



OKLAHOMA HIGHWAY SAFETY IMPROVEMENT PROGRAM 2018 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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Disclaimer

Protection of Data from Discovery Admission into Evidence

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section [HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.”

23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

For FFY 2017, exclusive of rail projects, ODOT obligated \$37.7 million in HSIP funds. 55 percent of HSIP funds were used for bridge projects. Signing projects used 11 percent of funds, with center-line rumble strips following at 6.4 percent, striping at 6.2 percent, guardrail at 5.7 percent, and traffic signals at 5.1 percent. The remaining funds were distributed between horizontal curves, ADA compliance, cable barrier, ITS operations, pedestrian hybrid beacons, and school signs.

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.

HSIP funding is distributed among field offices and the central Traffic Division office. Safety infrastructure programs using HSIP funds administered by Traffic Engineering Division constitute a minority of HSIP funds allocated.

Where is HSIP staff located within the State DOT?

Other-Traffic Engineering

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

How are HSIP funds allocated in a State?

Other-Central Office

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.

Local road projects do not currently use HSIP funds.

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

Traffic Engineering/Safety
Design
Districts/Regions

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

Describe coordination with internal partners.

The majority of HSIP funds are not allocated to the Division (Traffic) which is responsible for preparing this report. This report applies primarily to those funds which are allocated to Traffic Division. Traffic Division is not able to report on the administrative practices relevant to the remainder of the HSIP spending. The Traffic Division provides field offices with an annual Crash Digest, which can be used for selecting optimal safety project locations.

Identify which external partners are involved with HSIP planning.

Other-None

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

Describe coordination with external partners.

Coordination with external partners does not involve use of HSIP funds at this time.

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

No

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

No

Program Methodology

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

No

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

File Name:

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

2018 Oklahoma Highway Safety Improvement Program
Select the programs that are administered under the HSIP.

- Median Barrier
- Intersection
- Horizontal Curve
- Roadway Departure
- Sign Replacement And Improvement
- Shoulder Improvement
- Other-Striping

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

Program: Horizontal Curve

Date of Program Methodology: 1/1/2018

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

Addresses SHSP priority or emphasis area

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

Funding set-aside

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

Crashes	Exposure	Roadway
Other-run off road injury/fatal	Traffic Lane miles	Horizontal curvature Roadside features Other-Shoulder Width Other-Speed Limit Other-Design Speed

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

Expected crash frequency with EB adjustment
 Probability of specific crash types

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

No

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

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

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

Program: Intersection

Date of Program Methodology: 1/1/2017

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

Addresses SHSP priority or emphasis area

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

Funding set-aside

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

Crashes

Exposure

Roadway

Other-Angle Crashes

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?

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

Other-Crash Frequency : 1

Program: Median Barrier

Date of Program Methodology: 1/1/2017

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

Addresses SHSP priority or emphasis area

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

Funding set-aside

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

Crashes	Exposure	Roadway
Other-Crossover Crashes	Traffic Lane miles	Median width Other-Access Control

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

Expected crash frequency with EB adjustment

Other-Crash Severity Prediction Function

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

No

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

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

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

Program: Roadway Departure

Date of Program Methodology: 1/1/2017

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

Addresses SHSP priority or emphasis area

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

Funding set-aside

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

Crashes	Exposure	Roadway
Other-run off road injury/fatal	Traffic Lane miles	Roadside features Other-terrain type

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

Expected crash frequency with EB adjustment

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

No

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

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

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

Program: Shoulder Improvement

Date of Program Methodology: 1/1/2017

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

Other-run off road injury/fatal

Traffic
Lane miles

Other-terrain type

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

Expected crash frequency with EB adjustment

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

No

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

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

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

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

Reference Tab 2B Collision Digest. Funding may not all be HSIP. These projects are from Roadway Engineering, not Traffic Engineering.

Program: Sign Replacement And Improvement

Date of Program Methodology: 1/1/2017

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

Other-Safety Infrastructure

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

Other-None

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

Other-District Selection

2018 Oklahoma Highway Safety Improvement Program

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

No

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

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

How are projects under this program advanced for implementation?

Other-District Selection

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).

Other-District Selection : 1

Program: Other-Striping

Date of Program Methodology: 1/1/2017

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

Addresses SHSP priority or emphasis area

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

Funding set-aside

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

Crashes

Exposure

Roadway

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?

No

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

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

How are projects under this program advanced for implementation?

Other-option of field districts

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).

What percentage of HSIP funds address systemic improvements?

50.2

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

- Cable Median Barriers
- Rumble Strips
- Traffic Control Device Rehabilitation
- Install/Improve Signing
- Install/Improve Pavement Marking and/or Delineation
- Upgrade Guard Rails
- 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
- 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?

No

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

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.

HSM predictive method is used to evaluate potential benefits of projects.

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.

Most HSIP projects created by Traffic Division are systemic. Predictive methods are used to prioritize locations for treatment where practicable, otherwise crash frequency is used. Predictive methods have been used in one case (median cable barrier) as a way of indirectly prioritizing one program in comparison to others. Predictive methods are also used to help identify hot spot locations and (outside of Traffic Division) to prioritize locations for shoulder widening. The core metric for prioritization is benefit/cost ratio, either explicitly or through some metric that is an approximate surrogate.

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)	\$36,856,761	\$36,752,355	99.72%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$48,729	\$48,729	100%
Penalty Funds (23 U.S.C. 154)	\$0	\$0	0%
Penalty Funds (23 U.S.C. 164)	\$36,169	\$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$0	\$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$1,234,493	\$765,143	61.98%
State and Local Funds	\$6,698,052	\$25,549,357	381.44%
Totals	\$44,874,204	\$63,115,584	140.65%

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?

0%

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

0%

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

Local government safety projects are funded through STP funds.

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

\$0

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

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\$0

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.

N/A

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

No

2018 Oklahoma Highway Safety Improvement Program

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
HSIPY-299S134	Advanced technology and ITS	Advanced technology and ITS - other	1	Operation	\$700000	\$700000	HSIP (23 U.S.C. 148)	Statewide	0	0	State Highway Agency	None	N/A	ITS Operations
HSIPIG-299I132	Roadway signs and traffic control	Roadway signs (including post) - new or updated	497.03	Miles	\$568160	\$568160	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Systemic	N/A	Signing
HSIPG-261B070	Roadway	Rumble strips - center	12.6	Miles	\$78181	\$78181	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,600	65	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-204N021	Roadway	Rumble strips - center	19.31	Miles	\$198692	\$198692	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-213N020	Roadway	Rumble strips - center	18.44	Miles	\$153853	\$153853	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-230N025	Roadway	Rumble strips - center	19.44	Miles	\$213130	\$213130	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-235C032	Roadway	Rumble strips - center	13.1	Miles	\$65987	\$65987	HSIP (23 U.S.C. 148)	Rural Major Collector	2,100	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-270N024	Roadway	Rumble strips - center	18.51	Miles	\$172176	\$172176	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-270N025	Roadway	Rumble strips - center	19.55	Miles	\$198532	\$198532	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-270N026	Roadway	Rumble strips - center	19.67	Miles	\$343244	\$343244	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-270N027	Roadway	Rumble strips - center	17.58	Miles	\$183565	\$183565	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIP-226B047	Intersection traffic control	Intersection traffic control - other	1	Intersections	\$135941	\$169927	HSIP (23 U.S.C. 148)	Urban Minor Arterial	13,000	55	State Highway Agency	Spot	Intersections	Traffic Signals
HSIP-216B063	Intersection geometry	Intersection geometry - other	2.38	Miles	\$232185	\$232185	HSIP (23 U.S.C. 148)	Rural Minor Arterial	3,800	65	State Highway Agency	Spot	Intersections	Signing
HSIPG-209C059	Intersection traffic control	Intersection flashers - modify existing	1	Intersections	\$46474	\$46574	HSIP (23 U.S.C. 148)	Urban Major Collector	3,900	45	State Highway Agency	Spot	Intersections	Traffic Signals
HSIP-257C057	Roadway signs and traffic control	Roadway signs and traffic control - other	0.2	Miles	\$61557	\$68398	HSIP (23 U.S.C. 148)	Urban Major Collector	1,700	40	State Highway Agency	Spot	N/A	School Signs
SEC1934-272C223	Intersection traffic control	Modify traffic signal - replace existing indications (incandescent-to-LED and/or 8-to-12 inch dia.)	33	Intersections	\$1776846	\$2195392	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Intersections	Traffic Signals
HSIP-216N068	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	1	Intersections	\$115249	\$153666	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other Freeways and Expressways	28,000	45	State Highway Agency	Spot	Intersections	Traffic Signals

2018 Oklahoma Highway Safety Improvement Program

													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
HSIPG-237F040	Roadway delineation	Longitudinal pavement markings - remarking	25.1	Miles	\$450000	\$450000	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	Striping Program
NHPP-268N048	Roadway	Roadway - other	0.4	Miles	\$3226304	\$4032881	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	23,600	55	State Highway Agency	Spot	N/A	Bridge Projects
HSIP-274F020	Roadside	Barrier- metal	3	Locations	\$222969	\$278712	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Roadway Departure	Guardrail Program
ACSTP-208C048	Roadway	Roadway - other	0.34	Miles	\$7193817	\$8992271	HSIP (23 U.S.C. 148)	Rural Major Collector	2,300	55	State Highway Agency	Spot	N/A	Bridge Projects
ACSTP-251C081	Roadway	Roadway - other	0.2	Miles	\$163856	\$204820	HSIP (23 U.S.C. 148)	Rural Major Collector	1,500	55	State Highway Agency	Spot	N/A	Bridge Projects
HSIPG-240F059	Roadway delineation	Longitudinal pavement markings - remarking	27.51	Miles	\$333000	\$333000	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	Striping Program
HSIPG-204F024	Roadway delineation	Longitudinal pavement markings - remarking	42.08	Miles	\$354000	\$354000	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	Striping Program
HSIPG-251N074	Roadside	Barrier - cable	2.8	Miles	\$754206	\$754206	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	9,600	60	State Highway Agency	Spot	Roadway Departure	Cable Barrier
STP-272B208	Roadway	Roadway - other	0.25	Miles	\$6349079	\$7936349	HSIP (23 U.S.C. 148)	Rural Minor Arterial	4,600	55	State Highway Agency	Spot	N/A	Bridge Projects
HSIP-263N047	Pedestrians and bicyclists	Pedestrian signal - Pedestrian Hybrid Beacon	1	Intersections	\$135863	\$153929	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	7,000	35	State Highway Agency	Spot	Pedestrians	Pedestrian Hybrid Beacon
HSIP-258N036	Intersection traffic control	Modify traffic signal - miscellaneous/other/unspecified	1	Intersections	\$141523	\$176904	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	10,200	25	State Highway Agency	Spot	Intersections	Traffic Signals
HSIPG-211F031	Roadway	Rumble strips - center	32.42	Miles	\$118889	\$118889	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-219F057	Roadway signs and traffic control	Curve-related warning signs and flashers	11	Locations	\$1315133	\$1315133	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Systemic	Roadway Departure	Horizontal Curve
HSIPG-250C016	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	1.95	Miles	\$460329	\$475194	HSIP (23 U.S.C. 148)	Urban Major Collector	11,000		State Highway Agency	Spot	Pedestrians	ADA Compliance
HSIP-262C044	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	Locations	\$22019	\$24466	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,200	65	State Highway Agency	Spot	N/A	School Signs
HSIPG-212F041	Roadside	Barrier- metal	4.72	Miles	\$2284952	\$2284952	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Roadway Departure	Guardrail Program
HSIPG-215F027	Roadway	Rumble strips - center	71	Miles	\$494775	\$494775	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-265B020	Roadway	Rumble strips - center	8.62	Miles	\$63730	\$63730	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-208F059	Roadway	Rumble strips - center	80.48	Miles	\$473445	\$473445	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	CLRS Program

2018 Oklahoma Highway Safety Improvement Program

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	RELATIONSHIP TO SHSP	
													EMPHASIS AREA	STRATEGY
HSIPG-255F449	Roadway delineation	Longitudinal pavement markings - remarking	18.31	Miles	\$597286	\$597286	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	Striping Program
HSIPG-260B034	Roadway	Rumble strips - center	3.44	Miles	\$7070	\$7070	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	10,400	45	State Highway Agency	Spot	Lane Departure	CLRS Program
STP-219B054	Roadway	Roadway - other	0.35	Miles	\$7361579	\$9201974	HSIP (23 U.S.C. 148)	Rural Minor Arterial	2,800	65	State Highway Agency	Spot	N/A	Bridge Projects
HSIPG-277N042	Roadway	Rumble strips - center	5.3	Miles	\$23566	\$23566	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	9,800	40	State Highway Agency	Spot	Lane Departure	CLRS Program
HSIPG-013N165	Roadway signs and traffic control	Roadway signs (including post) - new or updated	72.04	Miles	\$996478	\$996478	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Systemic	N/A	Signing
HSIPIG-3500044	Roadway signs and traffic control	Roadway signs (including post) - new or updated	36.73	Miles	\$3285108	\$3285108	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Interstate	0	0	State Highway Agency	Systemic	N/A	Signing
HSIPG-260B031	Pedestrians and bicyclists	Miscellaneous pedestrians and bicyclists	0.5	Miles	\$748000	\$748000	HSIP (23 U.S.C. 148)	Urban Minor Collector	7,100	35	State Highway Agency	Spot	Pedestrians	ADA Compliance
HSIPG-226F064	Roadway delineation	Longitudinal pavement markings - remarking	91.62	Miles	\$985000	\$985000	HSIP (23 U.S.C. 148)	Multiple	0	0	State Highway Agency	Spot	Lane Departure	Striping Program

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

0s in AADT and Speed Limit denote multiple roadway characteristics.

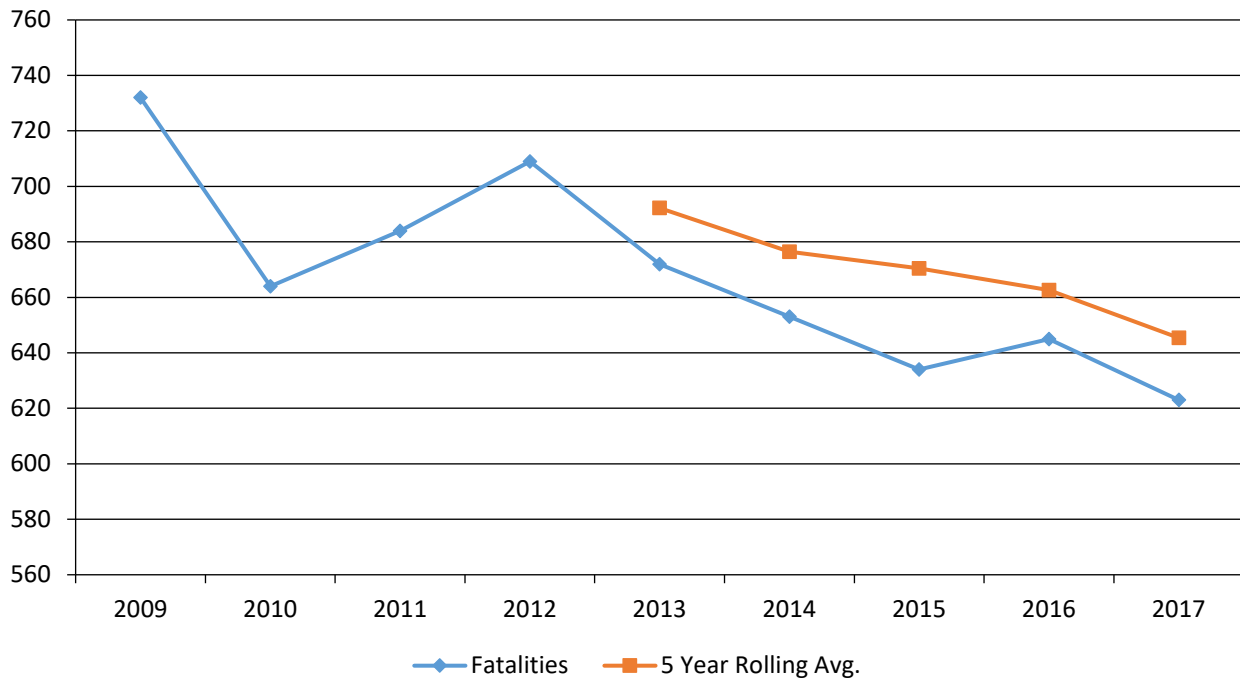
Safety Performance

General Highway Safety Trends

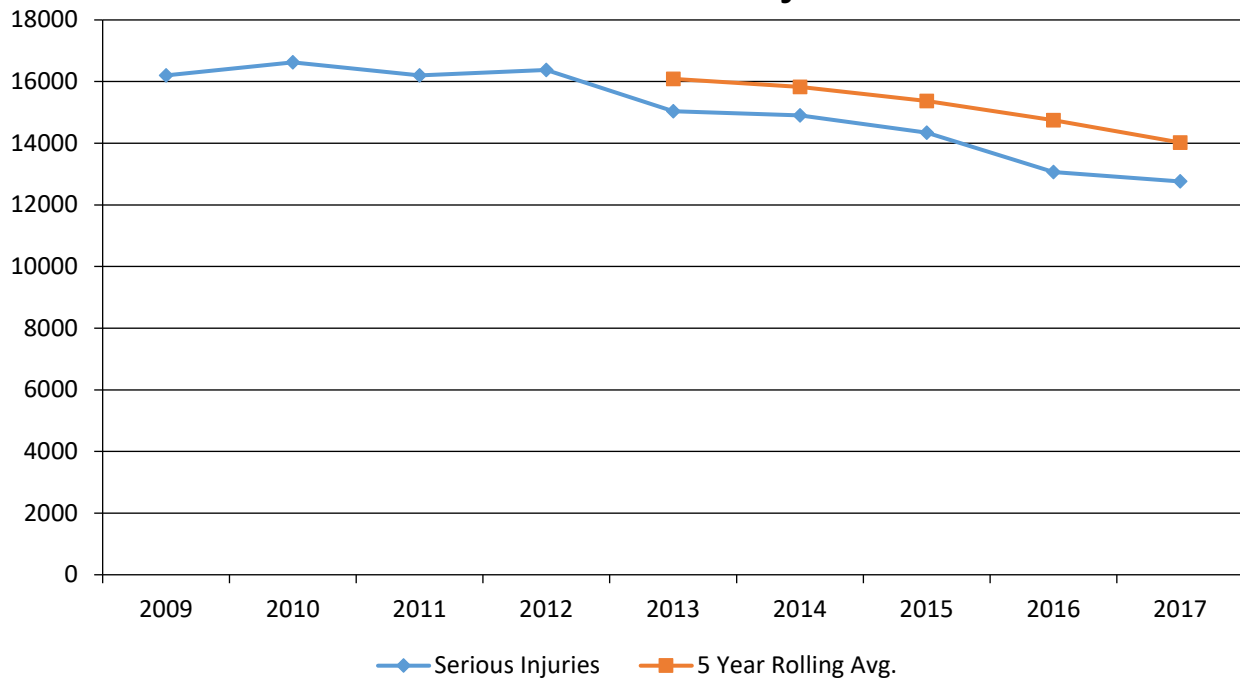
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	732	664	684	709	672	653	634	645	623
Serious Injuries	16,198	16,624	16,201	16,378	15,040	14,907	14,344	13,064	12,760
Fatality rate (per HMVMT)	1.558	1.391	1.441	1.485	1.400	1.369	1.329	1.320	1.275
Serious injury rate (per HMVMT)	34.466	34.818	34.134	34.306	31.335	31.252	30.063	26.727	26.105
Number non-motorized fatalities	43	75	46	72	75	55	76	84	94
Number of non-motorized serious injuries	569	555	583	606	543	554	685	568	563

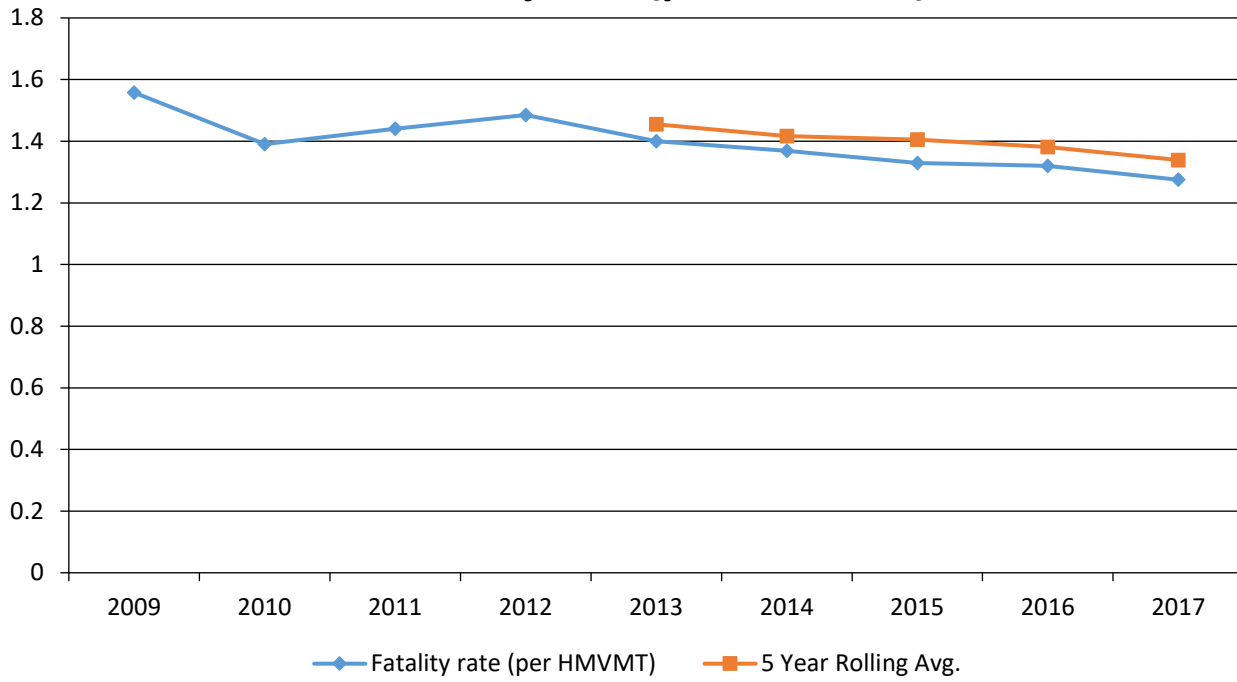
Annual Fatalities



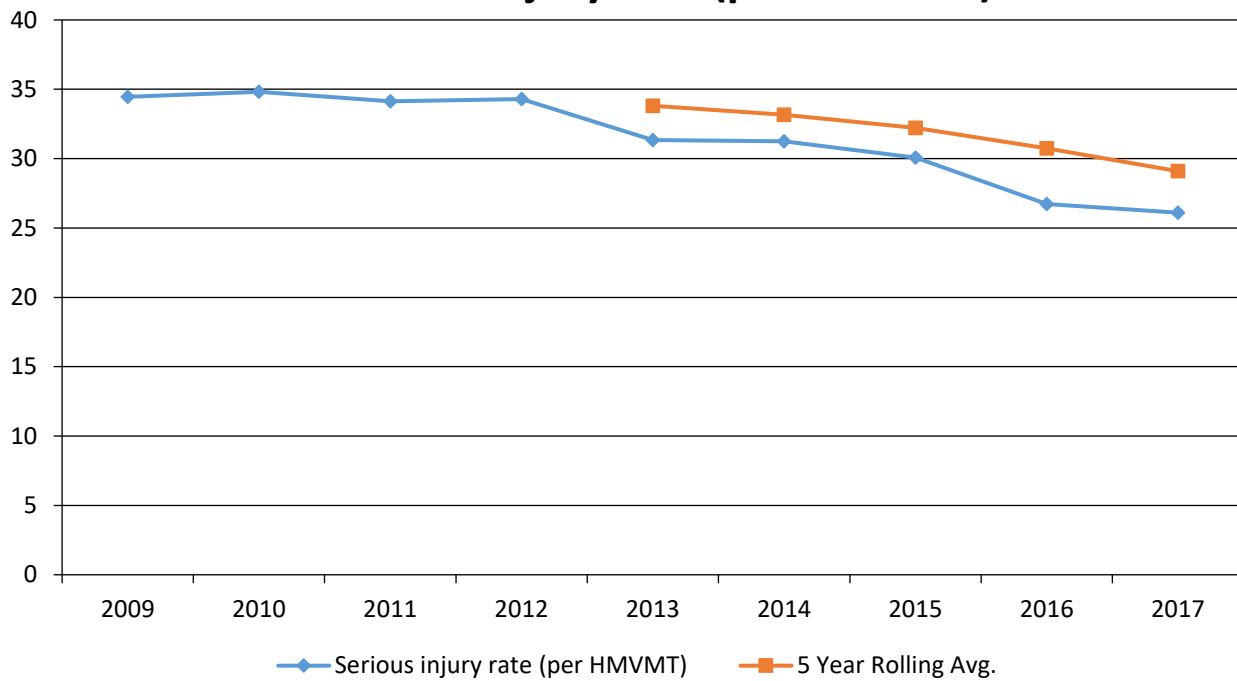
Annual Serious Injuries



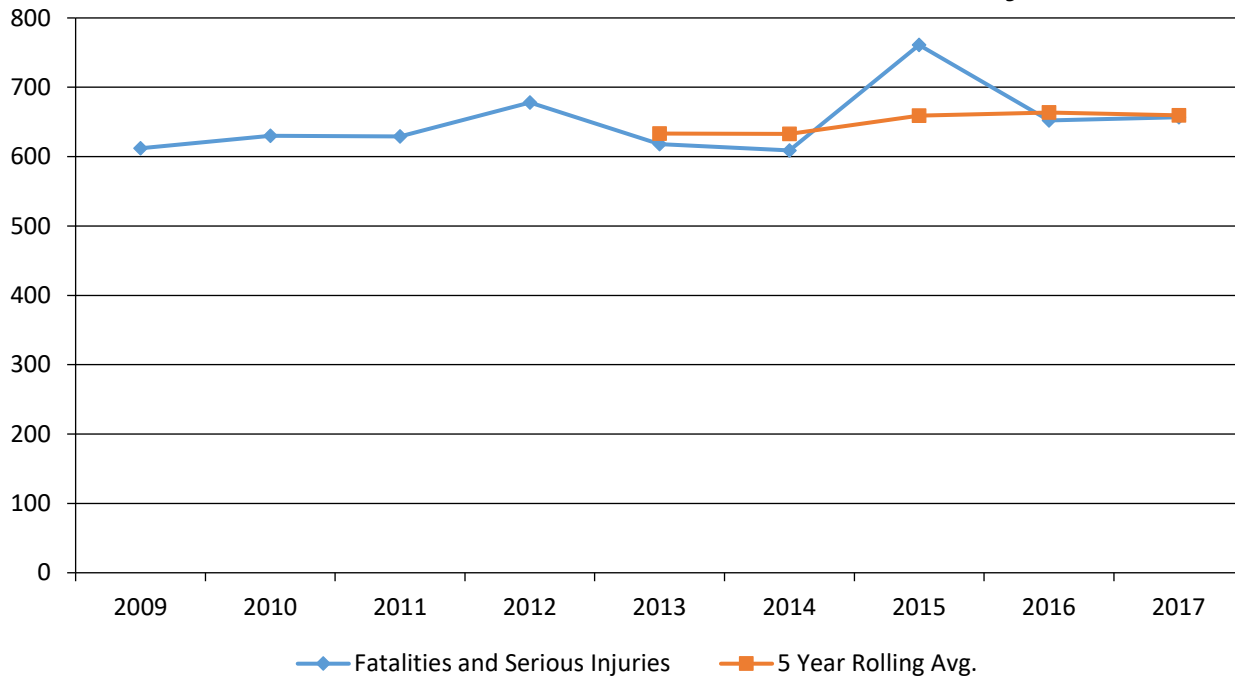
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



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

Describe fatality data source.

State Motor Vehicle Crash Database

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	37.6	112		
Rural Principal Arterial (RPA) - Other Freeways and Expressways	4	7.6		
Rural Principal Arterial (RPA) - Other	82	226		
Rural Minor Arterial	79	192		
Rural Minor Collector	1.6	6.8		

2018 Oklahoma Highway Safety Improvement Program

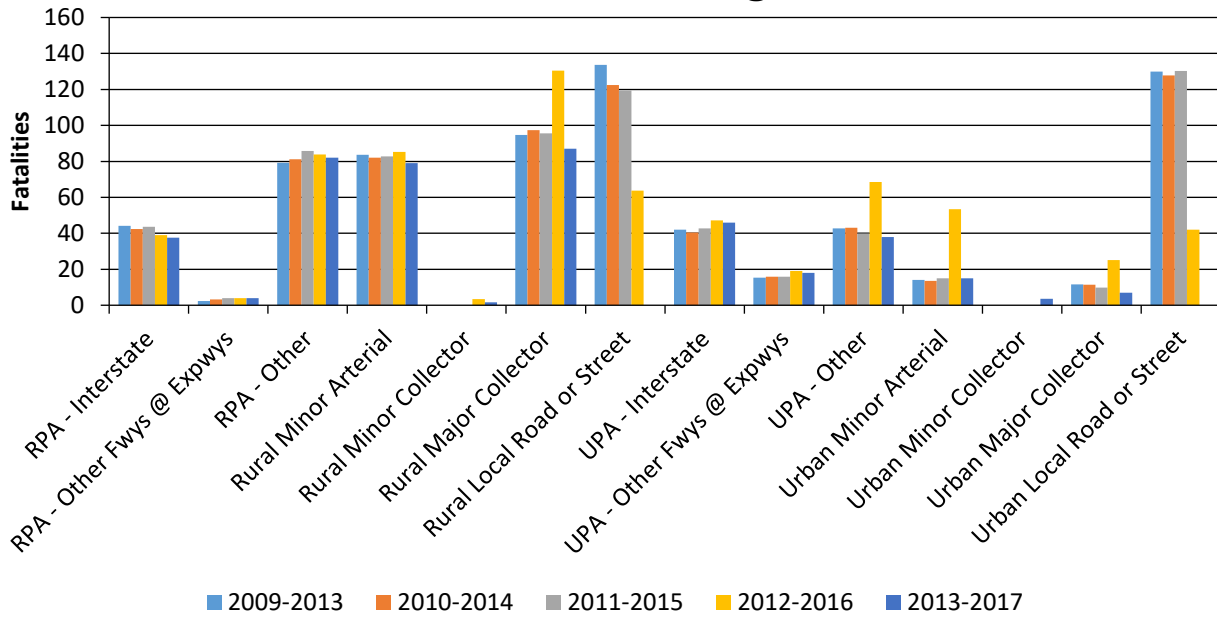
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Major Collector	87	248		
Rural Local Road or Street				
Urban Principal Arterial (UPA) - Interstate	46	234		
Urban Principal Arterial (UPA) - Other Freeways and Expressways	18	107		
Urban Principal Arterial (UPA) - Other	38	257		
Urban Minor Arterial	15	61.6		
Urban Minor Collector	3.6	9.2		
Urban Major Collector	7	37		
Urban Local Road or Street				

2018 Oklahoma Highway Safety Improvement Program

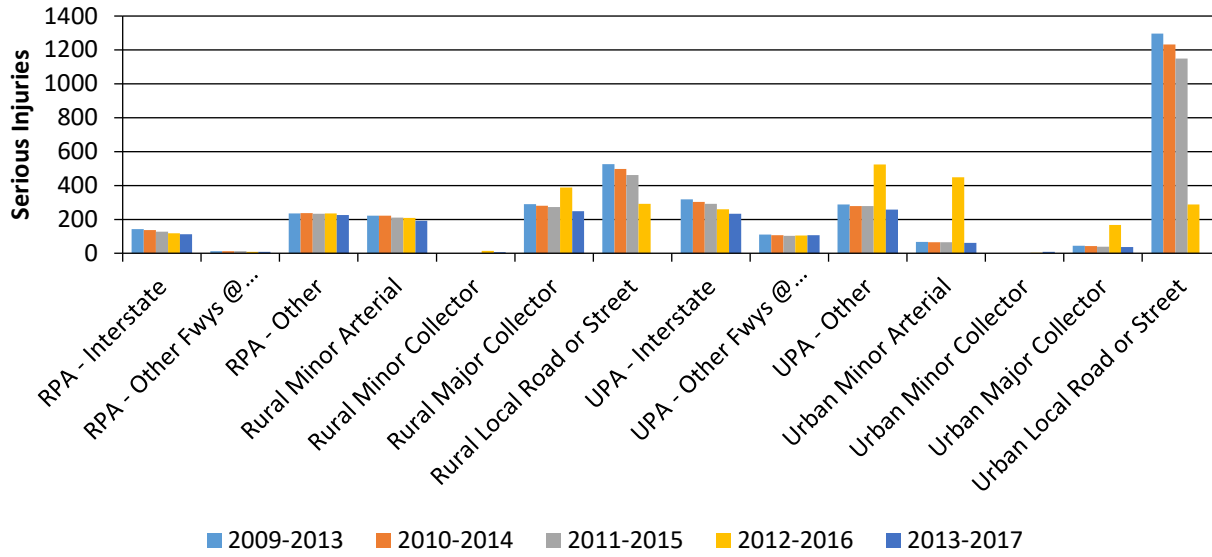
Year 2016

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	408.6	1,487.6	0	0
County Highway Agency	110.4	443.8	0	0
Town or Township Highway Agency				
City of Municipal Highway Agency	121.6	1,041.4	0	0
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad	4.6	2.6	0	0
State Toll Authority	28	78.4	0	0
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

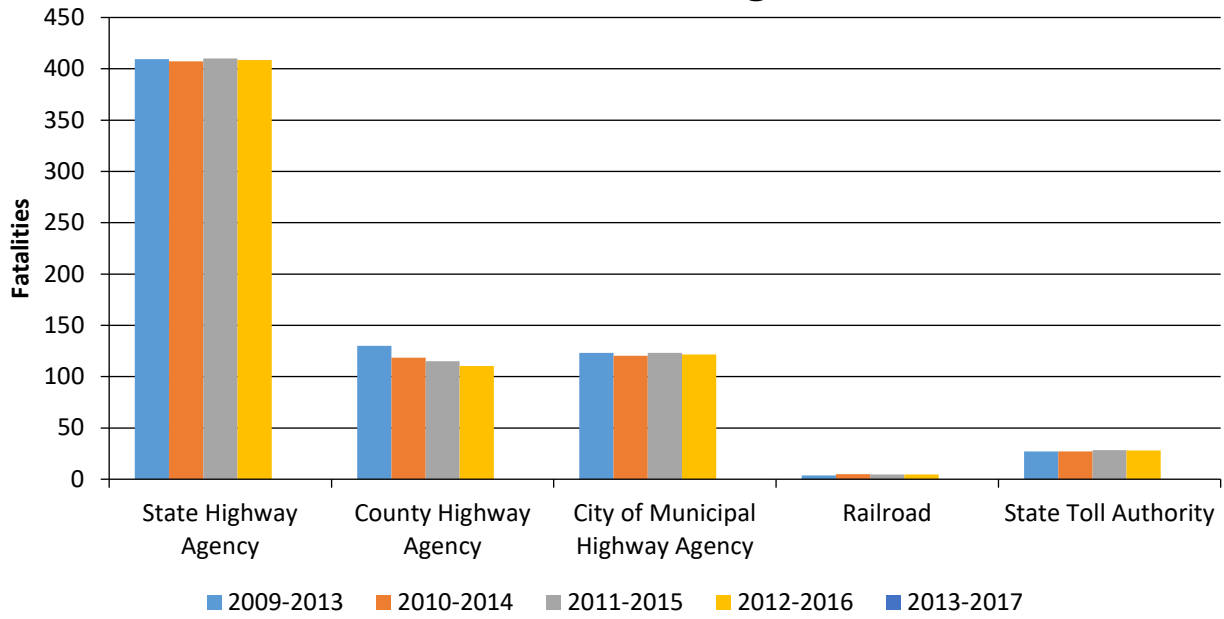
Number of Fatalities by Functional Classification 5 Year Average



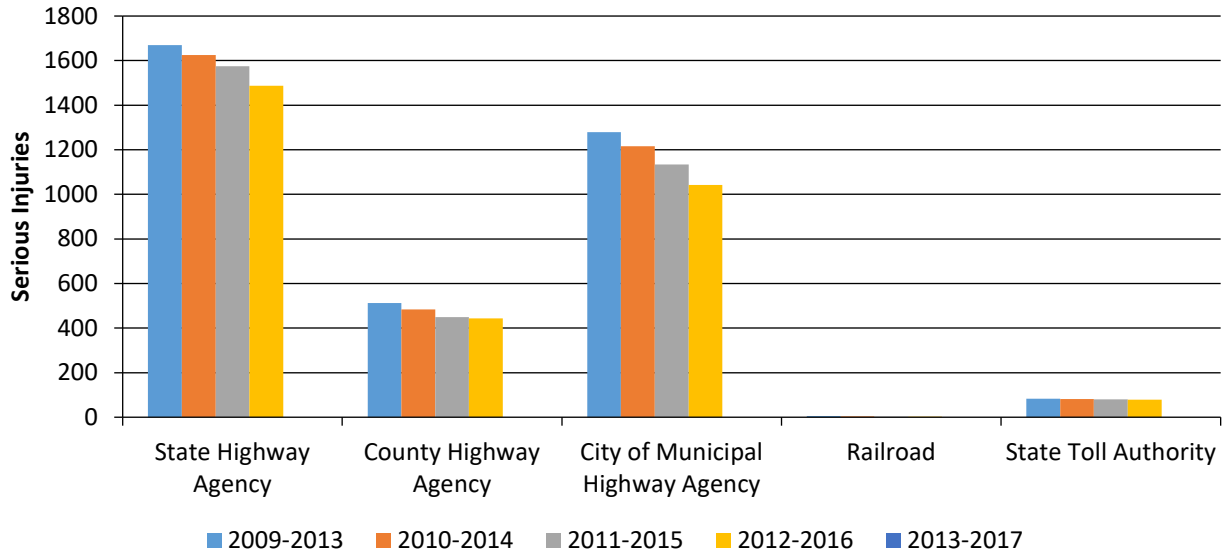
Number of Serious Injuries by Functional Classification 5 Year Average



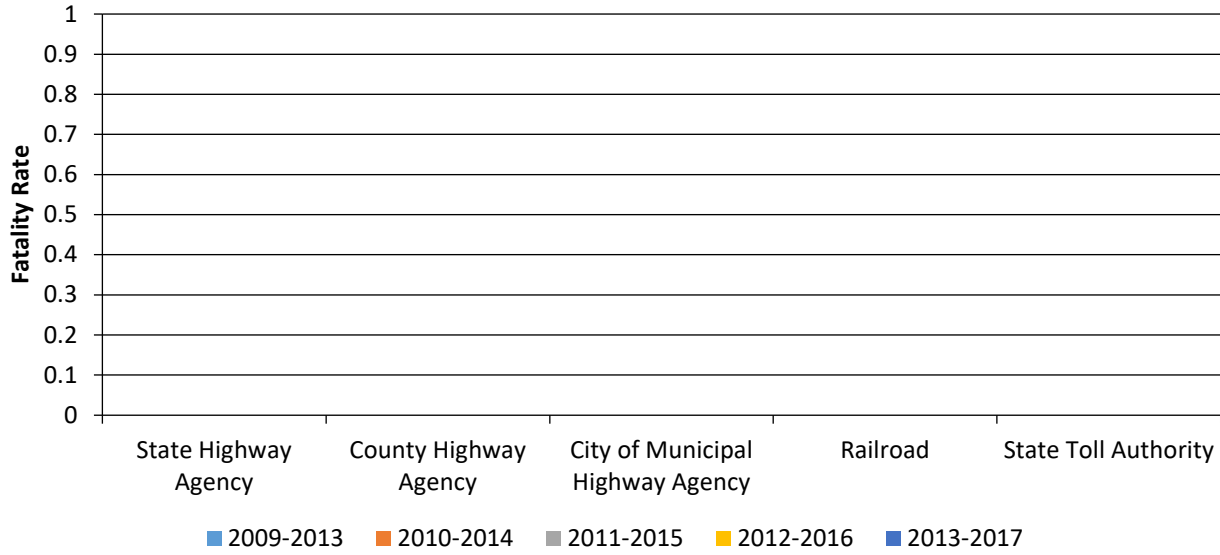
Number of Fatalities by Roadway Ownership 5 Year Average



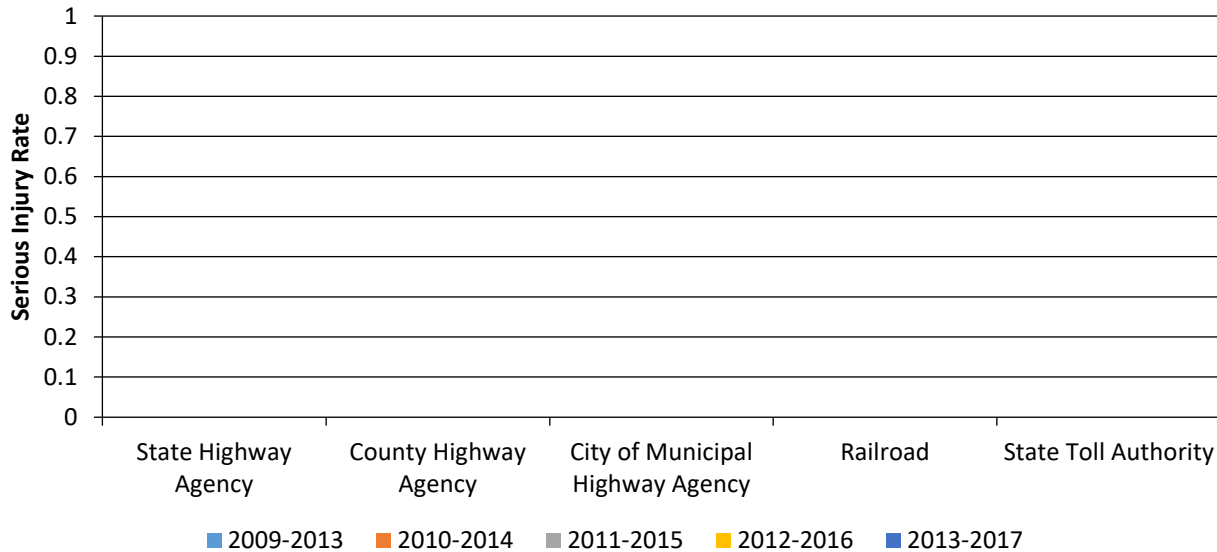
Number of Serious Injuries by Roadway Ownership 5 Year Average



Fatality Rate (per HMVMT) by Roadway Ownership 5 Year Average



Serious Injury Rate (per HMVMT) by Roadway Ownership Ownership 5 Year Average



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

Serious Injuries in this table only includes Incapacitating Injuries.

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 699.0

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

This target was set by the Highway Safety Office using an ARIMA model. It projects a limit to an increasing trend.

Number of Serious Injuries 2806.0

2018 Oklahoma Highway Safety Improvement Program

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

This target was set by the Highway Safety Office using an ARIMA model. It predicts that the recent decrease can be sustained.

Fatality Rate 1.430

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

This target was set by the Highway Safety Office using an ARIMA model. It projects a limit to an increasing trend.

Serious Injury Rate 27.580

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

This target was calculated by applying the difference between the projections for total fatalities and fatality rate to the serious injury total established by the Highway Safety Office.

Total Number of Non-Motorized Fatalities and Serious Injuries 812.0

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

The target is a linear least-squares regression of the five-year rolling averages calculated for the years 2015, 2016, and 2017.

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

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

ODOT has met regularly with HSO to discuss goal setting methodology.

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?

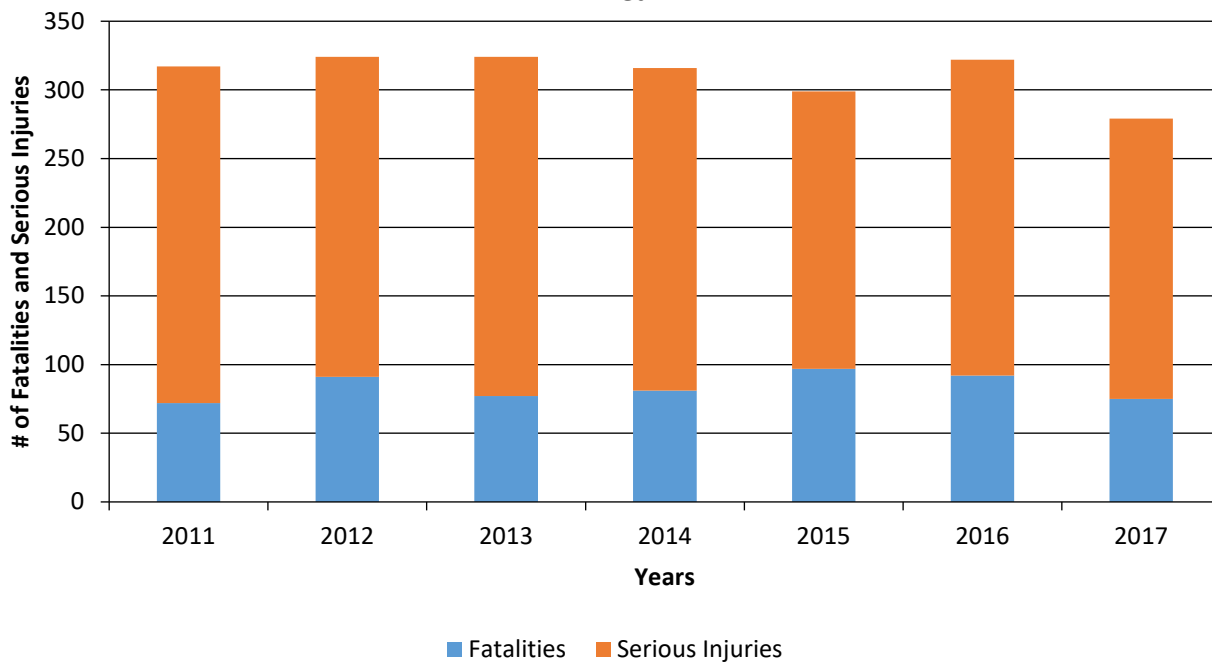
No

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	72	91	77	81	97	92	75
Number of Older Driver and Pedestrian Serious Injuries	245	233	247	235	202	230	204

Number of Older Driver and Pedestrian Fatalities and Serious Injuries by Year.



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.

There is no measure for the HSIP as a whole. Specific projects and programs may be evaluated by Benefit/Cost ratio or by reductions in targeted crash types.

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

High Friction Surface Treatment: Empirical Bayes before and after studies have suggested a statistically significant decrease in KAB collisions for the pilot sites.

Systemic Intersection Improvements: A naive before and after analysis showed a statistically significant decrease in KAB collisions at a 95 % confidence interval.

Crash data are insufficient for evaluation, or cannot be isolated, for signal backplate upgrades, centerline rumble strip, guardrail upgrades, ITS installations, and district signing and striping.

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
Policy change
Increased awareness of safety and data-driven process

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

Miles of improvement has been used for median cable barrier. Recent systemic programs include intersection sign and marking improvement, retroreflective backplate upgrades, curve delineation, centerline rumble strip, and high friction surface treatment. The introduction of centerline rumble strips represents a policy change.

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

No

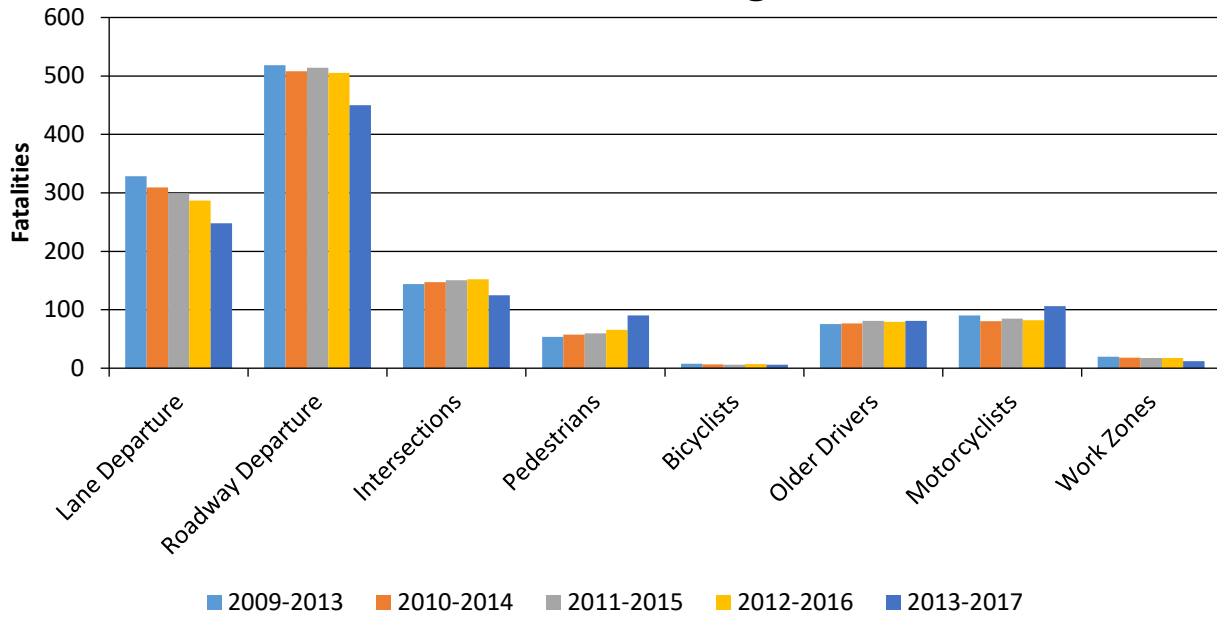
Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

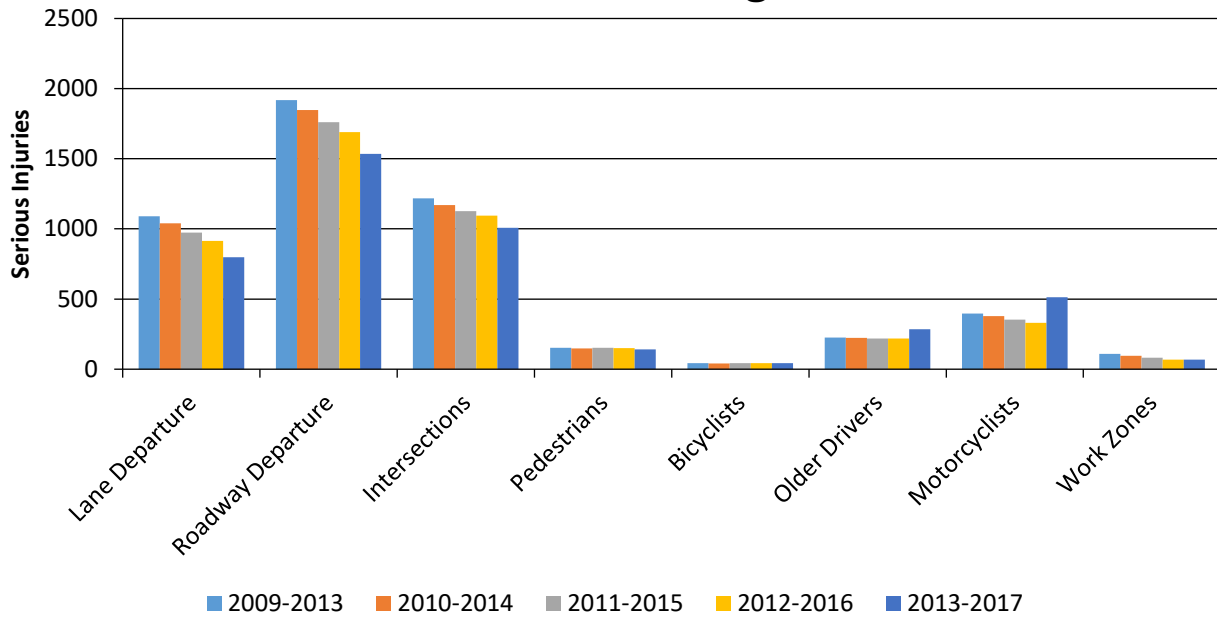
Year 2017

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)
Lane Departure	Exclude intersection, head-on, sideswipe, fixed object	248	799	0.51	1.63
Roadway Departure	Roadway Departure>0	450	1,535	0.92	3.14
Intersections	Intersections	125	1,007	0.26	2.06
Pedestrians	Unit Type = P	90	142	0.18	0.29
Bicyclists	Unit Type = B	6	43	0.01	0.09
Older Drivers	Driver = Y, Age>=65	81	286	0.17	0.59
Motorcyclists	Unit Type = D, Vehicle Type = 15	106	514	0.22	1.05
Work Zones	Special Feature = 5	12	68	0.02	0.14

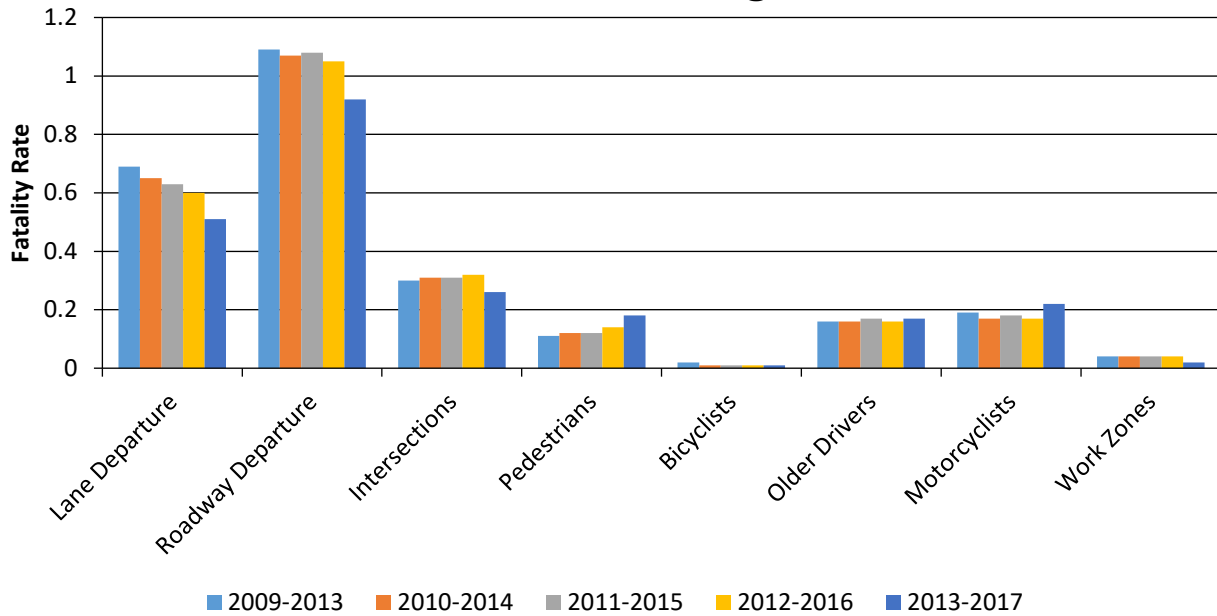
Number of Fatalities 5 Year Average



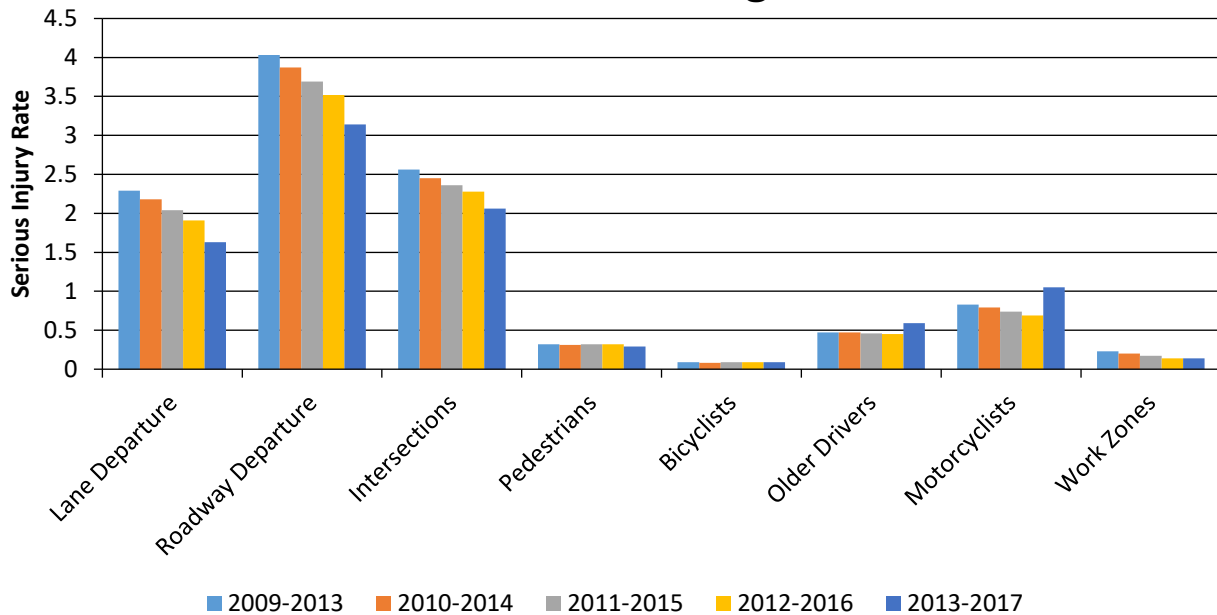
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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?

Yes

Please provide the following summary information for each countermeasure effectiveness evaluation.

CounterMeasures: High Friction Surface Treatment
Description:
Target Crash Type: Other (define)
Number of Installations: 6
Number of Installations: 6
Miles Treated:
Years Before: 5
Years After: 1.5
Methodology: Before/after using empirical Bayes or Full Bayes
Results: Results for 6 locations suggested a reduction in KAB crashes.

File Name: [Hyperlink](#)

CounterMeasures: Systemic Intersection Improvements
Description: Signing improvements such as doubled stop, 4' signs, flashers, and or rumble strips were installed at intersections.
Target Crash Type: Intersections
Number of Installations: 310
Number of Installations: 310
Miles Treated:
Years Before: 5
Years After: 2
Methodology: Simple before/after
Results: Results suggest a statistically significant reduction in crashes for some of the locations. Other locations did not show a statistically significant result. Using disaggregate analysis, Doubled Stop signs, doubled stop ahead, 4' Stop Ahead, Doubled X-road signs, and transverse rumble strips all head a statistically significant reduction in collisions.

File Name: [Hyperlink](#)

Project Effectiveness

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

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

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?

04/27/2018

What are the years being covered by the current SHSP?

From: 2018 To: 2023

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

2022

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.

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	100	0					0	0	0	0
Route Number (8)	100	0								
Route/Street Name (9)	100	0								
Federal Aid/Route Type (21)	100	0								
Rural/Urban Designation (20)	50	0					0	0		
Surface Type (23)	90	0					0	0		
Begin Point Segment Descriptor (10)	0	0					0	0	0	0
End Point Segment Descriptor (11)	0	0					0	0	0	0
Segment Length (13)	95	0								
Direction of Inventory (18)	100	0								
Functional Class (19)	90	0					0	0	0	0
Median Type (54)	50	0								
Access Control (22)	50	0								

2018 Oklahoma Highway Safety Improvement Program

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)	95	0								
Number of Through Lanes (31)	95	0					0	0		
Average Annual Daily Traffic (79)	90	0					0	0		
AADT Year (80)	100	0								
Type of Governmental Ownership (4)	100	0					0	0	0	0
INTERSECTION										
Unique Junction Identifier (120)			0	0						
Location Identifier for Road 1 Crossing Point (122)			0	0						
Location Identifier for Road 2 Crossing Point (123)			0	0						
Intersection/Junction Geometry (126)			0	0						
Intersection/Junction Traffic Control (131)			0	0						
AADT for Each Intersecting Road (79)			0	0						
AADT Year (80)			0	0						
Unique Approach Identifier (139)			0	0						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					0	0				
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)					0	0				
Roadway Type at Beginning of Ramp Terminal (195)					0	0				
Roadway Type at End Ramp Terminal (199)					0	0				

2018 Oklahoma Highway Safety Improvement Program

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)					0	0				
Ramp AADT (191)					0	0				
Year of Ramp AADT (192)					0	0				
Functional Class (19)					0	0				
Type of Governmental Ownership (4)					0	0				
Totals (Average Percent Complete):	78.06	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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.

ODOT intends to implement the MIRE implementation plan and some data collection is underway.

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	4	No	N/A	No	N/A	No
Crash Report Form Instruction Manual	Incapacitating Injury	No	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.	No	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.	No
Crash Database	4	No	N/A	No	N/A	No
Crash Database Data Dictionary	A	No	As reported by police.	No	As reported by police.	No

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

This is being addressed by the Department of Public Safety and Highway Safety Office.

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.

2018 Oklahoma Highway Safety Improvement Program

2020

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

Optional Attachments

Program Structure:

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.