



NEVADA

HIGHWAY SAFETY IMPROVEMENT PROGRAM 2018 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

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Disclaimer

Protection of Data from Discovery Admission into Evidence

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

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

Executive Summary

This annual Highway Safety Improvement Program (HSIP) report for 2018 summarizes the activities of the Nevada Department of Transportation's HSIP as required by Fixing America's Surface Transportation (FAST) Act. The FAST Act continues the HSIP to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance (FAST Act § 1113; 23 U.S.C. 148).

The FAST Act continued to allocate funds for the HSIP program in the Federal Fiscal Years 2016 – 2020. Available program funds for the purpose of this report are considered to be those funds obligated during the 2018 federal fiscal year. The activities of the Nevada Department of Transportation (NDOT) are primarily designed to develop safety improvement projects for the following areas:

- High crash locations (intersections and roadway segments)

- o Urban intersection safety improvements
- o Urban lane departure crash mitigation
- o Rural lane departure crash mitigation
- o Rural intersection safety improvements

- Systemic Safety Improvements
- Pedestrian related safety improvements
- Tribal Low-Cost Safety Improvements

The crash data on all public roadways contained in this report is extracted from the Nevada Citation and Accident Tracking System (NCATS) and Brazos crash databases and prepared for Traffic Safety Engineering's analysis as a normalized view. After the crash data is downloaded from the NCATS and Brazos databases, it is processed through our geo-location software and is linearly referenced to the statewide street centerline data. The geo-location software tools automate the cleanup of location attributes and assign a spatial location to the crash data through a series of database procedures.

The HSIP program is administered by the NDOT Traffic Safety Engineering section, a centrally located component of the NDOT. The methods used by the Traffic Safety Engineering section to identify, select, implement, and evaluate safety improvement projects have been compiled in the NDOT's "Safety Procedural Manual," implemented in 1980, amended in 1990, 2010, and 2016. A copy of the current updated NDOT Safety Procedural Manual is located on the NDOT website.

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.

See attached HSIP Flow Chart

Where is HSIP staff located within the State DOT?

Planning

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

How are HSIP funds allocated in a State?

SHSP Emphasis Area Data

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

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

Under the systemic roadway improvements approach, NDOT Traffic Safety Engineering evaluates local roads for safety improvements such as Slope Flattening/Shoulder Widening, Flashing Yellow Arrows, Rumble Stripes, and turn pockets with acceleration/deceleration lanes on rural highways. We also use recommendations made during Road Safety Assessment (RSA) completed on local and tribal roads to develop projects. While evaluating rural intersections, we are identifying those locations where fatalities and serious injuries can be reduced by converting to a roundabout.

Nevada was one of six states selected by FHWA to participate in the Local Road Safety Plan Pilot Project. Each of the six states were asked to select one or more counties to be included in the pilot project. The project vision is to advance road safety in the selected counties by reducing fatal and serious injuries. The NDOT

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selected Elko and Douglas Counties to be part of the pilot project. The first step in the project process included a review of the 5-year fatal and serious injury crash data for each county. That was followed by face to face meetings with each county to reach concurrence on possible countermeasures to be considered. This is an ongoing effort that potentially will lead to the implementation of local road safety improvements.

NDOT Traffic Safety Engineering developed a low-cost safety improvement project with the Washoe Tribe. The safety improvements included enhanced pedestrian lighting, signage, and sidewalk improvements.

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

Traffic Engineering/Safety

Design

Planning

Maintenance

Operations

Districts/Regions

Governors Highway Safety Office

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

Describe coordination with internal partners.

NDOT Traffic Safety Engineering coordinates with:

1. The NDOT Roadway Design team at many various levels to include, recommend or request the inclusion of safety improvements from strategies identified in the Strategic Highway Safety Program (SHSP), Road Safety Assessments (RSA), Safety Management Plans (SMPs) or locations identified as safety management areas:
 - Preliminary Field Design Survey – at this level the team recommends possible improvements to include into the project based on the review of field conditions.
 - Pre-design – at this level the traffic safety team evaluates the design concepts for the inclusion of safety improvements and recommends possible safety improvements to include into the project.
 - Intermediate design – at this level the traffic safety team evaluates the preliminary design for the inclusion of safety improvements and recommends possible safety improvements to include into the project.
 - Final design – at this level the traffic safety team evaluates the final design for the inclusion of safety improvements.

Also, NDOT Traffic Safety Engineering coordinates with the Roadway Design team to educate them in the latest safety strategies and provides guidance regarding safety improvements and ideas. This includes the utilization of the strategies included in the SHSP, the HSM and the federal guidelines. Traffic Safety Engineering coordinates with the Roadway Design Scoping section to initiate and recommend safety improvements into projects that are currently being evaluated.

2. The NDOT Maintenance/Operations division during Road Safety Assessment's, Safety Management Plans and miscellaneous field reviews.
3. The NDOT Planning division at many different levels to provide guidance regarding safety improvements in

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the development of projects and by recommending safety improvements for inclusion into projects that are in the early stage of development.

4. The NDOT Traffic Operations division when developing / implementing safety projects, which includes signal design, lighting design, operational analysis of roadway segments and intersections, and development and discussion of safety strategies, methodologies and guidelines. Traffic Safety and Traffic Operations have incorporated the Intersection Control Evaluation (ICE) as part of our intersection improvement evaluations and Wrong Way Driver countermeasures. The Traffic Incident Management (TIM) program is also a coordinated effort between Traffic Safety and Traffic Operations. The TIM programs primary goal is to reduce fatalities and serious injuries from secondary crashes.

5. The Governors Highway Safety Office (The Department of Public Safety - Office of Traffic Safety, OTS). Traffic Safety Engineering continues to coordinate with the OTS since the inception of the SHSP. Because of this long ongoing coordination between Traffic Safety Engineering and OTS, the safety messages continue to reach more and more road users in the state of Nevada which results in achieving our combined performance measures.

6. The NDOT District offices to gain knowledge of the locations that are of concern to the district to determine if they are being identified as potential safety project locations.

Identify which external partners are involved with HSIP planning.

Regional Planning Organizations (e.g. MPOs, RPOs, COGs)

Governors Highway Safety Office

Local Government Agency

Tribal Agency

Law Enforcement Agency

Academia/University

FHWA

Other-Emergency Medical Services

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

Describe coordination with external partners.

1.

NDOT Traffic Safety Engineering coordinated with:

1. Academia/University –the University of Nevada Reno, and the University of Nevada Las Vegas in several research projects, which includes Pedestrian safety, Safety Analyst, Before/After Studies for Complete Streets and Benefit Cost Ratios of roundabouts.
2. FHWA – while attending webinars, peer- to- peers, and workshops that are hosted by the FHWA. In 2018, TSE has meet with FHWA staff on a quarterly basis to review and develop HSIP procedures. Together we are working to update and develop the procedures for data analysis, project selection, and network screening.
3. Governors Highway Safety Office (The Department of Public Safety - Office of Traffic Safety, OTS). Traffic Safety Engineering has been coordinating with the OTS since the inception of the SHSP. Because of this long ongoing crash data coordination between Traffic Safety Engineering and OTS, the safety messages continue to reach more and more road users in the state of Nevada which results in achieving our combined performance measures.

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4. Local Government Agency – representatives from local government agencies attended the Safety Summit, contribute to Safety Management Plans and are also members of the Critical Emphasis Area teams.
5. MPO's – staff from the Southern Nevada RTC, RTC of Washoe County, and CAMPO attended the Safety Summit, contribute to Safety Management Plans and are also members of the Critical Emphasis Area teams.
6. Tribal Agency – some tribal representative attended the Safety Summit. Also, Traffic Safety Engineering has performed Road Safety Audits (RSAs) for a few tribes located in the state.
7. Law Enforcement Agency - representatives from local law enforcement agencies attended the Safety Summit, contribute to Safety Management Plans and are also members of the Critical Emphasis Area teams.

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

No

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

Yes

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

Nevada Strategic Highway Safety Plan:

The focus has been on effective implementation of the 2016 to 2020 SHSP Update and 2017 Supplement. The NECTS decided at their first meeting in 2018 to rename the CEA teams "Task Forces," as these groups are tasked with taking action to reduce fatalities and serious injuries for their particular CEA. The SHSP Steering Committee was determined to be duplicative and removed. Task Forces now report directly to the NECTS. In March 2018, the Chairs, Vice Chairs and Facilitators from each Task Force met in Carson City for a training session to discuss best practices, lessons learned and how to best lead task forces and get the most out of the task forces. The SHSP Task Force webpages went live in 2018 and provide information on task force activities, rosters, upcoming meetings, and information on how to join. Recurring activities for the SHSP include regular meetings of the NECTS (now meeting quarterly) and quarterly meetings for the seven SHSP Critical Emphasis Area (CEA) Task Forces: (Intersection Safety Task Force, Impaired Driving Prevention Task Force, Occupant Protection Task Force, Pedestrian Safety Task Force, Lane Departure Prevention Task Force, Motorcycle Safety Task Force and Young Driver Safety Task Force). The TRCC has been integrated into the SHSP. Three meetings were held focusing on increased availability of relevant traffic safety data to improve the effectiveness of implementation. Planning is underway for the 2018 Nevada Traffic Safety Summit. The focus for the 2018 Nevada Traffic Safety Summit is #WAYTOOMANY, calling to action those in attendance to focus on reducing the number of fatalities and serious injuries occurring on Nevada's roadways.

Road Safety Assessments (RSA)

The RSA program is continuing in Nevada and has been a typical approach by the designer and/or planner to use an RSA as a safety tool on their new projects. There were thirteen (13) RSA performed from September 1, 2017 to September 30, 2018. The RSA were primarily performed on 3R preservation projects, capacity projects, corridor studies, high crash locations, post construction projects, and Tribal planning projects. For

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Federal Fiscal Year 18, the RSA program continued the updating and completed the compilation of the RSA that were performed on 123 RSA reports statewide in a 5-year period from February 2010 to November 2014. The RSA database is a compilation of all the RSA suggestions in one central file that can be sorted out according to the required data field for use as a design/planning reference by NDOT transportation professionals. The RSA database will identify suggestions that were incorporated in the project or implemented by NDOT District Maintenance crews and/or by other using agencies; and identify those suggestions that were not implemented. The RSA program statewide will continue in FFY 19-20. The updating of the RSA database will include those RSA that were performed in 2015 and 2016.

Systemic improvements:

Systemic improvements that were incorporated in the FY2018 HSIP program were: shoulder widening & slope flattening on rural two-lane highways, flashing yellow arrow installations, and a rural highway curve project. NDOT is currently using the Intersection Control Evaluation (ICE) methodology to determine the best intersection type based on safety and efficiency on all intersection projects. Utilizing 6" edge line striping on rural state route highway as a countermeasure for lane departure crashes was also implemented.

Safety Management Plans: a safety focused corridor study

To reduce the number of crashes on Nevada Roadways, the NDOT Traffic Safety Engineering Division identified corridors on arterial roads statewide to implement safety improvements. To identify corridors for improvement on Principal Arterials, routes were identified that have highest rates of societal cost of crashes per mile per AADT. For Minor Arterials, routes were identified that rank highest societal cost of crashes per mile and normalized by AADT and compared against similar functional class.

Three SMP's were started at the following locations:

- Sahara Ave (Rainbow to I-15) in Las Vegas, Nevada
- Jones Blvd (Carey to Rancho) & Cheyenne Ave (Torrey Pines to Decatur) in Las Vegas, Nevada
- N. McCarran Blvd (I-80 to Socrates/Evans) in Reno, Nevada

These SMP's will evaluate the needs of all modes of transportation and make recommendations for future projects. The purpose of a Safety Management Plan (SMP) was to conduct a safety focused corridor study aimed at all road users and to include collaboration with stakeholders and the public. A SMP includes the development of short and long-range transportation safety improvement projects that incorporate relevant studies, access management principles, public and stakeholder input, crash and capacity analyses, benefit/cost analysis, and other impacts to all road users. A Technical Advisory Committee (TAC) and a Stakeholder Working Group (SWG) are created to help with the development of the SMP and to ensure that the plan was consistent with the needs of the many different stakeholders along the project corridor. The SMP process is consistent with the Nevada Strategic Highway Safety Plan's goals of reducing the number of fatalities and serious injuries on Nevada's roadways.

Traffic Safety Engineering Design Services (TSEDs):

The TSEDs were used to design safety improvements identified in RSAs and SMPs. The following list of projects were design in 2018 utilizing TSEDs:

- Washoe Tribe Low Cost Safety Improvements
- Stewart Street, Carson City - Pedestrian and ADA Improvements
- Eastern Ave and Civic Center Drive, Las Vegas - pedestrian, ADA, and access management safety improvements

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- Second Street, Reno – Pedestrian and ADA Improvements throughout Corridor, including a compact roundabout at 2nd and Giroux
- Pedestrian Safety Improvements with RRFB's, upgrade lighting, and refuge islands at:
 - Rainbow @ Tara, Las Vegas
 - Rainbow @ Edna, Las Vegas
 - Cheyenne @ Mary Dee, Las Vegas
 - SR160 @ Postal Road, Pahrump

Program Methodology

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

Yes

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

File Name:

[Highway Safety Improvement Program Manual final-updated-8.7.17.docx](#)

Select the programs that are administered under the HSIP.

Intersection

Rural State Highways

Pedestrian Safety

Segments

HRRR

Other-Safety Management Plans

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

Program: HRRR

Date of Program Methodology: 10/22/2012

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

Addresses SHSP priority or emphasis area

FHWA focused approach to safety

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

Funding set-aside

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

Crashes

Exposure

Roadway

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All crashes

Volume

Functional classification

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

Crash frequency

Crash rate

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Other-Priority Ranking

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

Available funding : 2

Other-Combining with other projects : 3

Other-Systemic Improvements : 1

Program: Intersection

Date of Program Methodology: 3/9/1997

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

Addresses SHSP priority or emphasis area

FHWA focused approach to safety

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

Competes with all projects

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

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Crashes	Exposure	Roadway
All crashes	Volume	Functional classification

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

Crash rate
Other-Societal Cost normalized by AADT

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Other-Priority Ranking

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).

Relative Weight in Scoring

Available funding : 30

Other-combining with other projects with our traffic safety partners : 20

Other-Societal costs per volume : 50

Total Relative Weight : 100

Program: Pedestrian Safety

Date of Program Methodology: 3/15/2015

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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

Funding set-aside

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

Crashes

All crashes

Exposure

Other-Land Use Generators

Roadway

Functional classification

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

Crash frequency

Other-Land Use Generator Matrix (see attached)

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Other-Priority Ranking

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).

Relative Weight in Scoring

Available funding : 30

Other-Combining with other projects being done by our traffic safety partners : 20

Other-weight from land use generator matrix : 50

Total Relative Weight : 100

Program:

Rural State Highways

Date of Program Methodology: 10/22/2012

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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

Funding set-aside

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

Crashes

Exposure

Roadway

All crashes

Volume

Functional classification

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

Crash frequency
Crash rate

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Other-Priority Ranking

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

Available funding : 2

Other-Combining with other projects being done by our traffic safety partners : 3

Other-Systemic Improvements : 1

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Program: Segments

Date of Program Methodology: 9/15/2015

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Volume	Functional classification

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

Crash rate
Other-Societal cost per volume

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Other-Priority Ranking

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).

Relative Weight in Scoring

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Available funding : 30

Other-Combining with other projects being done by our traffic safety partners : 20

Other-Societal cost per volume : 50

Total Relative Weight : 100

Program: Other-Safety Management Plans

Date of Program Methodology: 6/15/2016

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

Addresses SHSP priority or emphasis area
FHWA focused approach to safety

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

Competes with all projects

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

Crashes	Exposure	Roadway
All crashes	Volume	Functional classification

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

Crash rate
Other-Societal Costs normalized by ADT

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

Yes

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

Yes

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

How are projects under this program advanced for implementation?

Other-Priority Ranking

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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).

Relative Weight in Scoring

Available funding : 30

Other-combining with other projects with our traffic safety partners : 20

Other-Sociatal Cost per ADT : 50

Total Relative Weight : 100

What percentage of HSIP funds address systemic improvements?

60

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

- Cable Median Barriers
- Rumble Strips
- Pavement/Shoulder Widening
- Install/Improve Signing
- Safety Edge
- Install/Improve Lighting
- Add/Upgrade/Modify/Remove Traffic Signal
- Horizontal curve signs
- High friction surface treatment
- Wrong way driving treatments

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

What process is used to identify potential countermeasures? [Check all that apply]

- Engineering Study
- Road Safety Assessment
- Crash data analysis
- SHSP/Local road safety plan
- Data-driven safety analysis tools (HSM, CMF Clearinghouse, SafetyAnalyst, usRAP)
- Other-Safety Management Plans

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

Does the State HSIP consider connected vehicles and ITS technologies?

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No

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

Does the State use the Highway Safety Manual to support HSIP efforts?

Yes

Please describe how the State uses the HSM to support HSIP efforts.

The Highway Safety Manual's process for Network Screening and Project Prioritization is used to help determine the priority of HSIP projects as well as the predictive methodologies. We also use the Highway Safety Manual process for calculating the Safety Effectiveness of our projects.

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

Yes

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

The Highway Safety Manual's process for Network Screening and Project Prioritization is used to help determine the priority of HSIP projects as well as the predictive methodologies. We also use the Highway Safety Manual process for calculating the Safety Effectiveness of our projects. From 2017 to 2018 NDOT, in 2017 our corridor analysis was simply a societal cost per AADT/mile. This year we are doing a pure crash rate per mile combined with a severity index. Last year our intersections were analyzed as AADT per societal cost, this year we are combining Crash Rate, Frequency and a Severity index to our analysis. Currently we are collecting data to future our analysis to include the HSM predictive analysis.

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

Yes

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

Nevada was identified as a Focus State for Intersections by FHWA in July 2015. Because of this designation, NDOT Traffic Safety Engineering (TSE) has continued to incorporate into our program systemic and spot treatments at intersections such as Retroreflective Back Plates, Flashing Yellow Arrows, pedestrian crossing islands and medians and that will provide better corridor access management. NDOT is also currently utilizing

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the Intersection Control Evaluation (ICE) methodology to evaluate intersection safety mitigation, as well as promoting roundabouts wherever possible.

Nevada was also identified as a High Risk Rural Roads state, and is incorporating systemic proven countermeasures such as rumble strips, wider edge line striping, curve improvements (including HFST) as well as local road safety plans into our HSIP program.

Three Safety Management Plans (SMP) were completed in 2016, and low-cost safety improvements that were recommended within the study are being design for Craig Road in the City of North Las Vegas. Design for low-cost safety improvements from the Eastern Ave SMP in Las Vegas as well as the 2nd Street SMP in Reno have been started with an estimated design completion date of June 2018. Three new SMP studies were also started at McCarran Blvd in Sparks; Lamb Blvd in Las Vegas; and Rancho Drive in Las Vegas, Nevada.

In 2017, NDOT approved "NDOT Complete Streets Policy". The purpose of this policy is to include enhanced accommodations for people riding bicycles, walking, using transit, and other users, in addition to the traditional accommodations for vehicles. Provisions for all users will be integrated into the planning, design, construction, maintenance and operation of new and retrofit transportation facilities through the development of appropriate design features. NDOT will implement the Complete Street elements as appropriate. This will enable safe access and mobility of all users including pedestrians, bicyclists, and transit users of all ages and abilities.

NDOT was able to identify many freeway off-ramps in the Reno and Las Vegas areas where red rapid rectangular flashing beacons (RRFB) are to be used as part of wrong way driver countermeasures on freeway off-ramps on freeway projects. The countermeasure package will include Wrong Way signs, red RRFB, vehicle detection, cameras and a communications unit that can communicate a wrong way movement to the local traffic control center and the Nevada Highway Patrol dispatch.

Traffic Safety Engineering and Traffic Operations is continuing to expand the Traffic Incident Management (TIM) program throughout the state. The primary goal of the of the TIM program is to reduce fatalities and serious injuries from secondary crashes by providing coordination and education to all partners, including enforcement and emergency services.

TSE is currently working with the District offices to test using wider 6" edge line striping for lane departure crash mitigation on rural state routes.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year

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

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$13,887,303	\$13,887,303	100%
HRRR Special Rule (23 U.S.C. 148(g)(1))	\$1,487,814	\$1,487,814	100%
Penalty Funds (23 U.S.C. 154)	\$0	\$0	0%
Penalty Funds (23 U.S.C. 164)	\$0	\$0	0%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	\$0	\$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	\$0	\$0	0%
State and Local Funds	\$996,000	\$996,000	100%
Totals	\$16,371,117	\$16,371,117	100%

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

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

52%

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

52%

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

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

35%

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

35%

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

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

0%

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

0%

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

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

In order to lessen the disruption to traffic during construction, we combined safety projects with 3R projects that either moved to next fiscal year or didn't use the federal HSIP funds.

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

Yes

Describe any other aspects of the State's progress in implementing HSIP projects on which the State would like to elaborate.

During the development of Safety Management Plans, we have added an appendices with design concepts along with risks (right of way, environmental, etc.) that should speed up the scoping process for HSIP projects.

2018 Nevada Highway Safety Improvement Program

General Listing of Projects

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

													RELATIONSHIP TO SHSP	
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	EMPHASIS AREA	STRATEGY
Corridor Improvements to include Intersection, Pedestrian and ADA updates on Second Street and Arlin	Pedestrians and bicyclists	Pedestrian beacons		Locations	\$2112938	\$2224144	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	6,000	35	City of Municipal Highway Agency	Systemic	Pedestrians	
Corridor Improvements to include Intersection, Pedestrian and ADA updates on Eastern Ave	Access management	Access management - other		Locations	\$3262942	\$3434676	HSIP (23 U.S.C. 148)	Urban Principal Arterial (UPA) - Other	25,000	35	City of Municipal Highway Agency	Systemic	Intersections	
Pedestrian Safety Improvements on Stewart St, Carson City	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks	\$835456	\$879427	HSIP (23 U.S.C. 148)	Urban Minor Arterial	9,200	35	City of Municipal Highway Agency	Land Use Generator Matrix	Pedestrians	
Low Cost Pedestrian & Road Safety Improvements in Washoe Tribe	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks	\$869710	\$915484	HSIP (23 U.S.C. 148)	Various road function class	0		Indian Tribe Nation	Systemic	Pedestrians	
CLRS on multiple locations Statewide (HRRR)	Roadway	Rumble strips - center		Miles	\$1844096	\$1941157	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural Local Road or Street	0		State Highway Agency	Systemic	Lane Departure	
Pedestrian and ADA Improvements at Rainbow @ Tara	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$168,000	State and Local Funds	Urban Principal Arterial (UPA) - Other	5,200	45	State Highway Agency	Land Use Generator Matrix	Pedestrians	
Pedestrian and ADA Improvements at Rainbow @ Edna	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$207,000	State and Local Funds	Urban Principal Arterial (UPA) - Other	5,200	45	State Highway Agency	Land Use Generator Matrix	Pedestrians	
Pedestrian and ADA Improvements at Cheyenne @ MaryDee	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$160,000	State and Local Funds	Urban Minor Arterial	36,000	40	State Highway Agency	Land Use Generator Matrix	Pedestrians	
Pedestrian and ADA Improvements at SR160 @ Postal, in Pahrump	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$146,000	State and Local Funds	Rural Principal Arterial (RPA) - Other	23,000	35	State Highway Agency	Land Use Generator Matrix	Pedestrians	
Pedestrian and ADA Improvements at Charleston @ Mohawk	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$500,000	State and Local Funds	Urban Principal Arterial (UPA) - Other	35,000	45	State Highway Agency	Land Use Generator Matrix	Pedestrians	

2018 Nevada Highway Safety Improvement Program

													RELATIONSHIP TO SHSP	
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	EMPHASIS AREA	STRATEGY
Pedestrian and ADA Improvements at Nellis @ Cedar	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$500,000	State and Local Funds	Urban Principal Arterial (UPA) - Other	46,000	45	State Highway Agency	Land Use Generator Matrix	Pedestrians	
Pedestrian and ADA Improvements at Rancho @ Coran	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$500,000	State and Local Funds	Urban Principal Arterial (UPA) - Other	40,000	45	State Highway Agency	Land Use Generator Matrix	Pedestrians	
Pedestrian and ADA Improvements at Sahara @ Redwood	Pedestrians and bicyclists	Pedestrian beacons		Crosswalks		\$500,000	State and Local Funds	Urban Principal Arterial (UPA) - Other	45,000	45	State Highway Agency	Land Use Generator Matrix	Pedestrians	
Nevada Strategic Highway Safety Plan FY 2018	Non-infrastructure	Transportation safety planning			\$427500	\$450000	HSIP (23 U.S.C. 148)		0					
Nevada Citation and Accident Tracking System Statewide Crash Repository	Non-infrastructure	Data/traffic records			\$1187500				0					
Douglas County Sheriff Office Crash Data Improvement	Non-infrastructure	Data/traffic records			\$72751	\$76580	HSIP (23 U.S.C. 148)		0					
Henderson Police Department Crash Data Improvement	Non-infrastructure	Data/traffic records			\$231848	\$244050	HSIP (23 U.S.C. 148)		0					
HSIP Analytical Support FY 2108-2022	Non-infrastructure	Transportation safety planning			\$100000	\$105000	HSIP (23 U.S.C. 148)		0					
Road Safety Audits - Consulting Services	Non-infrastructure	Road safety audits			\$256300	\$269800	HSIP (23 U.S.C. 148)		0					
DPS-OTS statewide oversight of Emergency Medical Services	Non-infrastructure	Data/traffic records			\$250000	\$307917	HSIP (23 U.S.C. 148)		0					
NEVADA SHSP - DPS/NHP SUPPORT FOR EQUIPMENT, FY 2018-19	Non-infrastructure	Enforcement			\$325752	\$651504	HSIP (23 U.S.C. 148)		0					
PSNCATS Rebuild	Non-infrastructure	Data/traffic records			\$152000	\$160000	HSIP (23 U.S.C. 148)		0					
University of Nevada School of Medicine Crash-Trauma Database	Non-infrastructure	Data/traffic records			\$261250	\$275000	HSIP (23 U.S.C. 148)		0					

2018 Nevada Highway Safety Improvement Program

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	RELATIONSHIP TO SHSP	
													EMPHASIS AREA	STRATEGY
Washoe County Sheriff Office Crash Data Collection and Analysis	Non-infrastructure	Data/traffic records			\$258307	\$271902	HSIP (23 U.S.C. 148)		0					
Carson City Police Department Crash Data Collection and Analysis	Non-infrastructure	Data/traffic records			\$164536	\$173196	HSIP (23 U.S.C. 148)		0					
Humboldt County Sheriff Office Crash Data Collection and Analysis	Non-infrastructure	Data/traffic records			\$28927	\$30449	HSIP (23 U.S.C. 148)		0					
City of Fallon Police Department Crash Data Collection and Analysis	Non-infrastructure	Data/traffic records			\$23919	\$25178	HSIP (23 U.S.C. 148)		0					
Winnemucca Police Department Crash Data Collection and Analysis	Non-infrastructure	Data/traffic records			\$24777	\$26081	HSIP (23 U.S.C. 148)		0					
Clark County School District Police Department Crash Data Collection and Analysis	Non-infrastructure	Data/traffic records			\$31245	\$26801			0					
Lake Tahoe Regional Safety Plan	Non-infrastructure	Transportation safety planning			\$47500	\$50000	HSIP (23 U.S.C. 148)		0					
Safety Management Plan (SMP)	Non-infrastructure	Transportation safety planning			\$950000	\$1000000	HSIP (23 U.S.C. 148)		0					

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

Many projects fit into multiple improvement categories:

- Corridor Improvements to include Intersection, Pedestrian and ADA updates on Second Street and Arlington also has intersection improvements including a compact roundabout.
- Corridor Improvements to include Intersection, Pedestrian and ADA updates on Eastern Ave also has Pedestrian improvements including mid-block RRFB pedestrian crossings.
- Low Cost Pedestrian & Road Safety Improvements in Washoe Tribe also has many signing and striping improvements including speed feed back signs

The following projects have various Function Classes, AADT's and Speed limits therefore these boxes were left empty:

- CLRS on multiple locations Statewide (HRRR)
- Low Cost Pedestrian & Road Safety Improvements in Washoe Tribe

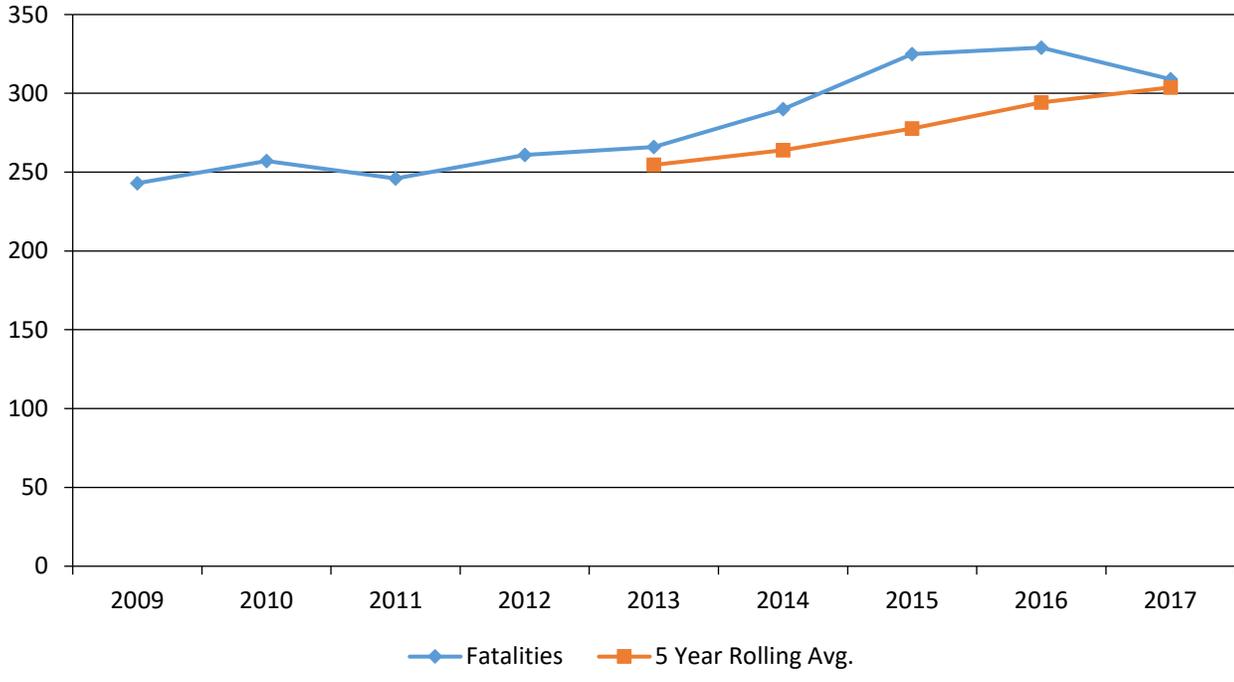
Safety Performance

General Highway Safety Trends

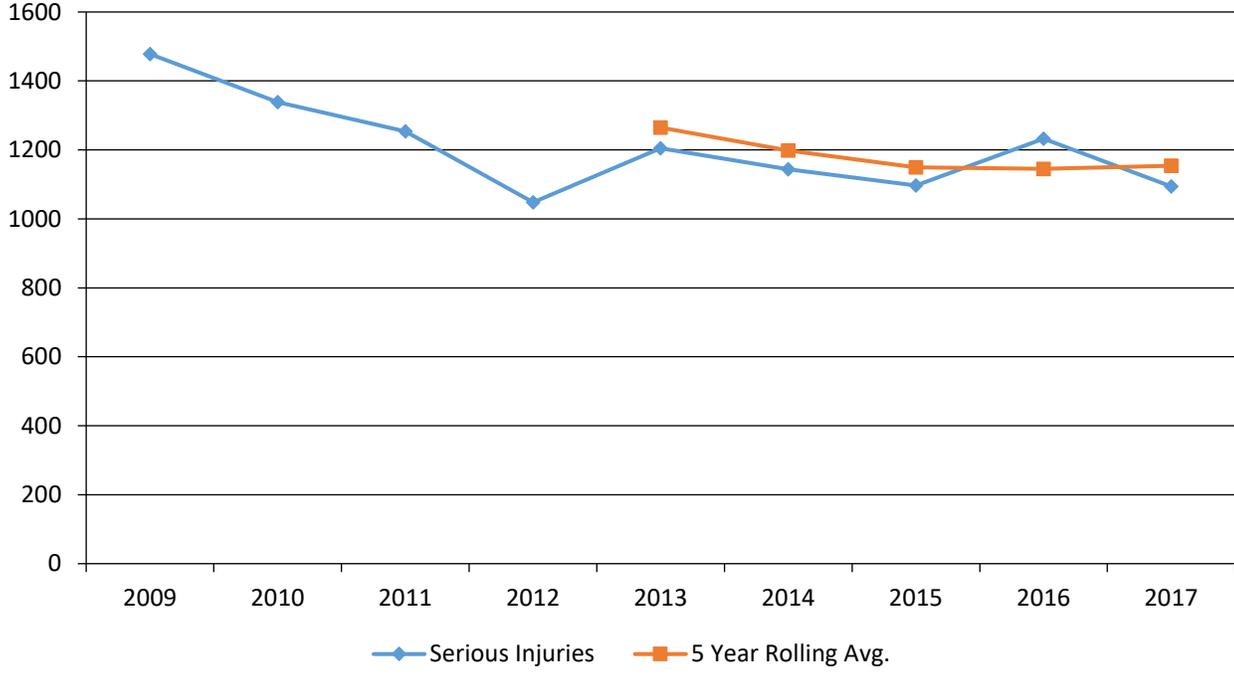
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2009	2010	2011	2012	2013	2014	2015	2016	2017
Fatalities	243	257	246	261	266	290	325	329	309
Serious Injuries	1,478	1,339	1,254	1,048	1,205	1,144	1,097	1,232	1,094
Fatality rate (per HMVMT)	1.160	1.160	1.100	1.150	1.130	1.140	1.300	1.320	1.095
Serious injury rate (per HMVMT)	7.030	6.370	5.970	4.590	3.900	4.490	4.370	4.910	3.880
Number non-motorized fatalities	42	46	48	61	68	80	83	86	108
Number of non-motorized serious injuries	260	232	190	197	211	199	181	206	229

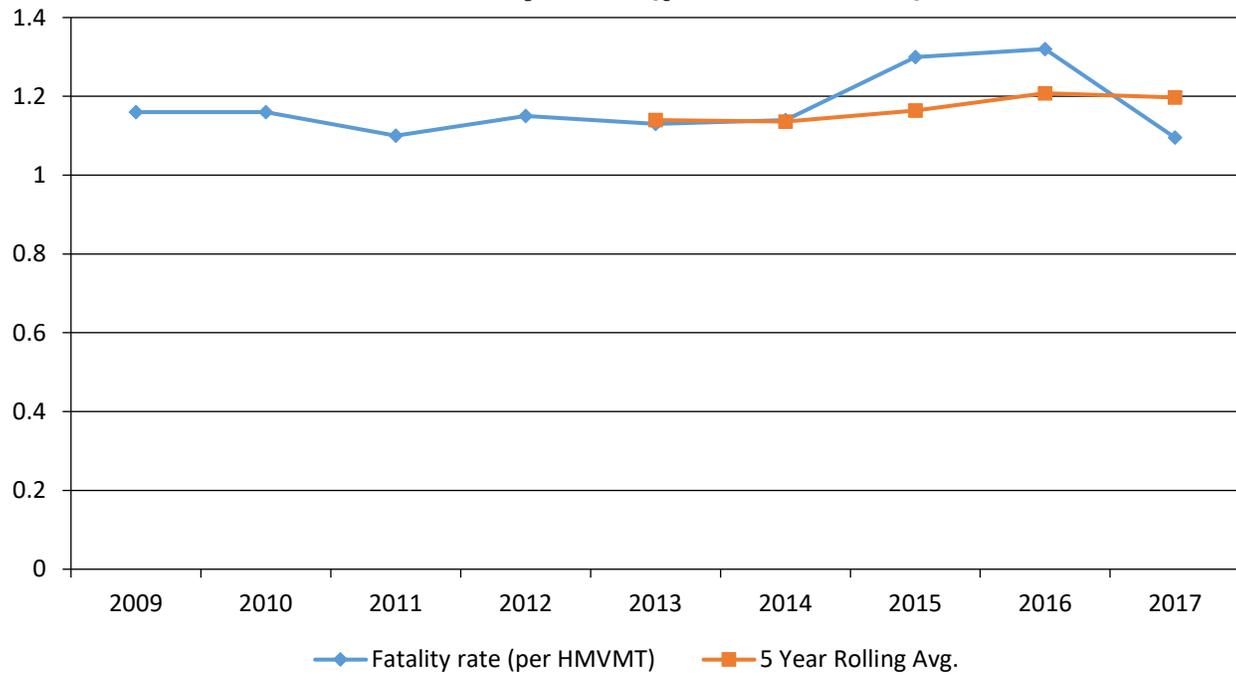
Annual Fatalities



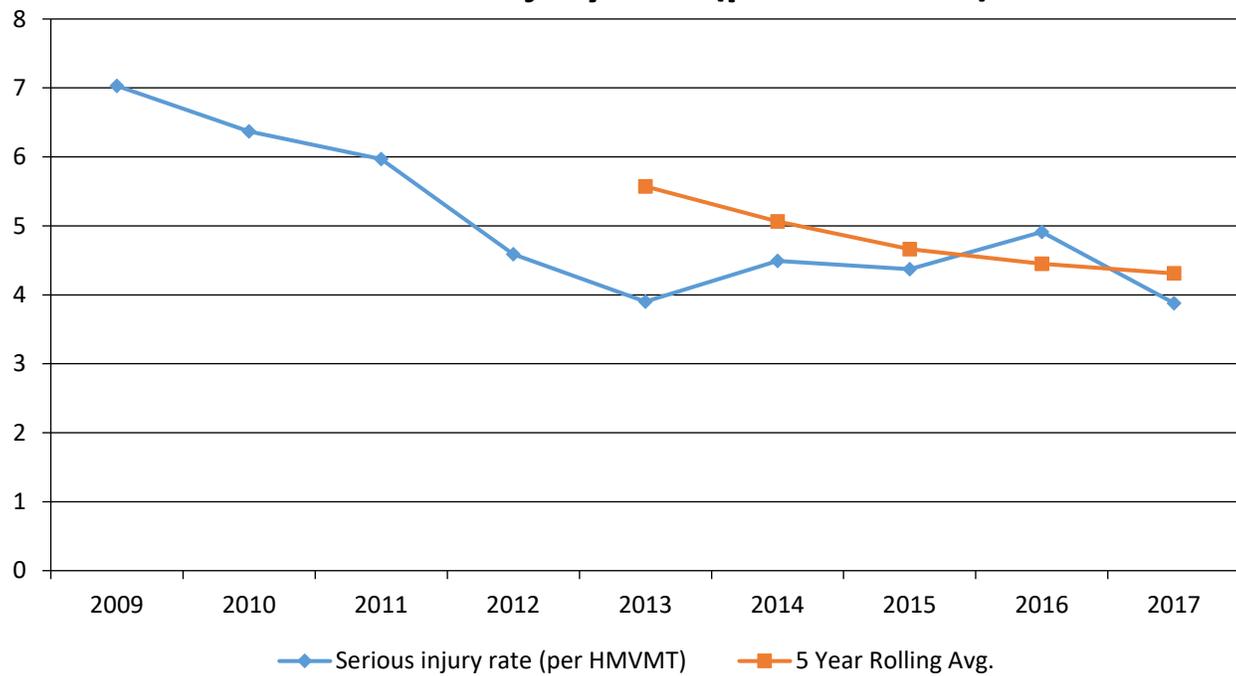
Annual Serious Injuries



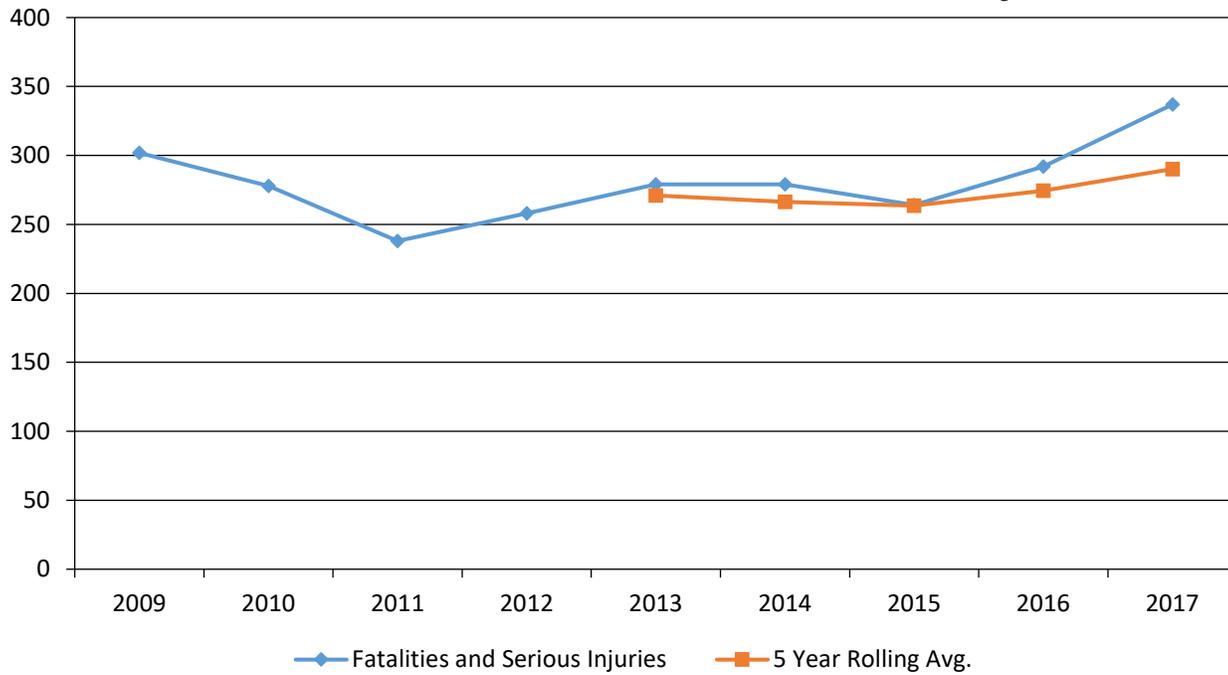
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



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

Describe fatality data source.

FARS

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

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

Year 2017

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Principal Arterial (RPA) - Interstate	20	39	0.96	1.82
Rural Principal Arterial (RPA) - Other Freeways and Expressways	0	0	0	0
Rural Principal Arterial (RPA) - Other	31	56	2.1	3.8
Rural Minor Arterial	8	22	2.1	5.5
Rural Minor Collector	3	2	1.6	6.5
Rural Major Collector	10	24	2.7	1.5

2018 Nevada Highway Safety Improvement Program

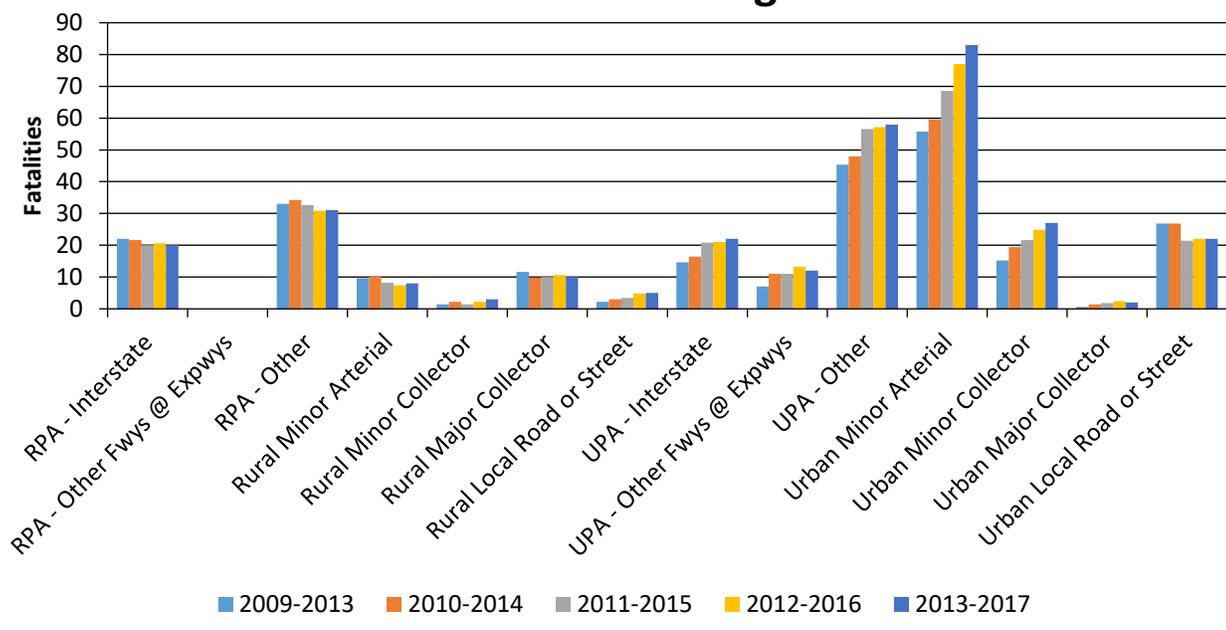
Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Local Road or Street	5	7	0.99	1.3
Urban Principal Arterial (UPA) - Interstate	22	69	0.52	1.66
Urban Principal Arterial (UPA) - Other Freeways and Expressways	12	29	0.73	1.73
Urban Principal Arterial (UPA) - Other	58	236	1.84	7.5
Urban Minor Arterial	83	366	1.63	7.2
Urban Minor Collector	27	123	0.01	5.4
Urban Major Collector	2	2	1.2	5.51
Urban Local Road or Street	22	119	0.47	2.5

2018 Nevada Highway Safety Improvement Program

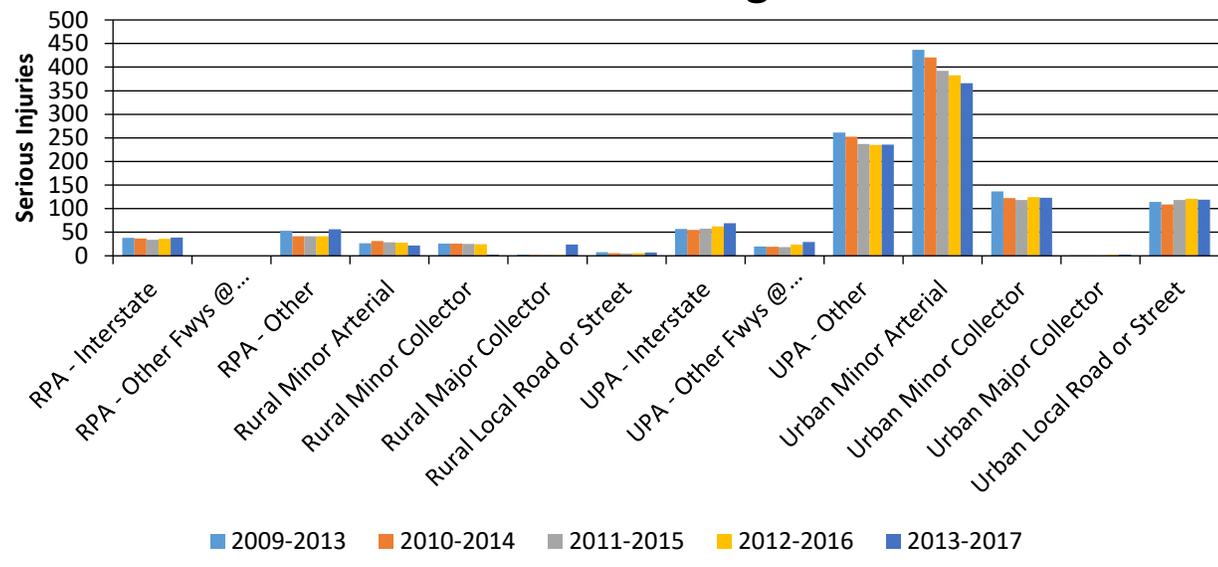
Year 2015

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	151	497		
County Highway Agency	55	417		
Town or Township Highway Agency				
City of Municipal Highway Agency	50	256		
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

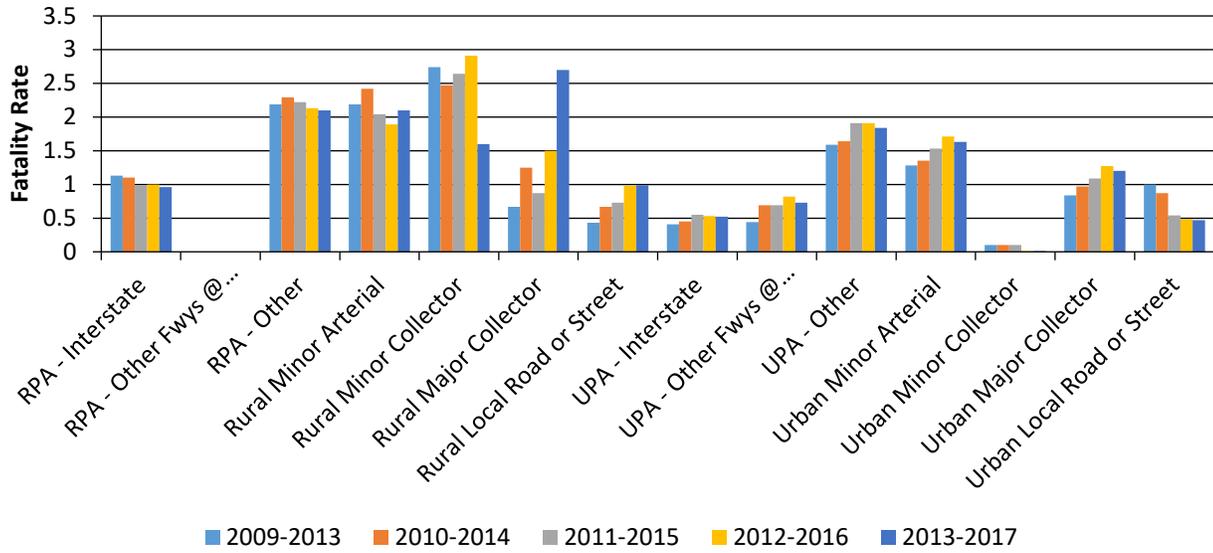
Number of Fatalities by Functional Classification 5 Year Average



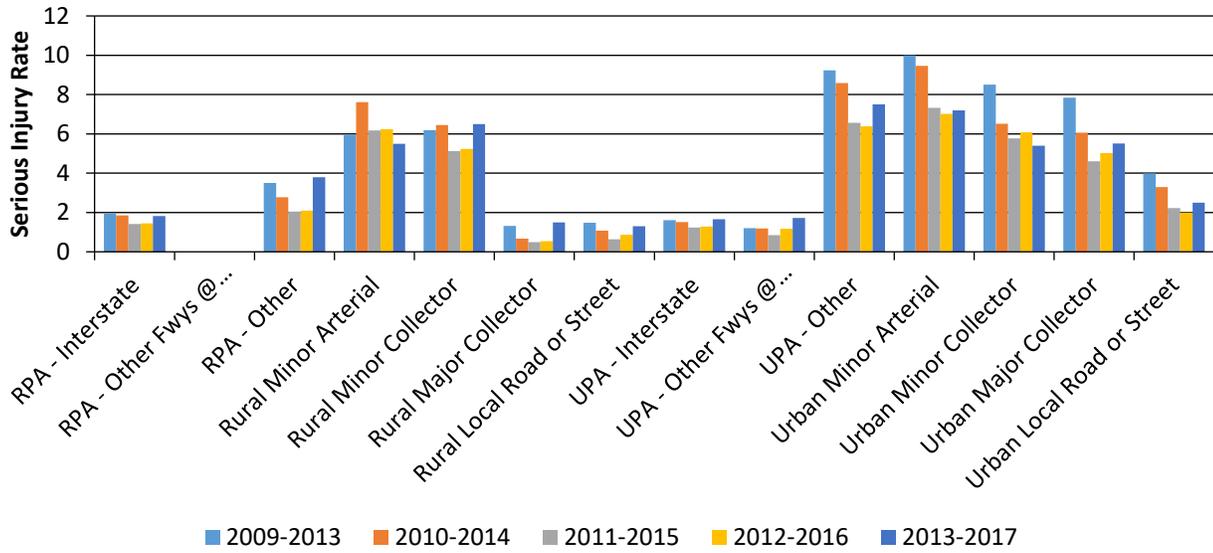
Number of Serious Injuries by Functional Classification 5 Year Average



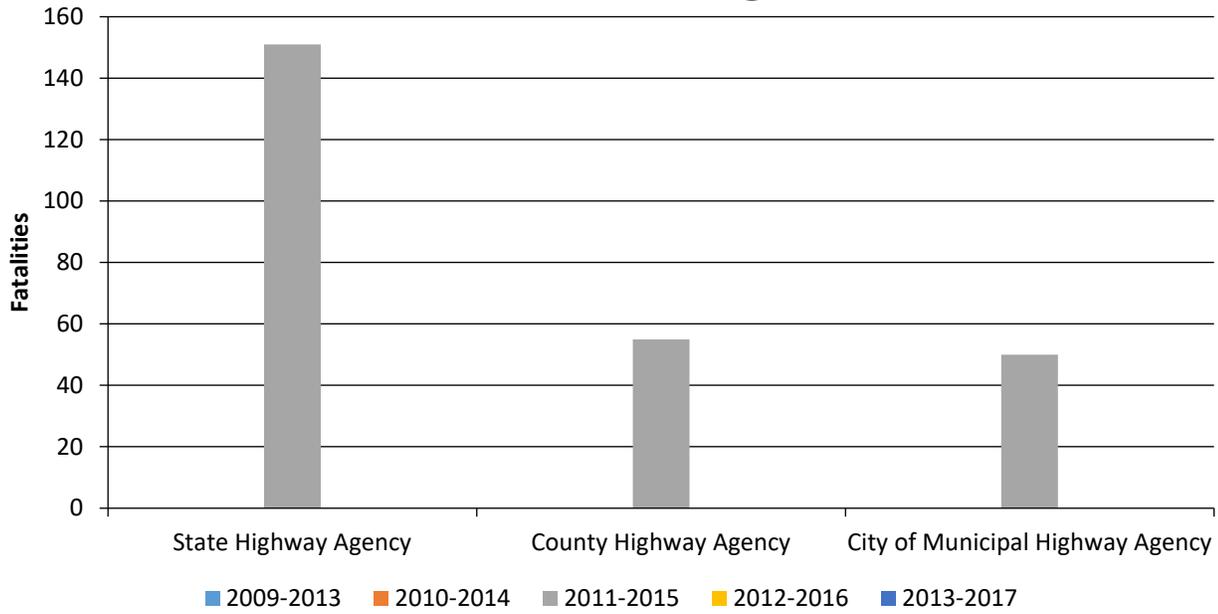
Fatality Rate (per HMVMT) by Functional Classification 5 Year Average



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



Number of Fatalities by Roadway Ownership 5 Year Average



2018 Nevada Highway Safety Improvement Program

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

Decrease the upward trend so that the 2012-2016 five-year moving average of 1240.4 serious injuries is 1,186.4, which is less than the projected 1,214.4 serious injuries by December 31, 2019.

Fatality Rate 1.209

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

Decrease the upward trend so that the 2012-2016 five-year moving average of 1.147 fatalities per 100M VMT is 1.209, which is less than the projected 1.236 fatality rate by December 31, 2019.

Serious Injury Rate 4.970

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

Decrease the 2012-2016 five-year moving average of 4.97 serious injuries per 100M VMT to 4.51 by December 31, 2019.

Total Number of Non-Motorized Fatalities and Serious Injuries 299.1

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

Decrease the upward trend so that the 2012-2016 five-year moving average of 271.5 non-motorized fatalities and serious injuries is 299.1, which is less than the projected 312.2 fatalities by December 31, 2019.

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

The target of 319.2 was set to meet Nevada's Zero Fatalities Interim Goal of reducing the 2004 to 2008 5-year moving average of 390.0 fatalities in half by 2030. The current trend was projected through 2019 and then a reduction from the 2019 projection was calculated for a linear reduction to meet the Interim Goal. The fit (R-squared) of the linear trend line for the four and five-year periods through 2017 for both the actual number of fatalities and the 5-year moving average were reviewed. The 5-year moving average for the 5-year period 2013 to 2017 had the highest correlation and was used to project the current trend through 2019.

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

There are ongoing efforts with the Locals to establish safety performance measures. This includes standing monthly coordination meetings with discussions on the available data, trends in the data, problems with the data and other relative matters at the time.

2018 Nevada Highway Safety Improvement Program

Our office works closely with each of the Local entities to provide them whatever data they request. This includes but not limited to: raw crash data, located crash maps, summarized crash analysis, heat maps and crashes by jurisdictional boundaries.

The SHSO (DPS/OTS) and NDOT Traffic Safety Engineering office work extremely close to set and use the first three measures; number of fatal crashes, fatal rate and number of serious injuries.

NDOT utilized FHWA's "Local Road's Safety Plans" pilot project with 2 counties in 2017. This is still an ongoing effort.

Does the State want to report additional optional targets?

No

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

Applicability of Special Rules

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

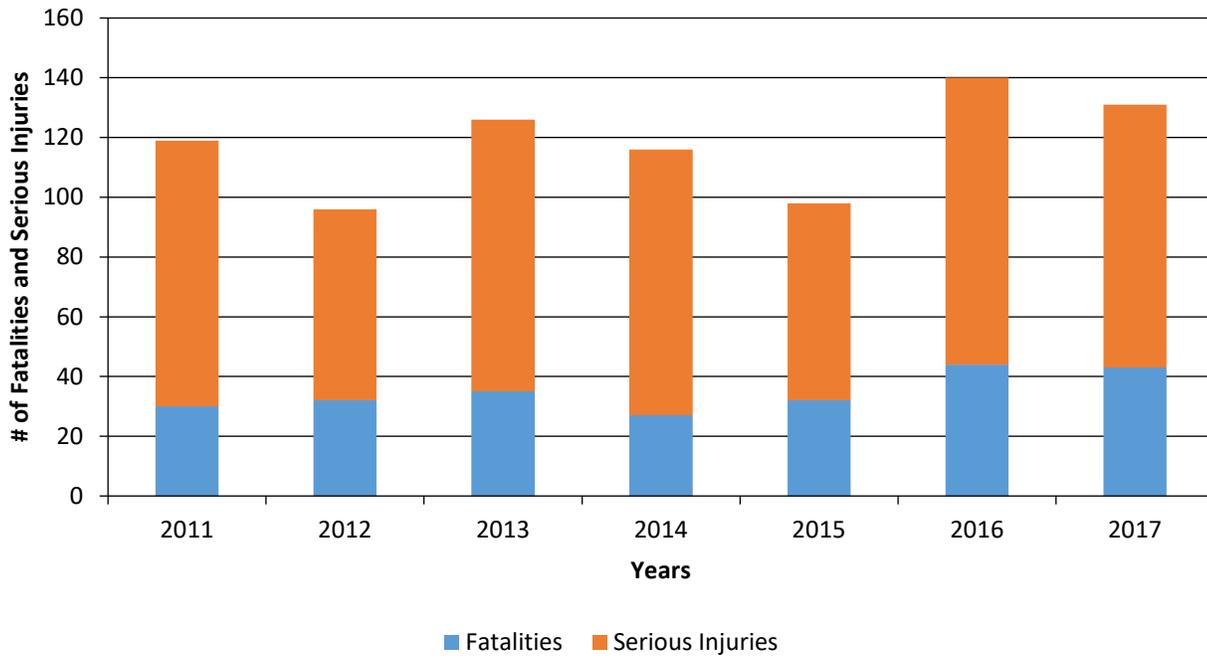
Yes

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

Provide the number of older driver and pedestrian fatalities and serious injuries 65 years of age and older for the past seven years.

PERFORMANCE MEASURES	2011	2012	2013	2014	2015	2016	2017
Number of Older Driver and Pedestrian Fatalities	30	32	35	27	32	44	43
Number of Older Driver and Pedestrian Serious Injuries	89	64	91	89	66	96	88

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



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

2011-2016 numbers were updated to reflect current data.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

Change in fatalities and serious injuries

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

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

NDOT measures the effectiveness of the HSIP by the measure of change in fatalities and serious injuries. From 2016 to 2017 Nevada saw an overall decrease in the Fatality and the Serious Injuries and rates.

For Lane Departure crashes, Fatality and Serious Injury rates statewide have decreased (question # 43). Also, of the 3 shoulder-widening slope flattening projects (shoulder treatments) on rural highways listed on the project list of this report (question #45), 2 showed significant reductions in fatalities and serious injuries. Intersection crashes over the last 5 years has seen a steady decline in the 5 year average rates for both fatalities and serious injuries statewide .

Nevada is continuing to work on reducing Pedestrian fatality and serious injuries with new programs.

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

miles improved by HSIP
More systemic programs
RSAs completed
HSIP Obligations

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

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

No

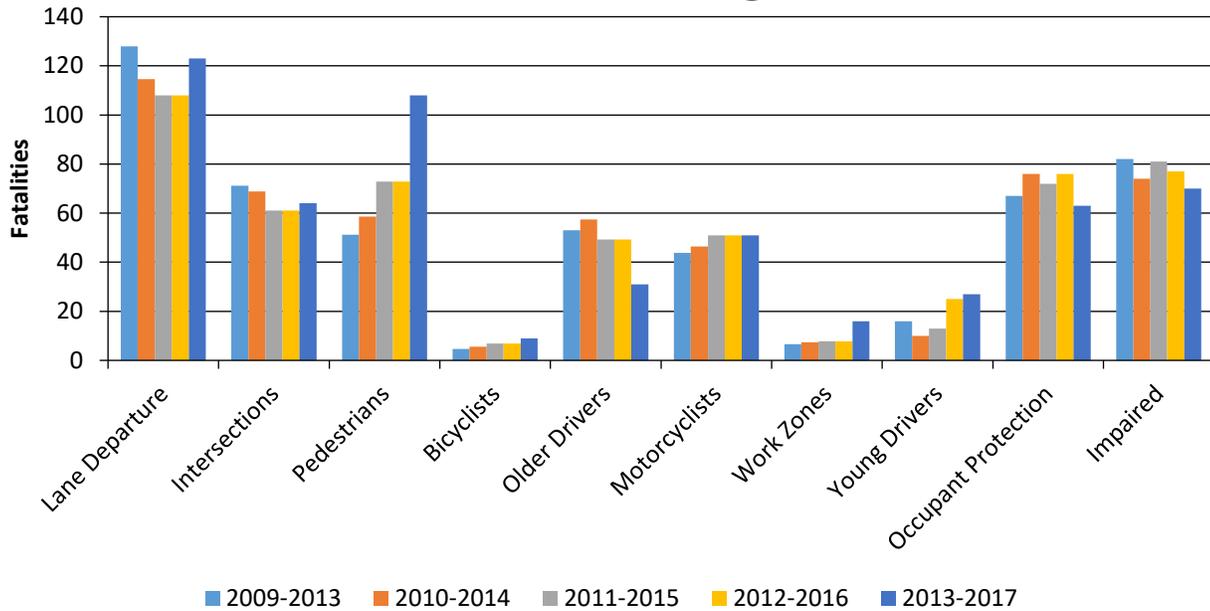
Effectiveness of Groupings or Similar Types of Improvements

Present and describe trends in SHSP emphasis area performance measures.

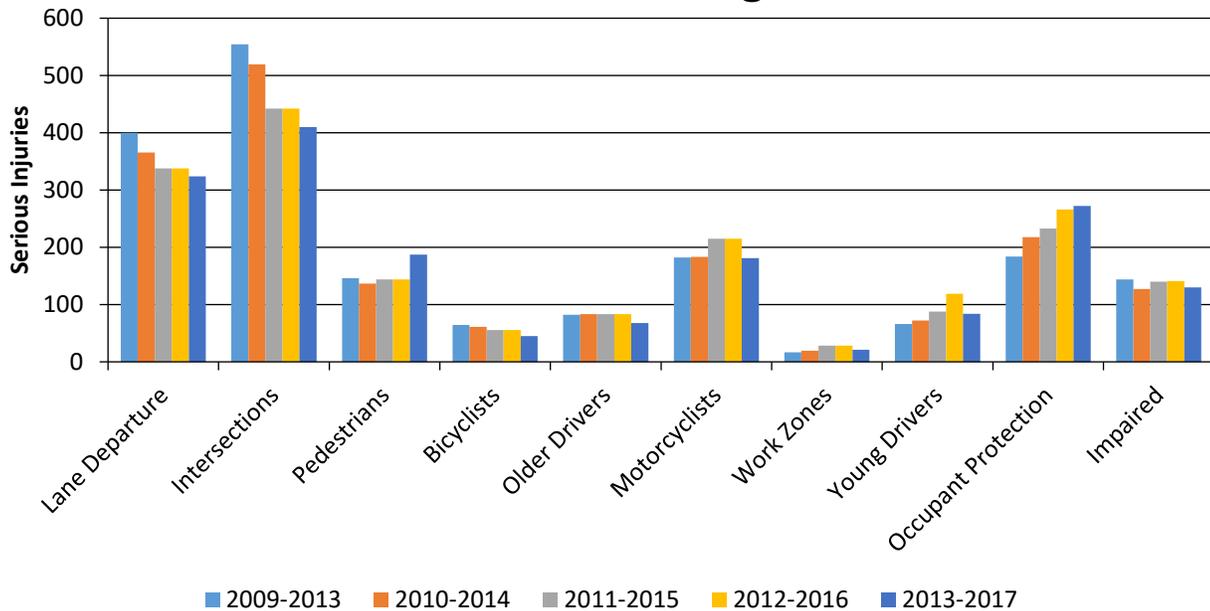
Year 2017

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Lane Departure		123	324	0.4	1.28
Intersections		64	410	0.22	1.63
Pedestrians		108	187	0.31	0.6
Bicyclists		9	45	0.04	0.16
Older Drivers		31	68	0.1	0.29
Motorcyclists		51	181	0.22	0.88
Work Zones		16	21	0.04	0.11
Young Drivers		27	84	0.07	0.33
Occupant Protection		63	272	0.28	0.86
Impaired		70	130	0.29	0.66

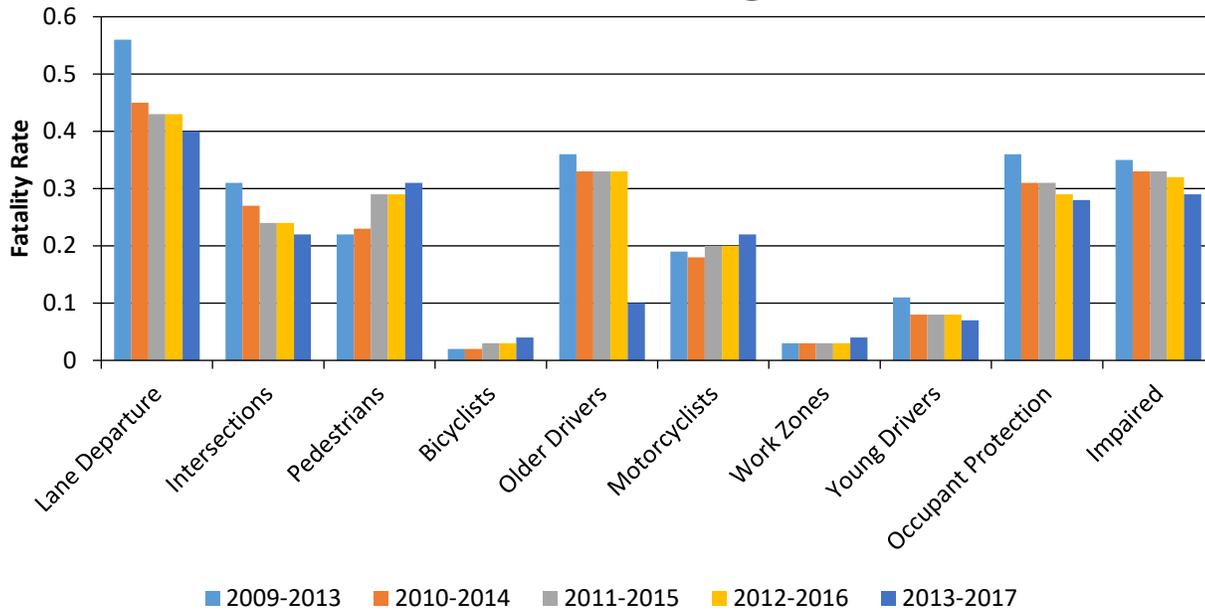
Number of Fatalities 5 Year Average



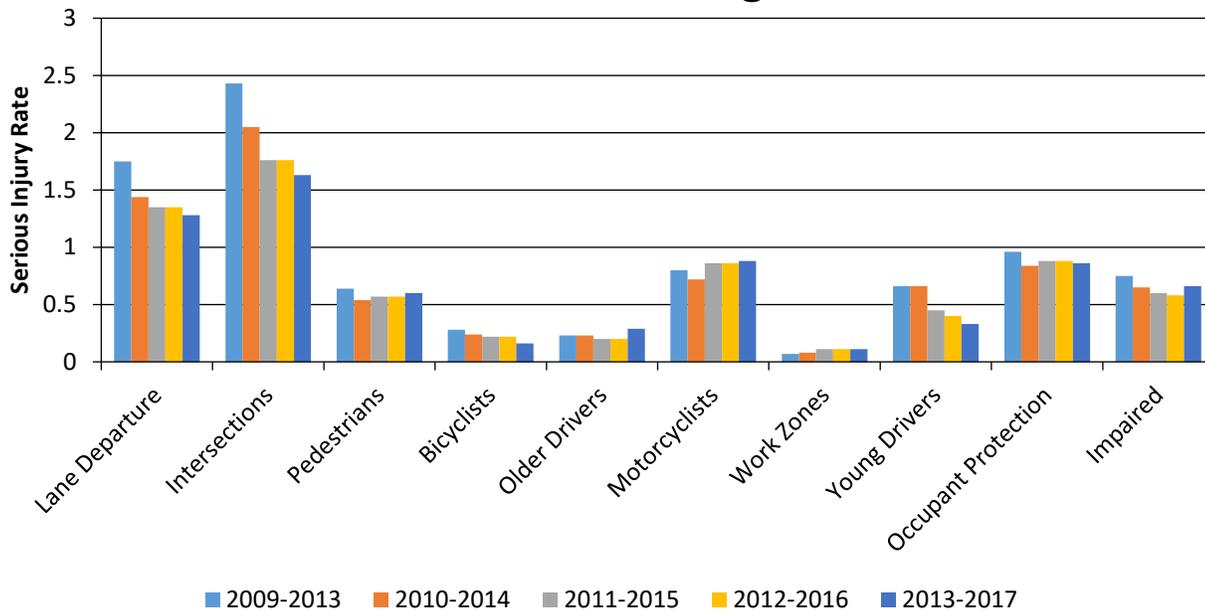
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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

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

No

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

We have started a Task Order to evaluate the effectiveness of Complete Streets and Roundabout projects with the University of Nevada, Reno. We hope to be able to report on the effectiveness of these systemic improvements soon.

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)
US 93 Lages Junction to Currie, MP WP112.8-116.69, EL0.00-11.79	Rural Principal Arterial (RPA) - Other	Shoulder treatments	Shoulder treatments - other	19.00	5.00			1.00		7.00	1.00	27.00	6.00	
US95 North of Winnemucca, MP HU1.50-33.00	Rural Principal Arterial (RPA) - Other	Shoulder treatments	Widen shoulder - paved or other	37.00	20.00	3.00	4.00	4.00	2.00	14.00	6.00	58.00	32.00	
SR 381 MP LN0.00-49.42, NY 0.00-38.79, WPO-22.56	Rural Principal Arterial (RPA) - Other	Roadway signs and traffic control	Roadway signs (including post) - new or updated	71.00	92.00	4.00	4.00	5.00	3.00	28.00	24.00	108.00	123.00	
US 395 MP DO 17-89	Rural Principal Arterial (RPA) - Other	Roadway	Roadway widening - add lane(s) along segment	23.00	17.00	2.00				13.00	14.00	38.00	31.00	
US 93 MP EL 11.79-54.46	Rural Principal Arterial (RPA) - Other	Shoulder treatments	Widen shoulder - paved or other	18.00	26.00		2.00		2.00	8.00	7.00	26.00	37.00	
Multiple Intersections in District 1, within City of North Las Vegas	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	15.00	7.00					3.00	6.00	18.00	13.00	
Multiple Intersections in District 1, within City of Las Vegas	Urban Principal Arterial (UPA) - Other	Intersection traffic control	Modify traffic signal - add flashing yellow arrow	6.00	8.00					3.00	2.00	9.00	10.00	
Fairview Drive, From S. Carson St to Roop St	Urban Minor Collector	Roadway delineation	Roadway delineation - other	68.00	65.00			2.00	1.00	16.00	11.00	86.00	77.00	
Various locations in District 2	Urban Local Road or Street	Intersection traffic control	Intersection flashers - add stop sign-mounted	80.00	114.00	3.00	1.00	6.00	7.00	41.00	55.00	130.00	177.00	

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

We currently only have crash data located back to 2011 so the Rural Before/After analysis is based on 3 years instead of 5 years.

The evaluation results were not included in this table because we are currently reviewing and updating our benefit/cost methodology under a Task Order with the University of Nevada, Reno.

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

Yes

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

NDOT Traffic Safety Engineering continues to focus on Pedestrian and Intersection improvement projects by utilizing FHWA proven countermeasures (see project list). NDOT has added a special focus on High Risk Rural Roads, as the HRRR special rule is applied to the state by memorandum dated January 17, 2017 for FFY 2018. Shoulder widening and slope flattening projects are being added to 3R projects wherever feasible. A continued focus on changing edge line striping on all rural 2-lane highways from 4" to 6" as a standard design is moving forward. Changes in rumble strip design on these rural highways is being reviewed to ensure their effectiveness while causing minimal impact to the structure of the roadway. Also, we have started to review and design projects that will focus on curves within the state.

Compliance Assessment

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

10/11/2016

What are the years being covered by the current SHSP?

From: 2016 To: 2020

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

2020

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

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

MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
ROADWAY SEGMENT										
Segment Identifier (12)	100	100					0	0	0	0
Route Number (8)	100	100								
Route/Street Name (9)	100	100								
Federal Aid/Route Type (21)	100	100								
Rural/Urban Designation (20)	100	100					0	0		
Surface Type (23)	100	100					0	0		
Begin Point Segment Descriptor (10)	100	100					0	0	0	0
End Point Segment Descriptor (11)	100	100					0	0	0	0
Segment Length (13)	100	100								
Direction of Inventory (18)	50	50								
Functional Class (19)	100	100					0	0	0	0
Median Type (54)	20	20								
Access Control (22)	45	45								

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MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
One/Two Way Operations (91)	100	100								
Number of Through Lanes (31)	100	100					0	0		
Average Annual Daily Traffic (79)	100	100					0	0		
AADT Year (80)	100	100								
Type of Governmental Ownership (4)	100	100					0	0	0	0
INTERSECTION										
Unique Junction Identifier (120)			0	0						
Location Identifier for Road 1 Crossing Point (122)			0	0						
Location Identifier for Road 2 Crossing Point (123)			0	0						
Intersection/Junction Geometry (126)			0	0						
Intersection/Junction Traffic Control (131)			0	0						
AADT for Each Intersecting Road (79)			100	100						
AADT Year (80)			0	0						
Unique Approach Identifier (139)			0	0						
INTERCHANGE/RAMP										
Unique Interchange Identifier (178)					0	0				
Location Identifier for Roadway at Beginning of Ramp Terminal (197)					0	0				
Location Identifier for Roadway at Ending Ramp Terminal (201)					0	0				
Ramp Length (187)					0	0				
Roadway Type at Beginning of Ramp Terminal (195)					0	0				
Roadway Type at End Ramp Terminal (199)					0	0				

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MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
Interchange Type (182)					0	0				
Ramp AADT (191)					0	0				
Year of Ramp AADT (192)					0	0				
Functional Class (19)					0	0				
Type of Governmental Ownership (4)					0	0				
Totals (Average Percent Complete):	89.72	89.72	12.50	12.50	0.00	0.00	0.00	0.00	0.00	0.00

*Based on Functional Classification

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

Describe actions the State will take moving forward to meet the requirement to have complete access to the MIRE fundamental data elements on all public roads by September 30, 2026.

The State of Nevada will take the following steps to meet the MIRE requirements by September 30, 2026:

1. Hire a consultant to assist with the planning, implementation and evaluation of the Highway Safety Improvement Program (HSIP) as it relates to MIRE data element requirements.
2. The planning phase will include:
 1. Identifying processes for collecting and maintaining a record of crash, roadway, traffic and vehicle data on all public roads including railway-highway grade crossings inventory data that includes but is not limited to the characteristics of both highway and train traffic.
 2. Expanding the agency's roadway inventory and traffic elements important to safety management to include all segments of our local roads.
 3. Identifying which HPMS data elements can be used in conjunction with the elements that comprise the MIRE data.
 4. Prioritizing the collection of data elements on Federal-aid roads and then expanding to non-Federal-aid roads
3. The implementation phase will identify data collection costs, funding sources, safety tools, collection methodologies, time schedules and other resources.

The evaluation phase shall include HSIP quality control measures to ensure the accuracy of the State's safety data and established performance measures.

Provide the suspected serious injury identifier, definition and attributes used by the State for both the crash report form and the crash database using the table below. Please also indicate whether or not these elements are compliant with the MMUCC 4th edition criteria for data element P5. Injury Status, suspected serious injury.

CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
Crash Report Form	A - Suspected Serious Injury	Yes	N/A	Yes	N/A	Yes
Crash Report Form Instruction Manual	A - Suspected Serious Injury	Yes	Suspected serious injury is any injury other than fatal which results in one or more of the descript	Yes	Examples: Fractures of the spine, open or displaced fractures of the limbs, exposure of underlying tissue, crush injuries, significant burns (2nd/ 3rd degree over10% of body, unconsciousness when taken from the crash scene, paralysis	Yes
Crash Database	A	Yes	N/A	No	N/A	No

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CRITERIA	SUSPECTED SERIOUS INJURY IDENTIFIER(NAME)	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY DEFINITION	MMUCC 4TH EDITION COMPLIANT *	SUSPECTED SERIOUS INJURY ATTRIBUTES(DESCRIPTORS)	MMUCC 4TH EDITION COMPLIANT *
Crash Database Data Dictionary	A	Yes	Crash database only stores the Code "A" and the corresponding description which currently is incapacitating. Project is about to begin to update the table that houses the code and description.	No	Not stored in the crash database	No

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

The state database is housed at EITS Enterprise Information Technology Services, state It division. We have a project in queue to make the necessary changes to the code and description (identifier name) table that houses the information, unfortunately the start date has not been confirmed. The database does not store any descriptors.

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

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

Yes

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

In Spring of 2017 a HSIP assessment was conducted with NDOT Traffic Safety Engineering and FHWA partners. As a result of this assessment, NDOT Traffic Safety Engineering has been updating their Project Evaluation process with guidance from the FHWA.

Optional Attachments

Program Structure:

[HSIP Flow Chart3 .pdf](#)

[Pedestrian Safety Improvement Evaluation Guideline 4-2-2018.pdf](#)

[Highway Safety Improvement Program Manual final-updated-8.7.17.docx](#)

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.