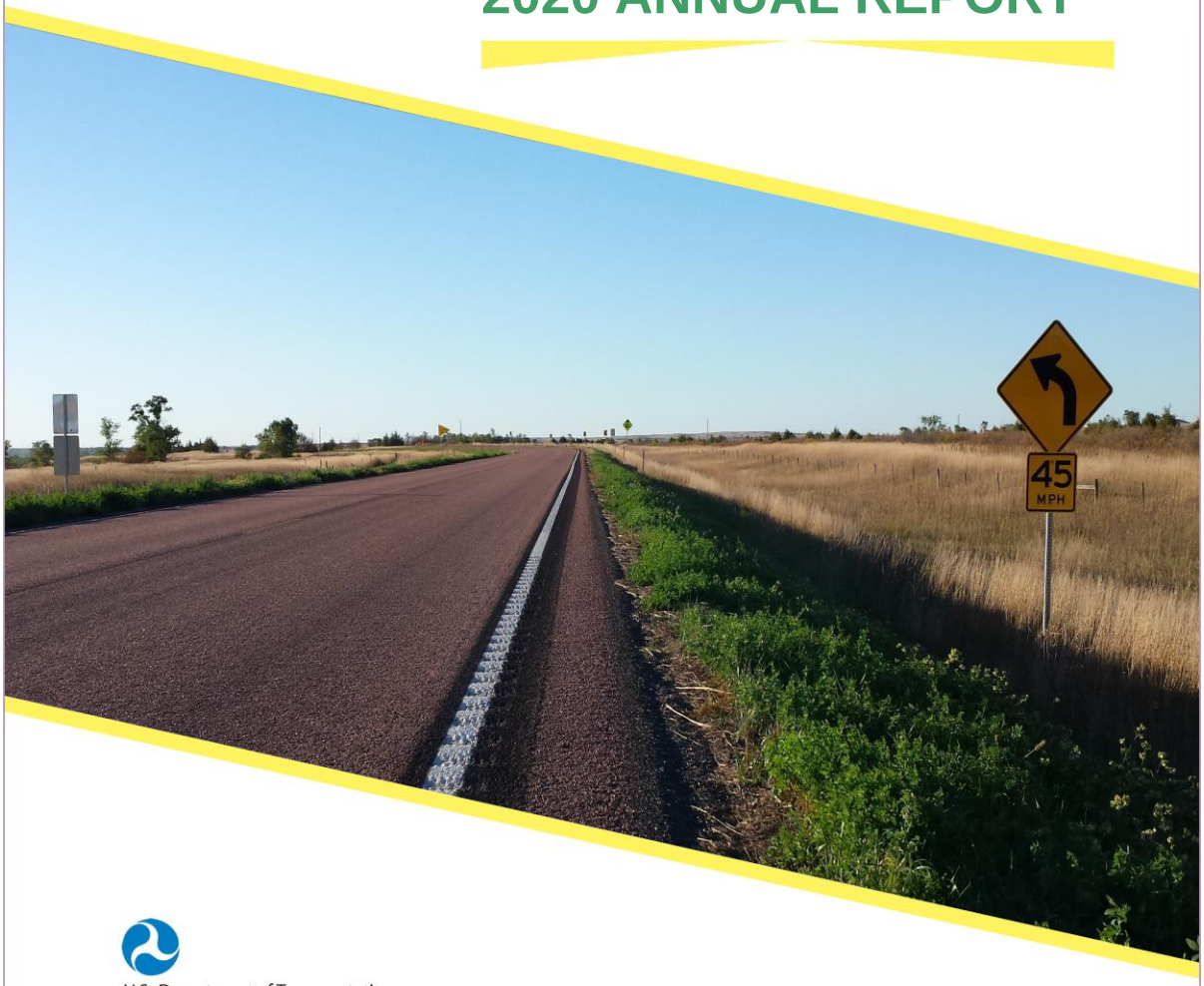
SOUTH DAKOTA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2020 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo Source:
Photo image courtesy of South Dakota Department of Transportation

Table of Contents

Disclaimer

Protection of Data from Discovery Admission into Evidence

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

23 U.S.C. 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

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

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

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

- All crashes

Exposure

- Traffic
- Volume

Roadway

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, 2019 to June 30, 2020

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$43,132,574	$6,984,640	16.19%
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)	$2,628,310	$79,083	3.01%
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	$45,760,884	$7,063,723	15.44%

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.

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

10%

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

10%

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?

3%

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

3%

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

$0

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

$0

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
07A7	Roadway delineation	Longitudinal pavement markings - remarking	10.3	Miles	$448408.99	$453408.99	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	17,835	65	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
07A6	Roadway	Rumble strips - transverse	8	Intersections	$113845.59	$129995.11	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,205	65	State Highway Agency	Systemic	Intersections	Transverse Rumble Strips
07CU	Intersection geometry	Auxiliary lanes - add left-turn lane	1	Intersections	$1153151.63	$1282553.81	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,706	65	State Highway Agency	Spot	Intersections	Turn Lane
06JE	Intersection geometry	Auxiliary lanes - add left-turn lane	5	Intersections	$1736175.66	$1975928.01	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	3,159	65	State Highway Agency	Spot	Intersections	Turn Lane
06JL	Roadway	Rumble strips - edge or shoulder	30.7	Miles	$1294769.1	$1296269.1	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	1,624	65	State Highway Agency	Systemic	Lane Departure	Edge Line Rumble Stripes
06DU	Roadside	Barrier- metal	32	Locations	$2149203.49	$2149203.49	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	4,317	80	State Highway Agency	Systemic	Roadway Departure	Guardrail Improvements
04HN	Shoulder treatments	Widen shoulder - paved or other	3.8	Miles	$5934864.83	$11160921.51	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	1,329	65	State Highway Agency	Spot	Roadway Departure	Shoulder Widening
04JX	Shoulder treatments	Widen shoulder - paved or other	7	Miles	$5641753.56	$6473403.8	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	1,104	65	State Highway Agency	Spot	Roadway Departure	Shoulder Widening
04JE	Shoulder treatments	Widen shoulder - paved or other	2.1	Miles	$2280786.63	$2320978.19	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other	1,466	65	State Highway Agency	Spot	Roadway Departure	Shoulder Widening
04L4	Roadway signs and traffic control	Roadway signs (including post) - new or updated	1	County	$3632892.98	$3736805.21	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	200	65	County Highway Agency	Systemic	Roadway Departure	Signing
04JM	Roadway delineation	Longitudinal pavement markings - remarking	28.9	Miles	$475366.52	$488866.52	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	19,038	65	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
04JN	Roadway delineation	Longitudinal pavement markings - remarking	98.6	Miles	$193290.35	$195790.35	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	488	65	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings

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
04JP	Roadway delineation	Longitudinal pavement markings - remarking	20.5	Miles	$254516.75	$259016.75	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	3,350	80	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
04JQ	Roadway delineation	Longitudinal pavement markings - remarking	7.3	Miles	$149006.88	$151206.88	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	1,841	55	State Highway Agency	Systemic	Lane Departure	Durable Pavement Markings
04JR	Non-infrastructure	Road safety audits	4	Numbers	$23737.46	$26374.96	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0	0	State Highway Agency	Spot	Road Safety Audits	Conduction Roadway Safety Audits
04JT	Non-infrastructure	Transportation safety planning	10	Numbers	$117000	$130000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0	0	State Highway Agency	Systematic	Data	Highway Safety Planning
04XH	Alignment	Horizontal and vertical alignment	2.5	Miles	$1558768.68	$4073988.43	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	540	65	State Highway Agency	Spot	Roadway Departure	Improve horizontal alignment
05GL	Roadside	Fencing	10	Locations	$18000	$20000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	3,500	0	State Highway Agency	Spot	Lane Departure	Snow Fence
03AW	Intersection traffic control	Intersection traffic control - other	1	Intersections	$311432.4	$398587.32	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	5,877	50	State Highway Agency	Spot	Intersections	Install Signals
025D	Shoulder treatments	Widen shoulder - paved or other	8.2	Miles	$5380590.73	$15568547.96	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	3,312	65	State Highway Agency	Spot	Roadway Departure	Shoulder Widening
062J	Roadside	Barrier- metal	19	Locations	$1698347.33	$1699092.91	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	7,816	75	State Highway Agency	Systemic	Roadway Departure	Guardrail Improvements
06AK	Roadway	Rumble strips - edge or shoulder	49.5	Miles	$2320185.64	$2325751.1	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,706	65	State Highway Agency	Systemic	Lane Departure	Edge Line Rumble Stripes
06AL	Roadway	Rumble strips - edge or shoulder	41	Miles	$1573683.57	$1576183.57	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,088	65	State Highway Agency	Systemic	Lane Departure	Edge Line Rumble Stripes
06AM	Roadway	Rumble strips - edge or shoulder	38.8	Miles	$1366518.08	$1373018.08	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	4,578	65	State Highway Agency	Systemic	Lane Departure	Edge Line Rumble Stripes
06C5	Intersection traffic control	Modify traffic signal - add backplates with retroreflective borders	75	Intersections	$347523.4	$352523.4	Penalty Funds (23 U.S.C. 164)	Urban	Principal Arterial-Other	12,530	55	State Highway Agency	Systemic	Intersections	Install signal backplates with retroreflective boarders

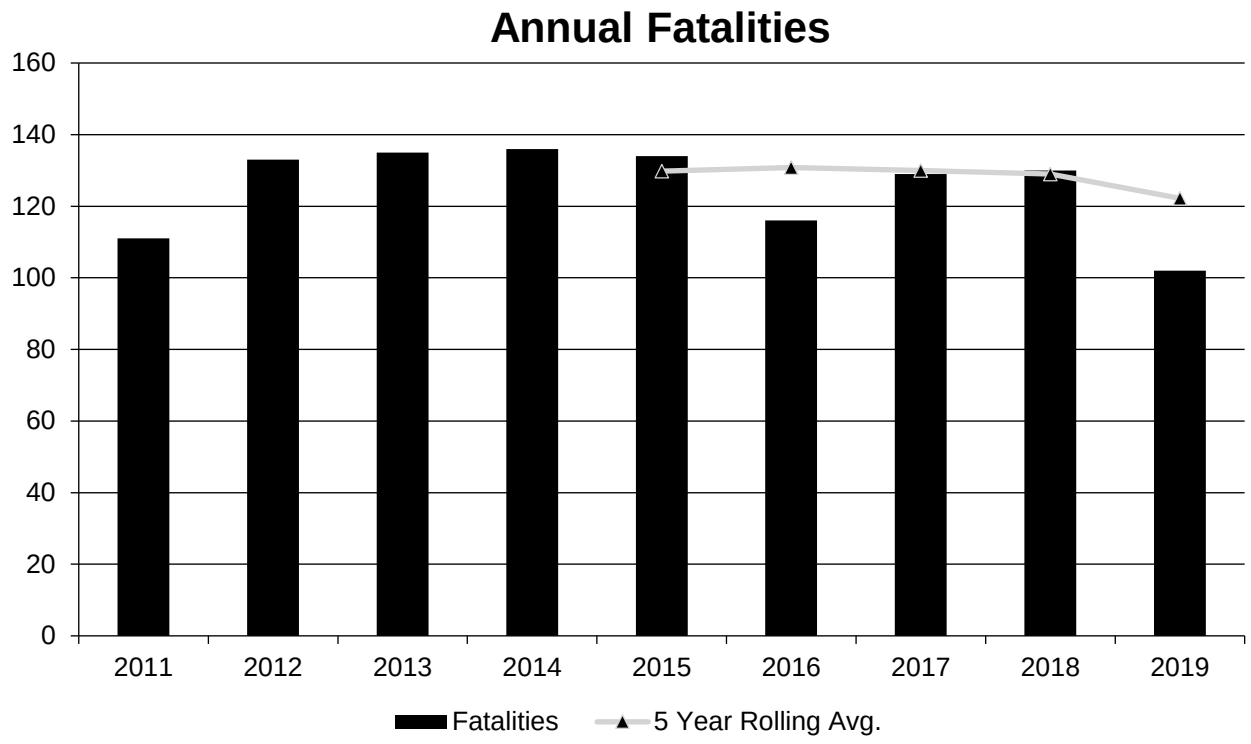
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
06C4	Intersection traffic control	Modify traffic signal - add backplates with retroreflective borders	145	Intersections	$409260.13	$419260.13	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	7,293	55	State Highway Agency	Systemic	Intersections	Install signal backplates with retroreflective boarders
06K3	Intersection geometry	Auxiliary lanes - add left-turn lane	2	Intersections	$1377069.38	$1530077.11	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,467	65	State Highway Agency	Spot	Intersections	Turn Lane
06TT	Roadway	Rumble strips - edge or shoulder	40	Miles	$599755.64	$605255.64	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	200	65	State Highway Agency	Systemic	Lane Departure	Edge Line Rumble Stripes
06TW	Intersection geometry	Auxiliary lanes - add left-turn lane	5	Intersections	$611793.98	$694948.27	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,760	65	State Highway Agency	Spot	Intersections	Turn Lane
06TY	Roadway signs and traffic control	Roadway signs and traffic control - other	16	Locations	$137017.63	$161241.82	HSIP (23 U.S.C. 148)	Rural	Major Collector	2,745	65	State Highway Agency	Systemic	Roadway Departure	Signing
06TX	Roadway signs and traffic control	Roadway signs and traffic control - other	6	Locations	$48259.43	$58621.59	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	1,500	65	State Highway Agency	Systemic	Roadway Departure	Signing
06U0	Roadway	Rumble strips - transverse	17	Intersections	$134854.56	$156338.4	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,043	65	State Highway Agency	Systemic	Intersections	Transverse Rumble Strips
06TU	Roadway	Rumble strips - edge or shoulder	40	Miles	$865918.07	$869949.07	HSIP (23 U.S.C. 148)	Rural	Major Collector	200	65	County Highway Agency	Systemic	Lane Departure	Edge Line Rumble Stripes
06U1	Roadway	Rumble strips - transverse	18	Intersections	$96290.39	$115184.51	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	1,143	65	State Highway Agency	Systemic	Intersections	Transverse Rumble Strips
073K	Roadside	Barrier- metal	22	Locations	$970186.62	$1157285.02	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	9,795	80	State Highway Agency	Systemic	Roadway Departure	Guardrail Improvements
0736	Roadway signs and traffic control	Roadway signs (including post) - new or updated	130.9	Miles	$196320.92	$196320.92	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	2,535	80	State Highway Agency	Systemic	Roadway Departure	Signing
074K	Roadway signs and traffic control	Roadway signs (including post) - new or updated	66.2	Miles	$140337.25	$147037.25	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	2,041	65	State Highway Agency	Systemic	Roadway Departure	Signing

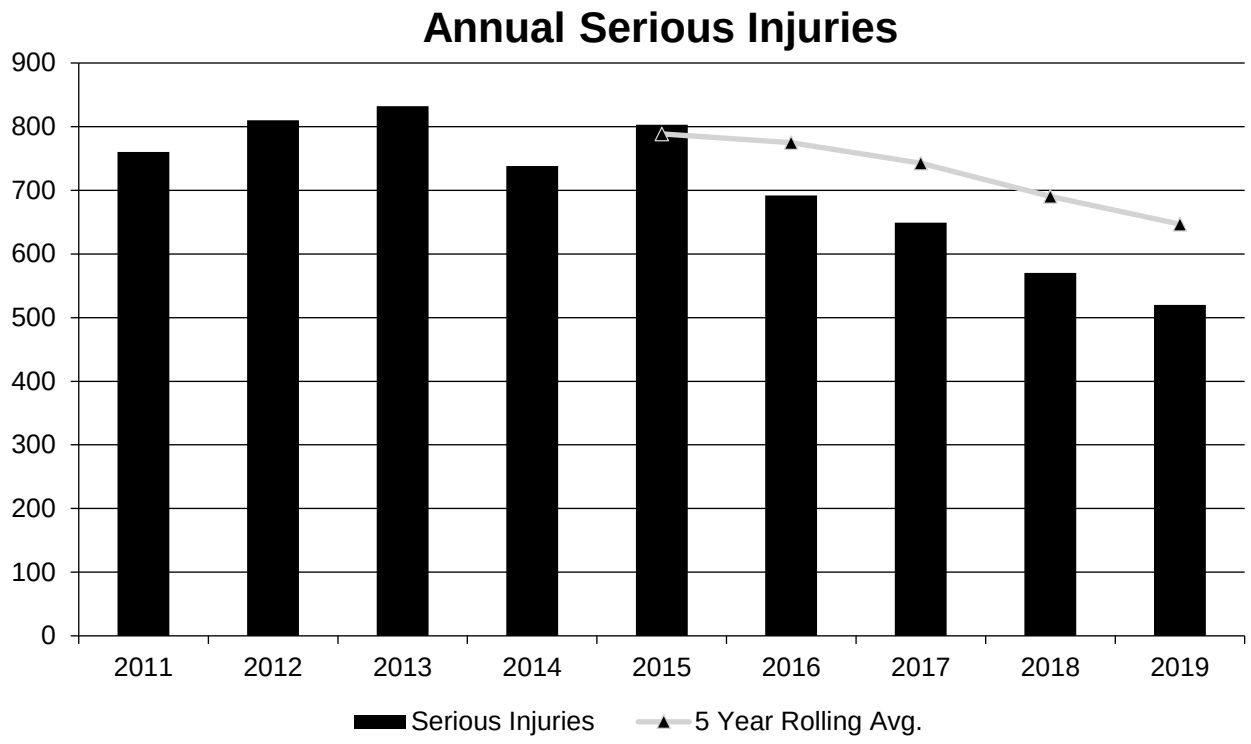
Safety Performance

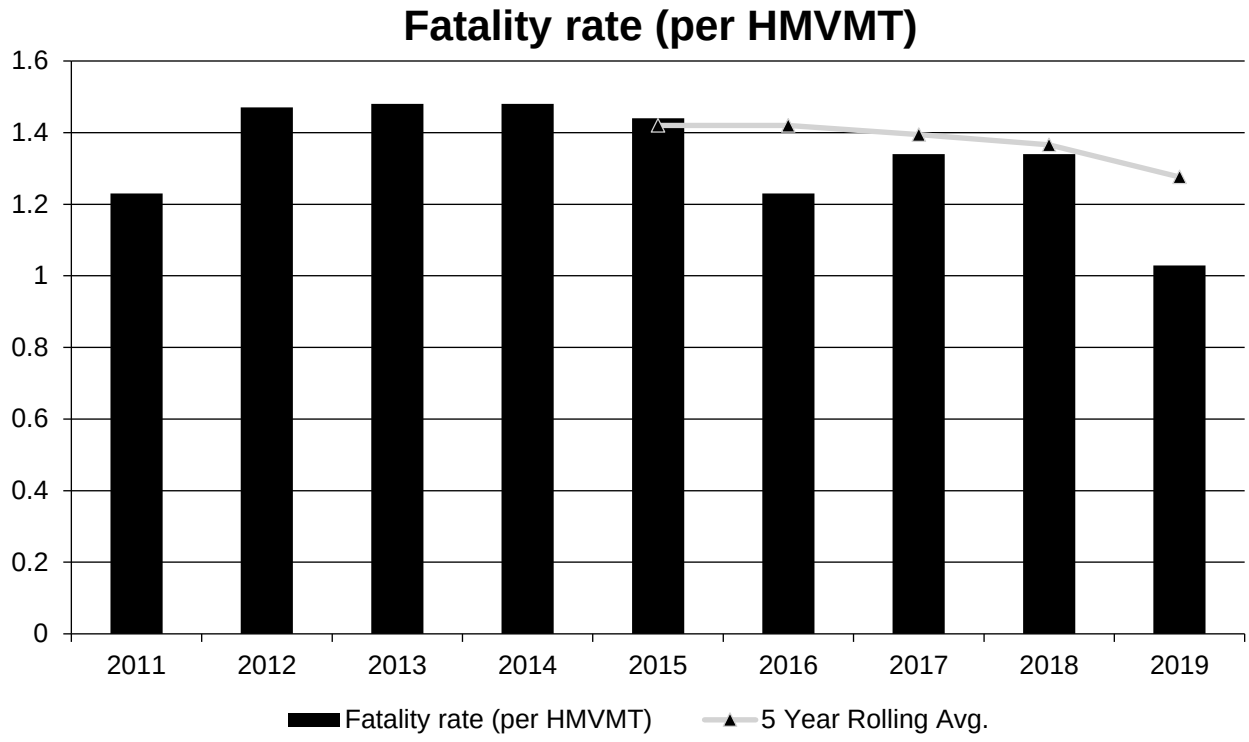
General Highway Safety Trends

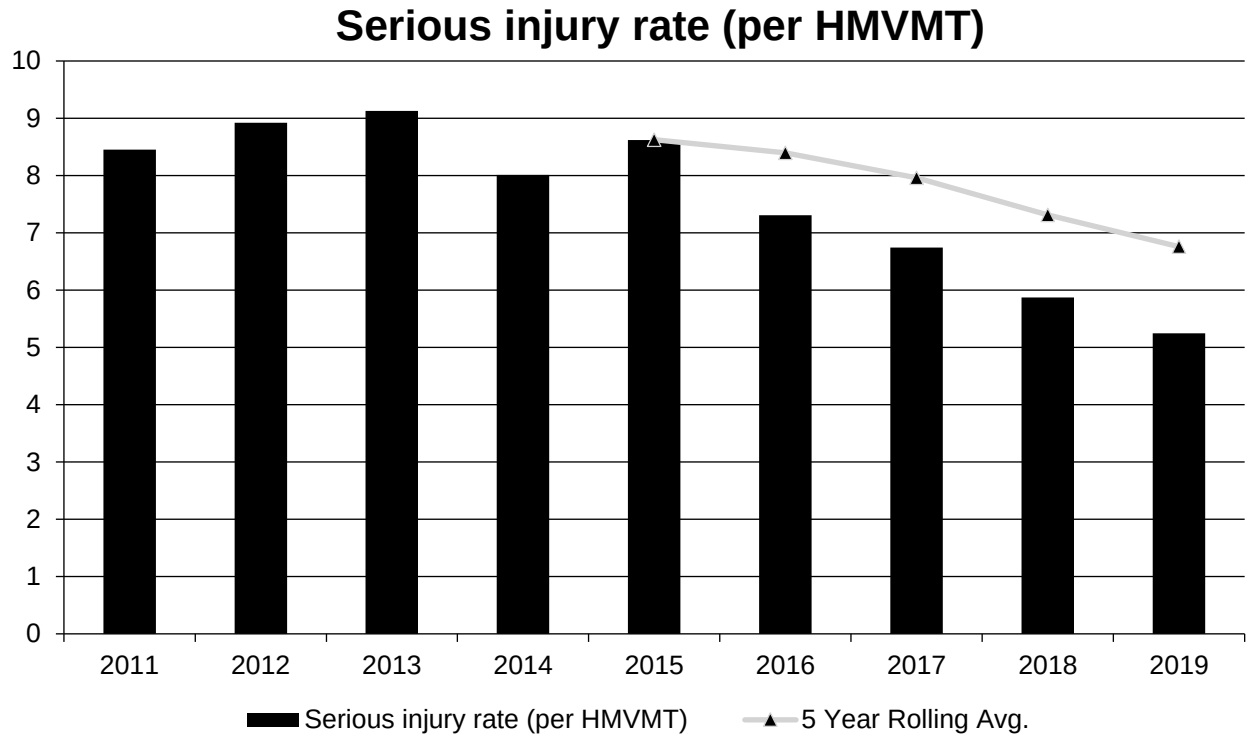
Present data showing the general highway safety trends in the State for the past five years.

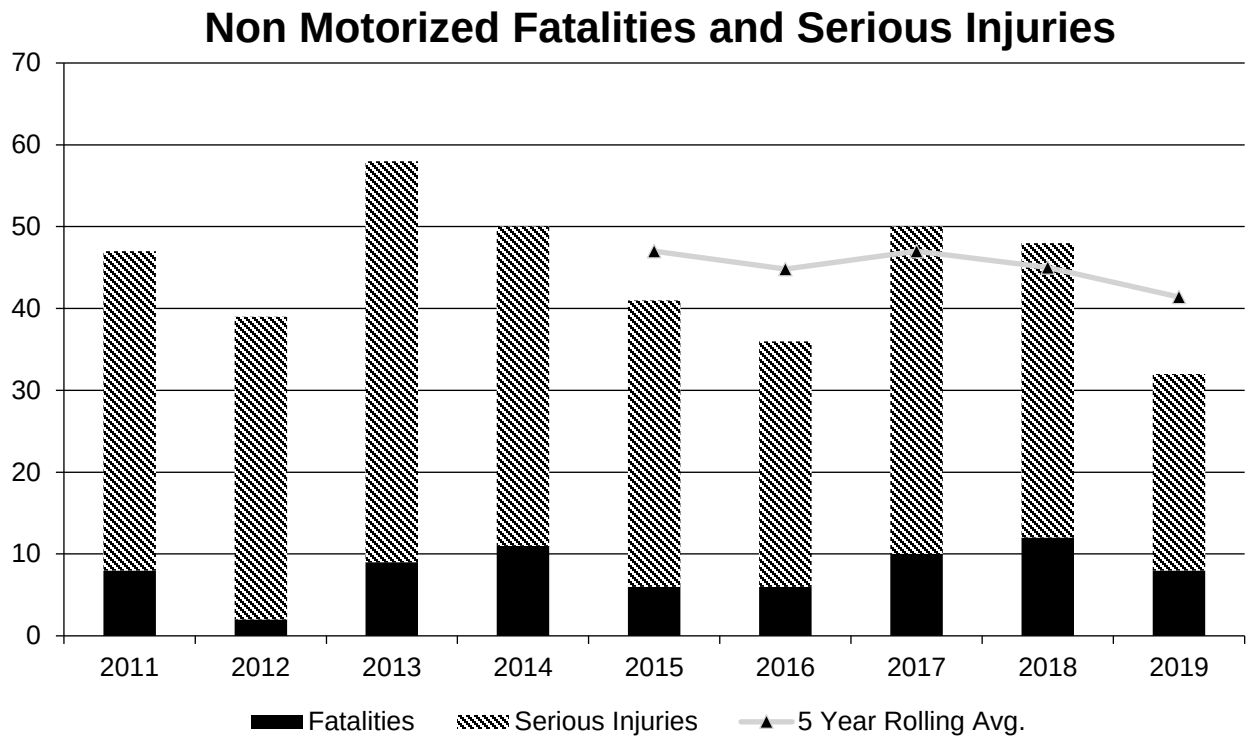
PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017	2018	2019
Fatalities	111	133	135	136	134	116	129	130	102
Serious Injuries	760	810	832	738	803	692	649	570	520
Fatality rate (per HMVMT)	1.230	1.470	1.480	1.480	1.440	1.230	1.340	1.340	1.029
Serious injury rate (per HMVMT)	8.450	8.920	9.130	8.010	8.620	7.310	6.744	5.870	5.248
Number non-motorized fatalities	8	2	9	11	6	6	10	12	8
Number of non-motorized serious injuries	39	37	49	39	35	30	40	36	24


Annual Fatalities
160
140
120
100
80
60
40
20
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
900
800
700
600
500
400
300
200
100
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
10
9
8
7
6
5
4
3
2
1
0
2011
2012
2013
2014
2015
2016
2017
2018
2019
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 2019

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	56	0.62	3.25
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	34.6	130.6	1.77	6.67
Rural Minor Arterial	15.2	70.8	1.49	6.98
Rural Minor Collector	3.8	15.8	2.56	10.67

Functional Classification	**Number of Fatalities (5-yr avg)**	**Number of Serious Injuries (5-yr avg)**	**Fatality Rate (per HMVMT) (5-yr avg)**	**Serious Injury Rate (per HMVMT) (5-yr avg)**
Rural Major Collector	25.2	91.6	2.35	8.56
Rural Local Road or Street	12.2	65.2	2.66	14.23
Urban Principal Arterial (UPA) - Interstate	5	26	0.66	3.45
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other	2.6	51	0.51	10.13
Urban Minor Arterial	5.6	67.2	0.56	6.77
Urban Minor Collector				
Urban Major Collector	2.2	24.6	0.77	8.62
Urban Local Road or Street	3	35.4	1.08	12.73

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 2021 Targets *

Number of Fatalities:125.2

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. The identified target supports the goals of the SHSP by annually measuring the effectiveness of the program which then lends the opportunity to shift resources between emphasis areas.

Number of Serious Injuries:656.7

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. The identified target supports the goals of the SHSP by annually measuring the effectiveness of the program which then lends the opportunity to shift resources between emphasis areas.

Fatality Rate:1.240

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. The identified target supports the goals of the SHSP by annually measuring the effectiveness of the program which then lends the opportunity to shift resources between emphasis areas.

Serious Injury Rate:6.630

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. The identified target supports the goals of the SHSP by annually measuring the effectiveness of the program which then lends the opportunity to shift resources between emphasis areas.

Total Number of Non-Motorized Fatalities and Serious Injuries:40.0

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. The identified target supports the goals of the SHSP by annually measuring the effectiveness of the program which then lends the opportunity to shift resources between emphasis areas.

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.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2019 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.

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	127.4	122.2
Number of Serious Injuries	703.4	646.8
Fatality Rate	1.310	1.276
Serious Injury Rate	6.740	6.758
Non-Motorized Fatalities and Serious Injuries	43.0	41.4

Based on the numbers inputted at reporting time, 4 of the 5 safety targets were met; Fatalities, Serious Injuries, Fatality Rate, and Non-Motorized Fatalities and Serious Injuries. I also looked at significant progress made to reach the Serious Injury Rate. Serious Injury Rate was below the base line so that target made significant progress. 5 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?

No

Based on the data reported in section 32, the 2013-2017 rate is 2.62 and the 2015-2019 rate is 1.99 so the HRRR special rule does not apply.

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	2013	2014	2015	2016	2017	2018	2019
Number of Older Driver and Pedestrian Fatalities	19	22	14	16	20	23	11
Number of Older Driver and Pedestrian Serious Injuries	52	61	90	62	53	55	44

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 2019 five year average fatal crash rate per 100MVMT was 15.4% lower and the serious injury crash rate was 28.8% lower than the 2010-2014 crash rates. The goal of the 2014 SHSP has already been met with 1 year to go.

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

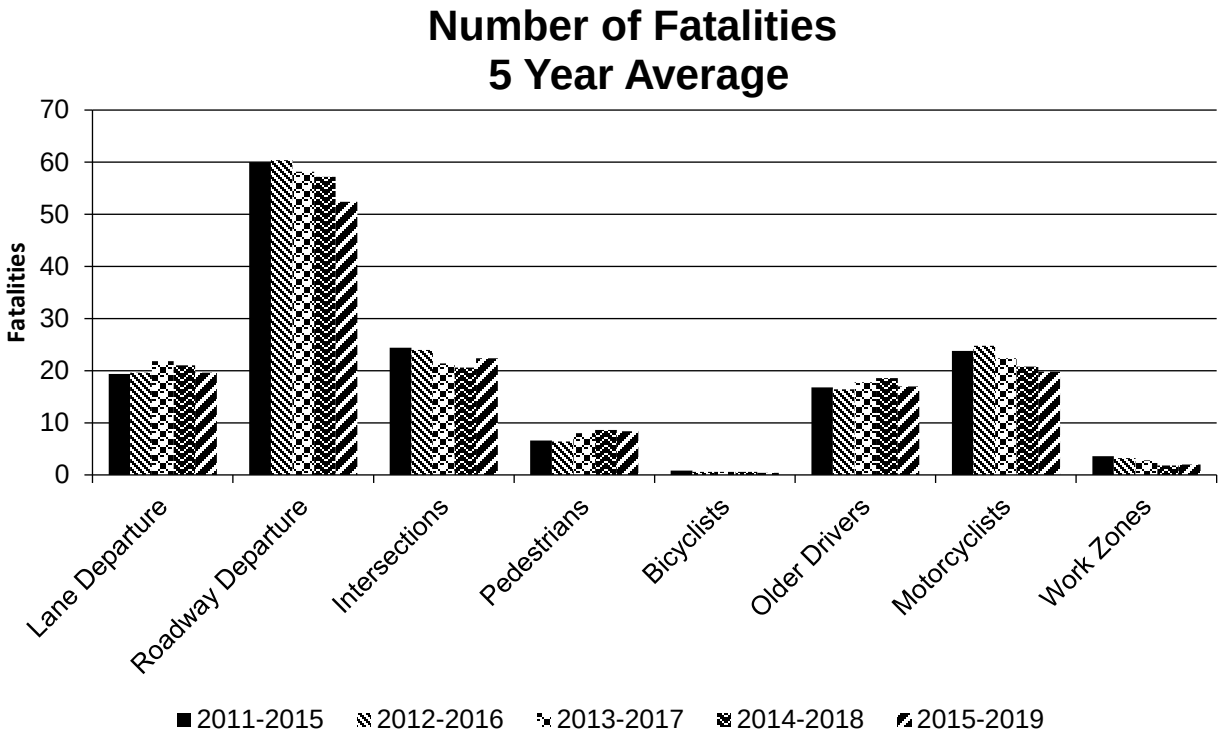
- HSIP Obligations

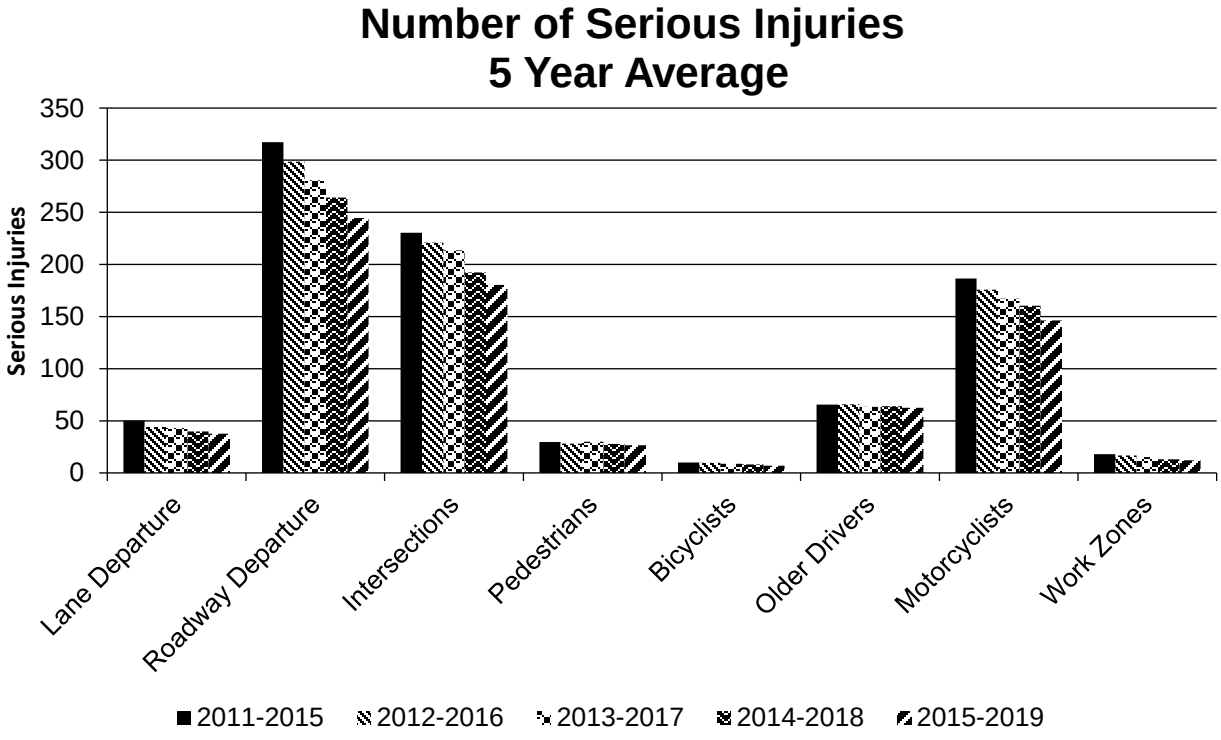
Effectiveness of Groupings or Similar Types of Improvements

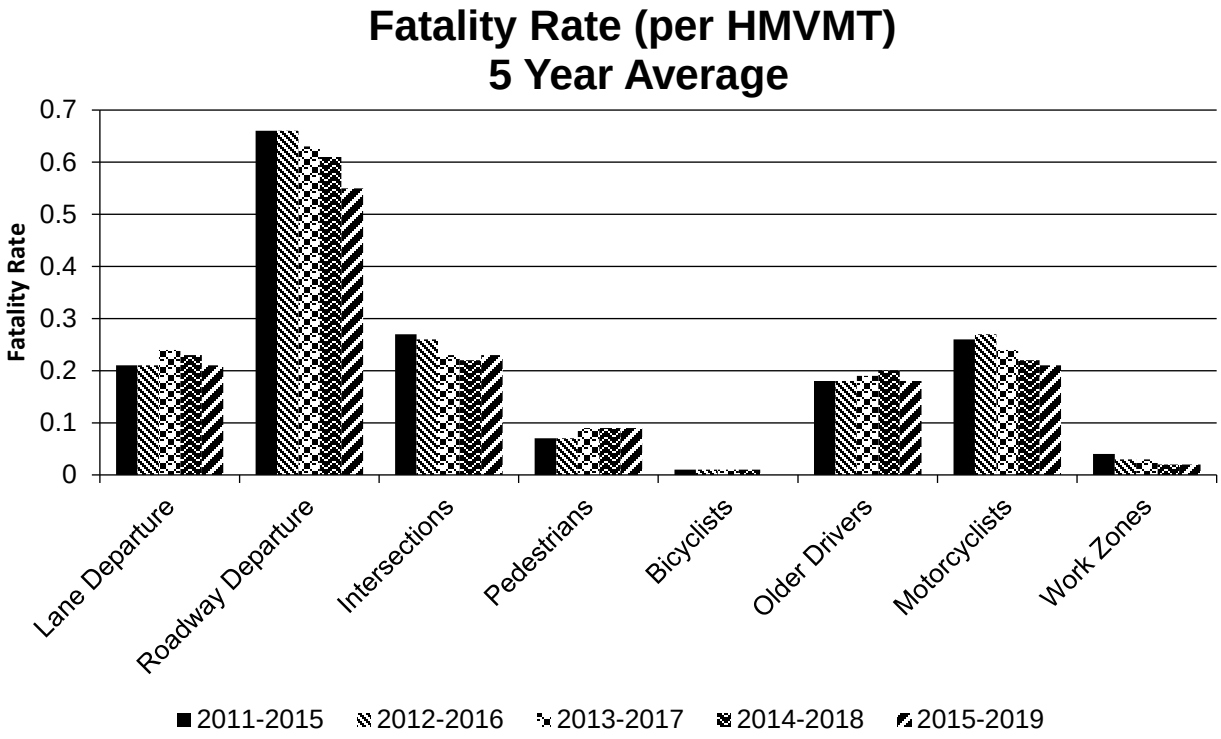
Present and describe trends in SHSP emphasis area performance measures.

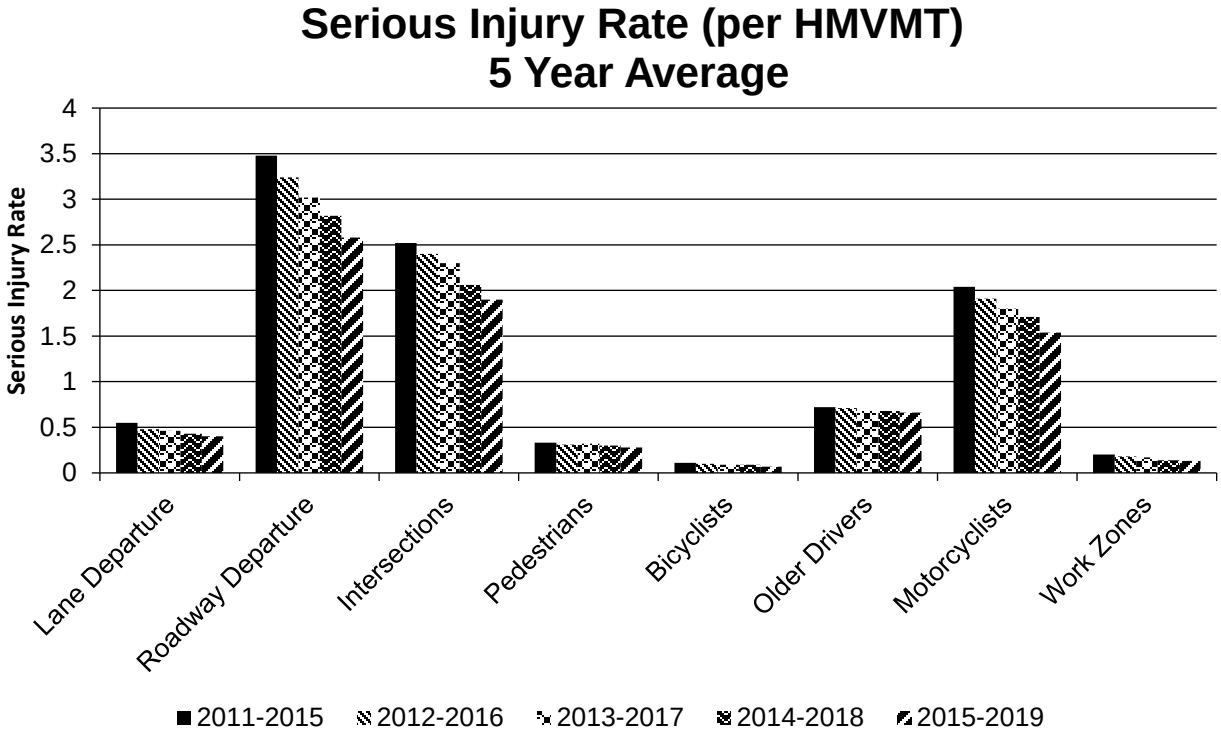
Year 2019

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Lane Departure		19.6	37.6	0.21	0.4
Roadway Departure		52.4	244.6	0.55	2.58
Intersections		22.4	180.4	0.23	1.9
Pedestrians		8.4	26.4	0.09	0.28
Bicyclists		0.4	6.8	0	0.07
Older Drivers		17	62.6	0.18	0.66
Motorcyclists		19.8	146.4	0.21	1.54
Work Zones		2	12.2	0.02	0.13


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
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019


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
2011-2015
2012-2016
2013-2017
2014-2018
2015-2019





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

No

The state has not completed any countermeasure effectiveness evaluations during the reporting period.

Project Effectiveness

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

Compliance Assessment

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

08/19/2019

What are the years being covered by the current SHSP?

From: 2015 To: 2024

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

2024

The 2019 SHSP covers years 2020-2024.

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

*Based on Functional Classification (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

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	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT	Segment Identifier (12) [12]	1	1					1	1	1	1
	Route Number (8) [8]	1	1								
	Route/Street Name (9) [9]	1	1								
	Federal Aid/Route Type (21) [21]	1	1								
	Rural/Urban Designation (20) [20]	1	1					1	1		
	Surface Type (23) [24]	1	1					1	1		
	Begin Point Segment Descriptor (10) [10]	1	1					1	1	1	1
	End Point Segment Descriptor (11) [11]	1	1					1	1	1	1
	Segment Length (13) [13]	1	1								
	Direction of Inventory (18) [18]	1	1								
	Functional Class (19) [19]	1	1					1	1	1	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	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]	1	1								
	Access Control (22) [23]	1									
	One/Two Way Operations (91) [93]	1	0.95								
	Number of Through Lanes (31) [32]	1	1					1	1		
	Average Annual Daily Traffic (79) [81]	1	1					1	1		
	AADT Year (80) [82]	1	1								
	Type of Governmental Ownership (4) [4]	1	1					1	1	1	1
INTERSECTION	Unique Junction Identifier (120) [110]			1	1						
	Location Identifier for Road 1 Crossing Point (122) [112]			1	1						
	Location Identifier for Road 2 Crossing Point (123) [113]			1	1						
	Intersection/Junction Geometry (126) [116]			1	1						
	Intersection/Junction Traffic Control (131) [131]			1	0.99						
	AADT for Each Intersecting Road (79) [81]			1	1						
	AADT Year (80) [82]			1	1						
	Unique Approach Identifier (139) [129]			1	1						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					1					
	Location Identifier for Roadway at					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	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					1					
	Ramp Length (187) [177]					1					
	Roadway Type at Beginning of Ramp Terminal (195) [185]					1					
	Roadway Type at End Ramp Terminal (199) [189]					1					
	Interchange Type (182) [172]					1					
	Ramp AADT (191) [181]					1					
	Year of Ramp AADT (192) [182]					1					
	Functional Class (19) [19]					1					
	Type of Governmental Ownership (4) [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 (MIRE 1.0 Element Number) [MIRE 2.0 Element Number]

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.

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.