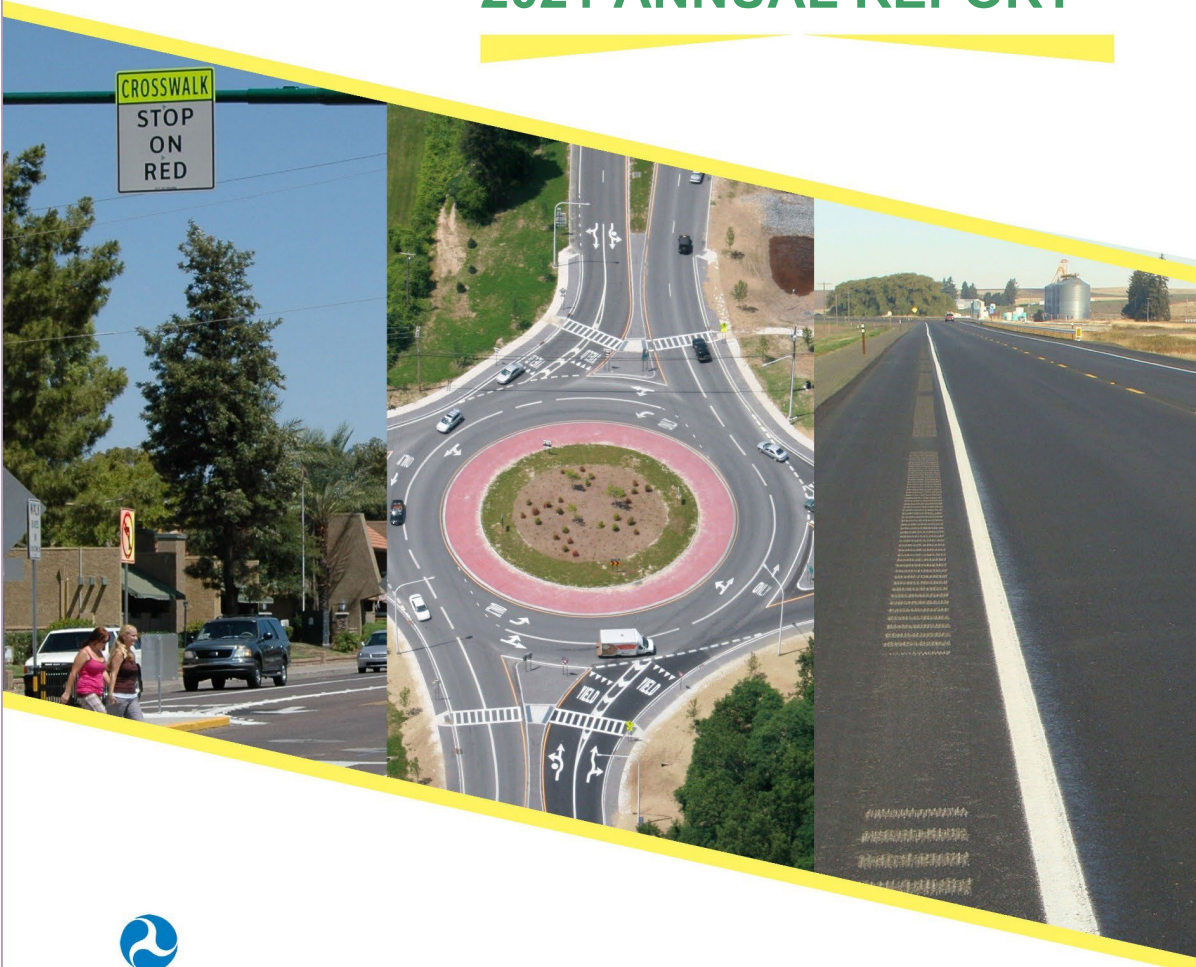




NEBRASKA

HIGHWAY SAFETY IMPROVEMENT PROGRAM 2021 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

Table of Contents

Disclaimer 3
 Protection of Data from Discovery Admission into Evidence 3
Executive Summary 4
Introduction 5
Program Structure..... 5
 Program Administration 5
 Program Methodology 8
Project Implementation 12
 Funds Programmed..... 12
 General Listing of Projects 14
Safety Performance 16
 General Highway Safety Trends..... 16
 Safety Performance Targets..... 22
 Applicability of Special Rules..... 23
Evaluation 25
 Program Effectiveness 25
 Effectiveness of Groupings or Similar Types of Improvements 25
 Project Effectiveness 29
Compliance Assessment 30
Optional Attachments..... 33
Glossary..... 34

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

State FY 2021 (July 1, 2020 - June 30, 2021) was a successful year for the Nebraska HSIP Program. Approx. \$5 million was obligated for thirty-six projects. Four major new projects were let for bids of over \$3.9 million in total. In addition, over \$0.4 million was obligated for Preliminary Engineering, Right-Of-Way, and Utilities on four projects that will be constructed in the future. Completed HSIP projects were shown to be somewhat effective, with five evaluations resulting in an overall Benefit-Cost Ratio of 2.4. Statewide fatalities and serious injuries decreased from 2019 to 2020, through the fatality rate and serious injury rate increased due to reduced vehicle miles traveled statewide. A continuing bright spot is the reduction in serious injuries. Since 2011, serious injuries have decreased by 27% and the serious injury rate has decreased by over 28%.

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.

The HSIP in Nebraska is administered by the NDOT under the direction of the State Highway Safety Engineer. The NDOT maintains three separate committees that are responsible for identifying projects that qualify for HSIP funding. The long-standing Highway Safety Committee is made up of members from several NDOT Divisions, local governments, and the FHWA Division Safety Engineer. They review crash studies in an attempt to find countermeasures for a location, both at sites identified by NDOT's High Crash Locations computer program and those requested by others. When they find a potential project, a benefit/cost study is prepared by Traffic Engineering's Highway Safety Section. Local governments or their consultants also present potential projects to the Committee. If the B/C ratio shows significant benefit, the Committee may vote to advance the proposal as an HSIP project.

The Strategic Safety Infrastructure Team was created by the NDOT when HSIP funding was significantly raised by Congress. It is made up of several NDOT division heads and a District Engineer. Higher cost projects (over \$1M) that are approved by the Safety Committee are passed up to the SSIT for final approval and determination of funding splits. The committee also identifies projects on its own, especially systemic projects. The committee developed and maintains a five-year HSIP and RHCP Expenditures Plan.

A High Risk Rural Roads Committee was formed by NDOT when specific funding for HRRR projects was available. The Department has elected to maintain this committee, even though the dedicated HRRR funding no longer exists. The committee is made up of representatives from NDOT's Traffic Engineering Division, Local Assistance Division, LTAP, and a representative from the Nebraska Association of County Officials. They work to find viable HSIP projects on rural county roads.

Approved HSIP projects generally go through NDOT's letting system. Many completed projects are evaluated to see whether or not they were effective in reducing crashes.

Where is HSIP staff located within the State DOT?

Engineering

The State Highway Safety Engineer is responsible for the HSIP program. Analysis and technical support are provided by the Highway Safety Section of the Traffic Engineering Division.

How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process

2021 Nebraska Highway Safety Improvement Program

- SHSP Emphasis Area Data

The NDOT has three teams that determine projects for HSIP funding. The Highway Safety Committee includes local agencies and can approve HSIP for projects costing up to \$1M. The Strategic Safety Infrastructure Projects Team (SSIP) has final approval over higher cost jobs (over \$1M). The High Risk Rural Roads Team focuses on identifying safety improvement projects for rural county roads and bring projects to the SSIP for approval. The Highway Safety Section supplies these teams with crash data analysis which can lead to projects at specific sites or systemic projects. These project proposals must support the SHSP critical emphasis areas. Project proposals can also be brought to these teams by local governments, District Engineers, or other NDOT engineers.

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

Local road projects are regularly funded under the HSIP. The NDOT's various safety committees identify potential locations for projects and send this information to local governments for their consideration as HSIP projects. City governments are encouraged to submit potential projects to the NDOT for consideration. Representatives of the state's four largest cities, Omaha, Lincoln, Bellevue, and Grand Island regularly attend Highway Safety Committee meetings; and officials from the smaller cities are always welcome. Representatives from the Nebraska LTAP Center and the Nebraska Highway Superintendents Association sit on the High Risk Rural Roads committee, which continues to function despite the loss of dedicated funding. The number of projects built on local roads varies from year to year. Some local road HSIP projects shifted letting dates to future fiscal years. Only \$0.4 million in HSIP funds were spent on local projects in State FY 2021.

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

- Design
- Districts/Regions
- Governors Highway Safety Office
- Local Aid Programs Office/Division
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Program Management

All of these areas have some part in the HSIP process, some more than others. Most of them are represented on at least one of our three safety committees.

Describe coordination with internal partners.

All of the above named disciplines play a role in the HSIP process. Highway Safety prepares collision diagrams, spot maps, or lists of high crash locations and presents them to committee members at their monthly meetings. They coordinate with the engineering divisions to get estimated project costs, from which they calculate benefit-cost ratios. They also complete evaluations of completed projects and present them to the group for use in making future decisions.

Proposed projects on the state highway system are sent to the appropriate District Engineer for concurrence. The DE often submits the required paperwork to begin the project process. The Traffic Engineering Division is

2021 Nebraska Highway Safety Improvement Program

the lead office for all HSIP activity. All HSIP projects are approved by either the NDOT Highway Safety Committee or the Strategic Safety Infrastructure Projects Team. The usual procedure is for an approved HSIP project to be assigned to Roadway Design Division, Traffic Engineering Division, or Local Assistance Division as the NDOT lead element, depending on the type of project and whether or not it is on a local road. These units work with Program Management to get the project scheduled and to make sure it is progressing adequately through the steps in the Clarity software, which is used for project programming. This includes the important step of working with the Environmental Section to make sure all environmental concerns are met. The lead units either design the project or oversee the design of a consultant and prepare the project for letting. If railroad property is involved in the project, the Rail and Public Transportation Section of Local Assistance Division must also be consulted. The Operations Division has taken the lead on projects involving bridge anti-icing systems, dynamic message signs, and required engineering analysis. NDOT Traffic Engineering Division uses the Highway Safety Manual procedures in the analysis and evaluation of HSIP projects. The Communication Division prepares professional documents for use in the HSIP program, such as the Strategic Highway Safety Plan, as well as print, television, and radio spots focusing on highway safety improvements, like roundabouts and flashing yellow arrows.

Identify which external partners are involved with HSIP planning.

- FHWA
- Governors Highway Safety Office
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Other-City of Omaha Public Works Department
- Other-City of Lincoln Public Works Department
- Other-City of Bellevue
- Other-City of Grand Island
- Other-Nebraska Highway Superintendents Association

Each of these partners sit on one or more of our safety committees, giving them the opportunity for input into the project selection process.

Describe coordination with external partners.

Most of the interaction with our external partners occurs through one of our three safety committees. Representatives from the Public Works departments of our two largest cities, Omaha and Lincoln, regularly attend the monthly meetings of the long-standing Highway Safety Committee, reviewing crash locations, making suggestions for countermeasures, presenting project proposals, and agreeing to make low cost changes or do further studies at locations within their own jurisdiction. Delegates from other cities attend less often, but do come when they have a project proposal to present.

LTAP has proven to be very helpful to the High Risk Rural Roads committee. Not only have they been involved in the development of projects, they have agreed to serve as liaison with the individual counties, recruiting them to take part in systemic projects. The County Highway Superintendent's representative helps NDOT better see the picture from the county's point of view. The FHWA Division Safety Engineer provides all of the committees with good information on new safety improvements and whether ideas are likely to qualify for HSIP funding.

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

NDOT started creating annual HSIP Implementation Plans. Data-driven allocation of Highway Safety Improvement Program (HSIP) funding helps to promote the Nebraska Department of Transportation (NDOT) strategic goals for safety by developing projects to reduce the frequency and severity of crashes on Nebraska's roads. The HSIP Implementation Plan also supports NDOT's strategic goal of Fiscal Responsibility by providing the framework for the prudent selection of projects. The HSIP Implementation Plan is intended as an action plan document for the Nebraska Strategic Highway Safety Plan (SHSP). The plan reviews historical crash data and HSIP funding then proposes strategies, goals, and actions for the HSIP in the one-year, five-year, and long-term planning horizons.

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

NDOT selected a vendor for building a new crash database. A new crash report, which follows Version 5 of Model Minimum Uniform Crash Criteria, has been designed to work in conjunction with the new database. The project is projected to be completed in 2021. NDOT is continuing development of a crash spot mapping and crash diagramming system. NDOT selected AASHTOWare Safety as the NDOT's software for implementing Highway Safety Manual based Empirical Bayes Estimate crash prediction method to replace our crash history based hazardous location analysis process. The new AASHTOWare Safety software is planned to be fully implemented in 2022.

Program Methodology

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

Yes

Select the programs that are administered under the HSIP.

- HRRR
- HSIP (no subprograms)

While Nebraska may include projects that fall under many of these categories in our HSIP, we have no specific programs, such as those that would require that a certain amount of money be spent each year on a given category of projects.

Program: HRRR

Date of Program Methodology:8/10/2021

What is the justification for this program?

- Other-17% of fatalities occur on rural collector and local roads

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes

- All crashes
- Fatal and serious injury crashes only

Exposure

- Volume
- Lane miles

Roadway

- Horizontal curvature
- Roadside features

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 frequency and crash types at specific locations or systemically

How are projects under this program advanced for implementation?

- Competitive application process
- selection committee

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Ranking based on B/C:1

Available funding:2

The Rate Quality Control method is used to identify high crash locations on state highways. This same method is not used on local roads because traffic volume data is incomplete, preventing valid comparisons of different sites.

Program: HSIP (no subprograms)

Date of Program Methodology:8/10/2021

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

- Volume

Roadway

- Other-Roadway Departure, Intersection, or other

What project identification methodology was used for this program?

- Crash rate
- Critical rate
- Relative severity index

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 frequency and crash type at specific locations

How are projects under this program advanced for implementation?

- Competitive application process
- selection committee

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).

Rank of Priority Consideration

Ranking based on B/C:1

Available funding:2

The Rate Quality Control method is used to identify high crash locations on state highways. This same method is not used on local roads because traffic volume data is incomplete, preventing valid comparisons of different sites.

What percentage of HSIP funds address systemic improvements?

9

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

- Cable Median Barriers
- Clear Zone Improvements
- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Pavement/Shoulder Widening
- Rumble Strips
- Safety Edge

The percentage of HSIP funds used for Systemic Projects varies from year to year. In the recent annual HSIP Implementation Plan, NDOT shifted the HSIP allocation goals to target more systemic projects going forward.

What process is used to identify potential countermeasures?

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

Countermeasures are normally identified by engineers on one of the NDOT safety committees. Crash studies are available to help guide them in these decisions. Project proposals from local jurisdictions often come with pre-determined countermeasures, although these may be amended by the committee.

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

Describe how the State HSIP considers connected vehicles and ITS technologies.

NDOT has funded ITS projects for dynamic message signs, anti-icing systems on bridges, and Adaptive Traffic Signal systems. NDOT has not considered any connected vehicle technology for HSIP funding.

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.

Highway Safety Manual techniques are used to determine benefit/cost ratios for some project proposals. NDOT is planning to implement the AASHTOWare Safety software for our Highway Safety Manual based Empirical Bayes Estimate crash prediction method safety analysis software to replace our crash history based hazardous location analysis process.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

Since the latest Federal Fiscal Year will not be over at the time the HSIP Report is due, we are reporting on the State Fiscal Year (July 1, 2020 to June 30, 2021).

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	\$5,300,000	\$4,655,354	87.84%
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)	\$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	\$801,000	\$699,840	87.37%
Totals	\$6,101,000	\$5,355,194	87.78%

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

27%

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

9%

Some local road HSIP projects shifted letting dates to future fiscal years.

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

14%

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

16%

2021 Nebraska Highway Safety Improvement Program

Nebraska non-infrastructure safety projects are for improving the crash database and safety analysis tools.

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%

No fund transfers were made into or out of the HSIP program in State FY 2021.

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

As projects become more expensive and more complex, it often takes longer to move them from the planning stage to completion. We have been successful, however, in obligating most of our available HSIP funds. We have an expenditure plan in place which should allow us to continue at this pace into the future. We also recently developed Nebraska's first HSIP Implementation Plan to align our HSIP expenditures based on crash history, historical funding obligations, and safety improvement outcomes. We plan to continue annual HSIP Implementation Plan updates going forward. At this point in time, we don't have any serious impediments to HSIP obligation.

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
00959 - Statewide Lighting	Lighting	Intersection lighting	11	Intersections	\$336265	\$358796	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0	65	State Highway Agency	Systemic	Intersections	Intersection Lighting
00979 - HSIP Software Replacement	Miscellaneous	Data collection	1	Software Implementation	\$4021754	\$4468616	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Data	Crash Data Collection Software
01018 - Peace Officer Crash Reporting System	Miscellaneous	Data collection	1	Software Implementation	\$1321330	\$1468145	HSIP (23 U.S.C. 148)	N/A	N/A	0		City or Municipal Highway Agency	Systemic	Data	Crash Data Collection Software
01025 - NE Transportation Information Portal - Phase 4	Miscellaneous	Data analysis	1	Software Implementation	\$43200	\$48000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Data	Crash Data Analysis Software
01030 - AASHTOWare Safety Software	Miscellaneous	Data analysis	1	Software Implementation	\$675000	\$750000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Data	Crash Data Analysis Software
01030 - N 27th St Adaptive Signals, Lincoln	Advanced technology and ITS	Adaptive Signal Control System	17	Intersections	\$4170377	\$4731853	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	18,505	45	City or Municipal Highway Agency	Systemic	Intersections	Adaptive Signal Control Technology
13338 - Pickrell North	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	7.3	Miles	\$808567	\$11381100	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	7,685	60	State Highway Agency	Systemic	Roadway Departure	Widen Shoulders
13391 - Saltillo Rd, Lancaster County	Shoulder treatments	Widen shoulder – paved or other (includes add shoulder)	2.7	Miles	\$6893017	\$8012992	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	8,850	55	County Highway Agency	Systemic	Roadway Departure	Widen shoulders
22506 - 24th St Complete Streets, Omaha	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	2.8	Miles	\$3058764	\$5082668	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	15,000	40	City or Municipal Highway Agency	Systemic	Intersections	Convert 4 lane into 3 lane section with directional bike lanes
22585 - I-80 - Fort St, Omaha	Roadway	Pavement surface – high friction surface	0.75	Miles	\$1148435	\$6435964	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	123,745	65	State Highway Agency	Systemic	Roadway Departure	High Friction Surface Treatment

2021 Nebraska Highway Safety Improvement Program

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST(\$)	TOTAL PROJECT COST(\$)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
22630 - 25th St - 23rd St, Omaha	Intersection geometry	Add/modify auxiliary lanes	1	Intersections	\$827752	\$1827302	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	123,745	65	State Highway Agency	Spot	Intersections	Add dual left turn lanes
22706 - 30th St Road Diet, Omaha	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	2.15	Miles	\$1698375	\$3233734	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	14,000	35	City or Municipal Highway Agency	Systemic	Intersections	Convert 4 lane to 3 lane section with directional bike lanes
42789 - Geneva North	Intersection geometry	Add/modify auxiliary lanes	1	Intersections	\$347916	\$415898	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	7,925	60	State Highway Agency	Spot	Intersections	Add right turn lane and intersection lighting
42863 - Five-Points Intersection, Grand Island	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	\$2818436	\$3523045	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	13,900	40	City or Municipal Highway Agency	Spot	Intersections	Convert 5-way traffic signal into a roundabout
42911 - Grand Island Area Bridges	Roadway	Pavement surface – high friction surface	11	Locations	\$882412	\$990657	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	23,535	75	State Highway Agency	Spot	Roadway Departure	High Friction Surface Treatment
71018 - Benkelman Northeast	Roadway	Roadway widening - travel lanes	0.2	Miles	\$219781	\$277522	HSIP (23 U.S.C. 148)	Rural	Major Collector	30	55	County Highway Agency	Spot	Roadway Departure	Widen and re-align roadway to improve sight distance

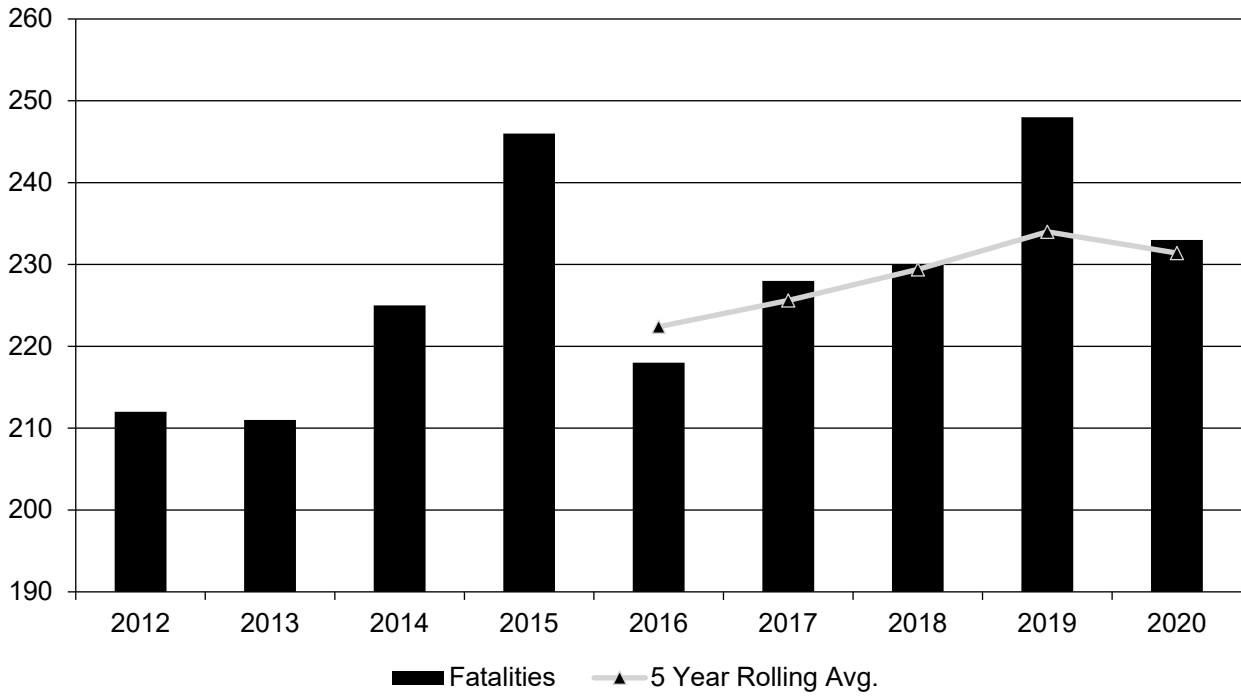
Safety Performance

General Highway Safety Trends

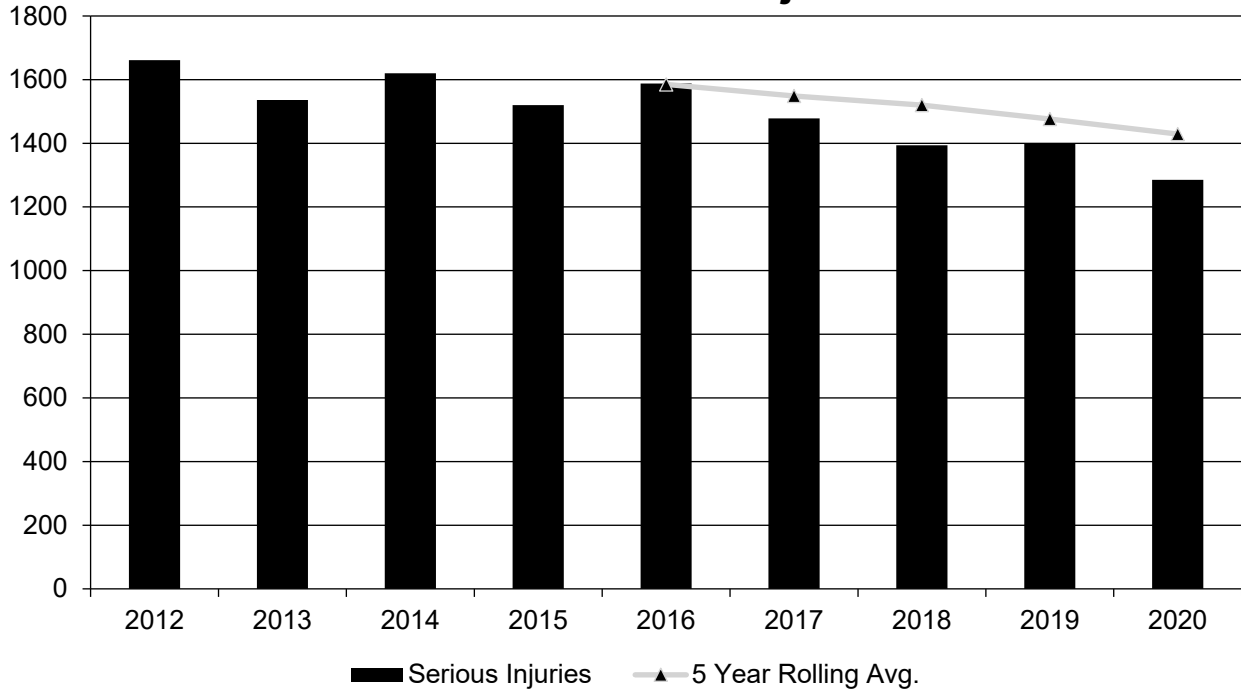
Present data showing the general highway safety trends in the State for the past five years.

PERFORMANCE MEASURES	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fatalities	212	211	225	246	218	228	230	248	233
Serious Injuries	1,661	1,536	1,620	1,520	1,588	1,478	1,394	1,400	1,285
Fatality rate (per HMVMT)	1.103	1.092	1.147	1.216	1.053	1.085	1.095	1.167	1.202
Serious injury rate (per HMVMT)	8.640	7.949	8.260	7.514	7.668	7.034	6.639	6.591	6.631
Number non-motorized fatalities	15	15	11	24	13	23	24	22	20
Number of non-serious motorized injuries	139	132	130	125	113	121	103	108	88

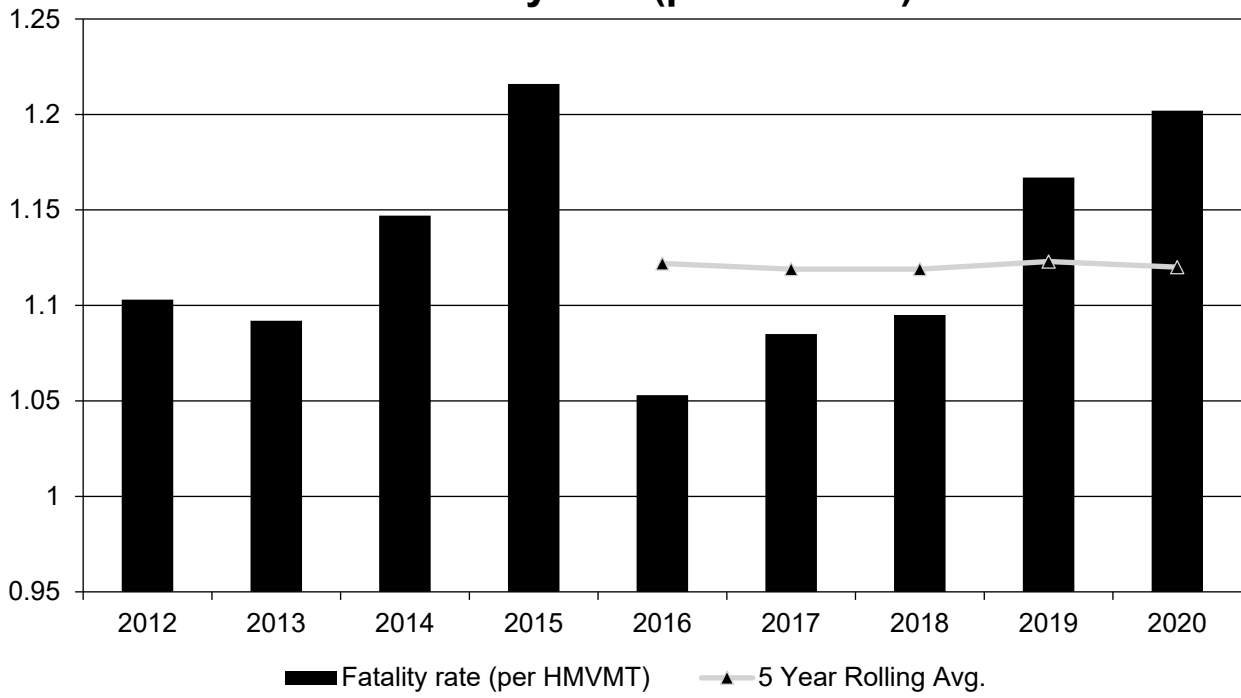
Annual Fatalities



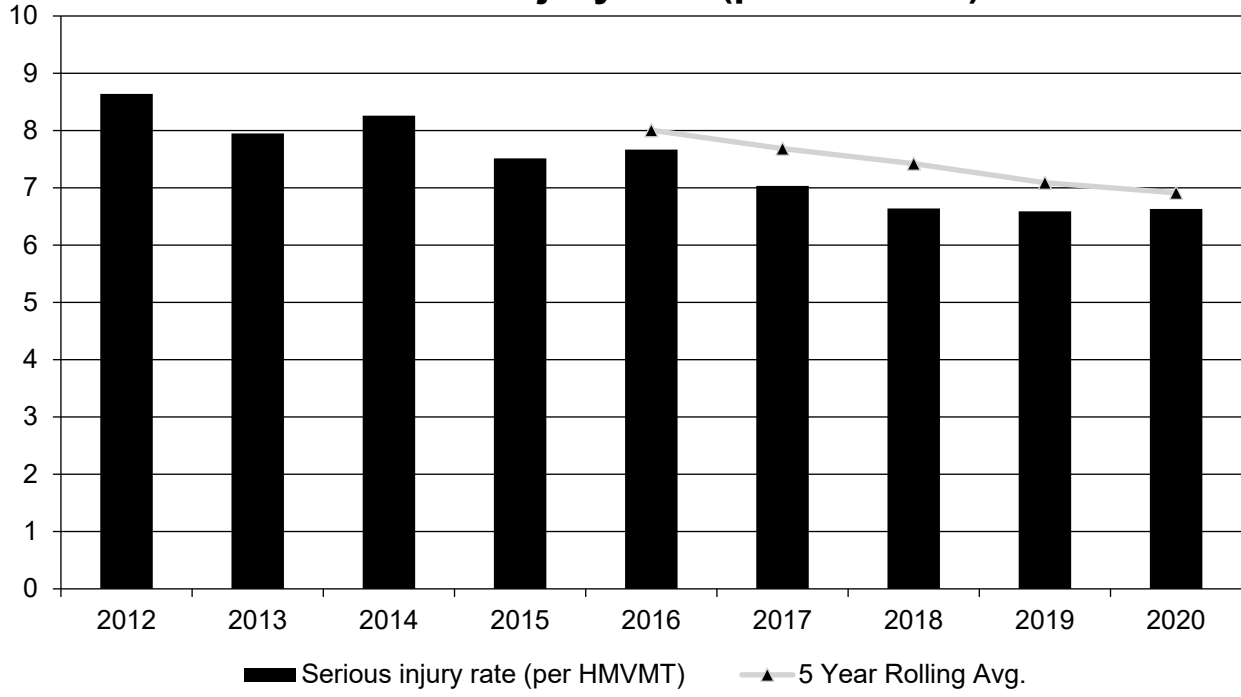
Annual Serious Injuries



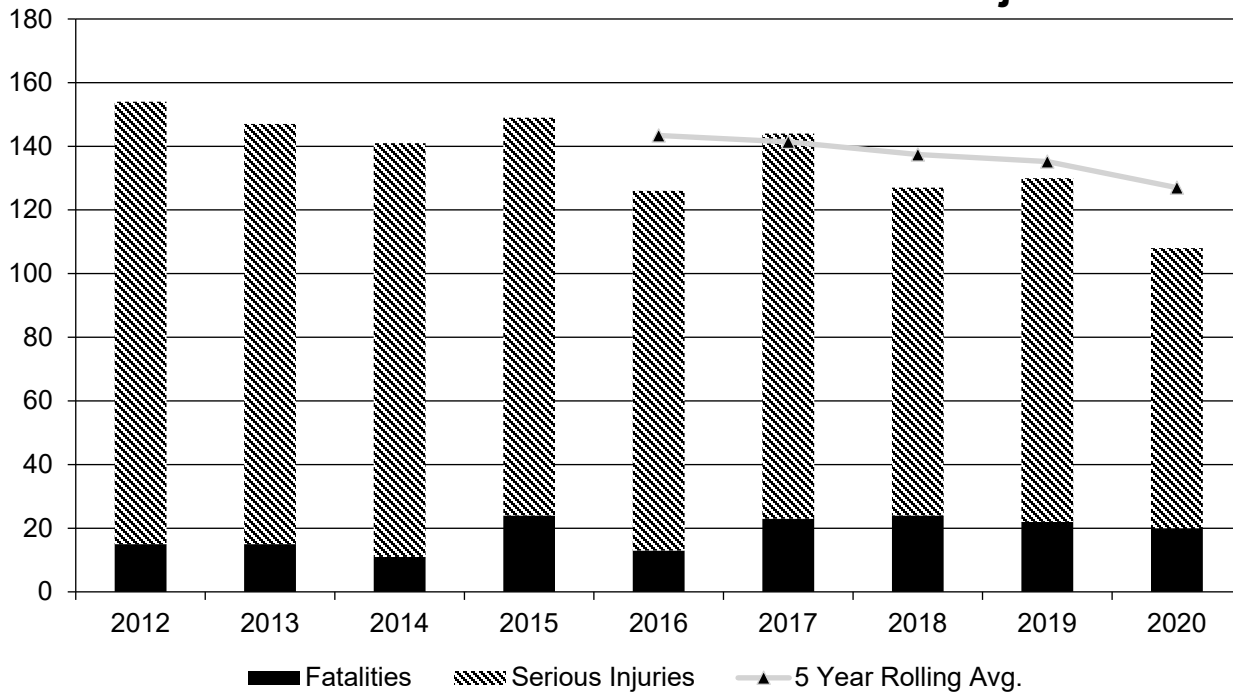
Fatality rate (per HMVMT)



Serious injury rate (per HMVMT)



Non Motorized Fatalities and Serious Injuries



Describe fatality data source.

FARS

The Nebraska FARS operation is located within the Highway Safety Section of Traffic Engineering Division (NDOT). Consequently, the FARS data and the state fatality data should always be the same.

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

Year 2020

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	23.6	72.6	0.81	2.48
Rural Principal Arterial (RPA) - Other Freeways and Expressways	6.6	61.4	0.67	6.21
Rural Principal Arterial (RPA) - Other	47	128.6	2.06	5.63
Rural Minor Arterial	39.4	141.2	1.67	6
Rural Minor Collector	21.4	132.4	1.49	9.21

2021 Nebraska Highway Safety Improvement Program

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Major Collector	4	27.4	1.5	10.24
Rural Local Road or Street	24.6	135.6	2.18	12.04
Urban Principal Arterial (UPA) - Interstate	7.6	58.6	0.47	3.65
Urban Principal Arterial (UPA) - Other Freeways and Expressways	4.4	61.4	0.37	5.19
Urban Principal Arterial (UPA) - Other	21.8	238.8	1.08	11.84
Urban Minor Arterial	14.6	224	0.61	9.29
Urban Minor Collector	4	50	0.65	8.09
Urban Major Collector	0.4	4.8	1.04	12.49
Urban Local Road or Street	12	90.6	0.85	6.41

2021 Nebraska Highway Safety Improvement Program

Year 2020

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	146	704.2	1.11	5.35
County Highway Agency	46.6	262.4	2	11.24
Town or Township Highway Agency				
City or Municipal Highway Agency	38.4	465.2	0.74	9.01
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				

Provide additional discussion related to general highway safety trends.

As we move farther away from the recession years, when fatalities were lower, the 5-year rolling averages for fatalities and fatality rate continue to increase. Given the increases in traffic volume, this result is not surprising. On the other hand, the 5-year rolling averages for serious injuries and serious injury rate have declined. Non-motorist fatality and serious injury numbers are low and slightly declining. We have observed an increase in motorcycle fatalities in the last few years.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2022 Targets *

Number of Fatalities:249.0

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

This target was selected based on a 1% reduction of the current trend line of 5-year averages of fatalities over the last several years. Based on this trend, we believe the established target is a realistic goal. If this target is met, the SHSP goal of toward zero deaths will be advanced.

Number of Serious Injuries:1358.0

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

This target was selected based on the current trend line of 5-year averages of serious injuries over the last several years. Based on this trend, we believe the established target is a realistic goal. This target continues the downward trend in serious injuries over the last several years. If this target is met, a basic goal of the SHSP, the reduction of serious injuries, will be advanced.

Fatality Rate:1.270

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

This target was selected based on a 1% reduction of the current trend line of 5-year averages of fatalities over the last several years. Based on this trend, we believe the established target is a realistic goal. If this target is met, the SHSP goal of toward zero deaths will be advanced.

Serious Injury Rate:6.323

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

This target was selected based on the current trend line of 5-year averages of serious injury rates over the last several years. Based on this trend, we believe the established target is a realistic goal. This target continues the downward trend in serious injury rates over the last several years. If this target is met, a basic goal of the SHSP, the reduction of serious injuries, will be advanced.

Total Number of Non-Motorized Fatalities and Serious Injuries:121.4

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

This target was selected based on the current trend line of 5-year averages of non-motorized fatalities and serious injuries over the last several years. Based on this trend, we believe the established target is a realistic goal. This target continues the downward trend in non-motorized fatalities and serious injuries over the last several years. If this target is met, the basic goals of the SHSP, the reduction of fatalities and serious injuries, will be advanced.

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

The NDOT Highway Safety Office is also located within the Traffic Engineering Division, so it is easy for us to get together to establish performance targets. Since their annual Highway Safety Plan must be submitted to NHTSA by July 1, we need to determine the targets we share with them early. This year, we held a teleconference with our MPOs to discuss target setting. The MPOs agreed with NDOT's target setting methodology and this year's safety performance targets.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2020 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	239.0	231.4
Number of Serious Injuries	1442.0	1429.0
Fatality Rate	1.140	1.120
Serious Injury Rate	6.803	6.913
Non-Motorized Fatalities and Serious Injuries	133.0	127.0

NDOT has made significant progress toward meeting the state's 2020 safety performance targets. NDOT met their target for 4 of the 5 safety performance targets. Actual outcomes for serious injuries, serious injury rate, and non-motorized fatalities and serious injuries were better than the baseline. Since NDOT met the target or was better than the baseline for 5 of the 5 performance measures, NDOT has made significant progress toward meeting the state's 2020 safety performance targets.

Applicability of Special Rules

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

No

The fatality rate on Nebraska's High Risk Rural Roads (Rural Major Collectors, Rural Minor Collectors, and Rural Local roads) was 1.966 fatalities per 100 million vehicle miles traveled for the 5-year period from 2013 to 2017. For the comparable 5-year period from 2015 to 2019, the fatality rate was 1.767 fatalities/100 million VMT. Since the rate decreased, the HRRR special rule does not apply to Nebraska.

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	2014	2015	2016	2017	2018	2019	2020
Number of Older Driver and Pedestrian Fatalities	33	27	41	31	33	32	42
Number of Older Driver and Pedestrian Serious Injuries	182	199	233	154	129	139	122

The fatality and serious injury rate for the 5-year period of 2015 to 2019 was 69.6. For the comparable 5-year period from 2013 to 2017, the fatality and serious injury rate was 77.6. Since the rate decreased, the Special Rule does not apply to Nebraska.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio
- Change in fatalities and serious injuries

NDOT uses benefit/cost analysis in the selection of most HSIP projects and then evaluates completed projects to see if they were effective in reducing crashes. A few projects that are not chosen on the basis of crash data will not be evaluated.

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

The Nebraska HSIP Program was successful in State FY 2021. The combined benefit-cost ratio for all the HSIP projects evaluated during this year was 2.4. The recent change of the minimum benefit-cost ratio to 5.0 should bring the HSIP project evaluation benefit-cost ratios up in the future. Although our fatality numbers have fluctuated up and down in recent years, even the highest years have been significantly below the numbers recorded in the first decade of this century. Serious injuries, on the other hand, have steadily declined during this same time period.

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

- HSIP Obligations
- Increased focus on local road safety
- More systemic programs
- Policy change

We have been successful in increasing our HSIP obligations over the last several years. Although we do not reserve a specific amount of funding for them, we try to include some High Risk Rural Roads projects each year. We have instituted several systemic projects in recent years and hope to include more of them in our HSIP program. Several improvements that started as HSIP projects have become agency policy, such as shoulder rumble strips and safety edge. We are piloting systemic cable median barrier projects along corridors with higher risk of median crossover crash related fatalities.

Effectiveness of Groupings or Similar Types of Improvements

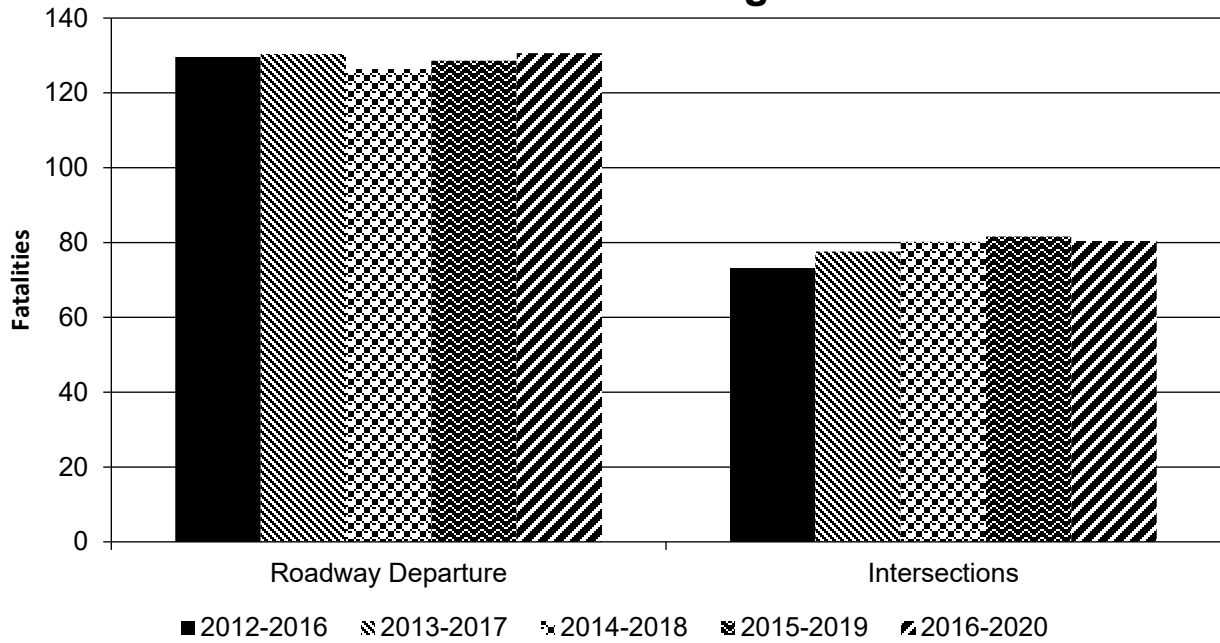
Present and describe trends in SHSP emphasis area performance measures.

Year 2020

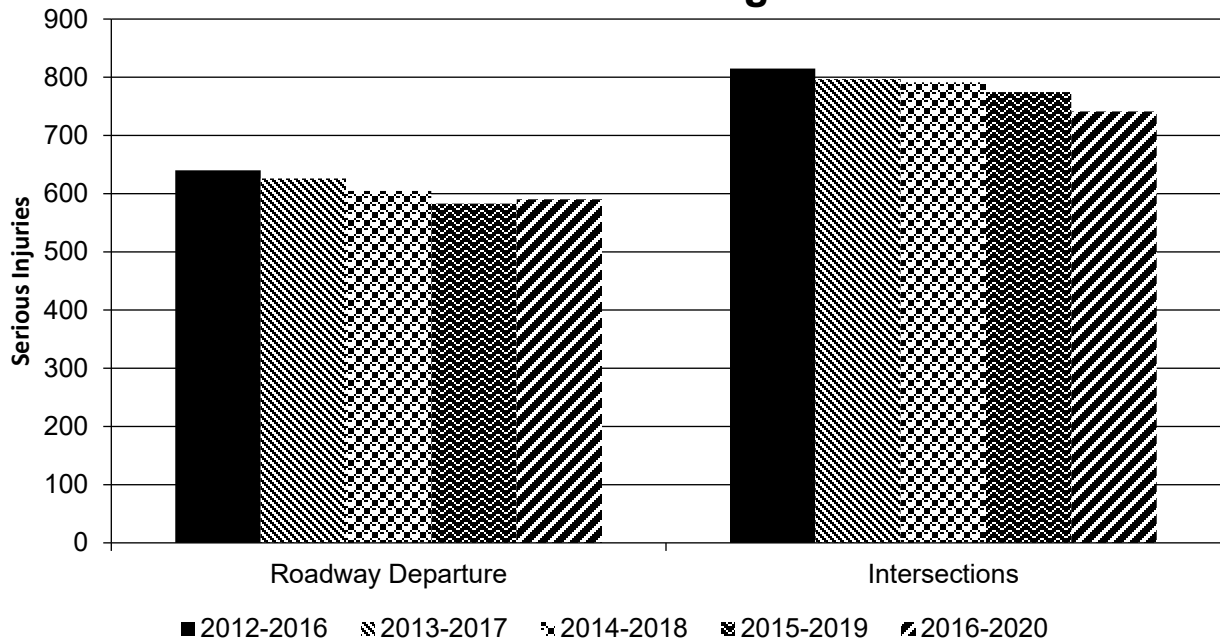
2021 Nebraska Highway Safety Improvement Program

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure	Run-off-road	130.6	590.4	0.63	2.87
Intersections	Intersections	80.4	741.4	0.39	3.6

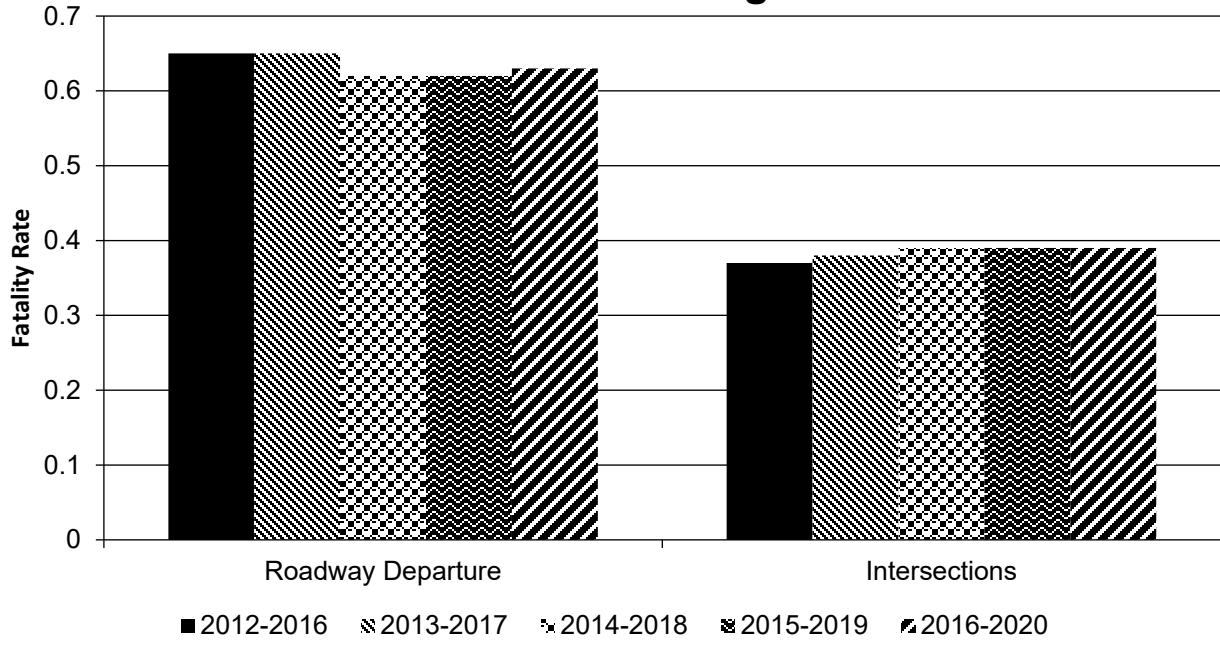
Number of Fatalities 5 Year Average



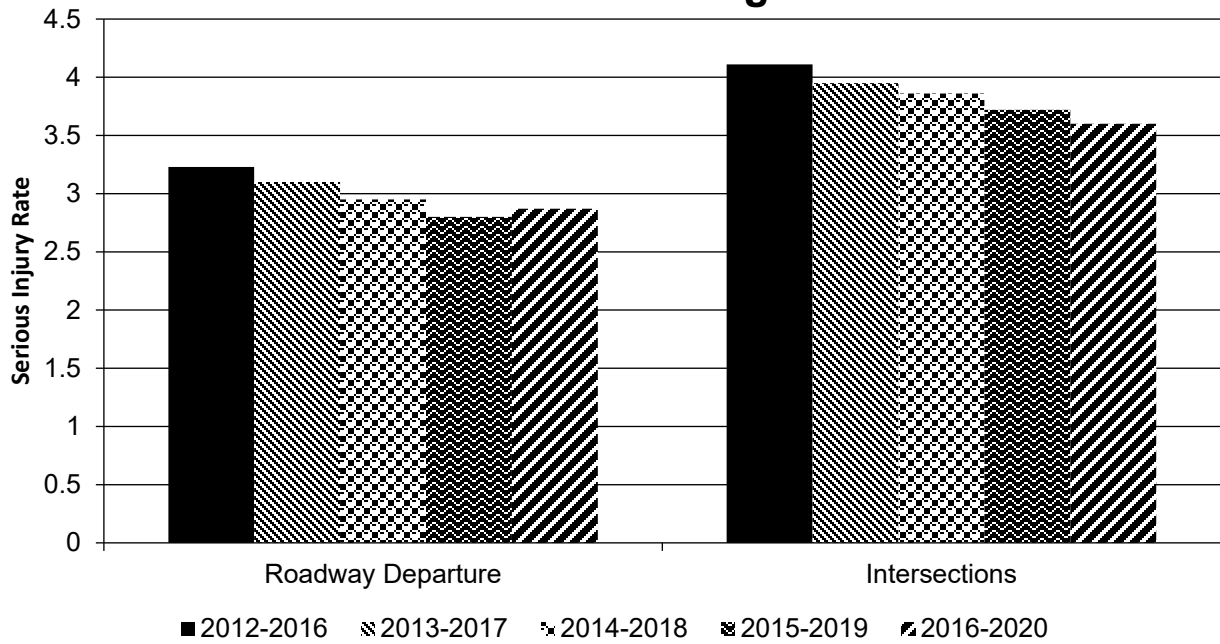
Number of Serious Injuries 5 Year Average



Fatality Rate (per HMVMT) 5 Year Average



Serious Injury Rate (per HMVMT) 5 Year Average



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)
Dodge County – S Jct US-77 & N-91	Rural Principal Arterial (RPA) - Other Freeways and Expressways	Intersection geometry	Add/modify auxiliary lanes	2.00	1.00	1.00				4.00	4.00	7.00	5.00	7.23
Lancaster County – US-77 Bridges	Urban Principal Arterial (UPA) - Other Freeways and Expressways	Roadway	Pavement surface – high friction surface	30.00	17.00					9.00	14.00	39.00	31.00	1.10
Bellevue - US-75 & Cornhusker Rd Interchange, SB Ramps	Urban Principal Arterial (UPA) - Other Freeways and Expressways	Intersection geometry	Add/modify auxiliary lanes	8.00	13.00					7.00	10.00	15.00	23.00	-21.47
Bellevue - US-75 & Cornhusker Rd Interchange, NB Ramps	Urban Principal Arterial (UPA) - Other Freeways and Expressways	Intersection geometry	Add/modify auxiliary lanes	19.00	24.00					28.00	27.00	47.00	51.00	2.83
Omaha – Intsx N-64 & N-133	Urban Principal Arterial (UPA) - Other	Intersection geometry	Add/modify auxiliary lanes	57.00	46.00					32.00	22.00	89.00	68.00	0.91

This year's HSIP project evaluation results spanned a wide range. NDOT's strategic safety committee recently increased the minimum benefit-cost ratio to 5.0 to bring the HSIP project evaluation benefit-cost ratios up in the future.

Compliance Assessment

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

03/31/2017

What are the years being covered by the current SHSP?

From: 2017 To: 2021

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

2022

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]	100	100					100	100	100	100
	Route Number (8) [8]	100	100								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	100	100								
	Rural/Urban Designation (20) [20]	100	100					100	100		
	Surface Type (23) [24]	100	100					100	100		
	Begin Point Segment Descriptor (10) [10]	100	100					100	100	100	100
	End Point Segment Descriptor (11) [11]	100	100					100	100	100	100
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								
	Functional Class (19) [19]	100	100					100	100	100	100
Median Type (54) [55]	100	100									

2021 Nebraska Highway Safety Improvement Program

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
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	100		
	Average Annual Daily Traffic (79) [81]	100	100					100			
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	100
INTERSECTION	Unique Junction Identifier (120) [110]			100	100						
	Location Identifier for Road 1 Crossing Point (122) [112]			100	100						
	Location Identifier for Road 2 Crossing Point (123) [113]			100	100						
	Intersection/Junction Geometry (126) [116]			100	100						
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]			100	100						
	AADT Year (80) [82]			100	100						
	Unique Approach Identifier (139) [129]			100	100						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					80	80				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187]					80	80				

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
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					80	80				
	Ramp Length (187) [177]					80	80				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					80	80				
	Roadway Type at End Ramp Terminal (199) [189]					80	80				
	Interchange Type (182) [172]					80	80				
	Ramp AADT (191) [181]					80	80				
	Year of Ramp AADT (192) [182]					80	80				
	Functional Class (19) [19]					80	80				
	Type of Governmental Ownership (4) [4]					80	80				
Totals (Average Percent Complete):		100.00	100.00	87.50	87.50	80.00	80.00	100.00	88.89	100.00	100.00

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

The most recent MIRE FDE mapping of NDOT data identified a few elements that were not being collected. Thus, some of the percentage of some of these elements went down from previous HSIP Annual Reports.

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.

We are continuing to inventory ramps and add them to the database. We have inventoried 80% of the ramps in the state. We have collected sample AADT data for local paved roads. The AADT data for local paved roads will be added to the database before 2026.

The most recent MIRE FDE mapping of NDOT data identified a few elements that were not being collected or may be missing codes. NDOT's Roadway Asset Management team is reviewing NDOT's MIRE FDE mapping and discussing options for collecting the missing MIRE FDEs and adding the correct codes to the current MIRE FDE database elements.

Optional Attachments

Program Structure:

HSIP Process Document 2020.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.