SOUTH DAKOTA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2019 ANNUAL REPORT

U.S. Department of Transportation
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

How are HSIP funds allocated in a State?

- Other-Central Office using SHSP Emphasis Area Data

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
- Districts/Regions
- Local Aid Programs Office/Division
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety

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.

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

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.

Program Methodology

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

No

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.

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

Program: Horizontal Curve

Date of Program Methodology:3/1/2013

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic Volume	Horizontal curvature

What project identification methodology was used for this program?

- 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

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

Program: Intersection

Date of Program Methodology:3/1/2013

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic Volume	Other-Intersection Type

What project identification methodology was used for this program?

- 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

Program: Local Safety

Date of Program Methodology:3/1/2015

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

What project identification methodology was used for this program?

- 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 Developement Personel

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

2019 South Dakota Highway Safety Improvement Program
Program: Low-Cost Spot Improvements

Date of Program Methodology:5/1/2014

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

What project identification methodology was used for this program?

- 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

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

Program: Roadway Departure

Date of Program Methodology:2/2/2014

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

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

What project identification methodology was used for this program?

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

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

No

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

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

Program: Shoulder Improvement

Date of Program Methodology:5/1/2014

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

What project identification methodology was used for this program?

- 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

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:4
Available funding:1
Ranking based on net benefit:2
Cost Effectiveness:2

2019 South Dakota Highway Safety Improvement Program
Program: Sign Replacement And Improvement

Date of Program Methodology:5/1/2017

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

What project identification methodology was used for this program?

- 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

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:4
Available funding:1
Ranking based on net benefit:2
Cost Effectiveness:2

Program: Skid Hazard

Date of Program Methodology:2/1/2016

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
All crashes	Traffic Volume	

What project identification methodology was used for this program?

- Crash frequency

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

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

What percentage of HSIP funds address systemic improvements?

50

HSIP funds are used to address which of the following systemic improvements?

- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Pavement/Shoulder Widening
- Rumble Strips
- Upgrade Guard Rails

What process is used to identify potential countermeasures?

- Crash data analysis
- Engineering Study
- SHSP/Local road safety plan
- Stakeholder input

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 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.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

July 1, 2018 to June 30, 2019

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$44,220,000	$36,777,934	83.17%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
Penalty Funds (23 U.S.C. 154)	$0	$0	0%
Penalty Funds (23 U.S.C. 164)	$821,000	$727,240	88.58%
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	$45,041,000	$37,505,174	83.27%

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

3%

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

3%

The way projects are reported is based on the amount obligated when the first 292 is submitted for the project. If the reporting was for the actually amount of projects let in the reporting period that amount would better represent the safety funds distributed to the local system.

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

1%

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

2%

How much funding was transferred in to the HSIP from other core program areas during the reporting period under 23 U.S.C. 126?

$37,191,872

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

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

The way projects are reported is based on the amount obligated when the first 292 is submitted for the project. In a lot of cases that amount is not the total project cost so that funding amount is tough to compare to the programmed amount. 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.

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.

General Listing of Projects

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

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
04HC	Non-infrastructure	Transportation safety planning	0	Numbers	$1200	$1200	Penalty Funds (23 U.S.C. 164)	N/A	N/A	0	0	State Highway Agency	Systematic	Data	Highway Safety Planning
06AJ	Speed management	Speed management - other	0	Numbers	$345127.8	$353627.8	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	10,163	60	State Highway Agency	Systemic	Intersections	Signing
04H6	Roadway delineation	Longitudinal pavement markings - remarking	4	Miles	$449371.11	$453871.11	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	6,047	55	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
06AX	Roadside	Fencing	3	Locations	$8713.27	$9681.42	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	0	State Highway Agency	Spot	Roadway Departure	Snow Fence
05LT	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	County	$980660.46	$980660.46	HSIP (23 U.S.C. 148)	Multiple/Varies	Local Road or Street	200	65	County Highway Agency	Systemic	Lane Departure	Signing
06K8	Non-infrastructure	Transportation safety planning	0	Numbers	$585930.2	$651033.57	HSIP (23 U.S.C. 148)	Rural	N/A	0	0	State Highway Agency	Systematic	Data	Update SHSP
04HJ	Shoulder treatments	Widen shoulder - paved or other	8.3	Miles	$6684919.52	$10143657.25	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,624	65	State Highway Agency	Systemic	Roadway Departure	Shoulder Widening
04XY	Roadway signs and traffic control	Roadway signs (including post) - new or updated	68.4	Miles	$98340.84	$139340.84	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	2,099	65	State Highway Agency	Systemic	Lane Departure	Signing
03RQ	Shoulder treatments	Widen shoulder - paved or other	21.6	Miles	$11433517.38	$14149967.09	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	1,479	65	State Highway Agency	Systemic	Roadway Departure	Shoulder Widening
04J1	Non-infrastructure	Transportation safety planning	0	Numbers	$117000	$130000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Systematic	Data	Highway Safety Planning
04HY	Non-infrastructure	Road safety audits	0	Numbers	$4500	$5000	HSIP (23 U.S.C. 148)	N/A	N/A	0	0	State Highway Agency	Spot	Road Safety Audits	Conduction Roadway Safety Audits
05W5	Roadway	Pavement surface - high friction surface	2	Miles	$972087.65	$973956.57	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	8,575	75	State Highway Agency	Spot	Lane Departure	High Friction Surface Treatment
05K4	Intersection geometry	Auxiliary lanes - add left-turn lane	1.8	Miles	$2270425.62	$2450925.62	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,809	65	State Highway Agency	Systemic	Intersections	Turn Lanes

2019 South Dakota Highway Safety Improvement Program

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
070G	Lighting	Continuous roadway lighting	0.4	Miles	$79573.91	$82073.91	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other Freeways & Expressways	4,300	60	State Highway Agency	Spot	Lane Departure	Roadway Lighting
04HW	Roadway delineation	Longitudinal pavement markings - remarking	8.2	Miles	$471521.26	$476021.26	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	6,635	55	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
0727	Roadway	Pavement surface - high friction surface	0.4	Miles	$405616.25	$405616.25	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Interstate	23,415	65	State Highway Agency	Spot	Lane Departure	High Friction Surface Treatment
04Y1	Roadway signs and traffic control	Roadway signs (including post) - new or updated	95.5	Miles	$722330.84	$754330.84	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	9,590	75	State Highway Agency	Systemic	Lane Departure	Signing
04XJ	Alignment	Horizontal and vertical alignment	1	Miles	$3536312.46	$4023280.18	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	1,322	55	State Highway Agency	Spot	Roadway Departure	Roadway Realignment
05FF	Roadway	Pavement surface - high friction surface	1	Locations	$65060.45	$534654.49	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	6,684	80	State Highway Agency	Spot	Lane Departure	High Friction Surface Treatment
05W9	Intersection traffic control	Intersection traffic control - other	4.4	Miles	$51356.12	$60356.12	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,328	70	State Highway Agency	Spot	Intersections	Intersection Sight Distance Improvements
060F	Intersection geometry	Auxiliary lanes - add left-turn lane	0.3	Miles	$284605.1	$339925.1	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,683	65	State Highway Agency	Systemic	Intersections	Turn Lanes
05W8	Intersection geometry	Auxiliary lanes - add left-turn lane	2.6	Miles	$3059690.17	$3300924.74	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,314	65	State Highway Agency	Systemic	Intersections	Turn Lanes
06NE	Roadway	Pavement surface - high friction surface	1.6	Miles	$1185148.95	$1336832.2	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	10,774	70	State Highway Agency	Spot	Lane Departure	High Friction Surface Treatment
04HX	Roadway delineation	Longitudinal pavement markings - remarking	49.3	Miles	$404843.98	$420843.98	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	4,859	65	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
0751	Roadway delineation	Longitudinal pavement markings - remarking	28.9	Miles	$687453.57	$689453.57	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	6,910	80	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
05G3	Intersection traffic control	Intersection traffic control - other	4.6	Miles	$199173.33	$262175.1	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	2,522	70	State Highway Agency	Spot	Intersections	Intersection Improvements

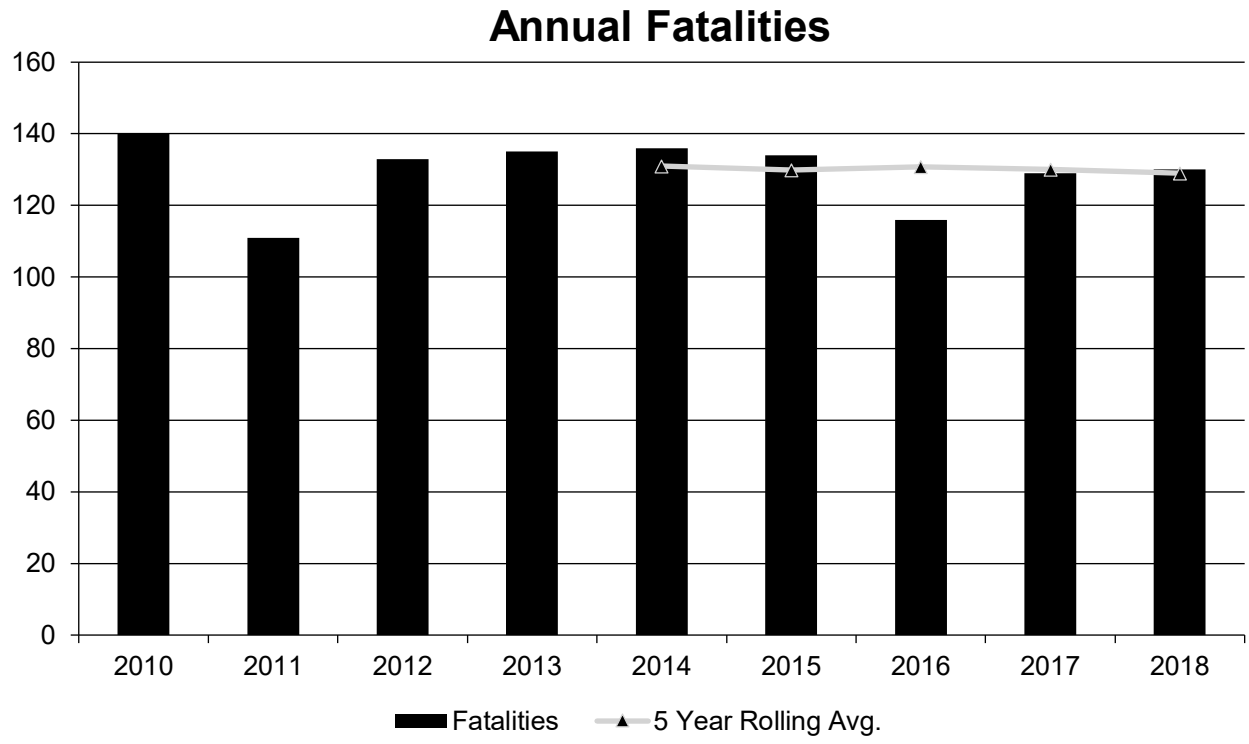
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
04HU	Roadway delineation	Longitudinal pavement markings - remarking	28.3	Miles	$765222.57	$775222.57	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	7,205	80	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
00YE	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Locations	$759960	$3303931.38	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0	0	State Highway Agency	Systemic	Intersections	Turn Lanes
04HV	Roadway delineation	Longitudinal pavement markings - remarking	65	Miles	$413502.48	$417002.48	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	2,053	65	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
04HT	Roadway delineation	Longitudinal pavement markings - remarking	2.8	Miles	$221158.39	$228158.39	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	3,340	65	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
06C6	Intersection traffic control	Modify traffic signal - add backplates with retroreflective borders	79	Locations	$240849.99	$244849.99	Penalty Funds (23 U.S.C. 164)	Urban	Principal Arterial-Other	10,013	65	State Highway Agency	Systemic	Intersections	Signal Reflective Backplates

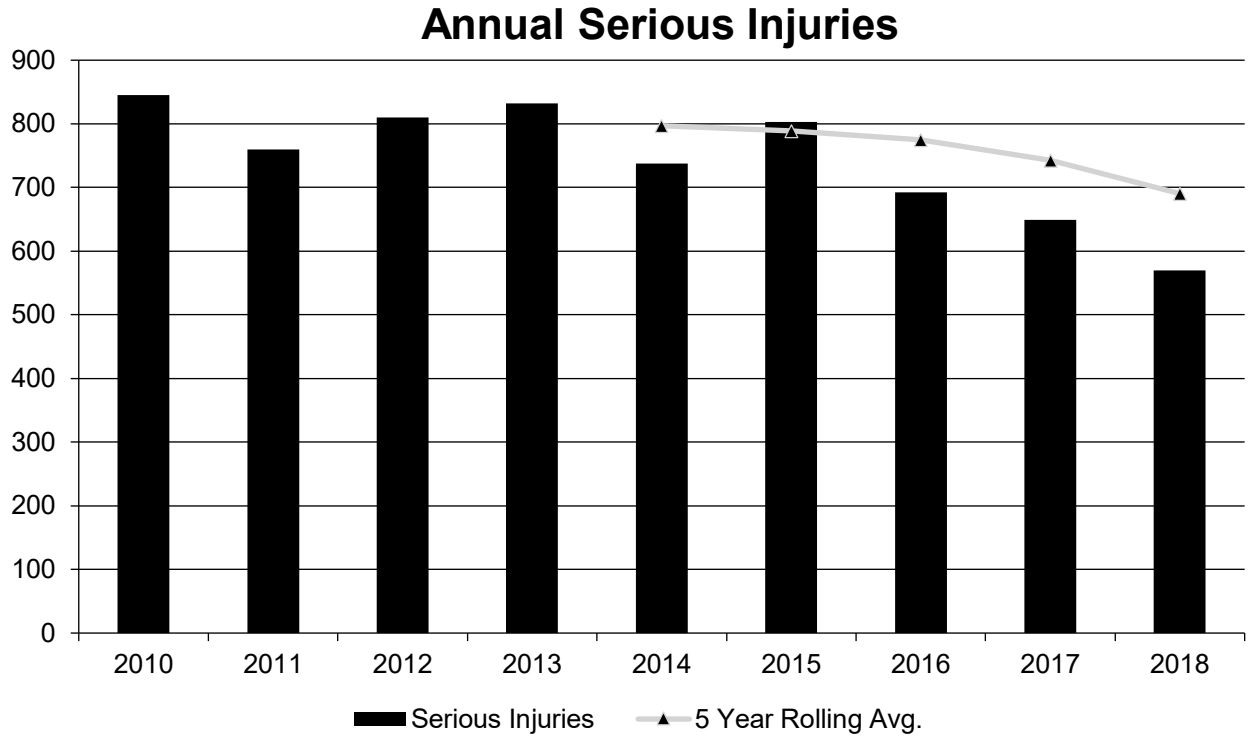
Safety Performance

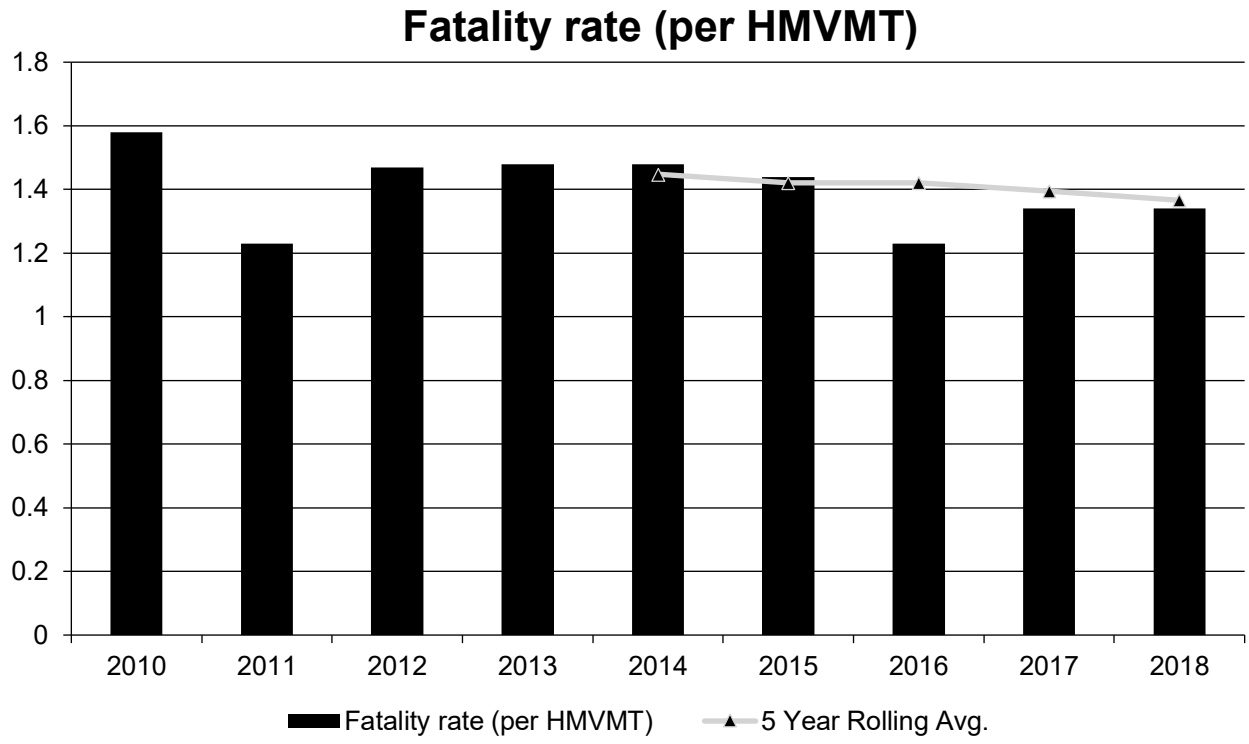
General Highway Safety Trends

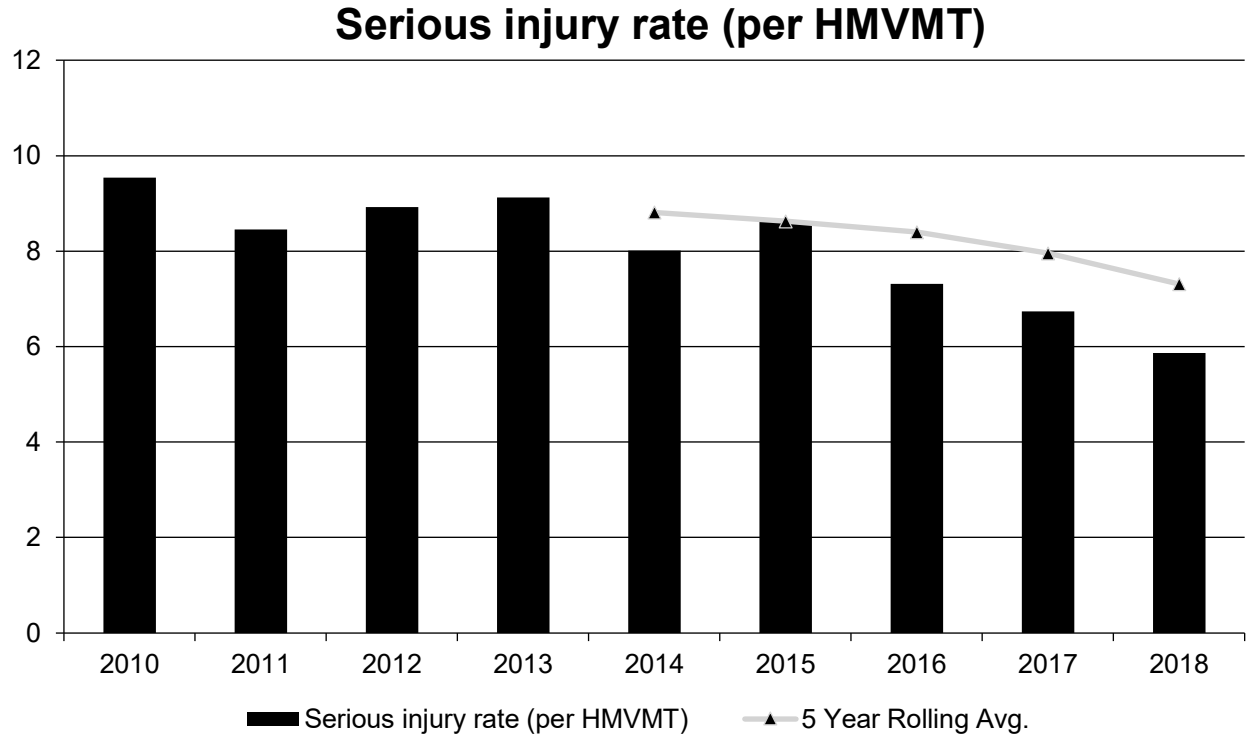
Present data showing the general highway safety trends in the State for the past five years.

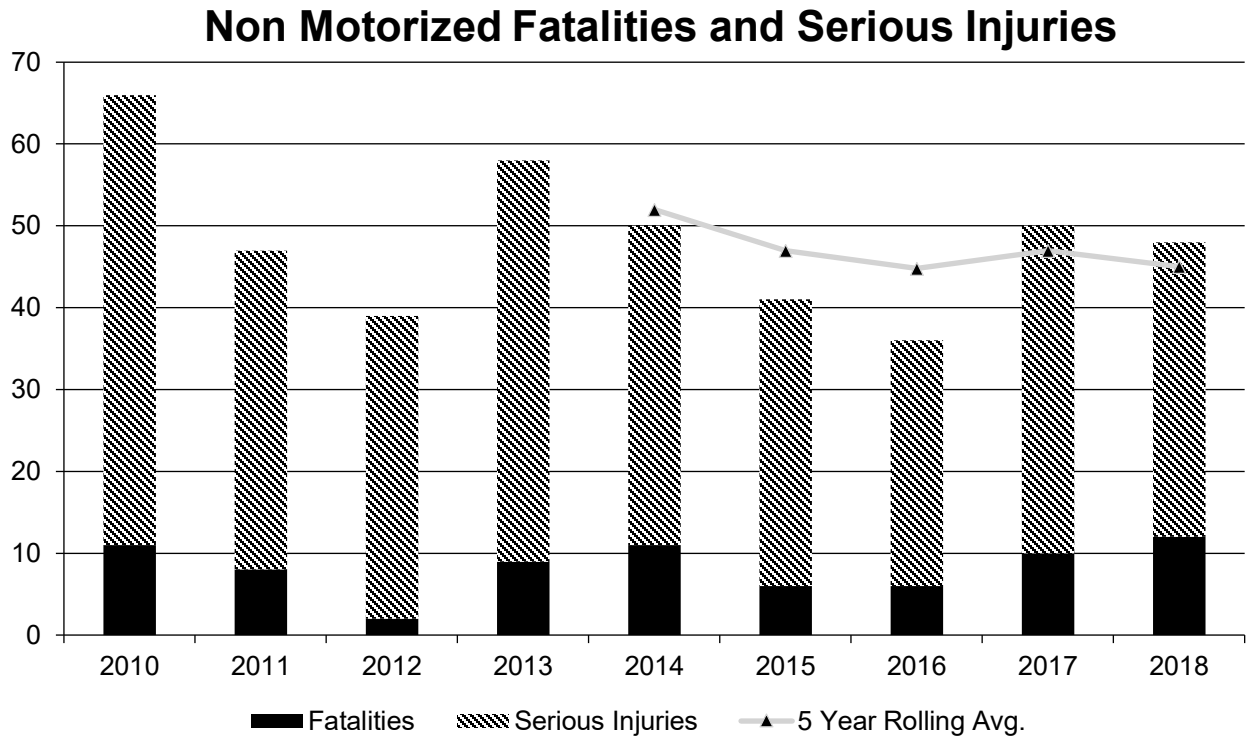
PERFORMANCE MEASURES	2010	2011	2012	2013	2014	2015	2016	2017	2018
Fatalities	140	111	133	135	136	134	116	129	130
Serious Injuries	845	760	810	832	738	803	692	649	570
Fatality rate (per HMVMT)	1.580	1.230	1.470	1.480	1.480	1.440	1.230	1.340	1.340
Serious injury rate (per HMVMT)	9.540	8.450	8.920	9.130	8.010	8.620	7.310	6.744	5.870
Number non-motorized fatalities	11	8	2	9	11	6	6	10	12
Number of non-motorized serious injuries	55	39	37	49	39	35	30	40	36


Annual Fatalities
160
140
120
100
80
60
40
20
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
900
800
700
600
500
400
300
200
100
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
12
10
8
6
4
2
0
2010
2011
2012
2013
2014
2015
2016
2017
2018
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Describe fatality data source.

Other

If Other Please describe

FARS & South Dakota Accident Records System

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

Year 2018

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	12.6	57.2	0.64	3.4
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	37.8	135.8	1.96	7.02
Rural Minor Arterial	16.4	74.2	1.66	7.47
Rural Minor Collector	3.2	17.4	2.18	11.88
Rural Major Collector	26.6	99	2.52	9.37

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Local Road or Street	13.8	69.6	3.01	15.19
Urban Principal Arterial (UPA) - Interstate	4.2	28.4	0.58	3.91
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other	2	48.2	0.4	9.71
Urban Minor Arterial	5.6	69.8	0.57	7.07
Urban Minor Collector				
Urban Major Collector	2	24.6	0.71	8.69
Urban Local Road or Street				

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 or 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				

Safety Performance Targets

Safety Performance Targets

Calendar Year 2020 Targets *

Number of Fatalities:126.4

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:667.4

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:1.280

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:6.740

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.

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.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2018 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

Based on the numbers inputted at reporting time, 3 of the 5 safety targets were met; Fatalities, Serious Injuries, and Serious injury rate. I also looked at significant progress made to reach the other 2 goals. Fatality Rate was below the base line so that target made significant progress. Non-motorized fatalities and serious injuries did not make significant progress. Since 4 of the 5 safety targets either were met or made significant progress, this requirement was met.

Applicability of Special Rules

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

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	2012	2013	2014	2015	2016	2017	2018
Number of Older Driver and Pedestrian Fatalities	14	21	22	14	16	21	26
Number of Older Driver and Pedestrian Serious Injuries	65	59	66	97	63	56	59

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries

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. The 2018 five year average fatal crash rate per 100MVMT was 7.7% lower and the serious injury crash rate was 13.3% lower than the 2010-2014 crash rates. The five year rolling averages are showing a trend 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?

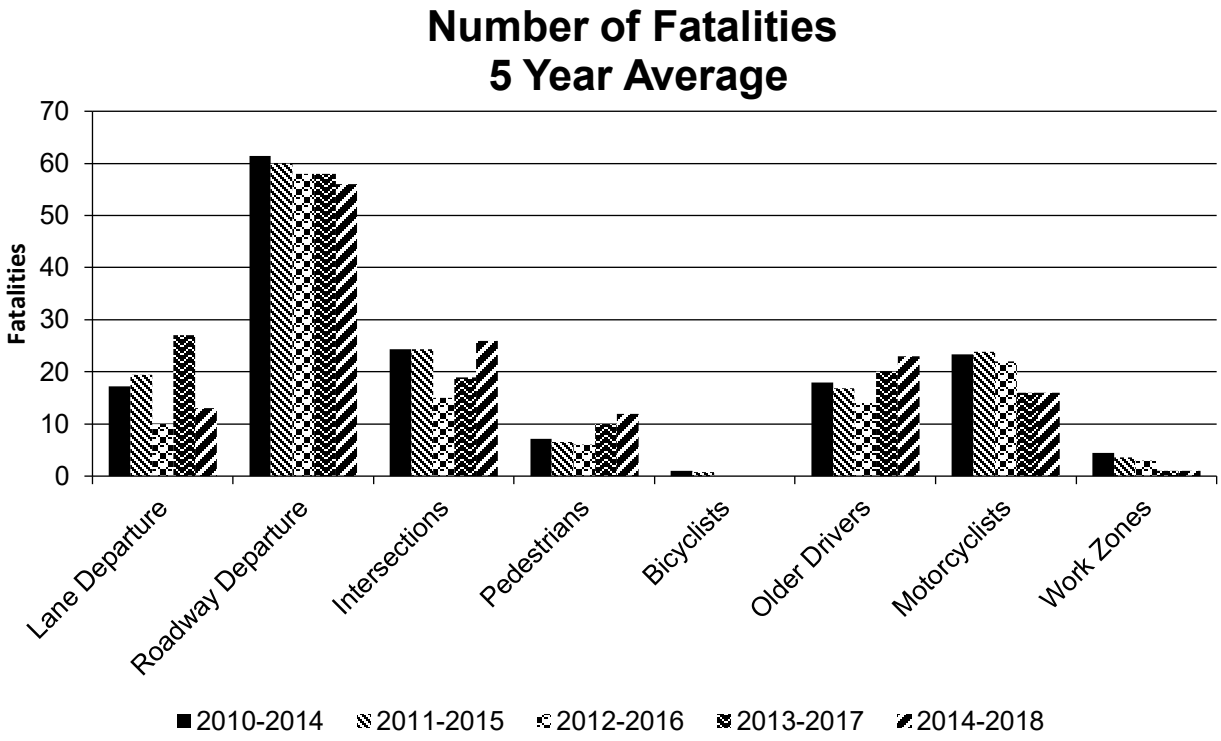
- HSIP Obligations

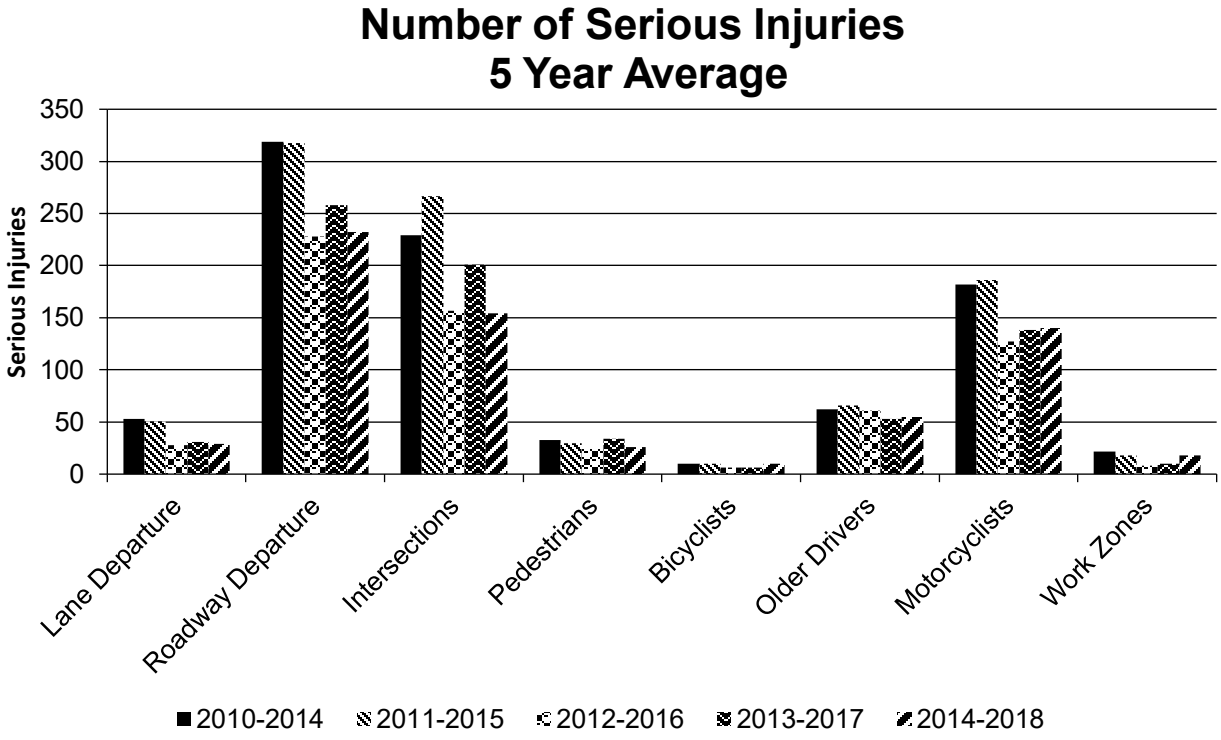
Effectiveness of Groupings or Similar Types of Improvements

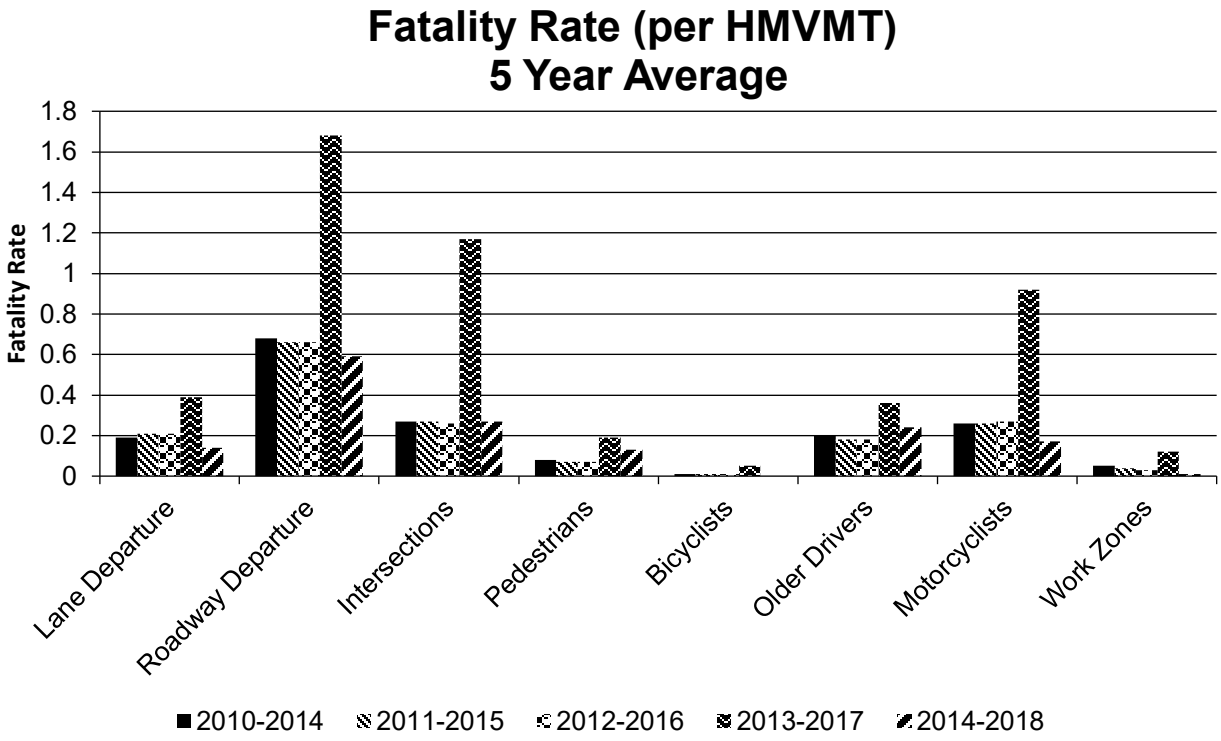
Present and describe trends in SHSP emphasis area performance measures.

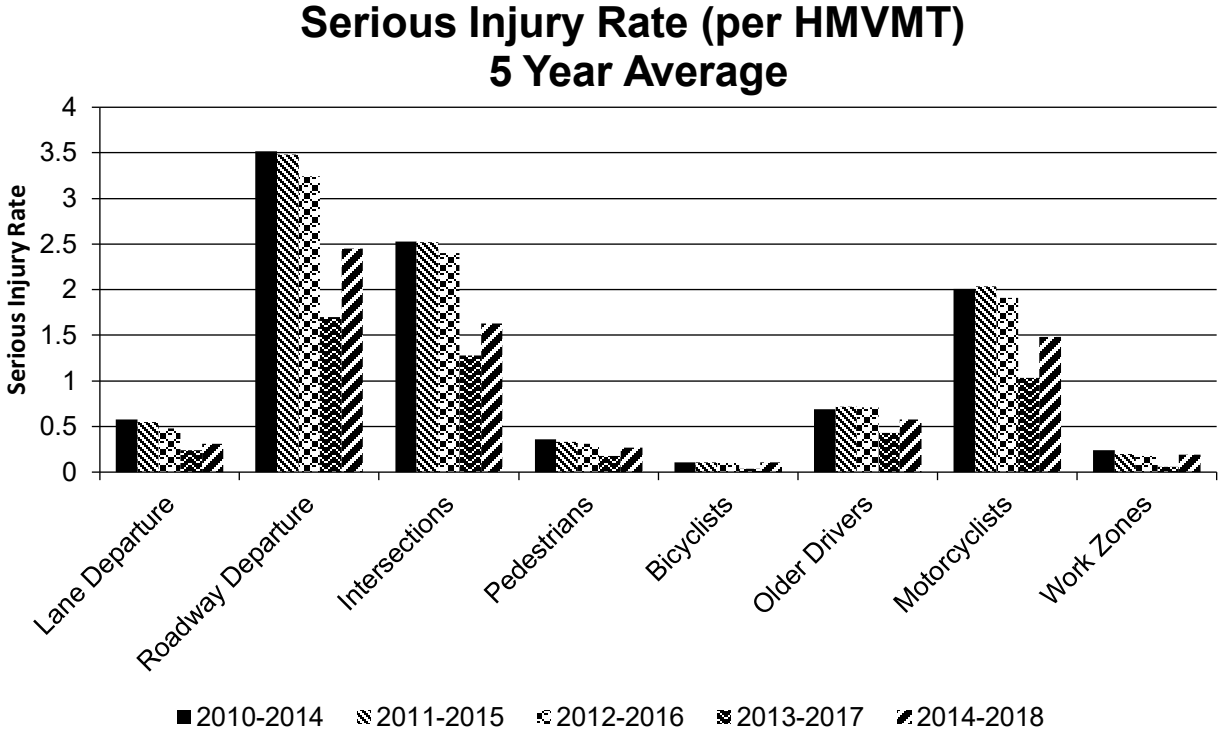
Year 2018

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		13	29	0.14	0.31	0.22	0.42	
Roadway Departure		56	232	0.59	2.45	0.61	2.82	
Intersections		26	154	0.27	1.63	0.22	2.06	
Pedestrians		12	26	0.13	0.27	0.09	0.3	
Bicyclists		0	10	0	0.11	0.01	0.09	
Older Drivers		23	55	0.24	0.58	0.2	0.68	
Motorcyclists		16	140	0.17	1.48	0.22	1.71	
Work Zones		1	18	0.01	0.19	0.02	0.14	


Number of Fatalities
5 Year Average
Fatalities
70
60
50
40
30
20
10
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2010-2014
2011-2015
2012-2016
2013-2017
2014-2018


Number of Serious Injuries
5 Year Average
Serious Injuries
350
300
250
200
150
100
50
0
Lane Departure
Roadway Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2010-2014
2011-2015
2012-2016
2013-2017
2014-2018





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

No

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)
US14A - Intersection with US85	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - modify right-turn lane offset							1.00		1.00		10.6
Intersection of US14 and Bushnell Road	Rural Principal Arterial (RPA) - Other	Intersection geometry	Auxiliary lanes - add left-turn lane					1.00		1.00		2.00		8
Mitchell Region	Rural Minor Arterial	Roadway	Rumble strips - edge or shoulder	49.00	18.00			2.00		18.00	6.00	69.00	24.00	118
Various Locations on the State System in the Pierre Region	Rural Minor Arterial	Roadway	Rumble strips - edge or shoulder	40.00	23.00	8.00	3.00	8.00	4.00	26.00	14.00	82.00	44.00	56

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

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

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		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								
	Access Control (22)	1									

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	One/Two Way Operations (91)	1	0.9								
	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	0.98						
	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					
	Location Identifier for Roadway at Beginning of Ramp Terminal (197)					1					
	Location Identifier for Roadway at Ending Ramp Terminal (201)					1					
	Ramp Length (187)					1					

ROAD TYPE	MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	
	Roadway Type at Beginning of Ramp Terminal (195)					1					
	Roadway Type at End Ramp Terminal (199)					1					
	Interchange Type (182)					1					
	Ramp AADT (191)					1					
	Year of Ramp AADT (192)					1					
	Functional Class (19)					1					
	Type of Governmental Ownership (4)					1					
Totals (Average Percent Complete):		**1.00**	**0.94**	**1.00**	**1.00**	**1.00**	**0.00**	**1.00**	**1.00**	**1.00**	**1.00**

*Based on Functional Classification

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.

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

No

When does the State plan to complete its next HSIP program assessment.

2020

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.