allow significantly improved traffic management systems, such as speed harmonization, queue warning, work zone traffic management. The primary goal of connected vehicles is improving safety and Arizona believes that this emerging technology will save lives. Therefore, State HSIP fund can be utilized for connected vehicles and ITS technologies.

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 HSM has been used on a limited bases primarily to support B/C ratio analysis and determining CMFs. Arizona's emphasis on predictive modeling over the last year has been focused on bring Safety Analyst on-line. It currently has been used to identify systemic projects on the State Highway System.

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?

2018 Arizona Highway Safety Improvement Program

No

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal 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)	$59,003,450	$59,003,450	100%
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)	$0	$0	0%
State and Local Funds	$1,924,740	$1,924,740	100%
Totals	$60,928,190	$60,928,190	100%

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

The obligated amount is based on the 2017 federal fiscal year, the exact amount programed over that amount if any is currently not available as the system only allows the State fiscal year data to be pulled, State fiscal year was 46,156,000. The remainder of programed funds was from the overlapping difference between state and federal fiscal years 16 and 17 respectively. A new ADOT eSTIP system is being rolled out that will allow this to be calculated correctly during the next reporting cycle.

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

31%

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

31%

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?

2%

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

2%

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.

None

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**
F0018 ADOT SE DISTRICT, US60, US95, SR74	Roadway	Rumble strips - edge or shoulder	56	Miles	$114754	$114754	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	5,290	65	State Highway Agency	Systemic	Roadway Departure	Minimizing the consequences of leaving the road
F0020 SOUTHCENTRAL/CENTRAL DISTRICT SAFETY IMPROVEMENTS	Roadway	Rumble strips - edge or shoulder	70	Miles	$481883	$481883	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	0		State Highway Agency	Systemic	Roadway Departure	Minimizing the consequences of leaving the road
F0023 DRAGOON ROAD - JOHNSON ROAD PHII	Shoulder treatments	Widen shoulder - paved or other	3	Rock Removal	$2516990	$2660458	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Interstate	14,944	75	State Highway Agency	Spot	Roadway Departure	Minimizing the consequences of leaving the road
F0025 I-17; NEW RIVER (MP 232 TO SR 169 (MP 279)	Speed management	Radar speed signs	12	Dynamic Feedback Signs	$2106780	$2226866	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Interstate	31,765	75	State Highway Agency	Spot	Other	Improve retroreflectivity and visibility
F0056 TELLER LANE - AZTEC ROAD	Roadway	Roadway - other	1	Intersections	$478000	$478000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	32,007	45	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
F0142 HORIZONTAL CURVE WARNING SIGNS, PHASE I	Roadway delineation	Delineators post-mounted or on barrier	30418	Signs	$299874	$299874	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
F0143 Statewide Horizontal Curve Warning Signs PHASE II	Roadway signs and traffic control	Roadway signs (including post) - new or updated	4813	Signs	$219719	$219719	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
F0146 AZTEC ROAD - VALENCIA ROAD & CP MOHAVE ROUNDABOUT SR95	Roadway	Roadway - other	1	Intersections	$849000	$849000	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	32,007	45	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H7637 BYLAS AREA, US 70	Pedestrians and bicyclists	Medians and pedestrian refuge areas	1	PHB, TURN LANES	$6951441	$7347673	HSIP (23 U.S.C. 148)	Rural Minor Arterial	0	45	State Highway Agency	Spot	Pedestrians	Making walking and street crossing easier
H7904 SR 79 at SR 79B RECONSTRUCTION	Roadway	Roadway - other	1	Intersections	$780145	$824613	HSIP (23 U.S.C. 148)	Urban Minor Arterial	13,421	45	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8102 I:8: ARABY ROAD/I-8 TI	Roadway	Roadway - other	1	Interchanges	$10559335	$10559335	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Interstate	0		State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8112 APACHE JCT - TORTILLA FLATS, SR 88	Roadway signs and traffic control	Curve-related warning signs and flashers	1716	Signs	$1933765	$2043989	HSIP (23 U.S.C. 148)	Rural Major Collector	2,771	25	State Highway Agency	Spot	Other	Improve retroreflectivity and visibility
H8265 SR 92 @ FOOTHILLS BLVD	Roadway	Roadway - other	1	Intersections	$475272	$502362	HSIP (23 U.S.C. 148)	Rural Minor Arterial	25,696	45	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration

													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
H8308 SUPERSTITION BLVD ROUNDABOUT	Roadway	Roadway - other	1	Intersections	$3940907	$3940907	HSIP (23 U.S.C. 148)	Urban Major Collector	5,822	40	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8388 US 95 AT AVE 8E ROUNDABOUT	Roadway	Roadway - other	1	Intersections	$192149	$192149	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	12,424	55	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8408 WILLOW BEACH - WHITE HILLS ROAD US 93	Shoulder treatments	Widen shoulder - paved or other	10.5	Miles	$3854708	$4074426	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	14,700	65	State Highway Agency	Spot	Roadway Departure	Minimizing the consequences of leaving the road
H8489 SR 95 @ MOHAVE RD	Roadway	Roadway - other	1	Intersections	$803800	$803800	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	5,000	35	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8557 GILA BEND REST AREA TO I-10	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	948	Signs	$2078000	$2078000	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Interstate	0	75	State Highway Agency	Spot	Other	Improve retroreflectivity and visibility
H8658 ELEVENTH ST - WINDY POINT ROAD, US 93	Shoulder treatments	Widen shoulder - paved or other	10	Miles	$205574	$217291	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	14,700	65	State Highway Agency	Systemic	Roadway Departure	Minimizing the consequences of leaving the road
H8659 WINDY POINT ROAD - MINERAL PARK ROAD, US 93	Shoulder treatments	Widen shoulder - paved or other	10.5	Miles	$213118	$225265	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	14,700	65	State Highway Agency	Spot	Roadway Departure	Minimizing the consequences of leaving the road
H8744 I-40/US 93 WEST KINGMAN TI INTERIM IMPROVEMENTS	Roadway	Roadway - other	1	Interchanges	$51113	$54026	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	40,000	35	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8838 RUINS DR AT SR87	Roadway signs and traffic control	Roadway signs and traffic control - other		Intersections	$40714	$43034	HSIP (23 U.S.C. 148)	Other	11,998	50	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8859 SAN CARLOS HIGH SCHOOL to BIA 170, US70	Roadway	Roadway widening - add lane(s) along segment	1	Miles	$735943	$735943	HSIP (23 U.S.C. 148)	Rural Minor Arterial	8,875	55	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
H8877 RANDOLPH RD INTERSECTION	Roadway	Roadway - other	1	Intersections	$616285	$651413	HSIP (23 U.S.C. 148)	Other	7,736	55	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
M5167 SYSTEMATIC IMPROVEMENT OF CRASH DATA - TRACS (TRAFFIC CRIMINAL SOFTWARE)	Non-infrastructure	Data/traffic records	3	Agencies	$23575	$25000	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Systemic	Data	More effective processes and safety management sys
M5212 SYSTEMATIC IMPROVEMENT OF CRASH DATA - TRACS (TRAFFIC CRIMINAL SOFTWARE)	Non-infrastructure	Data/traffic records	3	Agencies	$25000	$25000	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Systemic	Data	More effective processes and safety management sys
M6937 SAFETY ANALYST TECHNICAL SUPPORT	Non-infrastructure	Data/traffic records		Data Configuration	$387356	$410770	HSIP (23 U.S.C. 148)	Other	0		State Highway Agency	Other	Data	More effective processes and

													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**
														safety management sys
PNGHS NACOG STSP	Non-infrastructure	Transportation safety planning	1	Transportation Safety Plan	$26000	$26000	HSIP (23 U.S.C. 148)	Other	0		Other Local Agency	Systemic	Data	More effective processes and safety management sys
PSC17 SCMPO - STSP	Non-infrastructure	Transportation safety planning	1	Transportation Safety Plan	$210000	$210000	HSIP (23 U.S.C. 148)	Other	0		Other Local Agency	Systemic	Data	More effective processes and safety management sys
PSHSP SEAGO STSP	Non-infrastructure	Transportation safety planning	1	Transportation Safety Plan	$50000	$50000	HSIP (23 U.S.C. 148)	Other	0		Other Local Agency	Systemic	Data	More effective processes and safety management sys
PYM18 YMPO-Strategic Transportation Safety Plan Update	Non-infrastructure	Transportation safety planning	1	Transportation Safety Plan	$87000	$87000	HSIP (23 U.S.C. 148)	Other	0		County Highway Agency	Systemic	Data	More effective processes and safety management sys
SH533 HRRR RIVER ROAD AND PENDLETON DRIVE SAFETY IMPROVEMENTS, SANTA CRUZ CO	Roadway signs and traffic control	Roadway signs and traffic control - other	1	Intersections	$56580	$56580	HSIP (23 U.S.C. 148)	Other	0		County Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SH535 75TH AVE & CACTUS TI, PEORIA	Roadway	Roadway - other	1	Intersections	$3374379	$3374379	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	25,810	40	City of Municipal Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SH536 75TH AVE & PEORIA TI, PEORIA	Roadway	Roadway - other	1	Intersections	$3480960	$3480960	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	21,407	40	City of Municipal Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SH561 IR 15 AND IR 19, TON	Roadway	Roadway - other	10	Guardrails	$205000	$205000	HSIP (23 U.S.C. 148)	Other	1,885	55	Indian Tribe Nation	Spot	Roadway Departure	Minimizing the consequences of leaving the road
SH568 4TH AVE /CONGRESS STREET/TOOLE AVE -CITY OF TUCSON	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	1	Crosswalks	$286829	$303178	HSIP (23 U.S.C. 148)	Urban Major Collector	0		City of Municipal Highway Agency	Spot	Pedestrians	Making walking and street crossing easier
SH571 HRRR REAY LANE IRRIGATION CANAL DITCH RELOCATION, US70 - SAFFORD BRYCE ROAD	Shoulder treatments	Widen shoulder - paved or other	0.21	Miles	$181999	$192372	HSIP (23 U.S.C. 148)	Other	1,317		County Highway Agency	Spot	Roadway Departure	Minimizing the consequences of leaving the road
SH586 YUMA COUNTY - SOMERTON AVE & COUNTY 18TH ST.	Roadway	Roadway - other	1	Intersections	$57	$60	HSIP (23 U.S.C. 148)	Other	0		County Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SH596 SIGN REPLACEMENT, FLAGSTAFF	Roadway signs and traffic control	Roadway signs (including post) - new or updated	4165	Signs	$43000	$43000	HSIP (23 U.S.C. 148)	Other	0		City of Municipal Highway Agency	Systemic	Other	Improve retroreflectivity and visibility

													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**
SH599 CYMPO HSIP REGIONAL SIGN PROJECT - PHASE II	Roadway signs and traffic control	Roadway signs (including post) - new or updated	810	Signs	$592860	$592860	HSIP (23 U.S.C. 148)	Other	0		Other Local Agency	Systemic	Other	Improve retroreflectivity and visibility
SH609 CITY OF KINGMAN SIGN INVENTORY PROJECT	Non-infrastructure	Non-infrastructure - other	1	SIGN MGT SYSTEM	$153600	$153600	HSIP (23 U.S.C. 148)	Other	0		City of Municipal Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
SH629 CITY OF KINGMAN PROTECTED LEFT TURN	Roadway	Roadway - other	1	Intersections	$80640	$85236	HSIP (23 U.S.C. 148)	Other	0		City of Municipal Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SH634 SIGN MGMT SYSTEM/SIGN UPGRADE, BUCKEYE	Roadway signs and traffic control	Roadway signs and traffic control - other	2490	Signs	$167400	$167400	HSIP (23 U.S.C. 148)	Other	0		Town or Township Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
SH635 59TH AND OLIVE AVENUES, GLENDALE	Roadway	Roadway - other	1	Intersections	$1206376	$1275139	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	21,800	40	City of Municipal Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SH636 PED COUNTDOWN SIG HEADS/ APS/ SIGNA, AVONDALE	Roadway signs and traffic control	Roadway signs and traffic control - other	16	Signal heads	$205744	$205744	HSIP (23 U.S.C. 148)	Other	0		City of Municipal Highway Agency	Systemic	Pedestrians	Making walking and street crossing easier
SH645 SIGN PANEL REPLACEMENT, PINAL COUNTY	Roadway signs and traffic control	Roadway signs and traffic control - other	1849	Signs	$140995	$140995	HSIP (23 U.S.C. 148)	Other	0		County Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
SH646 VARIOUS LOCATIONS, ELOY SIGNS	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	797	Signs	$71772	$71772	HSIP (23 U.S.C. 148)	Other	0		Town or Township Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
SS914 ALMA SCHOOL ROAD/ CHANDLER BLVD, CHANDLER	Roadway	Roadway - other	1	Intersections	$4208929	$4448837	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	0		City of Municipal Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SS942 Lake Mary Road;MP 290.5-317.5, Coconino County	Roadway	Roadway - other	27	Clear Zone - Tree Clearing	$211385	$223433	HSIP (23 U.S.C. 148)	Rural Principal Arterial (RPA) - Other	0		State Highway Agency	Spot	Roadway Departure	Minimizing the consequences of leaving the road
SS990 HRRR REAY LANE/SAFFORD-BRYCE ROAD INTERSECTION	Roadway	Roadway - other	1	Intersections	$489110	$516989	HSIP (23 U.S.C. 148)	Other	1,062	55	State Highway Agency	Spot	Intersections	Reduce fatalities through geometric configuration
SS991, HRRR 8TH AVENUE & AIRPORT ROAD INTERSECTION,GRAHAM CO	Roadway	Roadway - other	1	Intersections	$65012.32	$68718	HSIP (23 U.S.C. 148)	Other	0		Indian Tribe Nation	Spot	Intersections	Reduce fatalities through geometric configuration
T0009 Design Sign Management System/Updgrade, Phase 3, AVONDALE	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	3360	Signs	$423600	$423600	HSIP (23 U.S.C. 148)	Other	0		City of Municipal Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
T0019 VAR LOCATIONS - CITY OF GLENDALE FYA PHASE III	Roadway	Roadway - other	22	Flashing Yellow Arrows	$288000	$288000	HSIP (23 U.S.C. 148)	Other	0		City of Municipal Highway Agency	Systemic	Intersections	Reduce fatalities through geometric configuration

													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**
T0022 VARIOUS LOCATIONS - SUPERIOR SIGN STRIPING UPGRADE	Roadway signs and traffic control	Sign sheeting - upgrade or replacement	1400	Signs	$156658	$156658	HSIP (23 U.S.C. 148)	Other	0		Town or Township Highway Agency	Systemic	Other	Improve retroreflectivity and visibility
T0039 NACOG MULTI-AGENCY SIGN PROCUREMENT - PHASE 2	Roadway signs and traffic control	Roadway signs and traffic control - other	3800	Signs	$597812	$597812	HSIP (23 U.S.C. 148)	Other	0		Other Local Agency	Systemic	Other	Improve retroreflectivity and visibility
T0055 FLORENCE BLVD; PEDSTRIAN SAFETY IMPROVEMENTS	Roadway	Roadway - other	1	PHB	$213553	$213553	HSIP (23 U.S.C. 148)	Other	0		City of Municipal Highway Agency	Spot	Pedestrians	Making walking and street crossing easier
T0113 NACOG REGIONAL SIGN REPLACEMENT - PHASE 3	Roadway signs and traffic control	Roadway signs and traffic control - other	1710	Signs	$150000	$150000	HSIP (23 U.S.C. 148)	Other	0		Other Local Agency	Other	Other	Improve retroreflectivity and visibility
T0146 SIGN PANEL REPLACEMENT, Pima County	Roadway signs and traffic control	Roadway signs and traffic control - other	38601	Signs	$643000	$643000	HSIP (23 U.S.C. 148)	Other	0		County Highway Agency	Systemic	Other	Improve retroreflectivity and visibility

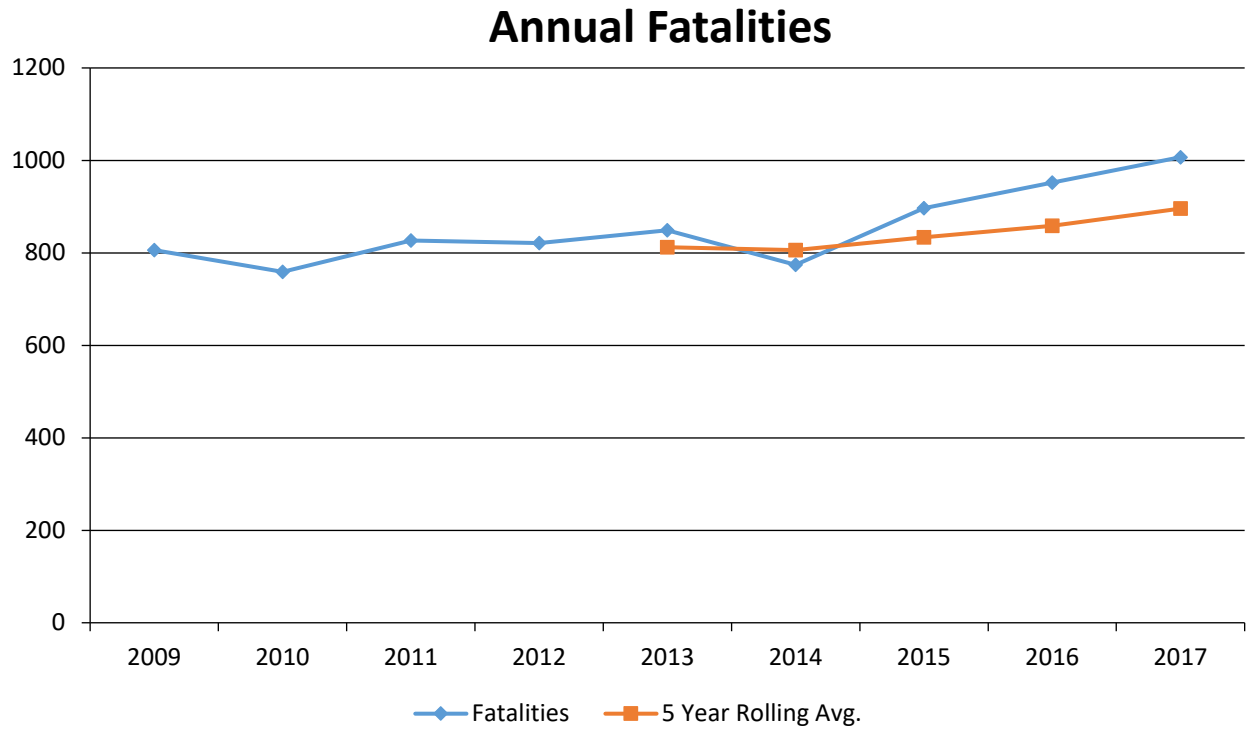
Enter additional comments here to clarify your response for this question or add supporting information.

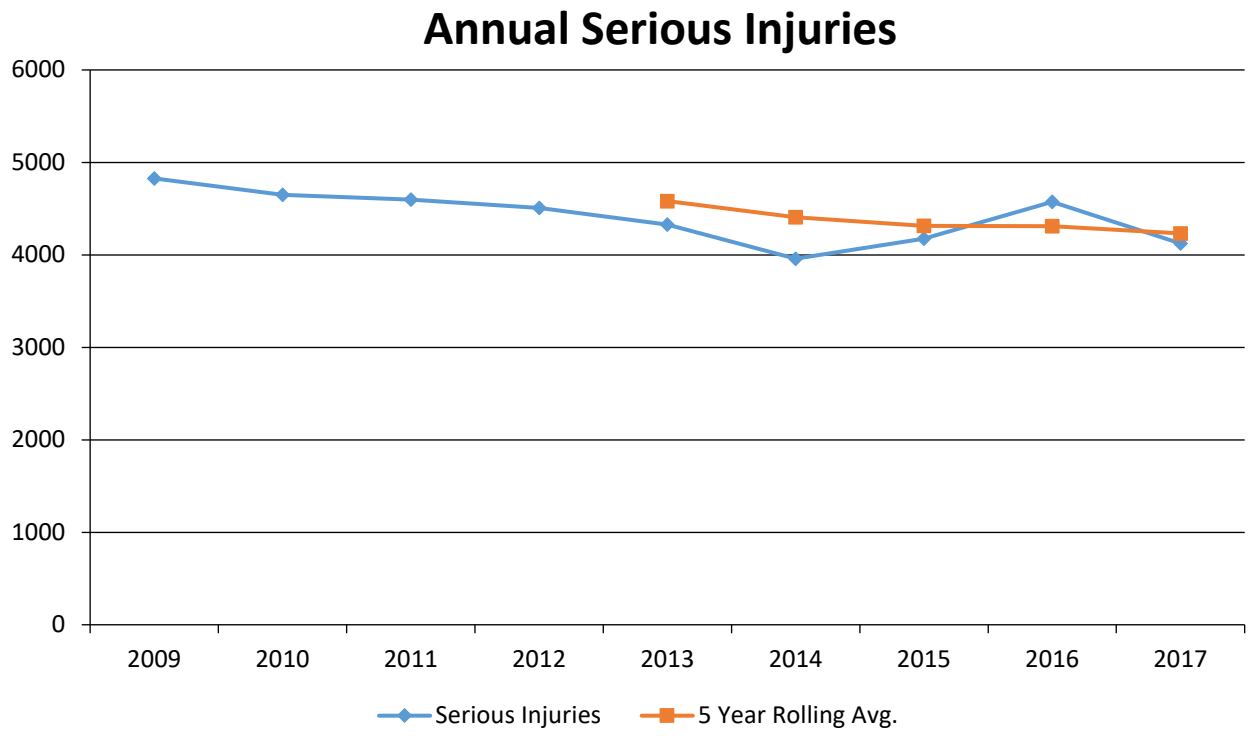
Safety Performance

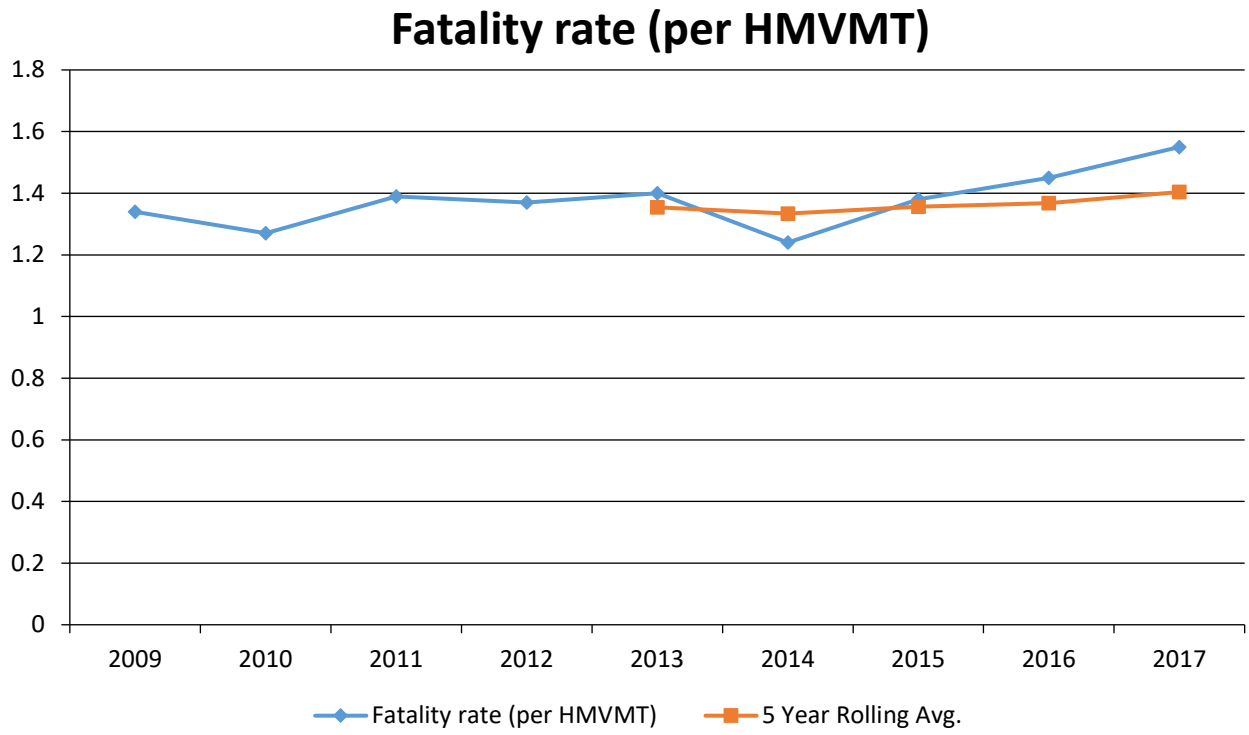
General Highway Safety Trends

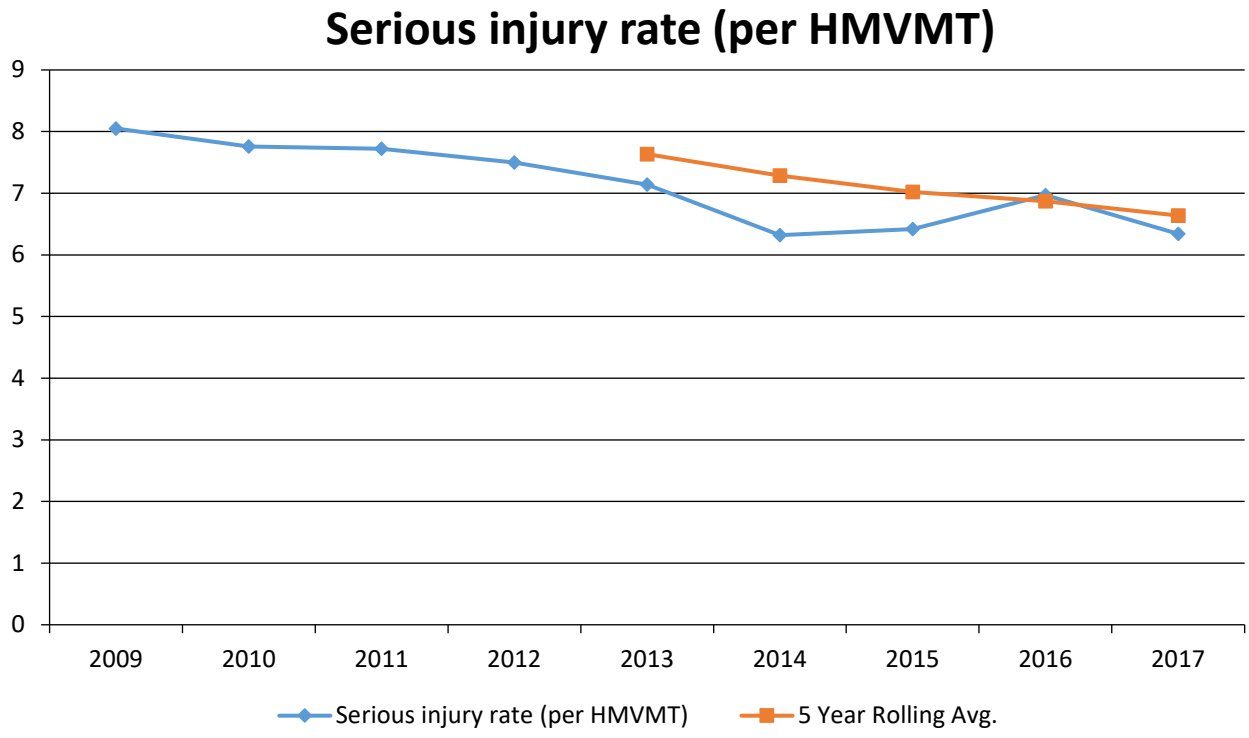
Present data showing the general highway safety trends in the State for the past five years.

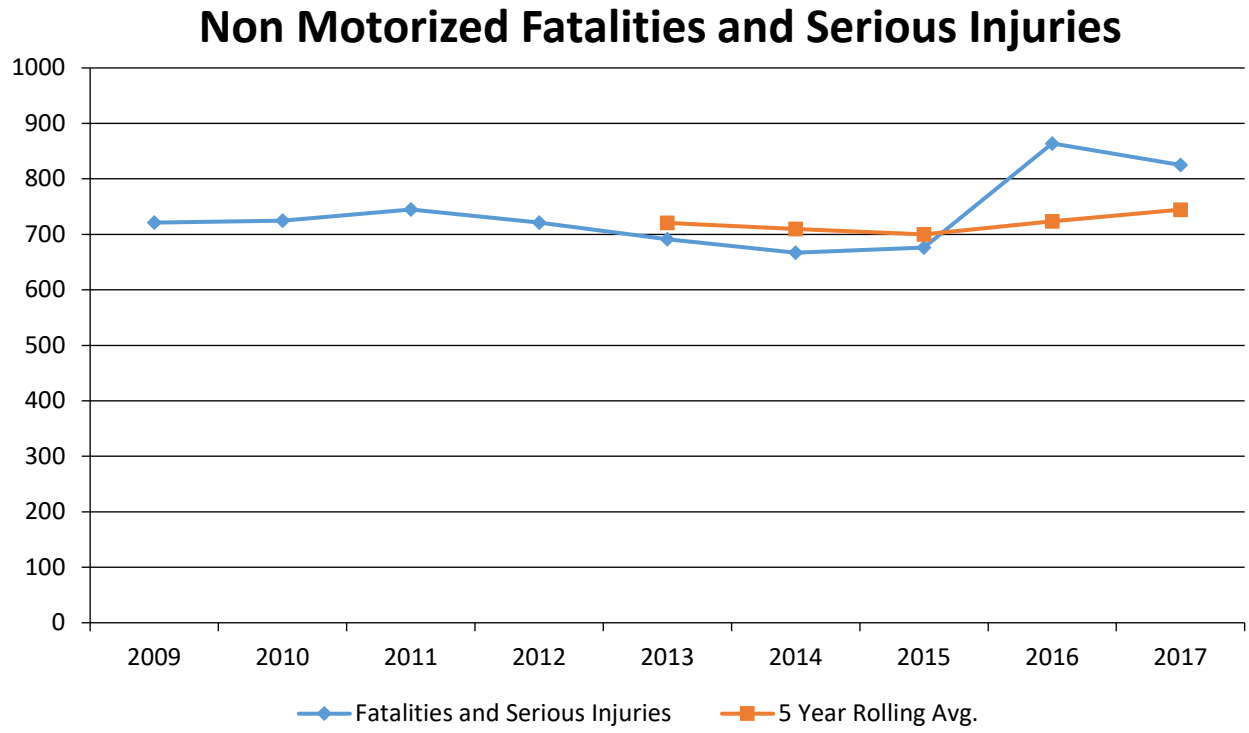
PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	806	759	827	821	849	774	897	952	1,007
Serious Injuries	4,827	4,648	4,598	4,508	4,328	3,959	4,175	4,575	4,125
Fatality rate (per HMVMT)	1.340	1.270	1.390	1.370	1.400	1.240	1.380	1.450	1.550
Serious injury rate (per HMVMT)	8.050	7.760	7.720	7.500	7.140	6.320	6.420	6.970	6.340
Number non-motorized fatalities	147	173	177	149	189	184	191	224	262
Number of non-motorized serious injuries	574	552	568	572	502	483	485	640	563
VMT	59,978	59,906	59,575	60,129	60,586	62,631	65,045	65,606	65,069

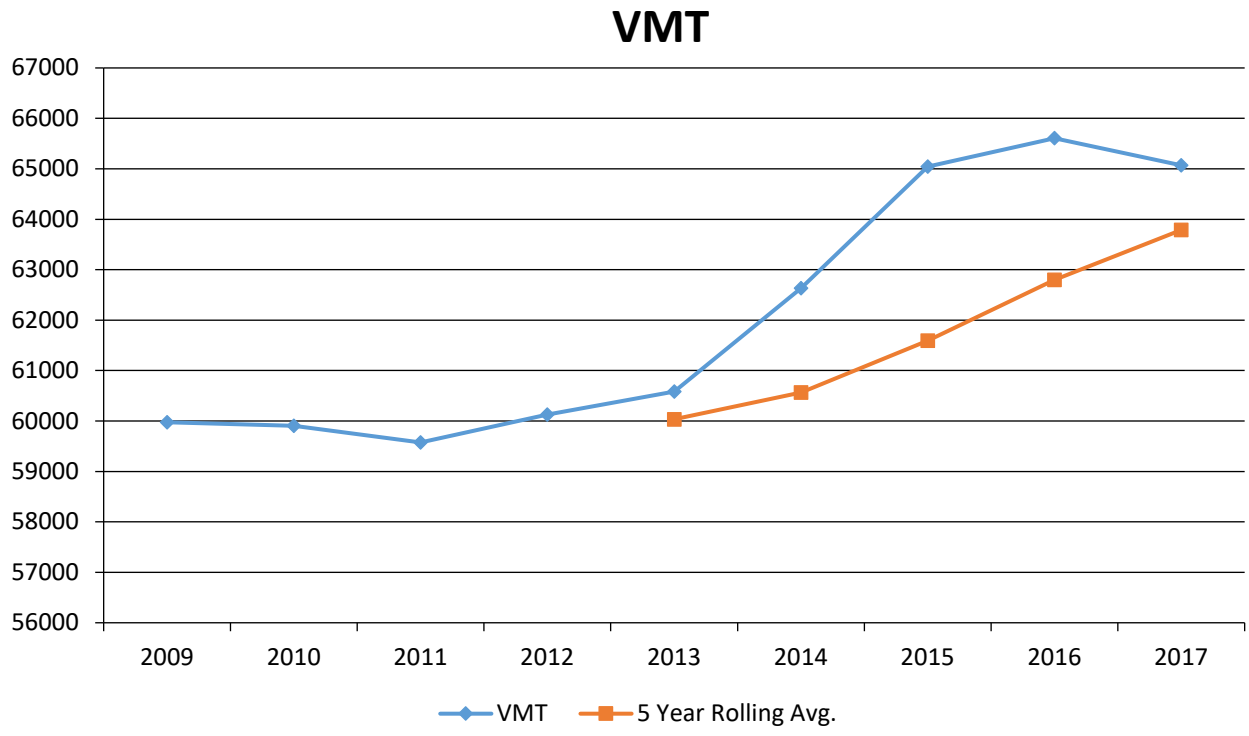

Annual Fatalities
1200
1000
800
600
400
200
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
6000
5000
4000
3000
2000
1000
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
9
8
7
6
5
4
3
2
1
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.

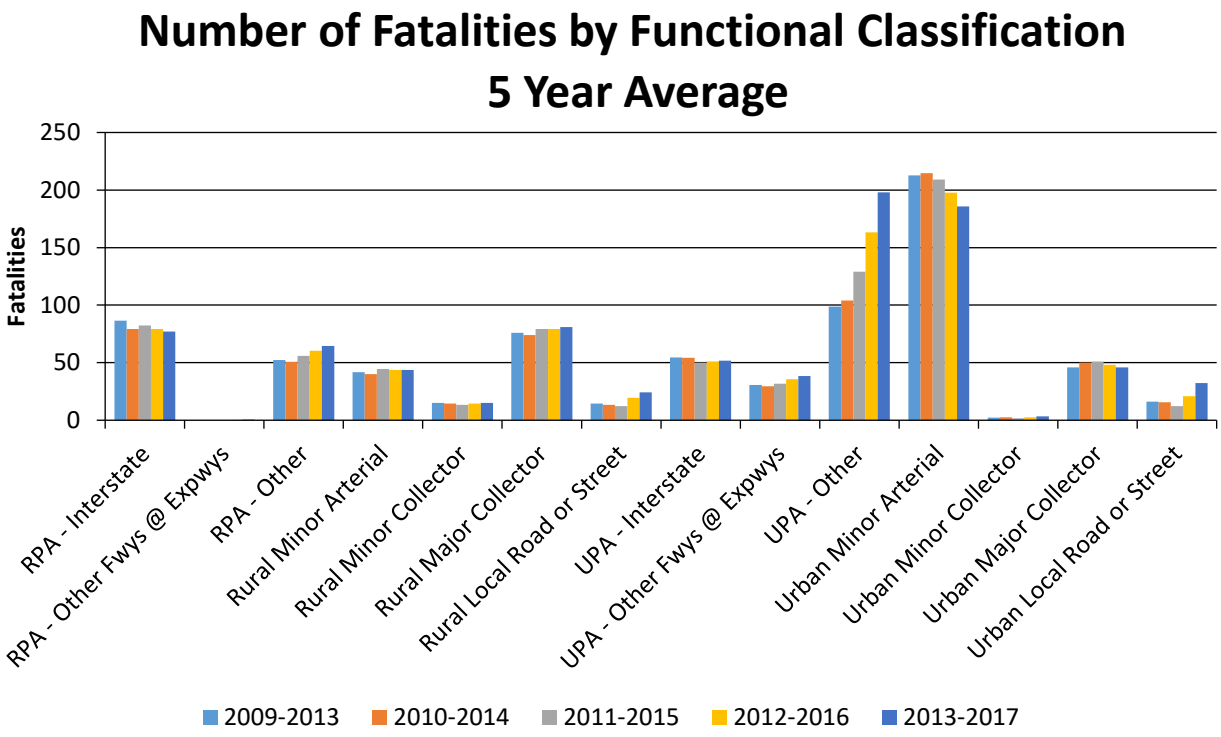
To the maximum extent possible, present this data by functional classification and ownership.

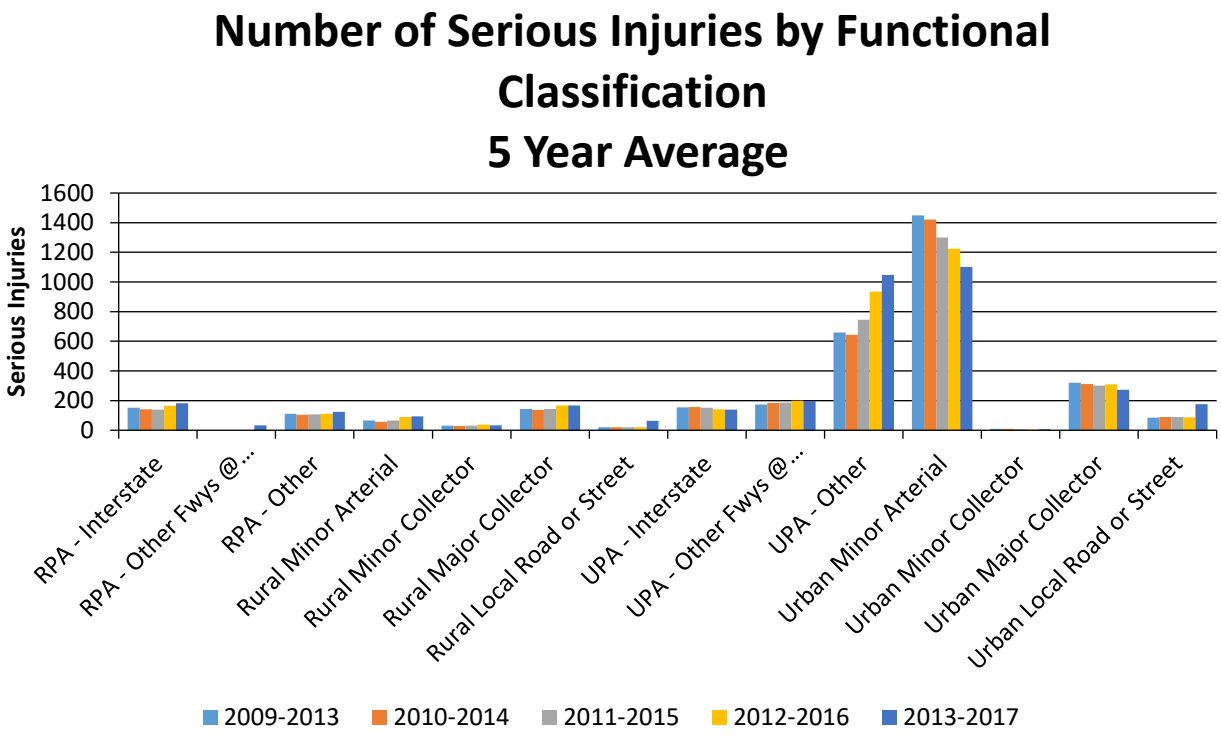
Year 2017

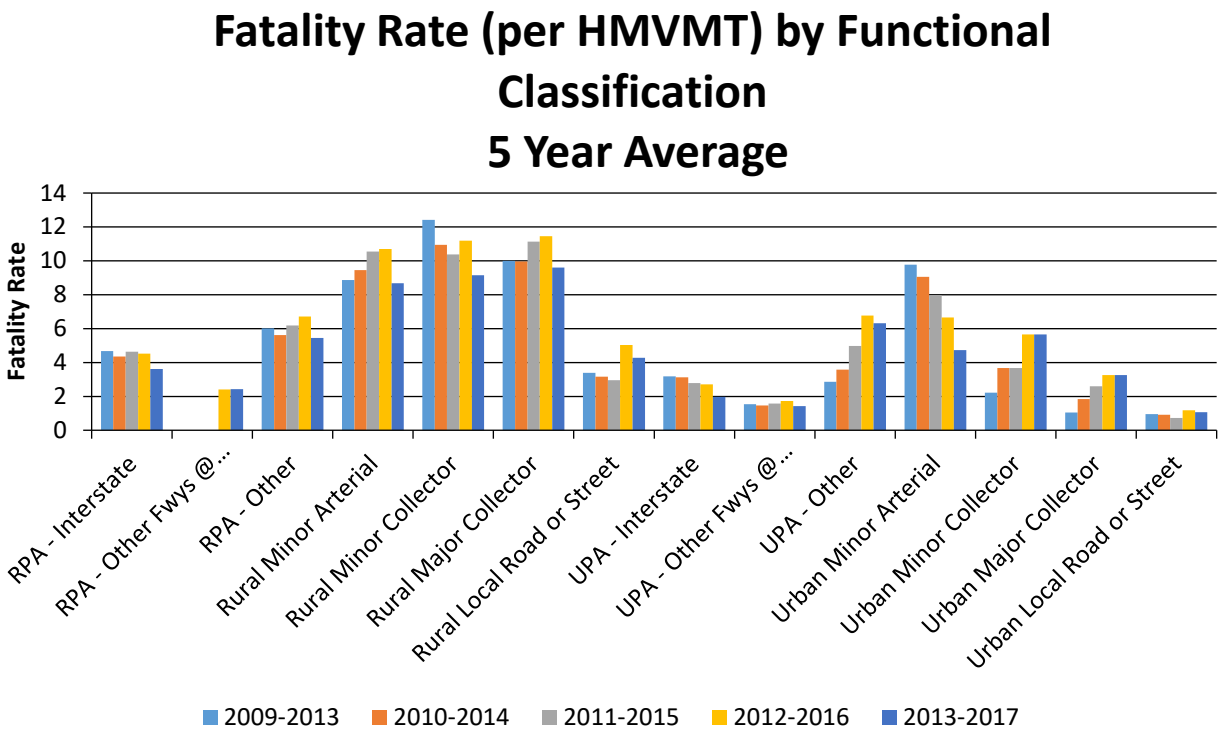
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	77	182.4	3.62	8.27
Rural Principal Arterial (RPA) - Other Freeways and Expressways	0.6	33.2	2.42	0.05
Rural Principal Arterial (RPA) - Other	64.6	123.4	5.44	10.11
Rural Minor Arterial	43.8	94.4	8.67	19.35
Rural Minor Collector	15	32.8	9.15	24.69
Rural Major Collector	81	167.8	9.61	20.33
Rural Local Road or Street	24.2	64.4	4.27	3.68
Urban Principal Arterial (UPA) - Interstate	51.8	138	1.98	5.57
Urban Principal Arterial (UPA) - Other Freeways and Expressways	38.4	197.4	1.43	7.96
Urban Principal Arterial (UPA) - Other	198	1,047	6.31	34.83
Urban Minor Arterial	185.8	1,102	4.72	28.49
Urban Minor Collector	3.4	8.2	5.66	11.83
Urban Major Collector	45.8	273.6	3.25	21.58
Urban Local Road or Street	32.4	176.4	1.07	4

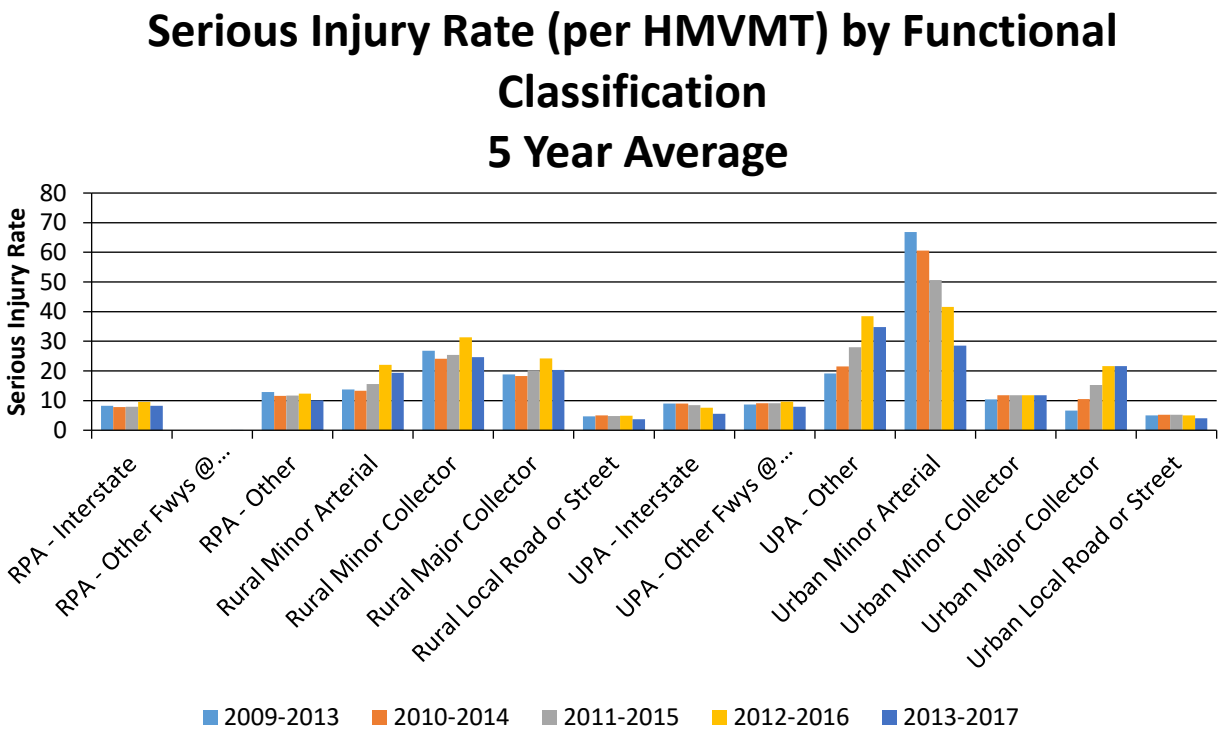
Year 2017

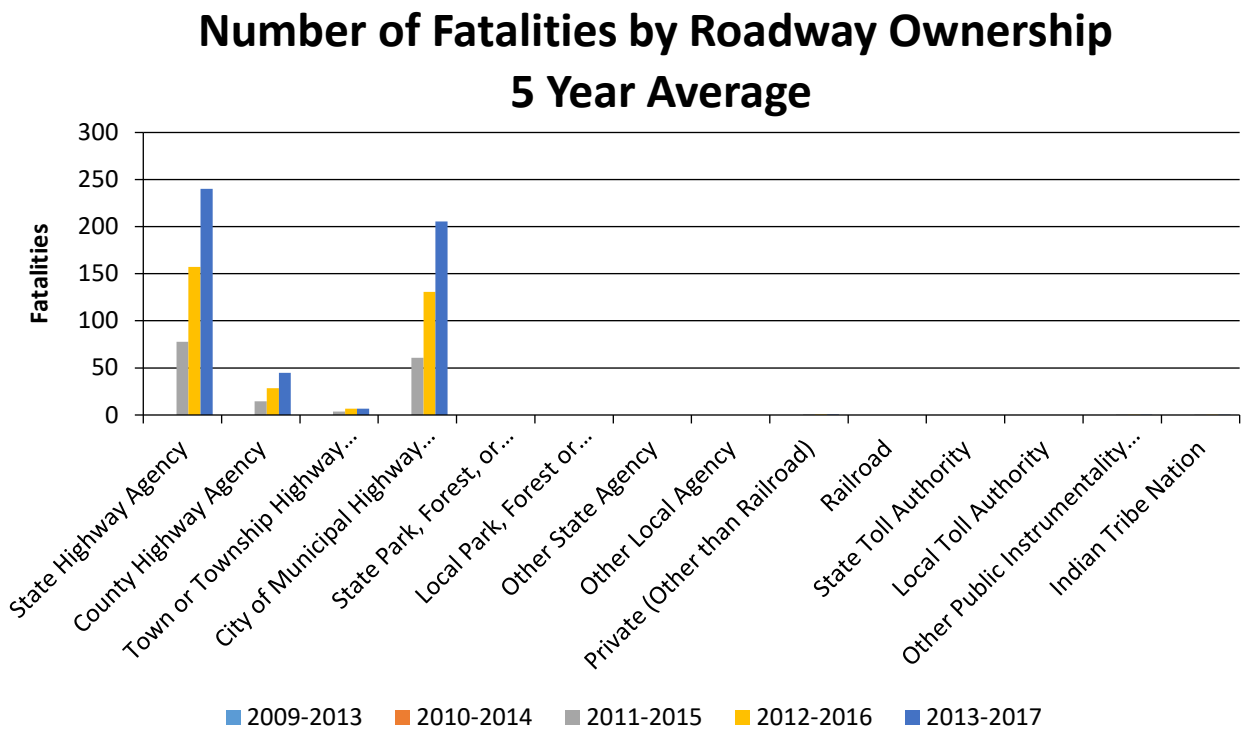
Roadways	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
State Highway Agency	240.2	0	0.24	0
County Highway Agency	44.8	0	0.04	0
Town or Township Highway Agency	6.8	0	0.01	0
City of Municipal Highway Agency	205.4	0	0.2	0
State Park, Forest, or Reservation Agency	0	0	0	0
Local Park, Forest or Reservation Agency	0	0	0	0
Other State Agency	0	0	0	0
Other Local Agency	0	0	0	0
Private (Other than Railroad)	0.6	0	0	0
Railroad	0	0	0	0
State Toll Authority	0	0	0	0
Local Toll Authority	0	0	0	0
Other Public Instrumentality (e.g. Airport, School, University)	0.2	0	0	0
Indian Tribe Nation	0.2	0	0	0

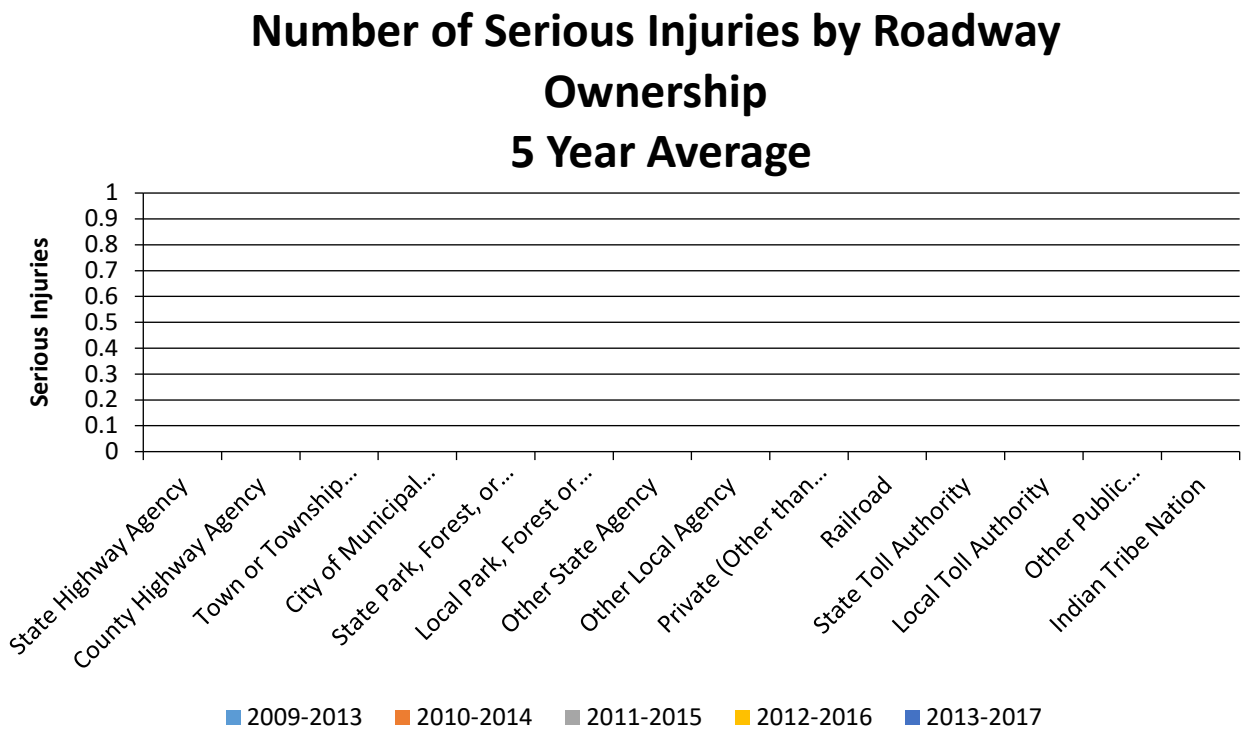

Number of Fatalities by Functional Classification
5 Year Average
Fatalities
250
200
150
100
50
0
RPA - Interstate
RPA - Other Fwys @ Expwys
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @ Expwys
UPA - Other
Urban Minor Arterial
Urban Minor Collector
Urban Major Collector
Urban Local Road or Street
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017

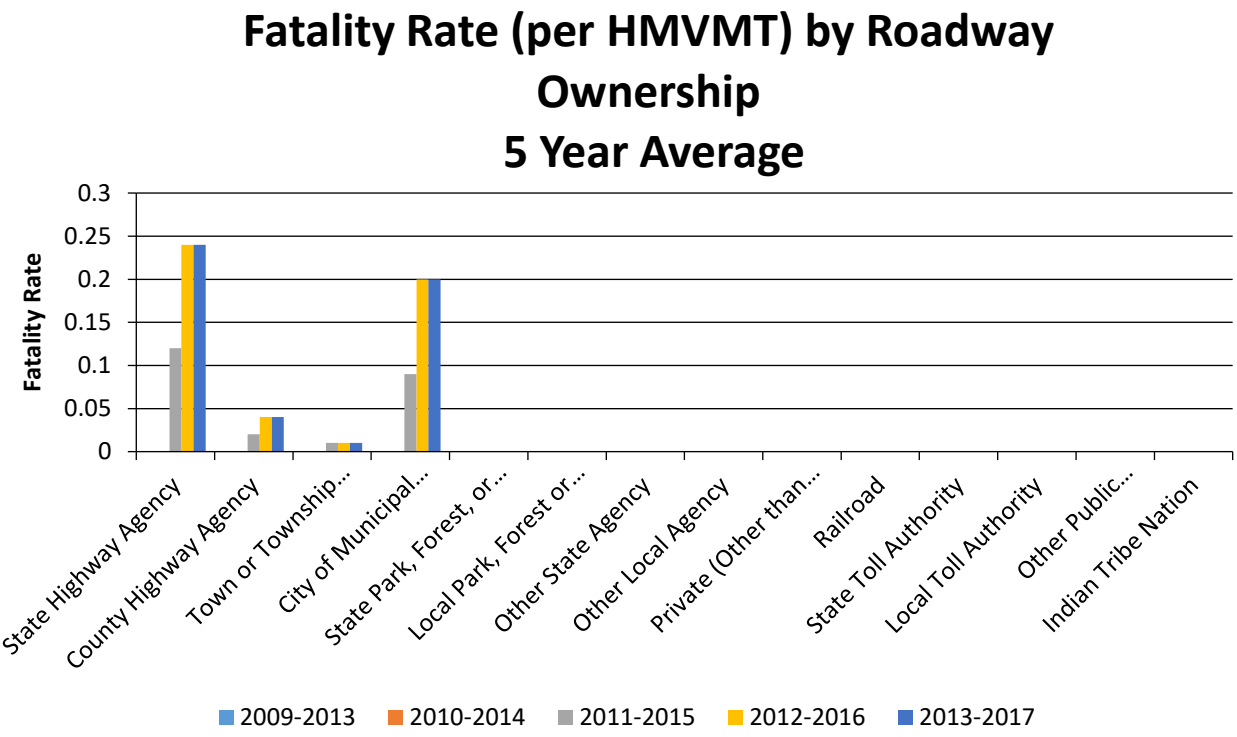

Number of Serious Injuries by Functional Classification
5 Year Average
Serious Injuries
1600
1400
1200
1000
800
600
400
200
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @...
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

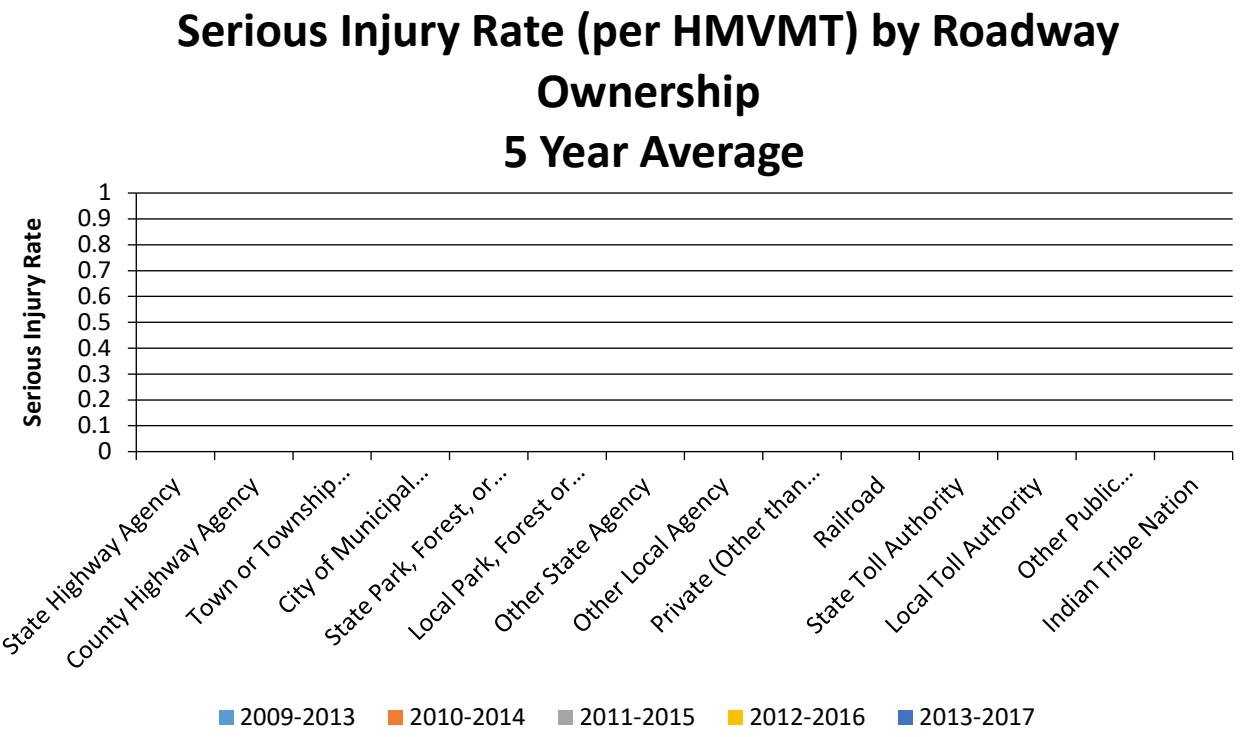

Fatality Rate (per HMVMT) by Functional Classification
5 Year Average
Fatality Rate
14
12
10
8
6
4
2
0
RPA - Interstate
RPA - Other Fwys @...
RPA - Other
Rural Minor Arterial
Rural Minor Collector
Rural Major Collector
Rural Local Road or Street
UPA - Interstate
UPA - Other Fwys @...
UPA - Other
Urban 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
80
70
60
50
40
30
20
10
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
300
250
200
150
100
50
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
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
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
0.3
0.25
0.2
0.15
0.1
0.05
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 1001.5

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

Arizona established our safety performance projections based on the 5-year rolling averages of statewide crash data. While the targets cover central areas of our State Strategic Highway Safety Plan, the projections do not reflect the goals of the plan which call for a 3-7 percent reduction in fatalities and serious injury crashes by the end of 2019.

Number of Serious Injuries 4166.9

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

Arizona established our safety performance projections based on the 5-year rolling averages of statewide crash data. While the targets cover central areas of our State Strategic Highway Safety Plan, the projections do not reflect the goals of the plan which call for a 3-7 percent reduction in fatalities and serious injury crashes by the end of 2019.

Fatality Rate	1.442

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

Arizona established our safety performance projections based on the 5-year rolling averages of statewide crash data. While the targets cover central areas of our State Strategic Highway Safety Plan, the projections do not reflect the goals of the plan which call for a 3-7 percent reduction in fatalities and serious injury crashes by the end of 2019.

Serious Injury Rate	6.102

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

Arizona established our safety performance projections based on the 5-year rolling averages of statewide crash data. While the targets cover central areas of our State Strategic Highway Safety Plan, the projections do not reflect the goals of the plan which call for a 3-7 percent reduction in fatalities and serious injury crashes by the end of 2019.

Total Number of Non-Motorized Fatalities and Serious Injuries	814.0

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

Arizona established our safety performance projections based on the 5-year rolling averages of statewide crash data. While the targets cover central areas of our State Strategic Highway Safety Plan, the projections do not reflect the goals of the plan which call for a 3-7 percent reduction in fatalities and serious injury crashes by the end of 2019.

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

It should be noted that the above "projections" are not the same as the SHSP goals because the SHSP goals were based on the calendar years during the economic downturn, reduced VMT and lower numbers of crashes. The current projections are based on the most current crash data and VMT which has been steadily increasing.

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

Individual meetings were held with each COG/MPO to discuss the State safety performance targets in addition to a general meeting with the State COG/MPO council. Each COG/MPO was given the opportunity to establish their own targets or to adopt the State safety performance targets. Sample target letters and wording was provided to aid them in meeting the submittal date. Prior to adopting the proposed targets, a meeting was conducted with GOHS to reach consensus on the State's safety performance targets. The process that ADOT followed in reaching the recommended safety performance targets was described. Attendees agreed to support the suggested targets.

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

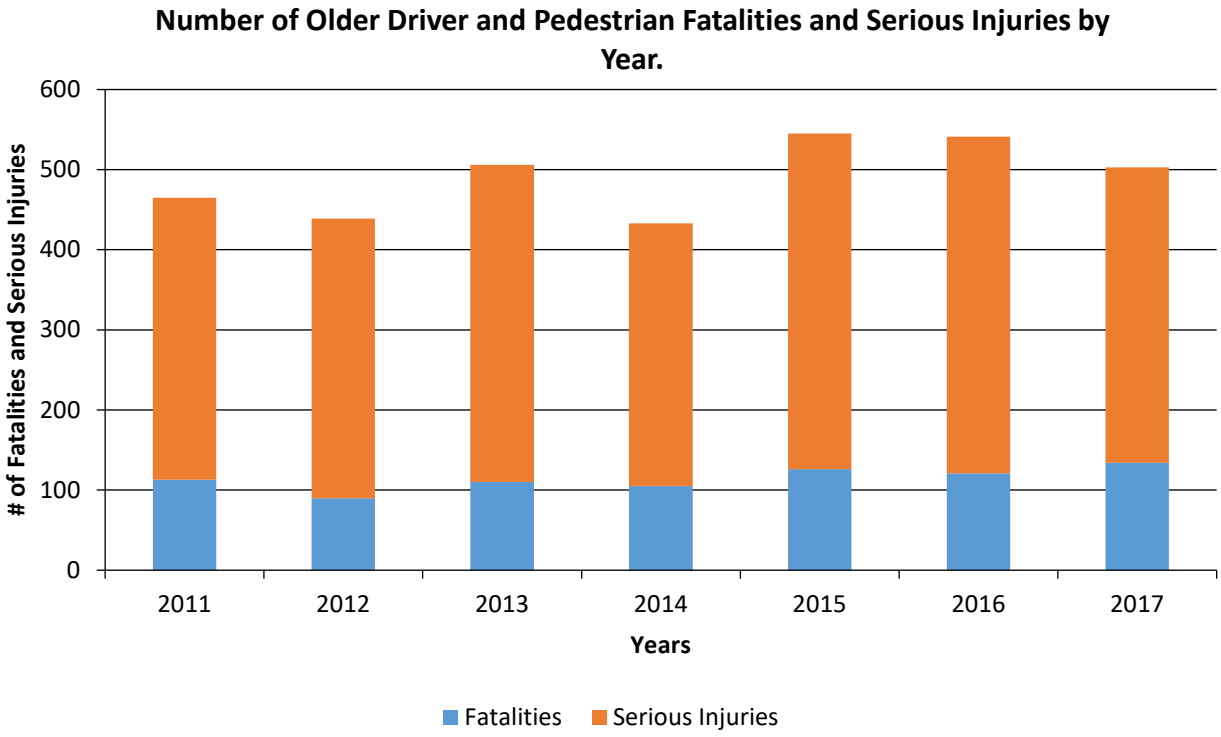
Does the HRRR special rule apply to the State for this reporting period?

No

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

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	113	90	110	105	126	121	134
Number of Older Driver and Pedestrian Serious Injuries	352	349	396	328	419	420	369



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

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.

Projects implemented during this reporting period were selected based on all crashes, HSIP manual was updated on May 2015, only fatal and serious injury crashes are allowed to be used in B/C ratio calculations for all future projects.

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

RSAs completed
Increased awareness of safety and data-driven process
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?

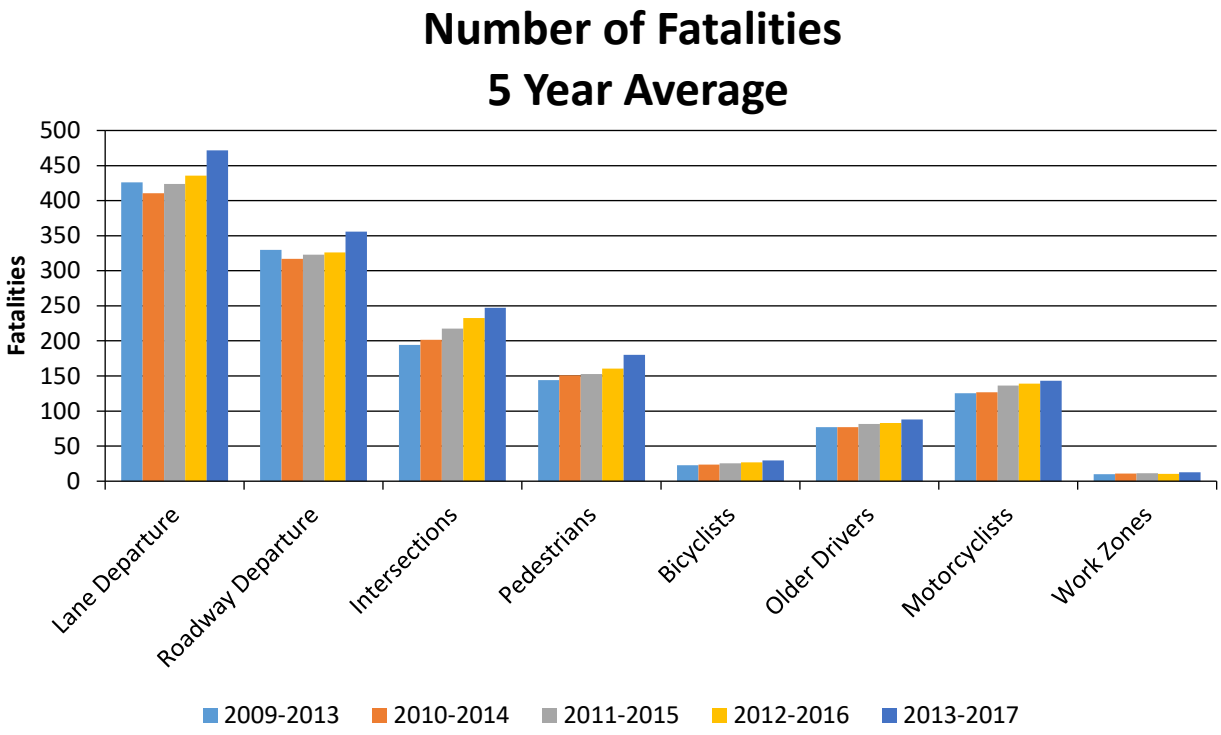
No

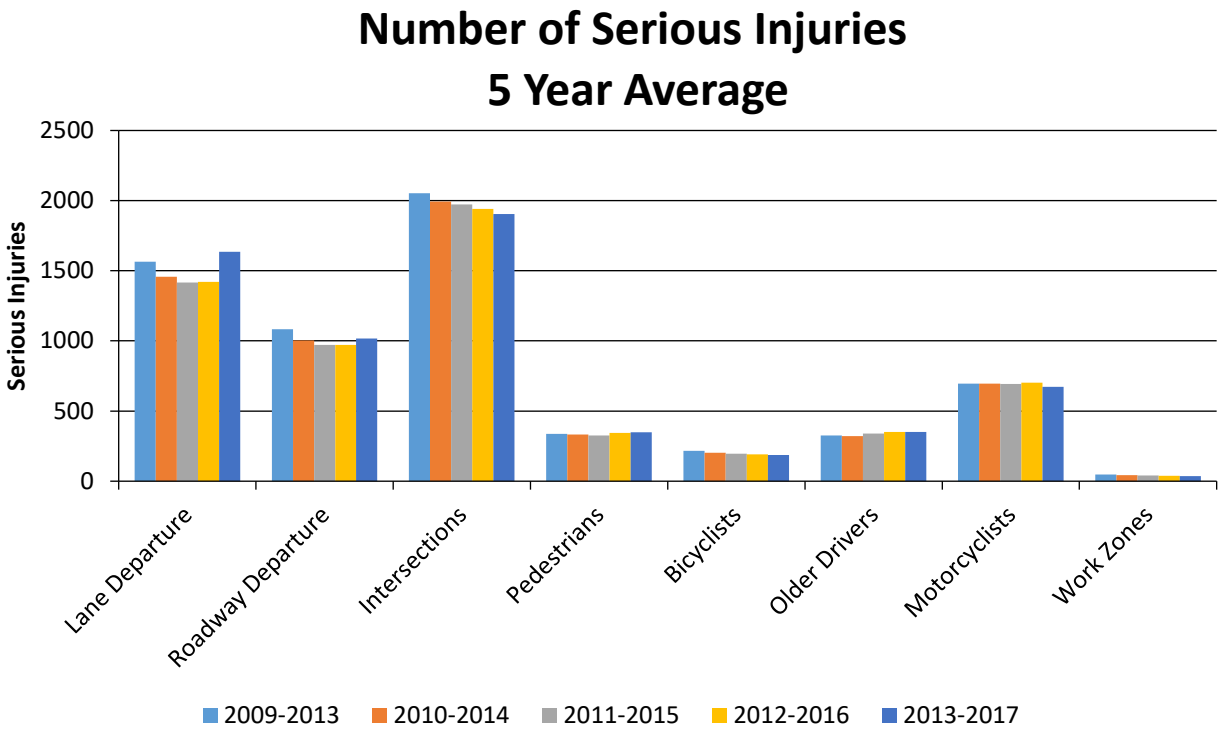
Effectiveness of Groupings or Similar Types of Improvements

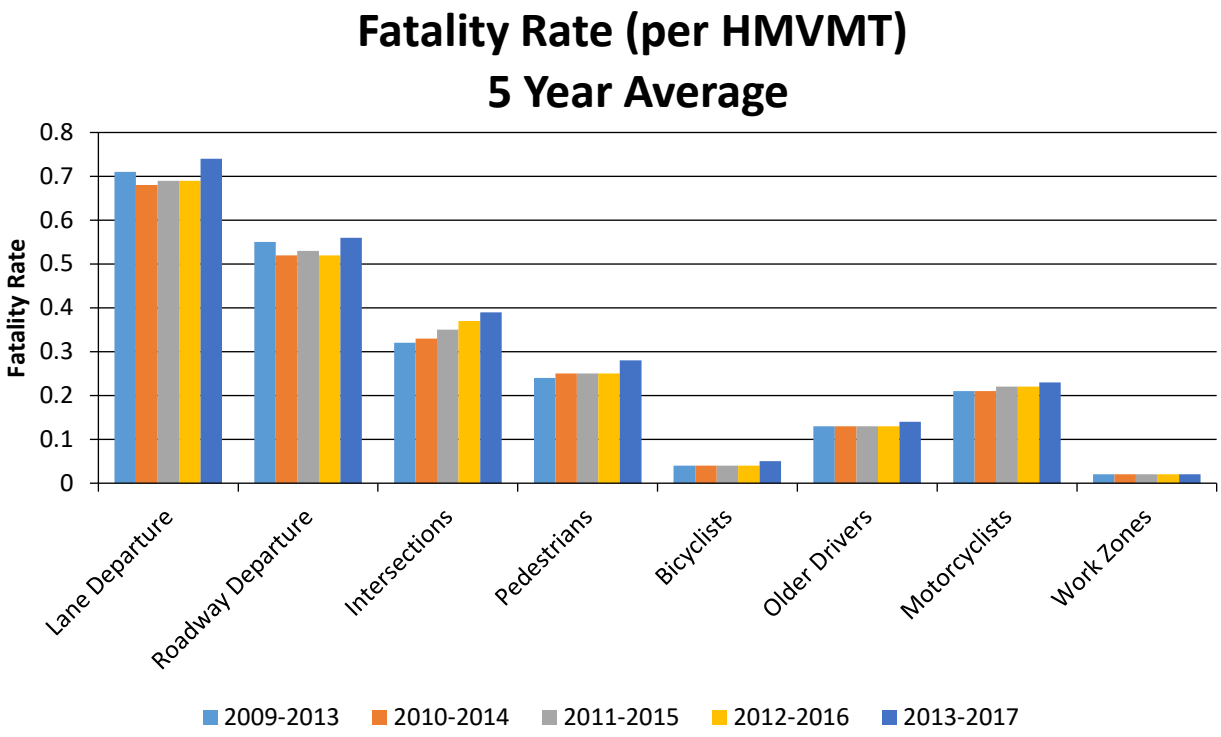
Present and describe trends in SHSP emphasis area performance measures.

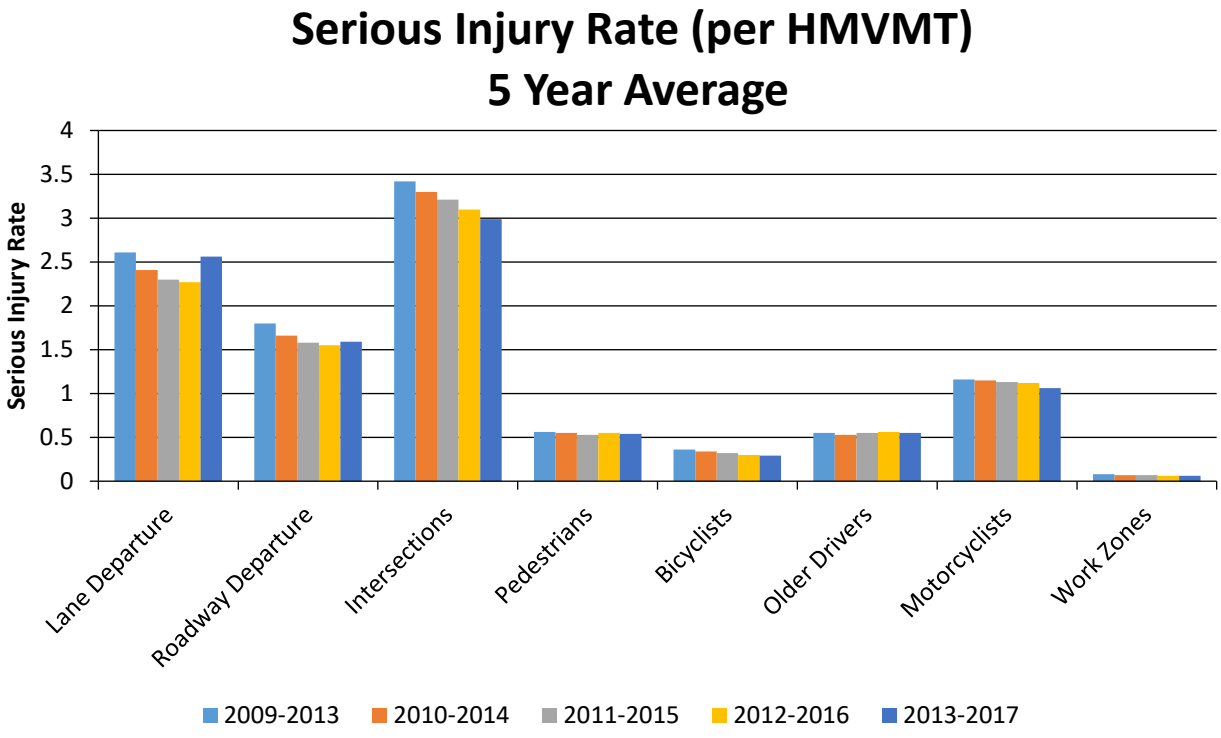
Year 2017

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		471.6	1,636	0.74	2.56	0	0	0
Roadway Departure		356	1,016.2	0.56	1.59	0	0	0
Intersections		247.4	1,904.6	0.39	2.99	0	0	0
Pedestrians		180.2	348.4	0.28	0.54	0	0	0
Bicyclists		29.8	186.2	0.05	0.29	0	0	0
Older Drivers		88	350.6	0.14	0.55	0	0	0
Motorcyclists		143.4	673	0.23	1.06	0	0	0
Work Zones		12.6	36	0.02	0.06	0	0	0


Number of Fatalities
5 Year Average
Fatalities
500
450
400
350
300
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2009-2013
2010-2014
2011-2015
2012-2016
2013-2017


Number of Serious Injuries
5 Year Average
Serious Injuries
2500
2000
1500
1000
500
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
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.

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?

10/14/2014

What are the years being covered by the current SHSP?

From: 2014 To: 2019

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

2019

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

Efforts are currently underway to update the 2014 SHSP with a target date of 10/2019 for publication.

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

	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
MIRE NAME (MIRE NO.)	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					100	50	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	50	0	0
End Point Segment Descriptor (11)	100	100					100	50	0	0
Segment Length (13)	100	100								
Direction of Inventory (18)	100	0								
Functional Class (19)	100	100					100	100	0	0
Median Type (54)	100	100								

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
Access Control (22)	100	100								
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	10					100	10		
Average Annual Daily Traffic (79)	100	100					100	10		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	10					100	10	0	0
INTERSECTION										
Unique Junction Identifier (120)			100	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)			0	0						
Intersection/Junction Traffic Control (131)			0	0						
AADT for Each Intersecting Road (79)			100	100						
AADT Year (80)			100	100						
Unique Approach Identifier (139)			0	0						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					100	100				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					0	0				
Location Identifier for Roadway at Ending Ramp Terminal (201)					0	0				
Ramp Length (187)					100	10				
Roadway Type at Beginning of Ramp Terminal (195)					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
Roadway Type at End Ramp Terminal (199)					100	0				
Interchange Type (182)					0	0				
Ramp AADT (191)					100	10				
Year of Ramp AADT (192)					100	10				
Functional Class (19)					100	100				
Type of Governmental Ownership (4)					100	100				
Totals (Average Percent Complete):	**100.00**	**84.44**	**62.50**	**25.00**	**72.73**	**30.00**	**100.00**	**53.33**	**0.00**	**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.

ADOT proposes the following steps to meet the requirement to have complete access to the MIRE fundamental data elements on all public roadways by September 30, 2026. Each of the following steps describes necessary actions and completion dates to meet this goal.

Step 1. Establish a MIRE task force committee comprising representatives from the Transportation Systems Management and Operations Division (TSMO), the Information Technology Group (ITG), and the Multimodal Planning Division (MPD) who will take responsibility in ensuring completion of the following steps.

ADOT has formed a preliminary MIRE task force committee consisting of nine total members, three from each division stated above:

Transportation Systems Management and Operations Division (TSMO)

- John Riemer
- Kerry Wilcoxon
- Vacant

Information Technology Group (ITG)

- Mark Flahan
- Scott Parkey*
- Tom Tyndall

Multimodal Planning Division (MPD)

- Mick Cseri*
- James Meyer
- Patrick Whiteford

* Indicates MIRE task force co-leader responsible for ensuring the following steps are completed.

Each division of the MIRE task force committee will work closely to ensure the following steps are completed timely and accurately.

Step 2. Create an outreach plan to facilitate communication between ADOT and Tribal and local agencies. The plan will include specific measures to promote awareness and understanding of the MIRE FDE plan and establish a mutual understanding of potential future data needs. This step will be completed in 2017. ADOT parties involved: MPD/ITG/TSMO.

Step 3. Verify the completeness and compatibility of the data that ADOT has at the State level for ADOT-maintained roads, noting the collection methodology and frequency. This step should also include verifying which division collects, receives, and maintains the data as well as how the data is stored, managed, and who has access to it. This step will be completed in 2017. ADOT parties involved: MPD/ITG/TSMO.

Step 3b. For all new elements, ADOT will establish a database schema.

Step 4. Determine the roadway characteristics and format of the data that each of the 15 Counties, 46 Cities, 45 Towns, 22 Tribes, and other agencies is collecting for their non-ADOT-maintained roadways. The collection methodology and frequency, quality control / quality assurance measures employed for the collected data, database schema, and software that each locality uses should also be confirmed. This step will begin in 2017. ADOT parties involved: MPD/ITG/TSMO.

Step 4b. Determine if the locality data is complete and compatible with ADOT's existing data. This step will begin in 2017 and be completed simultaneously with Step 2. This step will determine if data needs to be collected by ADOT for the non-ADOT-maintained roadways. ADOT parties involved: MPD/TSMO.

Step 5. Finalize the data collection needs for both ADOT and non-ADOT-maintained roadways. This step should be completed directly following Step 3. This step will be completed in 2018. ADOT parties involved: MPD/TSMO.

Step 6. Create a detailed data collection and maintenance plan to include specific costs, resource needs, prioritization, and schedules. The data collection plan should specify the anticipated data collection methodology, who is responsible for collecting the data, how it will be made available to ADOT, and how frequently the data will be updated. If a quality assurance / quality control process has not yet been established, ADOT will create one prior to data collection. This step will be completed in 2019. ADOT parties involved: MPD/ITG/TSMO.

Step 7. Create a cost estimate for all data collection and maintenance efforts. This step will be completed in 2018. ADOT parties involved: MPD/TSMO.

Step 8. Identify funding sources for the data collection and maintenance process. This step will be completed in 2019. ADOT parties involved: MPD/TSMO.

Step 9. Allocate funding and resources for the data collection efforts. This step will be completed in 2020. ADOT parties involved: MPD/TSMO.

Step 10. Gather all remaining data. This step will be completed by September 2025 to allow one year for post-processing. ADOT parties involved: MPD/TSMO.

Step 11. Post-process all data into a user-friendly format compatible with appropriate State data systems. This step must be completed by September 2026 to meet federal regulations. ADOT parties involved: MPD/TSMO.

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	Incapacitating Injury	Yes	N/A	Yes	N/A	Yes
Crash Report Form Instruction Manual	Incapacitating Injury	Yes	Any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred. Often defined as "needing help from the scene."	Yes	Includes: severe lacerations, broken or distorted limbs, skull or chest injuries, abdominal injuries, unconsciousness when taken from the crash scene.	Yes
Crash Database	Incapacitating Injury	Yes	N/A	Yes	N/A	Yes

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 Database Data Dictionary	Incapacitating Injury	Yes	Any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred. Often defined as "needing help from the scene."	Yes	Includes: severe lacerations, broken or distorted limbs, skull or chest injuries, abdominal injuries, unconsciousness when taken from the crash scene.	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?

Yes

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

The self-assessment of the Arizona Highway Safety Improvement Program (HSIP) Program Review was completed in May 2018. The objectives of the program review were to:
a. Benchmark and track progress towards improving the adoption of best practices for the HSIP over the long term
b. Raise the level of awareness of HSIP-related practices and strategies
c. Identify gaps in existing HSIP efforts; and
d. Generate strategies to improve HSIP-related to adoption and practices.

See attached Final Report.

Optional Attachments

Program Structure:

2015 HSIP Manual (RevFeb17).pdf
HSIP Appendix_A (Rev Jan18).pdf
HSIP Appendix_ B.pdf
HSIP Appendix_C.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.