



SOUTH DAKOTA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2017 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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Disclaimer

Protection of Data from Discovery Admission into Evidence

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

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

Executive Summary

The South Dakota Highway Safety Improvement Program (HSIP) is administered through the Office of Project Development in the South Dakota Department of Transportation (SDDOT) Central Office. The SDDOT uses Road Safety Audits Review (RSAR), Roadway Safety Review (RSR) inspections, Safety Module software program, and ArcGIS to identify locations that would benefit from a safety improvement project. RSR inspections are developed by utilizing the South Dakota Department of Public Safety's (SDDPS) crash reporting database, SDDOT's roadway and traffic data, and ArcGIS software to determine high crash locations. Both the RSAR process and RSR inspections are available for use on all public roadways in South Dakota. HSIP projects are selected for implementation by determining which project will result in the greatest safety improvement for the investment. The overall coordination and collaboration efforts for HSIP projects involve Regional SDDOT personnel, city representatives, county representatives, township representatives, consultant firms, law enforcement representatives, among other agencies. The SDDOT HSIP process will be expanded in further detail in the Program Methodology section of this report.

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 is managed by the Highway Safety Engineer within the Planning and Engineering Division. A portion of the funds are set aside for a countywide signing project, systemic improvements, and spot locations with improvements ranked by benefit/cost.

Where is HSIP staff located within the State DOT?

Other-Planning and Engineering

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

HSIP staff are located in the Project Development Office which is within the Planning and Engineering Division.

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.

The SDDOT administers a County wide signing program which conducts approximately four County wide signing projects each year. Counties are prioritized by crash rate based on serious injury and fatal crashes per million vehicle miles traveled.

Routes are also identified for improvements by conducting both RSR and RSAR inspections and by an over representation of crash clusters and higher than average crash rates. Routes are also identified to deploy systemic improvements.

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

Design
Planning
Maintenance
Operations

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

Describe coordination with internal partners.

The SHSP is used along with crash record analysis and mapping to hold meetings with operation and maintenance personal to identify locations to apply safety improvements.

During the planning and design process of a project, the HSM and IHSDM software is used to compare options to increase safety.

Identify which external partners are involved with HSIP planning.

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

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

Describe coordination with external partners.

Coordination with the FHWA Division Office takes place throughout the year. HSIP staff take part in an annual Tribal Transportation Safety Summit which brings together several tribal agencies, engineering consultants, universities, city, county, township representatives. Coordination with the Highway Safety Office also takes place throughout the year.

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?

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Yes

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

The SDDOT completed their SHSP in August of 2014. Emphasis has been placed on implementing safety strategies within the SHSP.

Program Methodology

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

No

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

The SDDOT is working to develop an in-house software tool that will evaluate HSIP projects after construction to track performance.

Select the programs that are administered under the HSIP.

- Intersection
- Horizontal Curve
- Skid Hazard
- Roadway Departure
- Low-Cost Spot Improvements
- Sign Replacement And Improvement
- Local Safety
- Shoulder Improvement

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

Program: Horizontal Curve

Date of Program Methodology: 3/1/2013

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

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

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

Crashes

Exposure

Roadway

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

Crashes

Exposure

Roadway

All crashes

Traffic
Volume

Other-Intersection Type

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

Crash frequency

Crash rate

Excess expected crash frequency using SPFs

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

Yes

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

No

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

When ADT is available and intersects with State road.

How are projects under this program advanced for implementation?

Other-B/C ratio

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

Incremental B/C : 4

Ranking based on net benefit : 2

Cost Effectiveness : 2

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

Program:

Local Safety

Date of Program Methodology: 3/1/2015

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

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

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

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

Crash frequency
Crash rate

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

Yes

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

No

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

Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-SDDOT Project Development Personnel

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 : 4
Ranking based on net benefit : 2
Cost Effectiveness : 2

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

Program: Low-Cost Spot Improvements

Date of Program Methodology: 5/1/2014

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

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

Crash frequency
Crash rate

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.

Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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).

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

Program: Roadway Departure

Date of Program Methodology: 2/2/2014

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	Horizontal curvature Functional classification Roadside features

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

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

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.

Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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 : 4
Ranking based on net benefit : 2
Cost Effectiveness : 2

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

Program: Shoulder Improvement

Date of Program Methodology: 5/1/2014

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

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

Crash frequency
Crash rate

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.

Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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).

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

Program: Sign Replacement And Improvement

Date of Program Methodology: 5/1/2017

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
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All crashes	Traffic Volume	
-------------	-------------------	--

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

Crash rate

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.

Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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).

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

Program: Skid Hazard

Date of Program Methodology: 2/1/2016

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

Addresses SHSP priority or emphasis area

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

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?

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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.

Crash rates and crash clusters

How are projects under this program advanced for implementation?

Other-B/C ratio

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 : 4

Ranking based on net benefit : 2

Cost Effectiveness : 2

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

What percentage of HSIP funds address systemic improvements?

50

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

Rumble Strips

Pavement/Shoulder Widening

Install/Improve Signing

Install/Improve Pavement Marking and/or Delineation

Upgrade Guard Rails

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

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Rumble Strips
Crash data analysis
Install/Improve Signing
Upgrade Guard Rails
Horizontal curve signs

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 such as variable speed limits, adaptive signal controls, and intersection conflict warning systems are installed within the HSIP program.

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 was used in the development of in-house software which is used to identify locations and improvement types for rural 2 lane segments and intersections. The HSM is also used during corridor planning studies to compare different design alternatives.

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?

No

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

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

July 1, 2016 to June 30, 2017

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$45,166,000	\$41,738,175	92.41%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$0	\$0	0%
Penalty Funds (23 U.S.C. 154)	\$1,453,000	\$453,326	31.2%
Penalty Funds (23 U.S.C. 164)	\$3,527,000	\$5,497,083	155.86%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$0	\$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$0	\$0	0%
State and Local Funds	\$0	\$0	0%
Totals	\$50,146,000	\$47,688,584	95.1%

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?

18%

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

20%

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?

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1%

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

1%

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?

57%

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.

Typical project obstacles such as estimating project costs to be programmed, projects time line slipping due to environmental impacts, right-of-way impacts, can all be expected on any type of project.

Ways to overcome these obstacles is to do a better job of estimating projects and when scheduling projects allow for the proper time to accomplish environmental and ROW activities.

Although a project is only programmed within one study period it could be obligated over multiple study periods. A multi-million dollar project could be let within this study period but only a couple hundred thousand dollars is obligated during the same study period.

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

No

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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
02PT	Roadway	Pavement surface - high friction surface	2	Locations	\$29000	\$2234000	Penalty Funds (23 U.S.C. 164)	Rural Principal Arterial - Interstate	14,305	65	State Highway Agency	Spot	Roadway Departure	High Friction Surface Treatment
02UE	Roadway signs and traffic control	Roadway signs (including post) - new or updated	20306	Signs	\$716000	\$716000	Penalty Funds (23 U.S.C. 164)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
02UL	Roadway signs and traffic control	Roadway signs (including post) - new or updated	30289	Signs	\$1068000	\$1068000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
036K	Shoulder treatments	Widen shoulder - paved or other	6.6	Miles	\$6159000	\$6159000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	763	65	State Highway Agency	Spot	Roadway Departure	Shoulder Widening
03B1	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	0.8	Miles	\$6721000	\$10229000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	9,726	35	State Highway Agency	Spot	Intersections	Modify roadway geometrics
03KE	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	0.7	Miles	\$9434000	\$15388000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	17,812	35	State Highway Agency	Spot	Intersections	Modify roadway geometrics
03R4	Roadway	Pavement surface - high friction surface	1	Locations	\$19000	\$1268000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	7,424	80	State Highway Agency	Spot	Roadway Departure	High Friction Surface Treatment
03UT	Roadway delineation	Longitudinal pavement markings - new	28.5	Miles	\$550000	\$550000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	11,888	80	State Highway Agency	Systemic	Roadway Departure	Durable Pavement Markings
03UU	Roadway delineation	Longitudinal pavement markings - new	112.6	Miles	\$220000	\$220000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	6,220	80	State Highway Agency	Systemic	Roadway Departure	Durable Pavement Markings
03UV	Roadway delineation	Longitudinal pavement markings - new	21.6	Miles	\$650000	\$650000	Penalty Funds (23 U.S.C. 164)	Rural Principal Arterial - Interstate	27,218	65	State Highway Agency	Systemic	Roadway Departure	Durable Pavement Markings
03V1	Non-infrastructure	Transportation safety planning	999	Miles	\$130000	\$130000	HSIP (23 U.S.C. 148)	Rural Minor Arterial	1,500	65	State Highway Agency	Other	Roadway Departure	Highway Safety Planning
03V3	Roadway delineation	Longitudinal pavement markings - new	25.5	Miles	\$300000	\$300000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	7,746	80	State Highway Agency	Systemic	Roadway Departure	Durable Pavement Markings
03V4	Non-infrastructure	Road safety audits	999	Miles	\$30000	\$30000	HSIP (23 U.S.C. 148)	Rural Local Road or Street	1,500	65	State Highway Agency	Spot	Roadway Departure	Conduction Roadway Safety Audits
03VA	Roadside	Barrier- metal	26	Locations	\$1000000	\$1000000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	11,324	80	State Highway Agency	Systemic	Roadway Departure	Barrier Treatments
044E	Roadway signs and traffic control	Roadway signs (including post) - new or updated	33352	Signs	\$1176000	\$1176000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing

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													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
044F	Roadway signs and traffic control	Roadway signs (including post) - new or updated	44299	Signs	\$1562000	\$1562000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
04H5	Roadway signs and traffic control	Roadway signs (including post) - new or updated	28360	Signs	\$1000000	\$1000000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	4,398	65	State Highway Agency	Systemic	Roadway Departure	Signing
04HF	Alignment	Vertical alignment or elevation change	0.7	Miles	\$1403000	\$1403000	Penalty Funds (23 U.S.C. 154)	Rural Minor Arterial	1,876	65	State Highway Agency		Intersections	Increase intersection sight distance
04JA	Intersection geometry	Auxiliary lanes - modify left-turn lane offset	2	Intersections	\$399000	\$399000	Penalty Funds (23 U.S.C. 164)	Urban Principal Arterial - Other	3,408	55	State Highway Agency	Spot	Intersections	Add left turn lanes
04K6	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Intersections	\$700000	\$700000	Penalty Funds (23 U.S.C. 164)	Rural Principal Arterial - Other	3,932	70	State Highway Agency	Spot	Intersections	Add left turn lanes
04R6	Roadway signs and traffic control	Roadway signs (including post) - new or updated	29778	Signs	\$1050000	\$1050000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
04R7	Roadway signs and traffic control	Roadway signs (including post) - new or updated	49290	Signs	\$1738000	\$1738000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
04TF	Intersection traffic control	Modify traffic signal timing - signal coordination	21	Intersections	\$588000	\$588000	HSIP (23 U.S.C. 148)	Urban Major Collector	37,561	35	State Highway Agency		Roadway Departure	Adaptive Signal Control Technology
04TX	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	\$245000	\$245000	HSIP (23 U.S.C. 148)	Urban Principal Arterial - Other	2,472	45	State Highway Agency	Spot	Intersections	Add left turn lanes
053V	Advanced technology and ITS	Advanced technology and ITS - other	1	Intersections	\$150000	\$150000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	1,025	65	State Highway Agency		Intersections	Intersection Conflict Warning System
546N	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1.1	Miles	\$6700000	\$12500000	HSIP (23 U.S.C. 148)	Urban Minor Arterial	9,360	35	State Highway Agency	Spot	Intersections	Modify roadway geometrics
05H7	Shoulder treatments	Shoulder treatments - other	43.3	Miles	\$1000000	\$1000000	Penalty Funds (23 U.S.C. 164)	Rural Principal Arterial - Other	3,102	65	State Highway Agency	Systemic	Roadway Departure	Shoulder edge drop-off
05H8	Roadway	Rumble strips - center	74.3	Miles	\$400000	\$400000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,222	65	State Highway Agency	Systemic	Roadway Departure	Centerline Rumble Stripes
05H9	Roadway	Pavement surface - high friction surface	17	Locations	\$2100000	\$2100000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	5,051	55	State Highway Agency	Spot	Roadway Departure	High Friction Surface Treatment
05JJ	Lighting	Intersection lighting	1	Intersections	\$33000	\$33000	Penalty Funds (23 U.S.C. 164)	Rural Principal Arterial - Other	2,461	65	State Highway Agency	Spot	Intersections	Intersection Lighting
05NM	Roadway	Rumble strips - center	20.2	Miles	\$200000	\$200000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	4,034	65	State Highway Agency	Systemic	Roadway Departure	Centerline Rumble Stripes
05W0	Lighting	Intersection lighting	1	Intersections	\$50000	\$50000	Penalty Funds (23 U.S.C. 154)	Rural Minor Arterial	2,357	65	State Highway Agency	Spot	Intersections	Intersection Lighting

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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
05X3	Roadway	Rumble strips - center	74.3	Miles	\$400000	\$400000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	5,051	55	State Highway Agency	Systemic	Roadway Departure	Centerline Rumble Stripes
05X4	Roadway	Rumble strips - center	5.3	Miles	\$40000	\$40000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,019	65	State Highway Agency	Systemic	Roadway Departure	Centerline Rumble Stripes
05X5	Roadway	Rumble strips - center	63.2	Miles	\$320000	\$320000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Other	3,577	65	State Highway Agency	Systemic	Roadway Departure	Centerline Rumble Stripes
060G	Roadway signs and traffic control	Roadway signs (including post) - new or updated	20306	Signs	\$716000	\$716000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
060J	Roadway signs and traffic control	Roadway signs (including post) - new or updated	29778	Signs	\$1050000	\$1050000	HSIP (23 U.S.C. 148)	Rural Major Collector	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
060K	Roadside	Fencing	3	Locations	\$100000	\$100000	HSIP (23 U.S.C. 148)	Rural Principal Arterial - Interstate	3,587	80	State Highway Agency	Systemic	Roadway Departure	Snow Fence

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

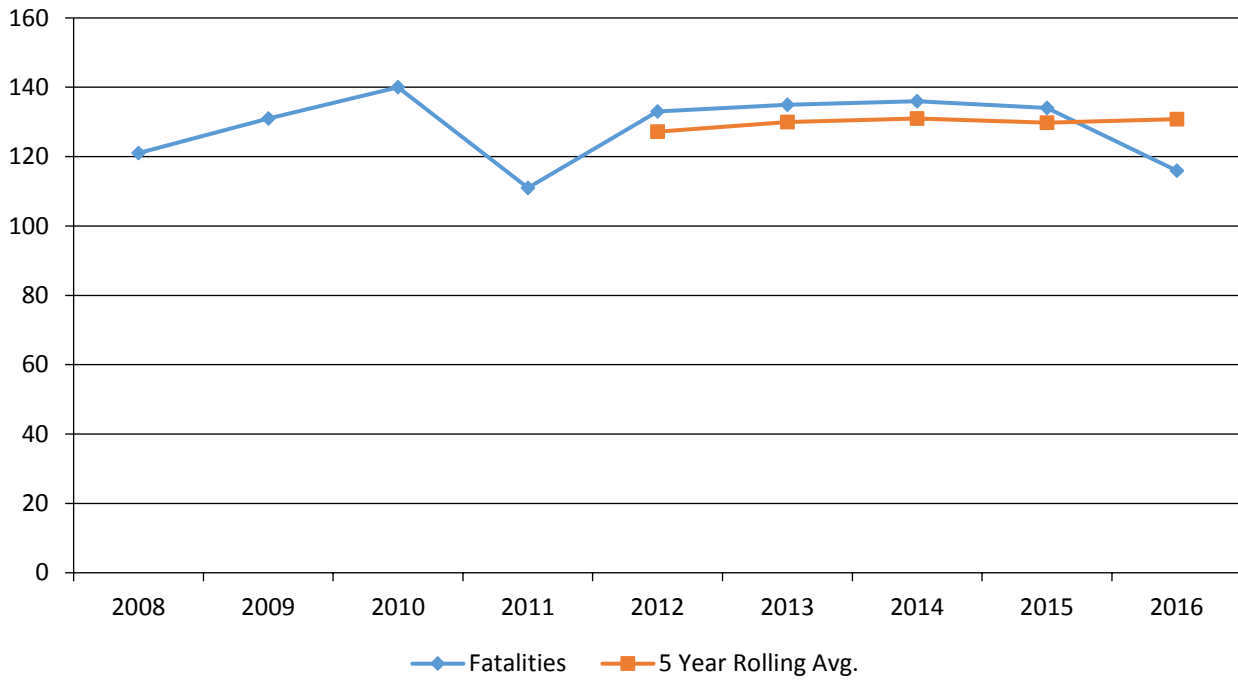
Safety Performance

General Highway Safety Trends

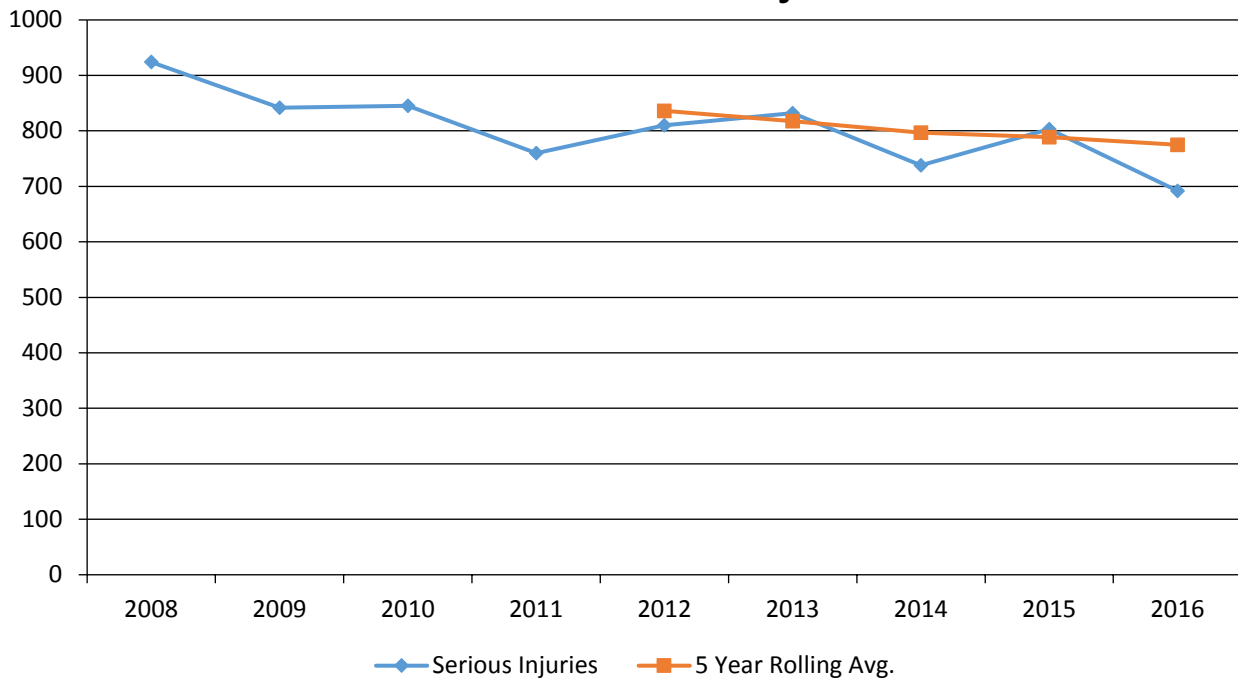
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2008	2009	2010	2011	2012	2013	2014	2015	2016
Fatalities	121	131	140	111	133	135	136	134	116
Serious Injuries	924	842	845	760	810	832	738	803	692
Fatality rate (per HMVMT)	1.430	1.500	1.580	1.230	1.470	1.480	1.480	1.440	1.230
Serious injury rate (per HMVMT)	10.910	9.630	9.540	8.450	8.920	9.130	8.010	8.620	7.310
Number non-motorized fatalities	10	4	11	8	2	9	11	6	6
Number of non-motorized serious injuries	40	37	55	39	37	49	39	35	30

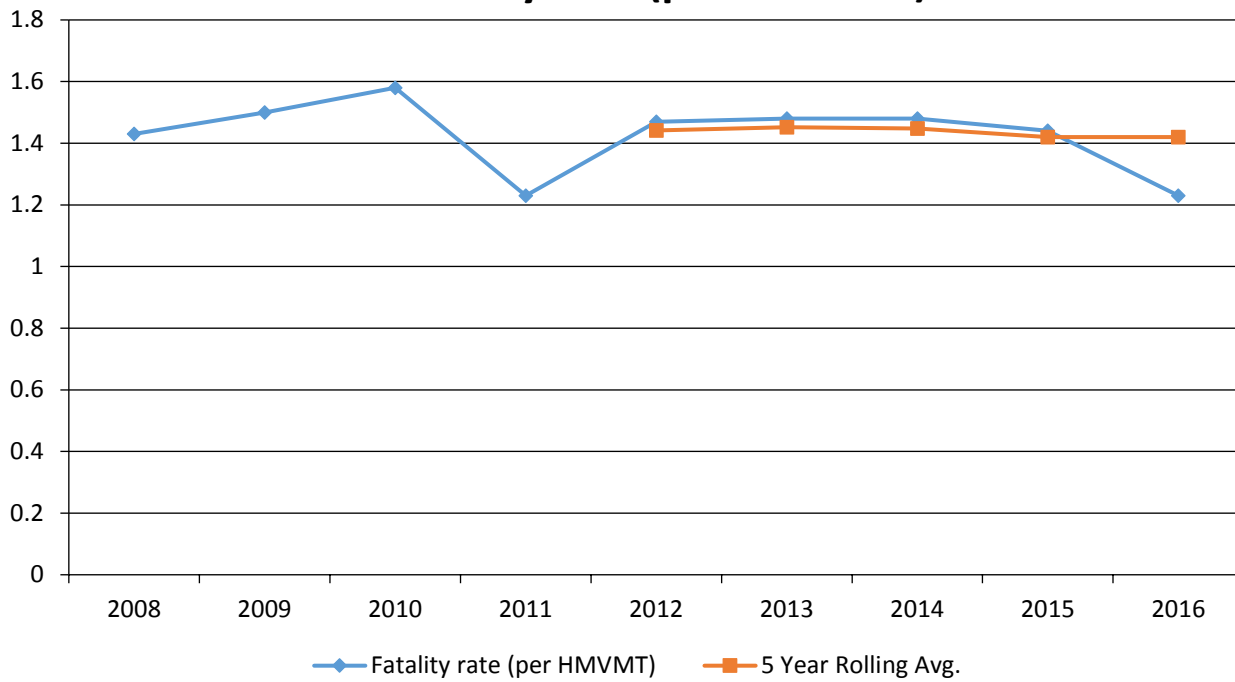
Annual Fatalities



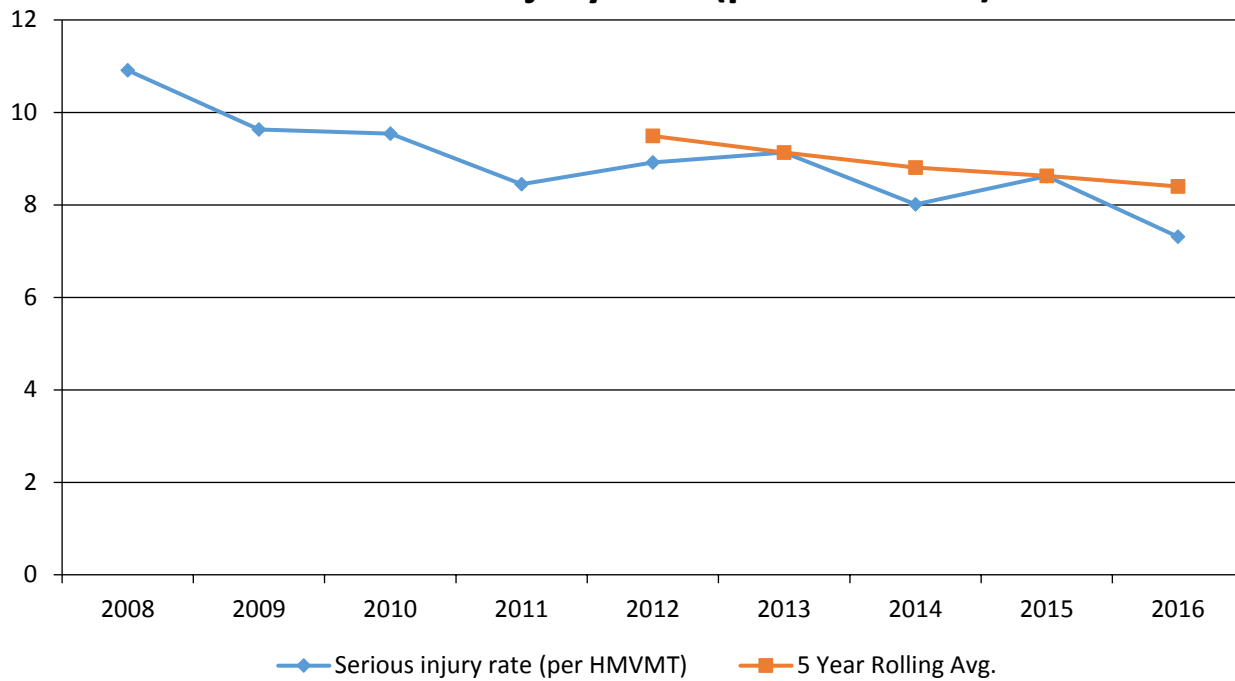
Annual Serious Injuries



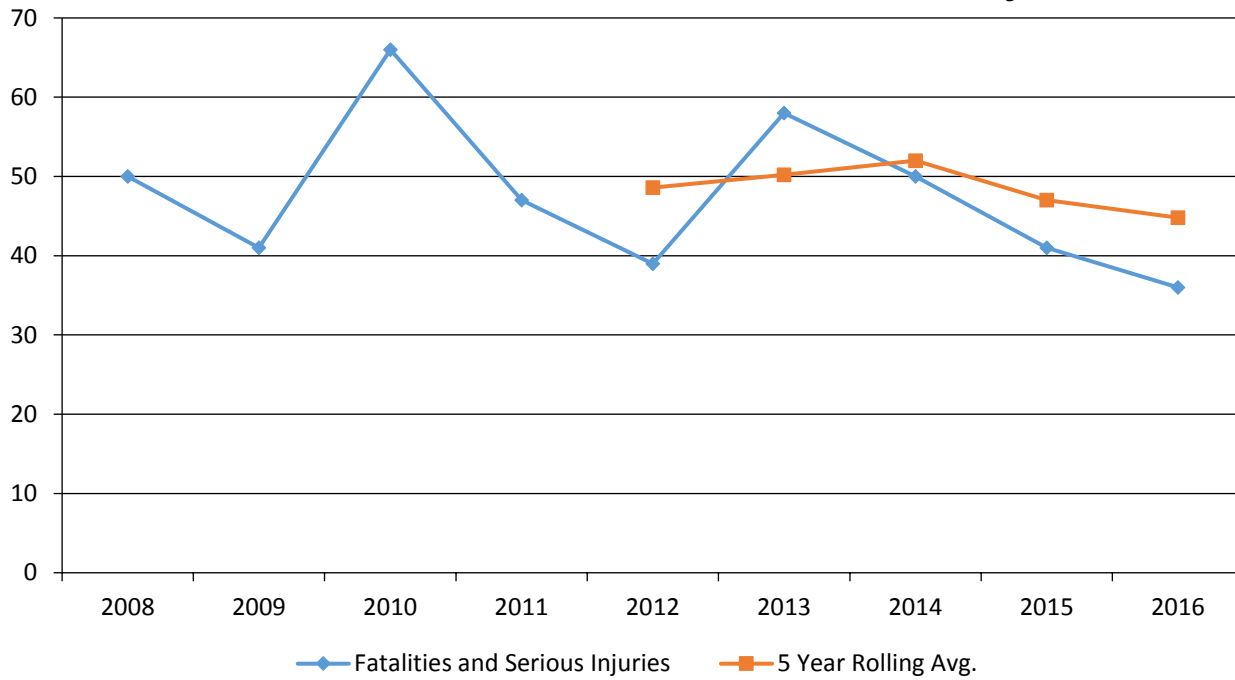
Fatality rate (per HMVMT)



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.

Other

If Other Please describe

FARS & South Dakota Accident Records System

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

FARS is used for those years where it is available. The South Dakota Accident Report System is used to bridge the gap of FARS data.

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

Year 2016

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Interstate	14.4	60.6	0.74	3.64

2017 South Dakota Highway Safety Improvement Program

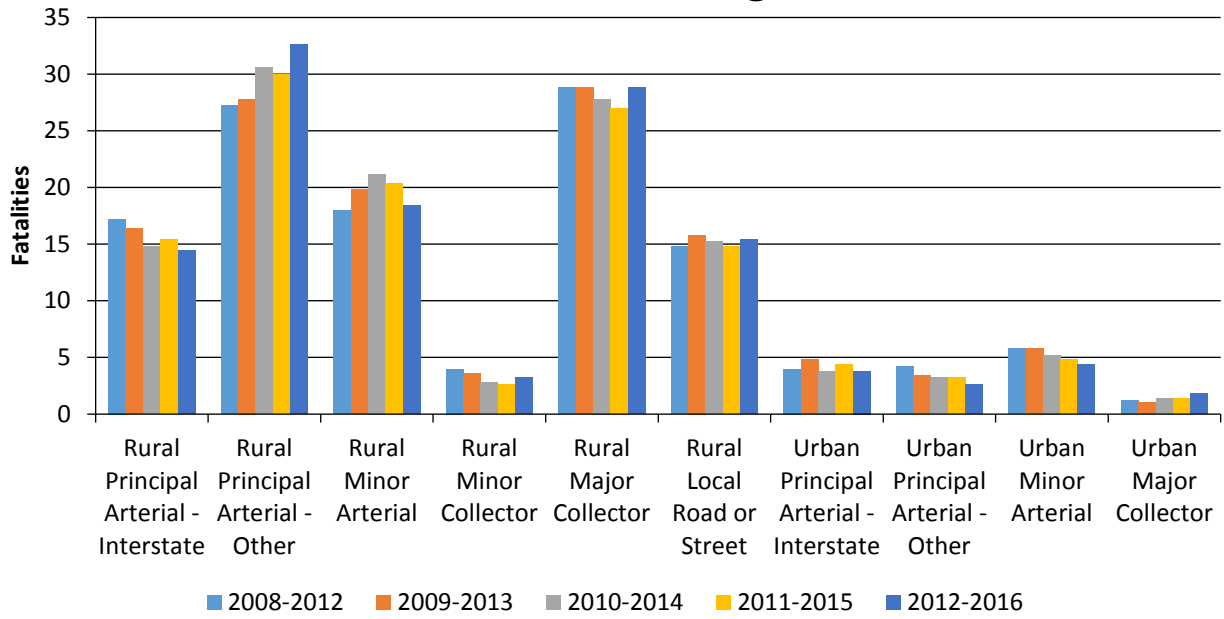
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial - Other Freeways and Expressways				
Rural Principal Arterial - Other	32.6	140.2	1.72	7.39
Rural Minor Arterial	18.4	82	1.89	8.38
Rural Minor Collector	3.2	17.8	2.18	12.16
Rural Major Collector	28.8	108.6	2.73	10.31
Rural Local Road or Street	15.4	77.4	3.35	16.86
Urban Principal Arterial - Interstate	3.8	35	0.54	4.96
Urban Principal Arterial - Other Freeways and Expressways				
Urban Principal Arterial - Other	2.6	68	0.53	13.89
Urban Minor Arterial	4.4	72	0.46	7.43
Urban Minor Collector				
Urban Major Collector	1.8	23.8	0.67	8.75
Urban Local Road or Street	0.4	8.6	0.14	3.09

2017 South Dakota Highway Safety Improvement Program

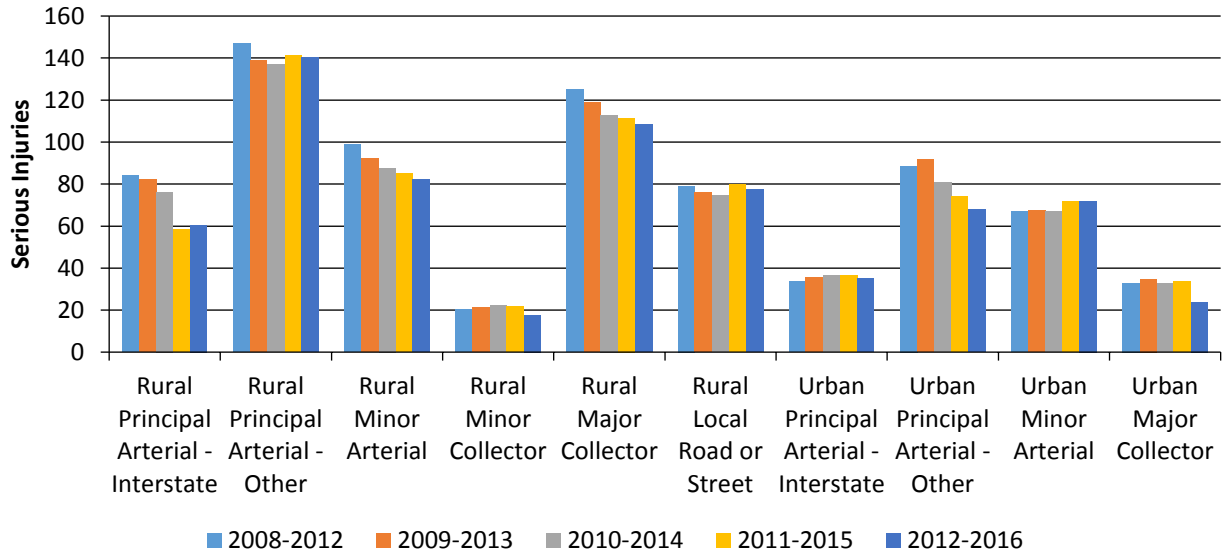
Year 2016

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	58.4	303	0.94	4.89
County Highway Agency	25.6	120	2.01	9.4
Town or Township Highway Agency	3.4	29	1.4	11.88
City of Municipal Highway Agency	8.6	135.4	0.65	10.17
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

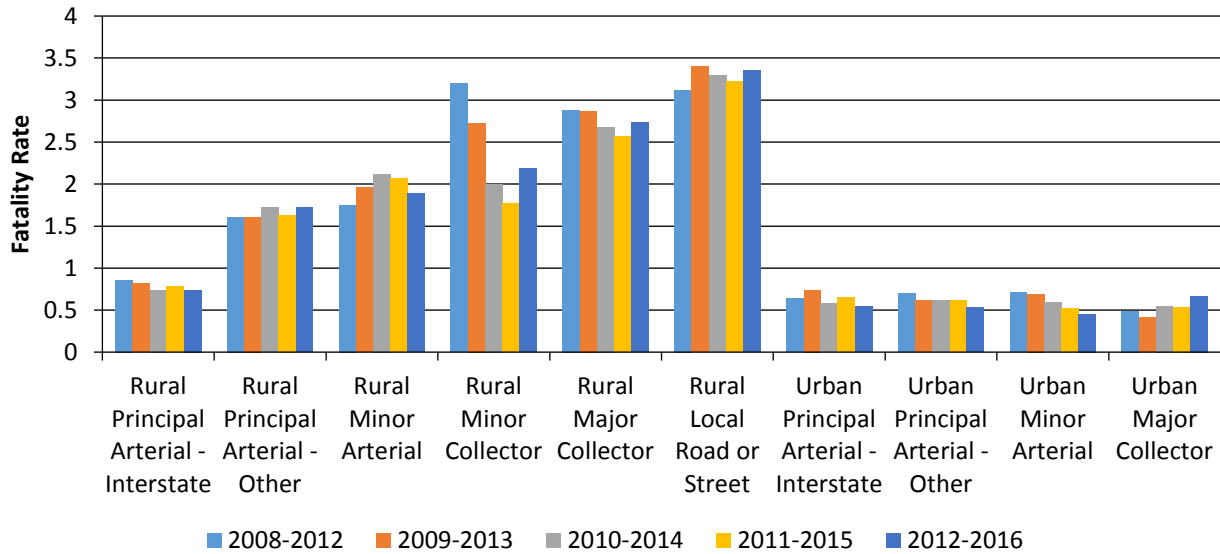
Number of Fatalities by Functional Classification 5 Year Average



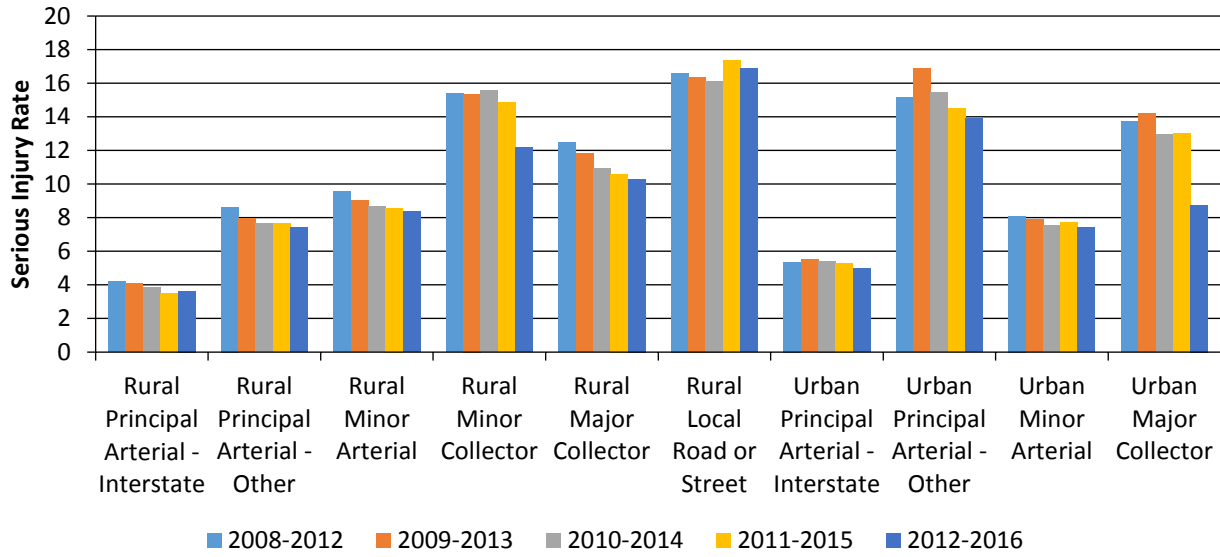
Number of Serious Injuries by Functional Classification 5 Year Average



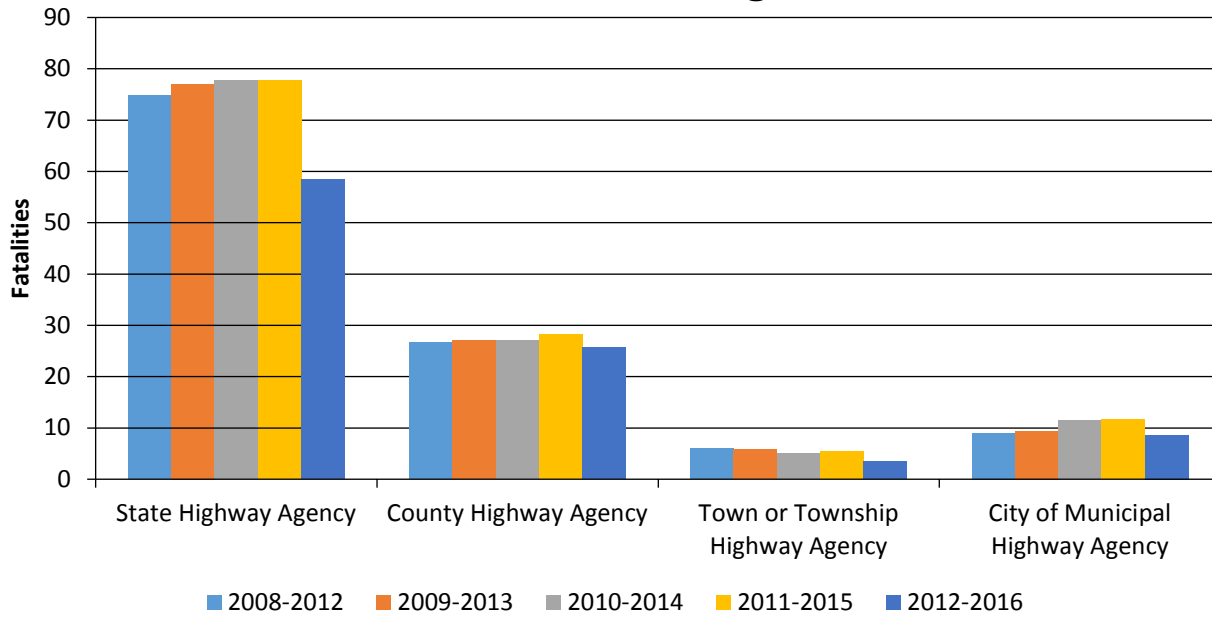
Fatality Rate (per HMVMT) by Functional Classification 5 Year Average



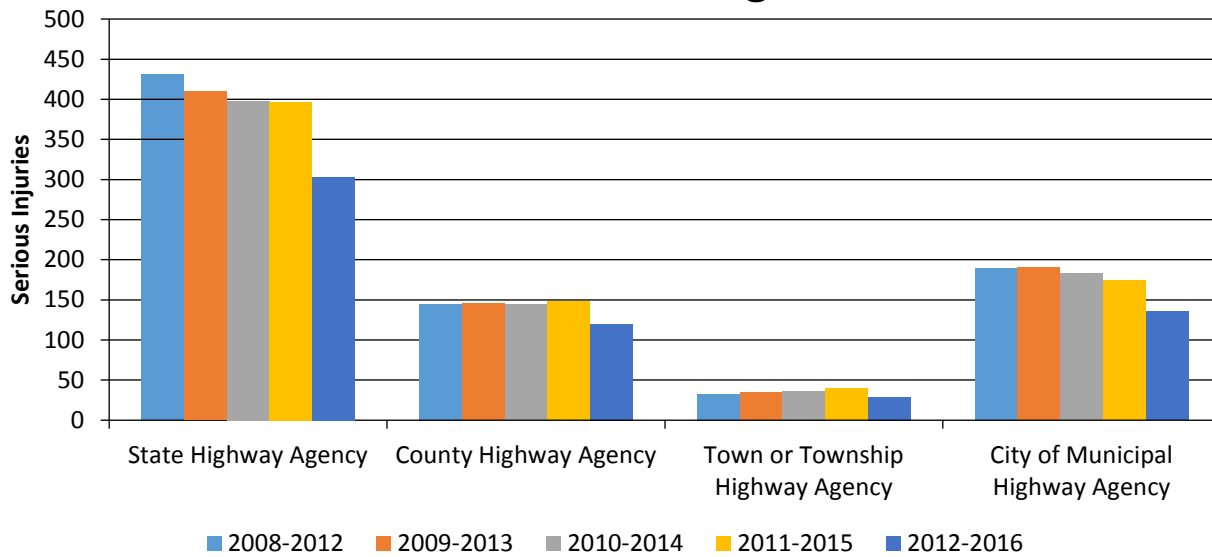
Serious Injury Rate (per HMVMT) by Functional Classification 5 Year Average



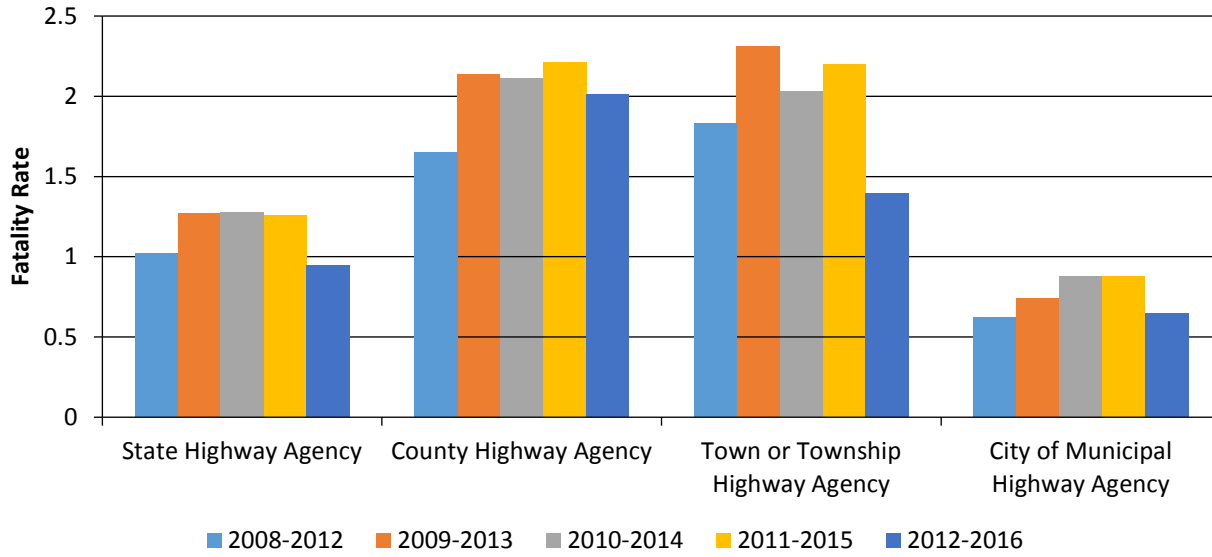
Number of Fatalities by Roadway Ownership 5 Year Average



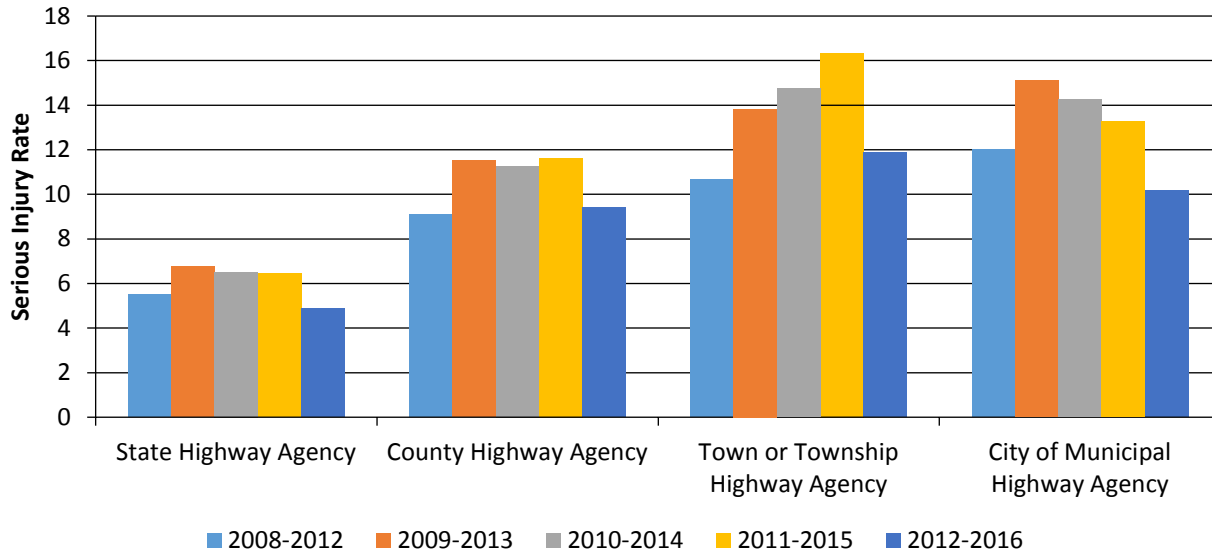
Number of Serious Injuries by Roadway Ownership 5 Year Average



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.

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

No

Safety Performance Targets
Safety Performance Targets

Calendar Year 2018 Targets *

Number of Fatalities 130.0

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Number of Serious Injuries 759.0

2017 South Dakota Highway Safety Improvement Program

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Fatality Rate 1.340

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Serious Injury Rate 7.900

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

Total Number of Non-Motorized Fatalities and Serious Injuries 43.0

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

A trend line analysis was performed using FARS data and South Dakota Accident Records System data. External factors such as VMT, laws, and investments along with stakeholder feedback were also considered when establishing this target.

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.

A one day work shop was conducted on April 4th, 2017 with SDDOT, SD Office of Highway Safety, FHWA SD Division Office, Rapid City MPO, Sioux City MPO, and Sioux Falls MPO representatives in attendance. The work shop went through the 5 performance measures in detail and the reporting requirements. There was a lot of discussion on current crash trends and external factors such as VMT, laws, and investments. Everyone involved agreed that the targets shall be data driven, realistic and attainable.

The OHS also conducts four meetings throughout the year with local law enforcement and EMS representatives to garner buy in from all safety stakeholders throughout the state.

2017 South Dakota Highway Safety Improvement Program
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?

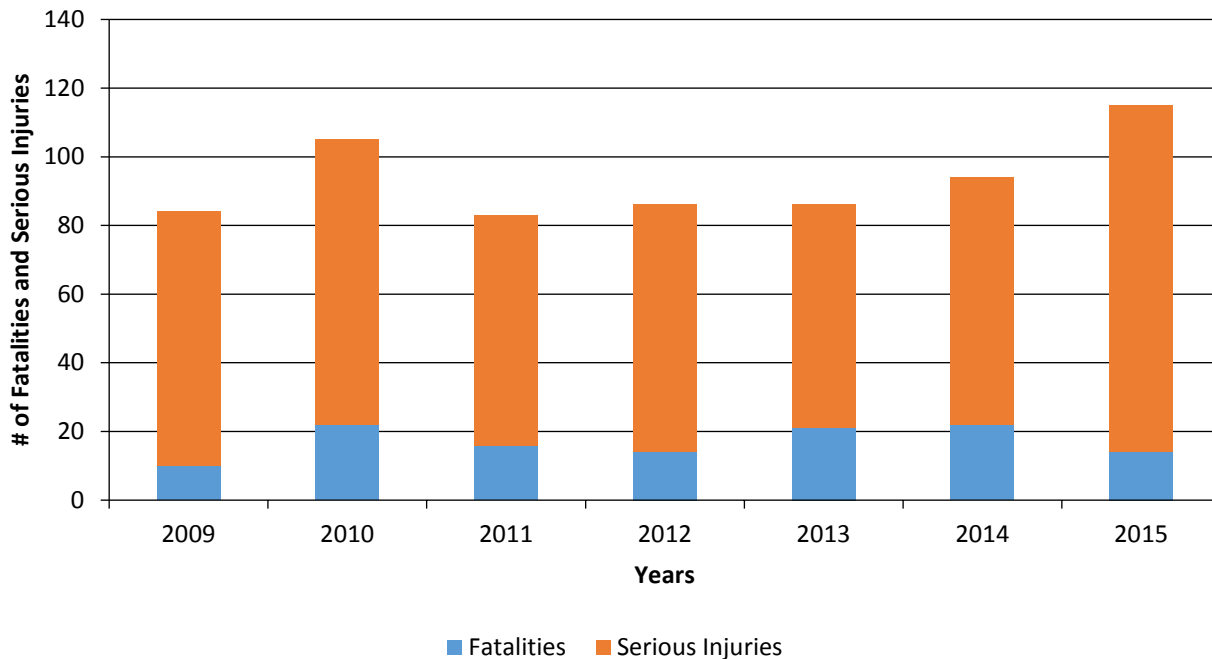
No

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 for the past seven years.

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015
Number of Older Driver and Pedestrian Fatalities	10	22	16	14	21	22	14
Number of Older Driver and Pedestrian Serious Injuries	74	83	67	72	65	72	101

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

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

SDDOT tracks the number of fatal and serious injury crashes to see if SHSP goals are being met. The HSIP program follows the SHSP.

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

The goal of the 2014 Strategic Highway Safety Plan is to reduce the fatal and serious injury crash rates by 15% by the year 2020. In 2015 the fatal crash rate per 100MVMT was 4.3% lower and the serious injury crash rate was 6% lower than the 2010-2014 crash rates. In 2016 the fatal crash rate per 100MVMT was 16.4% lower and the serious injury crash rate was 19.5% lower than the 2010-2014 crash rates. Both years show a trend well on the way of meeting the establish goal of the 2014 SHSP.

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

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.

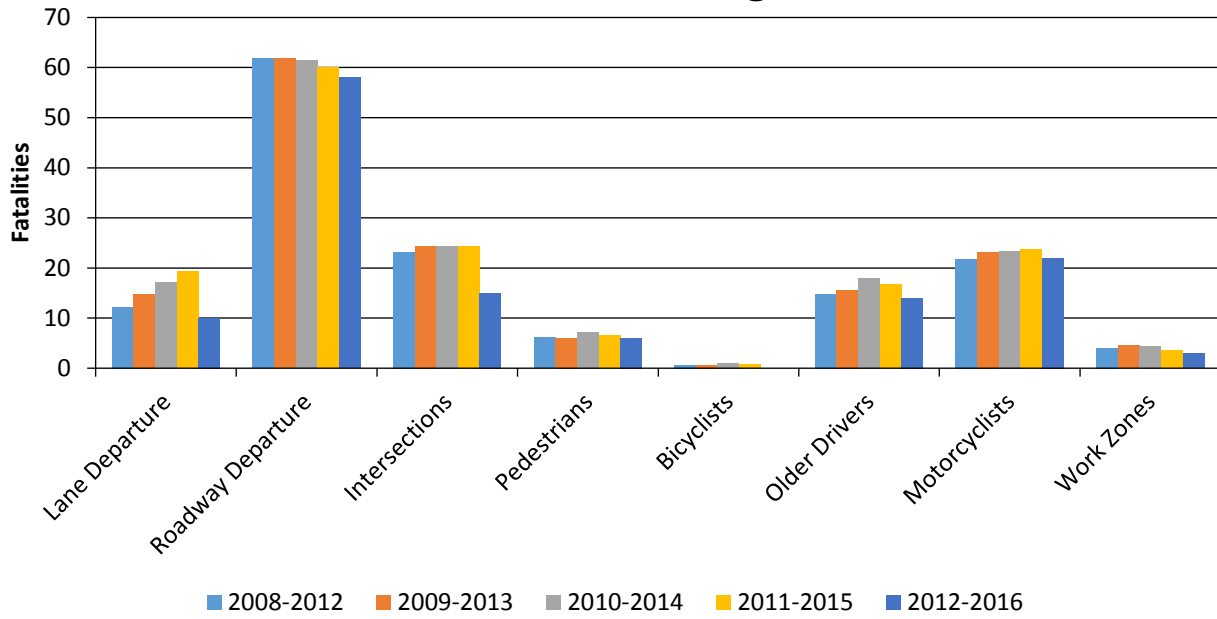
Year 2016

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	All	10	28	0.21	0.48			

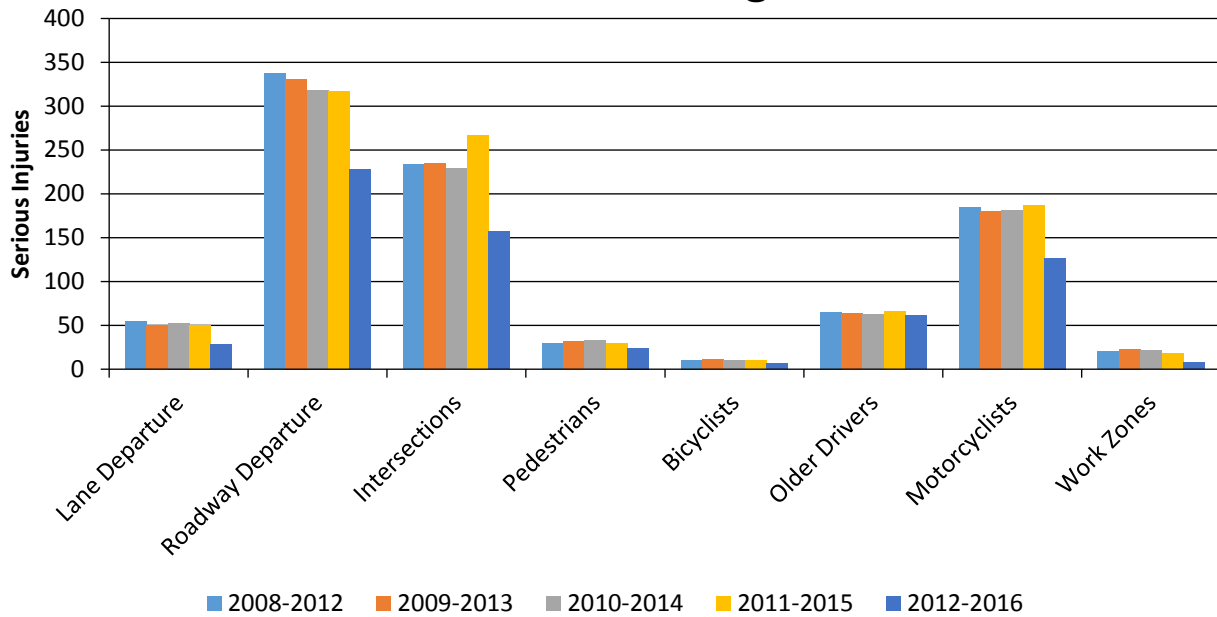
2017 South Dakota Highway Safety Improvement Program

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)	Other 1	Other 2	Other 3
Roadway Departure	Run-off-road	58	228	0.66	3.24			
Intersections	Angle	15	157	0.26	2.4			
Pedestrians	Vehicle/pedestrian	6	24	0.07	0.31			
Bicyclists	Vehicle/bicycle	0	6	0.01	0.1			
Older Drivers	All	14	61	0.18	0.71			
Motorcyclists	All	22	127	0.27	1.91			
Work Zones	All	3	8	0.03	0.18			

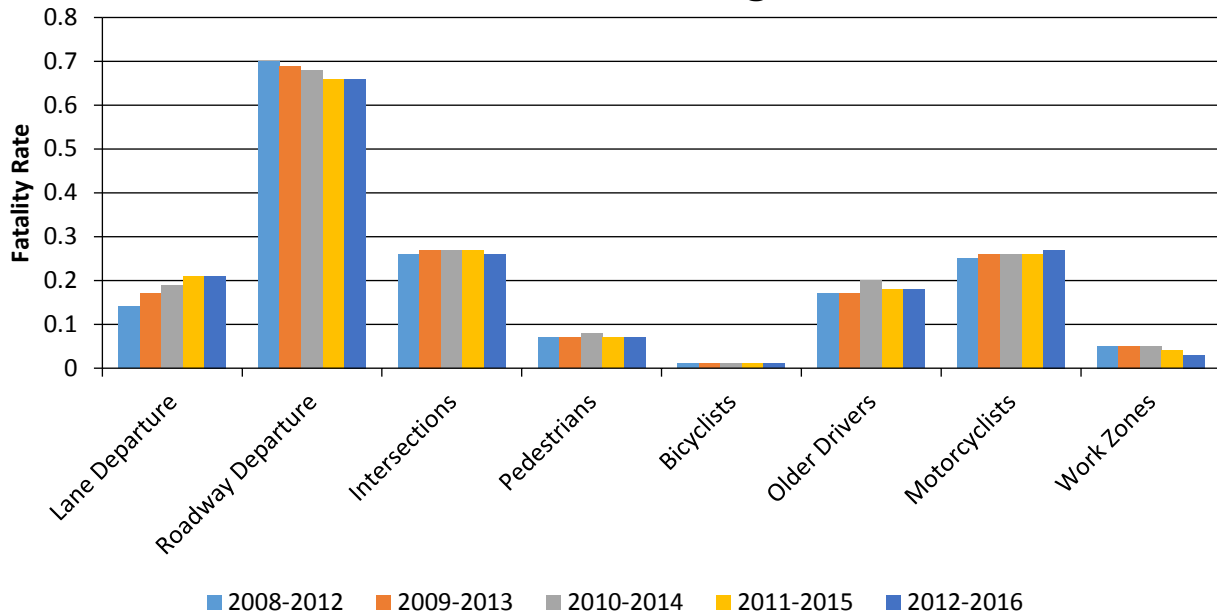
Number of Fatalities 5 Year Average



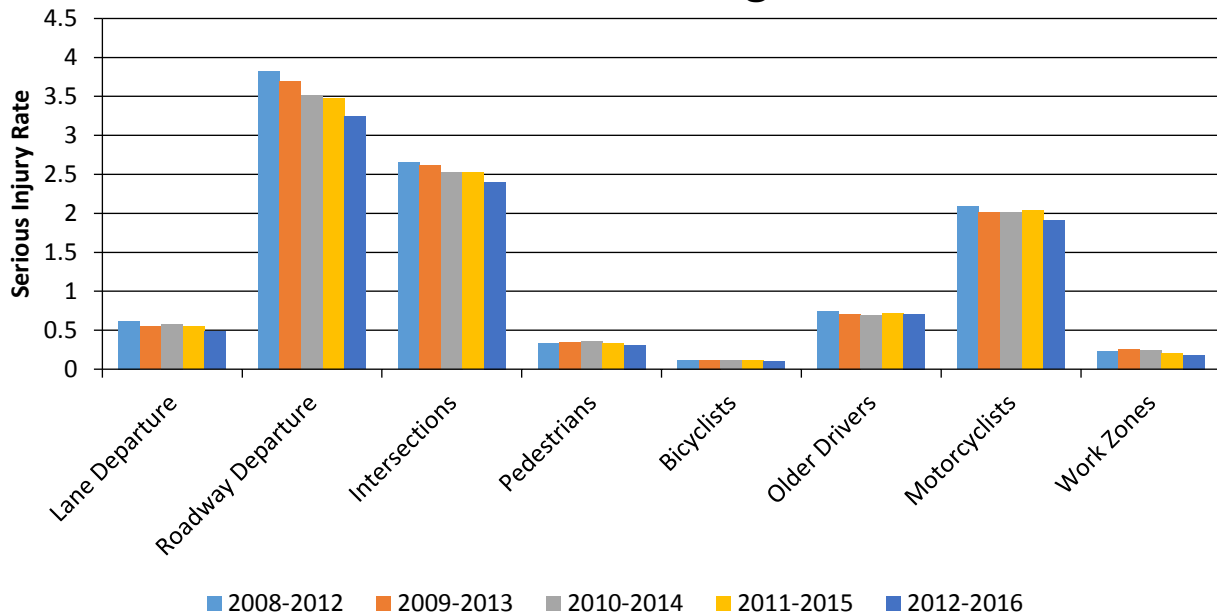
Number of Serious Injuries 5 Year Average



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?

2017 South Dakota Highway Safety Improvement Program

No

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

Project Effectiveness

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

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL INJURY BEFORE	ALL INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
US385 - MRM 114.0 (Boondocks Area) & US14A - MRM 48.8 to 51.58 (Boulder Canyon)	Rural Principal Arterial - Other	Speed management	Radar speed signs	18.00	15.00			9.00	3.00	23.00	9.00	50.00	27.00	260
I90 EB Ramp & LaCrosse St	Urban Principal Arterial - Interstate	Intersection geometry	Intersection geometrics - miscellaneous/other/unspecified	35.00	15.00					10.00	6.00	45.00	21.00	6.4

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?

08/08/2014

What are the years being covered by the current SHSP?

From: 2015 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.

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)	1	1					1	1	1	1
Route Number (8)	1	1								
Route/Street Name (9)	1	1								
Federal Aid/Route Type (21)	1	1								
Rural/Urban Designation (20)	1	1					1	1		
Surface Type (23)	1	1					1	1		
Begin Point Segment Descriptor (10)	1	1					1	1	1	1
End Point Segment Descriptor (11)	1	1					1	1	1	1
Segment Length (13)	1	1								
Direction of Inventory (18)	1	1								
Functional Class (19)	1	1					1	1	1	1
Median Type (54)	1	1								

2017 South Dakota 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
Access Control (22)	1	0								
One/Two Way Operations (91)	1	0.25								
Number of Through Lanes (31)	1	1					1	1		
Average Annual Daily Traffic (79)	1	1					1	1		
AADT Year (80)	1	1								
Type of Governmental Ownership (4)	1	1					1	1	1	1
INTERSECTION										
Unique Junction Identifier (120)			1	1						
Location Identifier for Road 1 Crossing Point (122)			1	1						
Location Identifier for Road 2 Crossing Point (123)			1	1						
Intersection/Junction Geometry (126)			1	1						
Intersection/Junction Traffic Control (131)			1	0.9						
AADT for Each Intersecting Road (79)			1	1						
AADT Year (80)			1	1						
Unique Approach Identifier (139)			1	1						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					1	0				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					1	0				
Location Identifier for Roadway at Ending Ramp Terminal (201)					1	0				
Ramp Length (187)					1	0				
Roadway Type at Beginning of Ramp Terminal (195)					1	0				

2017 South Dakota 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
Roadway Type at End Ramp Terminal (199)					1	0				
Interchange Type (182)					1	0				
Ramp AADT (191)					1	0				
Year of Ramp AADT (192)					1	0				
Functional Class (19)					1	0				
Type of Governmental Ownership (4)					1	0				
Totals (Average Percent Complete):	1.00	0.90	1.00	0.99	1.00	0.00	1.00	1.00	1.00	1.00

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

South Dakota does not have non-state owned interchanges so "0" was inputted of this column as "N/A" is not an eligible value.

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.

South Dakota is aggressively collecting the needed data for the MIRE fundamental data elements. South Dakota will continue on this path as only a few data elements remain incomplete on the list.

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	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	Severe lacerations Broken or distorted limbs Skull or chest injuries Abdominal injuries Unconsciousness at or when taken from scene Unable to leave the accident scene without assistance EXCLUDED: Momentary unconsciousness	No
Crash Database	Incapacitating Injury	No	N/A	No	N/A	No
Crash Database Data Dictionary	Incapacitating Injury	No	Definitions are not listed for each accident severity.	No	Attributes are not listed for each accident severity.	No

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

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

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.