NEBRASKA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2023 ANNUAL REPORT

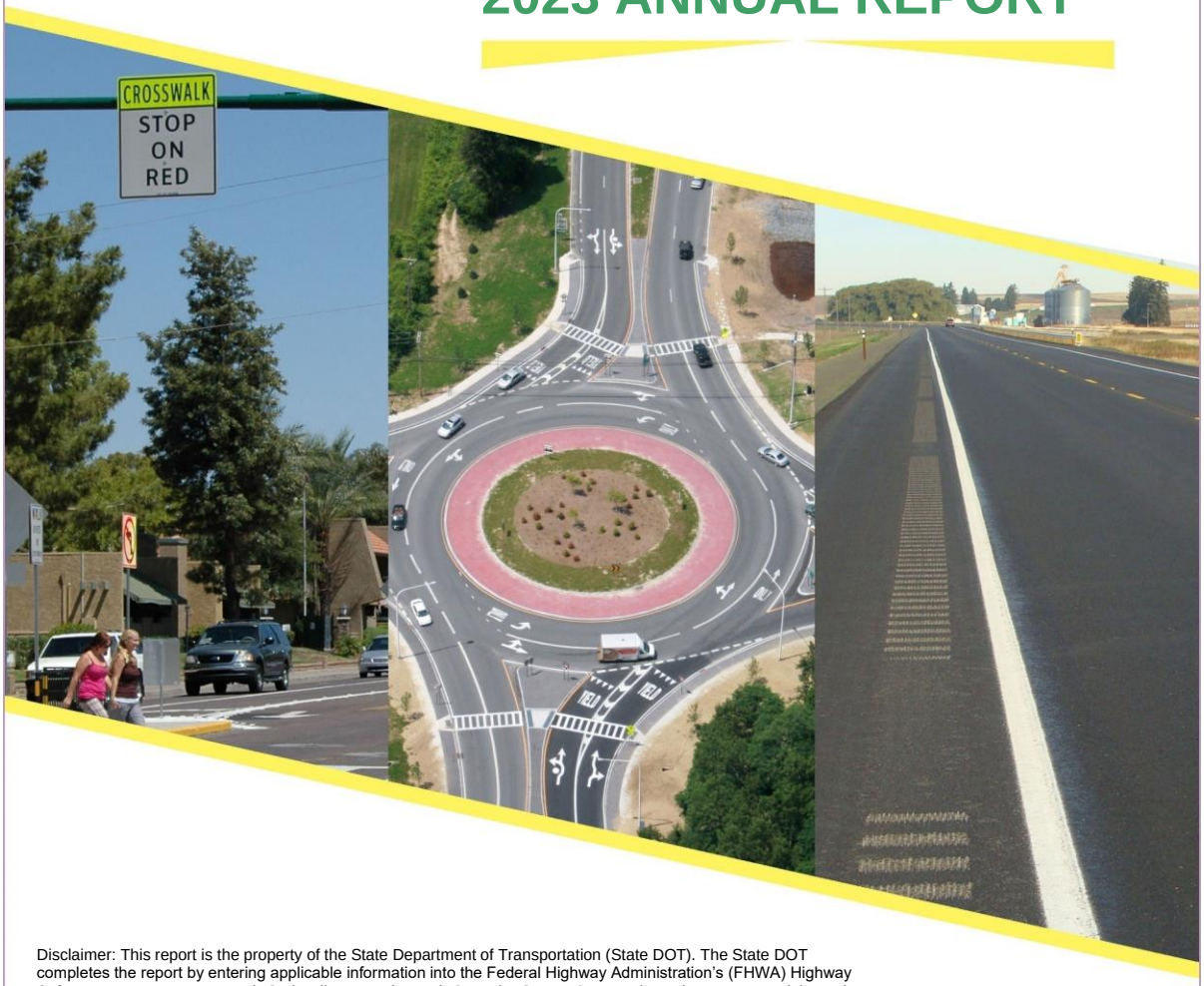

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Photo source: Federal Highway Administration

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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. 407 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 2023 (July 1, 2022 - June 30, 2023) was a successful year for the Nebraska HSIP Program. Approx. $6.5 million was obligated for 14 projects . 4 major new projects were let for bids of over $5.1 million in total. In addition, over $166 thousand was obligated for Preliminary Engineering, Right-Of-Way, and Utilities on 1 project that will be constructed in the future. Completed HSIP projects were shown to be somewhat effective , with 2 evaluations resulting in an overall Benefit-Cost Ratio of 1.5.

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 Division'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 Projects 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 SSIP for final approval and determination of funding splits. The committee also identifies projects on its own, especially systemic projects. The committee develops a five-year HSIP and RHCP Implementation Plan each year.

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, especially low-cost systemic projects.

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
- SHSP Emphasis Area Data

The NDOT has three committees that determine projects for HSIP funding. Project funding approvals are prioritized by benefit-cost ratio in a competitive statewide process. 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 analyses 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 committees 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 and the Nebraska Association of County Officials 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 $2.1 million in HSIP funds were spent on local projects in State FY 2023.

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 Section 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 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 if it is on a local road. These units work with Program Management to program and schedule the project and to make sure the project progresses through the scoping process. 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 restricted crossing intersections.

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 Association of County Officials

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. External partners attending the safety committee review crash locations, make suggestions for countermeasures, present project proposals, and agree to make low cost changes or do further studies at locations within their own jurisdiction. Delegates from other cities attend less often, but do attend when they have a project proposal to present.

LTAP has been an important partner for the High Risk Rural Roads committee and has consistently been involved in the development of safety project ideas. LTAP often serves as liaison with the individual counties, recruiting them to take part in systemic projects and safety training. The representative for the Nebraska Association of County Officials helps NDOT better see the picture from the county's point of view, provides insights in the county safety needs, and the viability of county participation in safety projects. 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.

Only partial Nebraska crash data is available for 2021-2022 as of the time of submittal of this report. NDOT HSIP processes have been using crash data through 2020 data for safety analysis. NDOT has been able to utilize 2021-2022 fatality and serious injury data for safety performance measure work.

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

A new crash report, which follows Version 5 of Model Minimum Uniform Crash Criteria, has been designed to work in conjunction with a new database. The project is projected to be completed by the end of 2023. NDOT selected AASHTOWare Safety as the NDOT's software for implementing Highway Safety Manual based Empirical Bayes crash prediction method to replace our crash history based high crash location analysis process. The new AASHTOWare Safety software is planned to be fully implemented by the end of 2023.

Program Methodology

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

Yes

The HSIP Process document was updated with new Critical Emphasis Area information from the most recent Nebraska SHSP update.

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	Exposure	Roadway

- All crashes
- Fatal and serious injury crashes only
- Volume
- Lane miles
- Horizontal curvature
- Roadside features
- Other-Traffic Control

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Probability of specific crash types

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
- Fatal and serious injury crashes only

Exposure

- Volume
- Lane miles

Roadway

- Other-Roadway Departure, Intersection, or other

What project identification methodology was used for this program?

- Crash frequency
- Crash rate
- Critical rate
- Probability of specific crash types
- 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?

39

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

- Clear Zone Improvements
- Other-Crash Investigation Sites to Reduce Secondary Crashes

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 crash prediction method safety analysis software to replace our crash history based high crash location analysis process.

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

Only partial Nebraska crash data is available for 2021-2022 as of the time of submittal of this report. NDOT HSIP processes have been using crash data through 2020 data for safety analysis. NDOT has been able to utilize 2021-2022 fatality and serious injury data for safety performance measure work.

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

Only partial Nebraska crash data is available for 2021-2022 as of the time of submittal of this report. NDOT HSIP processes have been using crash data through 2020 data for safety analysis. NDOT has been able to utilize 2021-2022 fatality and serious injury data for safety performance measure work.

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 most recent complete State Fiscal Year (July 1, 2022 to June 30, 2023).

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$14,831,000	$6,523,467	43.99%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$0	$0	0%
VRU Safety Special Rule (23 U.S.C. 148(g)(3))	$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	$1,605,000	$652,347	40.64%
Totals	$16,436,000	$7,175,814	43.66%

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

41%

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

33%

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

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

1%

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

3%

Nebraska non-infrastructure safety projects are for improving the crash database and safety analysis tools. This fiscal year NDOT obligated HSIP funds for one $50k education safety campaign under the new funding flexibility under IIJA.

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 2023.

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 annual implementation plan in place which should allow us to continue at this pace into the future. The HSIP Implementation Plan aligns our HSIP expenditures based on crash history, historical funding obligations, and safety improvement outcomes. At this point in time, we don't have any serious impediments to HSIP obligation.

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

NDOT averages approximately 75% HSIP obligation per year. To support a percentage of HSIP funding obligations closer to 100%, NDOT has started overprogramming the HSIP program by 30% higher than the annual HSIP allocation. This method of overprogramming builds backup safety projects that can be obligated when some safety projects don't make the programmed year.

NDOT has been comparing NDOT's policies and safety project selections with FHWA's Proven Safety Countermeasures to identify gaps in NDOT's implementation of these proven safety countermeasures. The review has lead to the increased installation of these safety improvements and an increase in the average benefit-cost of projects approved for HSIP funding.

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
00979 - HSIP Software Replacement	Miscellaneous	Data collection	1	Software Implementation	$4021754	$4646925	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	0	State Highway Agency	Systemic	Data	Safety Analysis
01018 - Peace Officer Crash Reporting System	Miscellaneous	Data collection	1	Software Implementation	$1329431	$1525580	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	0	State Highway Agency	Systemic	Data	Safety Analysis
01030 - AASHTOWare Safety Software	Miscellaneous	Data analysis	1	Software Implementation	$1022400	$1276002	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	0	State Highway Agency	Systemic	Data	Safety Analysis
01053 - FY23 Safety Education Campaign	Miscellaneous	Miscellaneous - other	1	Education Campaign	$44100	$49000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	0	State Highway Agency	Systemic	Young Drivers	Education Campaign
01060 - Vulnerable Road User Assessment	Pedestrians and bicyclists	Pedestrians and bicyclists – other	1	Safety Plan	$92044	$101248	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0	0	State Highway Agency	Systemic	Pedestrians	Strategic Planning
13244 - N 27th St, 'O' St - I-80, Lincoln	Advanced technology and ITS	Adaptive Signal Control System	17	Intersections	$2868827	$3187686	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	18,505	45	City or Municipal Highway Agency	Systemic	Intersections	Adaptive Signal Control Technology
13473 - 148th & Holdrege - Lancaster County	Intersection geometry	Add/modify auxiliary lanes	2	Approaches	$1298459	$1442734	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	4,830	55	County Highway Agency	Spot	Intersections	Intersection Improvements
22828 - Accident Investigation Sites, Omaha	Miscellaneous	Miscellaneous - other	10	Locations	$1918831	$2207234	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	157,385	65	State Highway Agency	Systemic	Secondary Crashes	Crash Investigation Sites
22856 - I-80 EB at I-680 Interchange, Omaha	Roadway	Pavement surface – high friction surface	0.55	Miles	$734357	$818402	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	81,080	65	State Highway Agency	Spot	Roadway Departure	High Friction Surface Treatment
42863 - Five Points Intersection, Grand Island	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$2640000	$4323858	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	18,250	30	City or Municipal Highway Agency	Spot	Intersections	Roundabout

2023 Nebraska Highway Safety Improvement Program

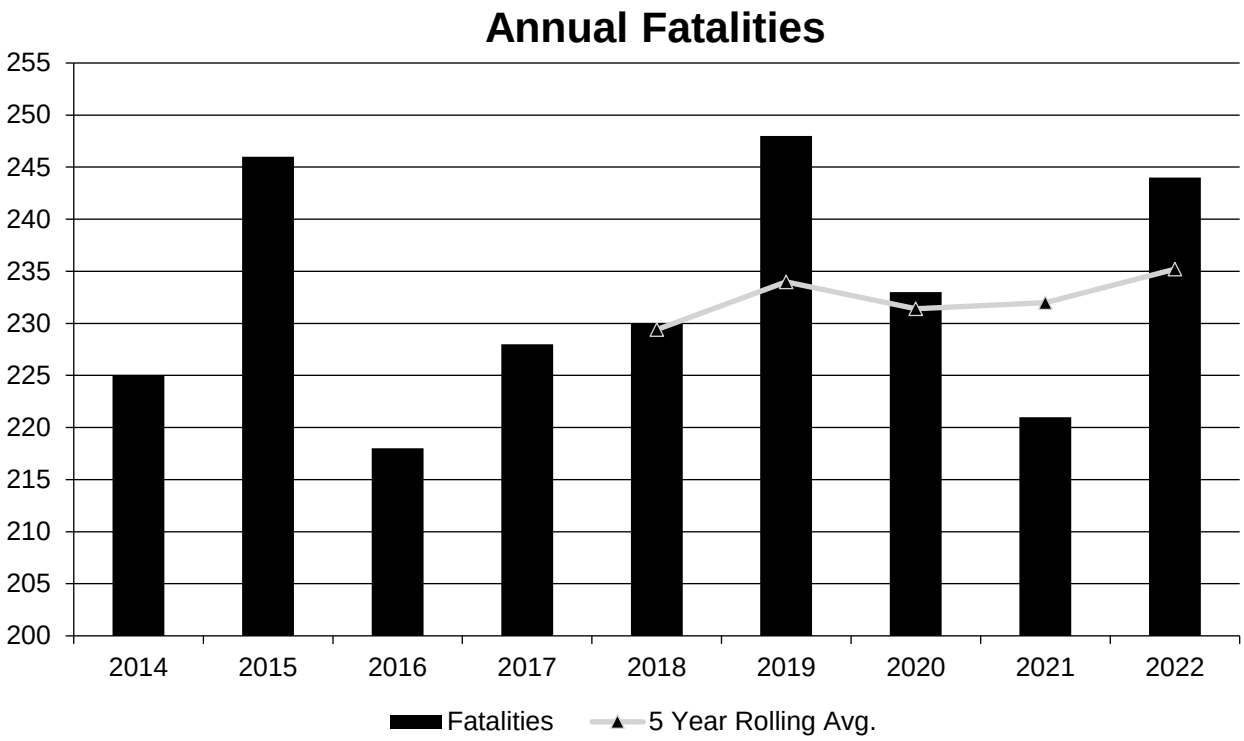
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
42911 - Grand Island Area Bridge	Roadway	Pavement surface – high friction surface	11	Locations	$1048377	$1175063	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	23,535	75	State Highway Agency	Spot	Roadway Departure	High Friction Surface Treatment
61457 - Lexington East Viaduct	Railroad grade crossings	Grade crossing elimination	1	Locations	$15872370	$21504570	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,441	55	County Highway Agency	Spot	Railroad Vehicle Crashes	Viaduct
61680 - Paxton East	Roadside	Increase clear zone – tangent	3	Locations	$430693	$518746	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	7,965	75	State Highway Agency	Systemic	Roadway Departure	Culvert Extension
61681 - Lexington East & West	Roadside	Increase clear zone – tangent	5	Locations	$772750	$883811	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	18,130	75	State Highway Agency	Systemic	Roadway Departure	Culvert Extension

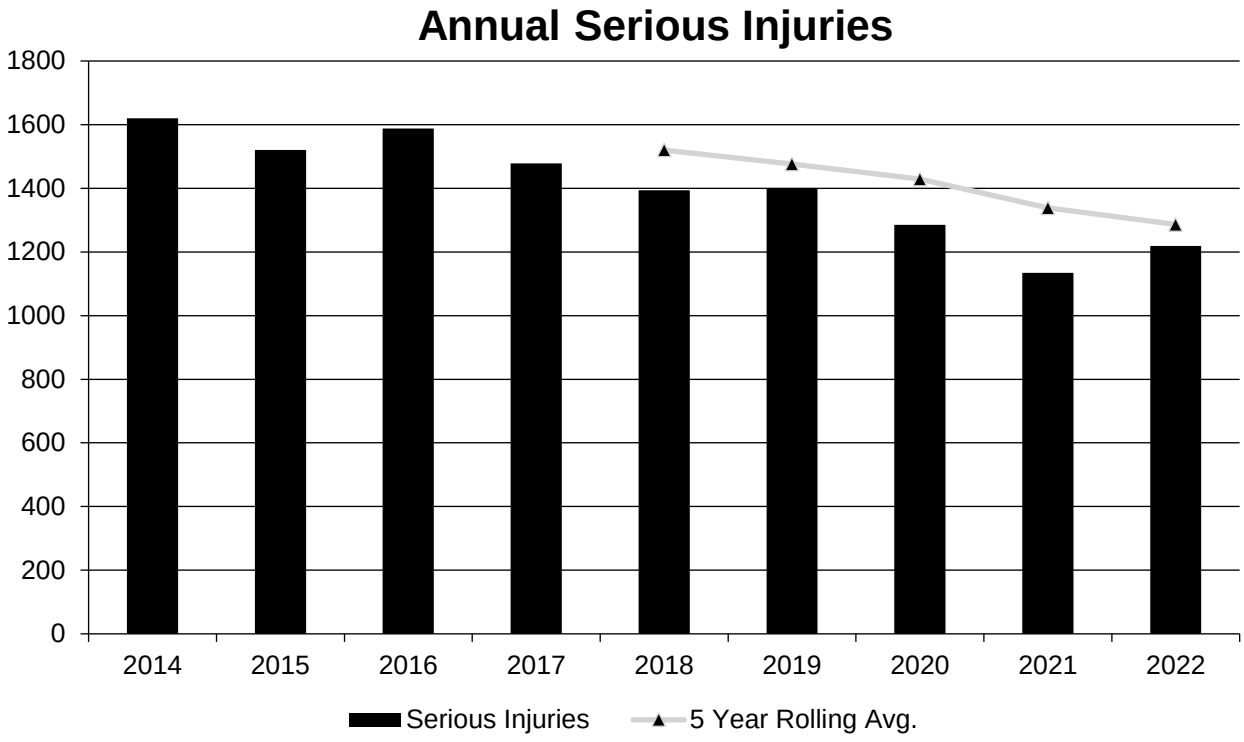
Safety Performance

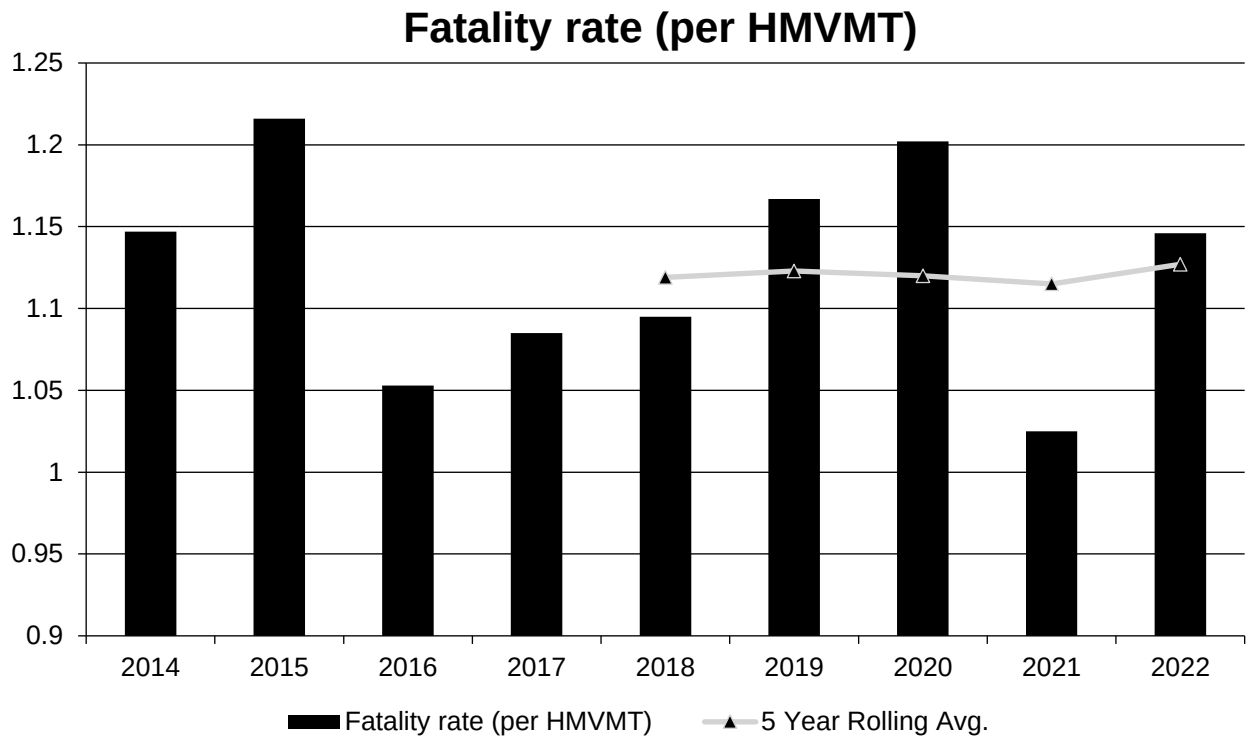
General Highway Safety Trends

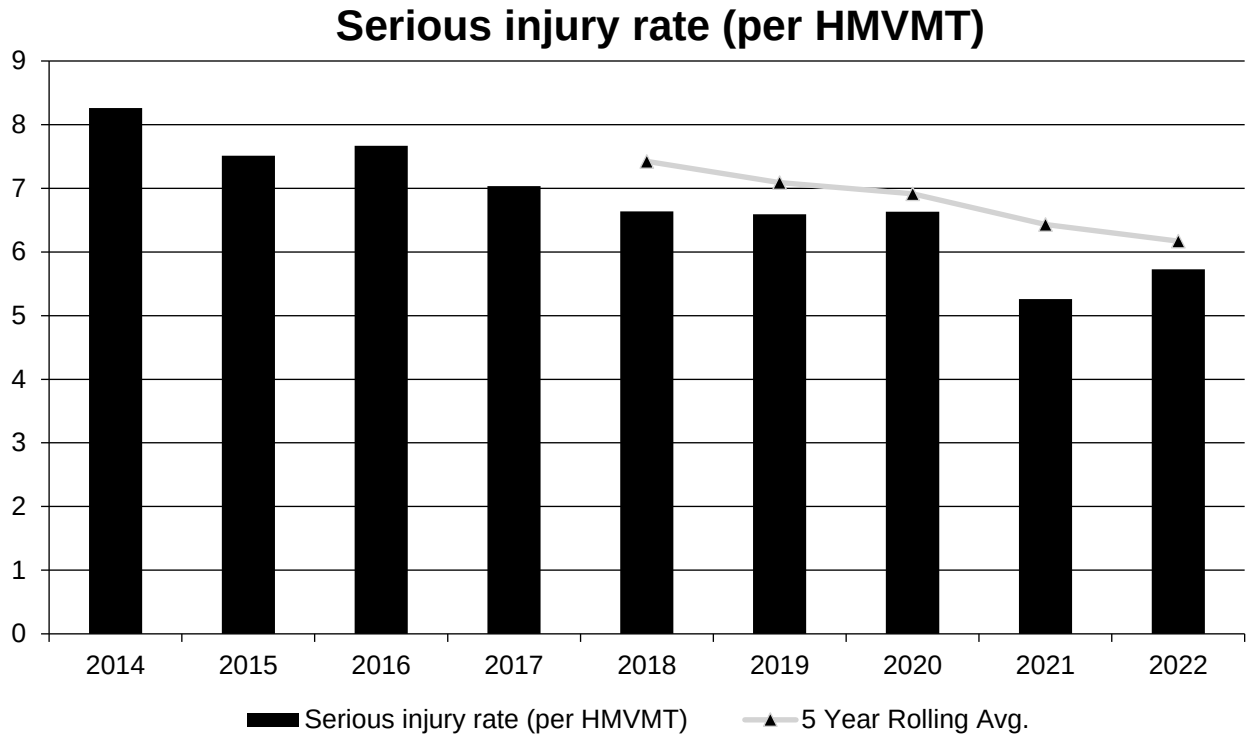
Present data showing the general highway safety trends in the State for the past five years.

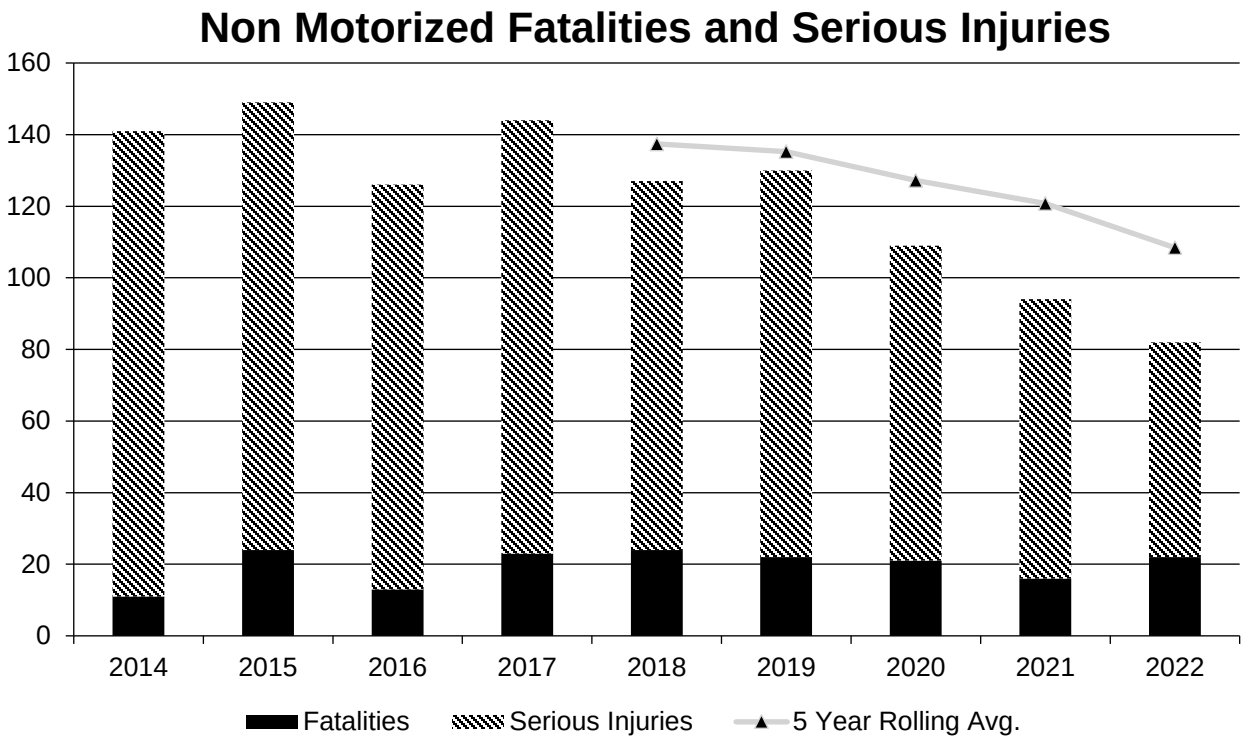
PERFORMANCE MEASURES	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fatalities	225	246	218	228	230	248	233	221	244
Serious Injuries	1,620	1,520	1,588	1,478	1,394	1,400	1,285	1,134	1,219
Fatality rate (per HMVMT)	1.147	1.216	1.053	1.085	1.095	1.167	1.202	1.025	1.146
Serious injury rate (per HMVMT)	8.260	7.514	7.668	7.034	6.639	6.591	6.631	5.261	5.726
Number non-motorized fatalities	11	24	13	23	24	22	21	16	22
Number of non-motorized serious injuries	130	125	113	121	103	108	88	78	60


Annual Fatalities
255
250
245
240
235
230
225
220
215
210
205
200
2014
2015
2016
2017
2018
2019
2020
2021
2022
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
1800
1600
1400
1200
1000
800
600
400
200
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.25
1.2
1.15
1.1
1.05
1
0.95
0.9
2014
2015
2016
2017
2018
2019
2020
2021
2022
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
9
8
7
6
5
4
3
2
1
0
2014
2015
2016
2017
2018
2019
2020
2021
2022
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



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 2022

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	23.8	52.8	0.79	1.75
Rural Principal Arterial (RPA) - Other Freeways and Expressways	6.8	49	0.68	4.92
Rural Principal Arterial (RPA) - Other	51	102.2	2.26	4.53
Rural Minor Arterial	38.6	118	1.63	4.98

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 Minor Collector	4.2	20.4	1.51	7.36
Rural Major Collector	21.8	106.2	1.49	7.25
Rural Local Road or Street	18.2	107	1.59	9.33
Urban Principal Arterial (UPA) - Interstate	6.6	57.6	0.41	3.57
Urban Principal Arterial (UPA) - Other Freeways and Expressways	5.8	57.8	0.48	4.73
Urban Principal Arterial (UPA) - Other	25.8	217.4	1.25	10.75
Urban Minor Arterial	18.8	209.2	0.75	8.38
Urban Minor Collector	0.4	6.6	1.02	16.85
Urban Major Collector	4.4	58.6	0.69	9.19
Urban Local Road or Street	9.6	86.2	0.75	6.72

Year 2022

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	159.4	633.2	1.2	4.76
County Highway Agency	37.8	221.4	1.58	9.27
Town or Township Highway Agency				
City or Municipal Highway Agency	38	397.8	0.73	7.63
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.

Safety Performance Targets

Safety Performance Targets

Calendar Year 2024 Targets *

Number of Fatalities:234.0

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:1168.0

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, the SHSP goal of reducing serious injuries will be advanced.

Fatality Rate:1.120

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 fatality rates 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:5.539

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, the SHSP goal of reducing serious injuries will be advanced.

Total Number of Non-Motorized Fatalities and Serious Injuries:96.8

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 SHSP goals of reducing fatalities and serious injuries will be advanced.

The 2024 HSIP targets match the 2024 HSP targets in the annual HSP plan created by the Nebraska Highway Safety Office.

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 2022 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	249.0	235.2
Number of Serious Injuries	1358.0	1286.4
Fatality Rate	1.270	1.127
Serious Injury Rate	6.323	6.170
Non-Motorized Fatalities and Serious Injuries	121.4	108.4

NDOT has made significant progress toward meeting the state's 2022 safety performance targets. NDOT met their target for 5 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 2022 safety performance targets.

Applicability of Special Rules

Does the VRU Safety Special Rule apply to the State for this reporting period?

No

The fatalities for vulnerable road users (VRUs) in 2021 was 16, and the total fatalities for 2021 was 221. The percent of fatalities in 2021 that were VRUs was 7%. Since the percent VRU fatalities of the total fatalities was less than 15 percent, the Special Rule does not apply to Nebraska.

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 1.737 fatalities per 100 million vehicle miles traveled for the 5-year period from 2015 to 2019. For the comparable 5-year period from 2017 to 2021, the fatality rate was 1.706 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	2016	2017	2018	2019	2020	2021	2022
Number of Older Driver and Pedestrian Fatalities	41	31	33	32	42	38	32
Number of Older Driver and Pedestrian Serious Injuries	233	154	129	139	122	109	113

The fatality and serious injury rate for the 5-year period of 2017 to 2021 was 54.1. For the comparable 5-year period from 2015 to 2019, the fatality and serious injury rate was 69.6. 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 2023. The combined benefit-cost ratio for all the HSIP projects evaluated during this year was 1.5. 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. Nebraska fatality numbers have fluctuated up and down in recent years. 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 edgeline/centerline/shoulder rumble strips/stripes, surface shoulders, and safety edge. We are also piloting a modular roundabout with state funds that could be more cost effective and accomplish a similar reduction in crashes.

Describe significant program changes that have occurred since the last reporting period.

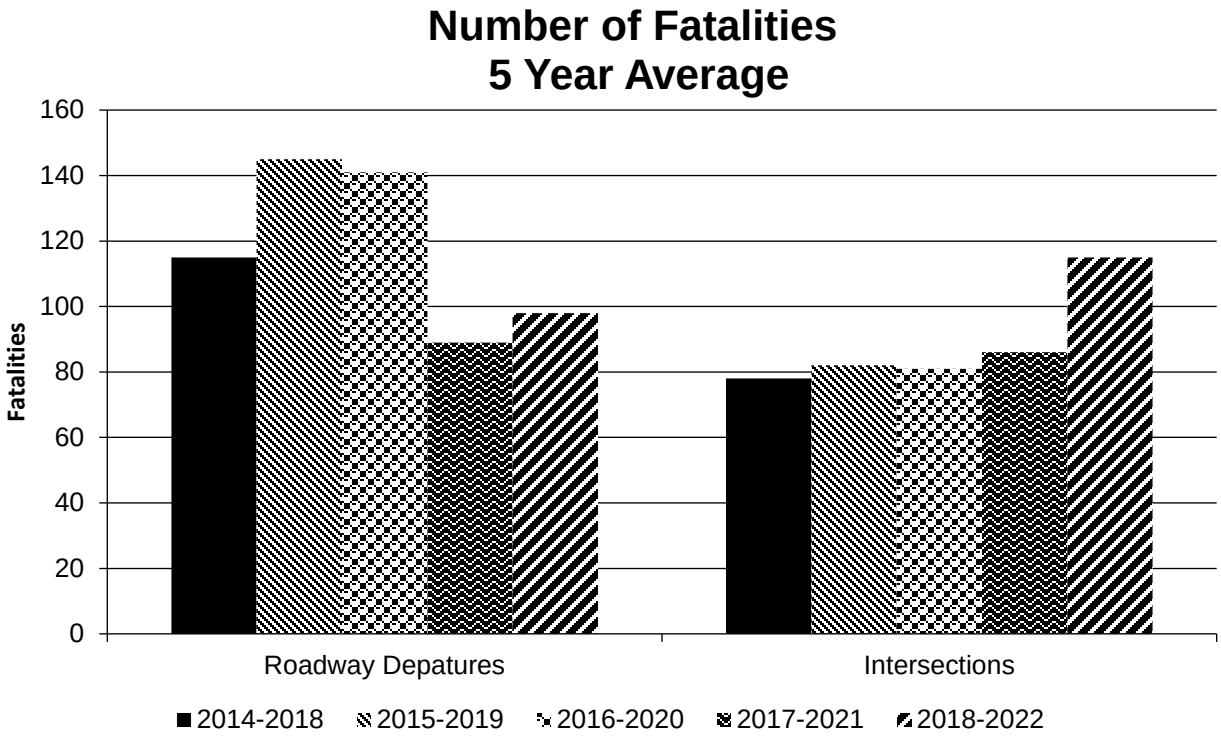
NDOT implemented a marked crosswalk pedestrian safety countermeasure matrix review during the scoping process of all 3R and new construction projects. This process will improve pedestrian safety as part of typical construction projects without requiring HSIP funded standalone projects.

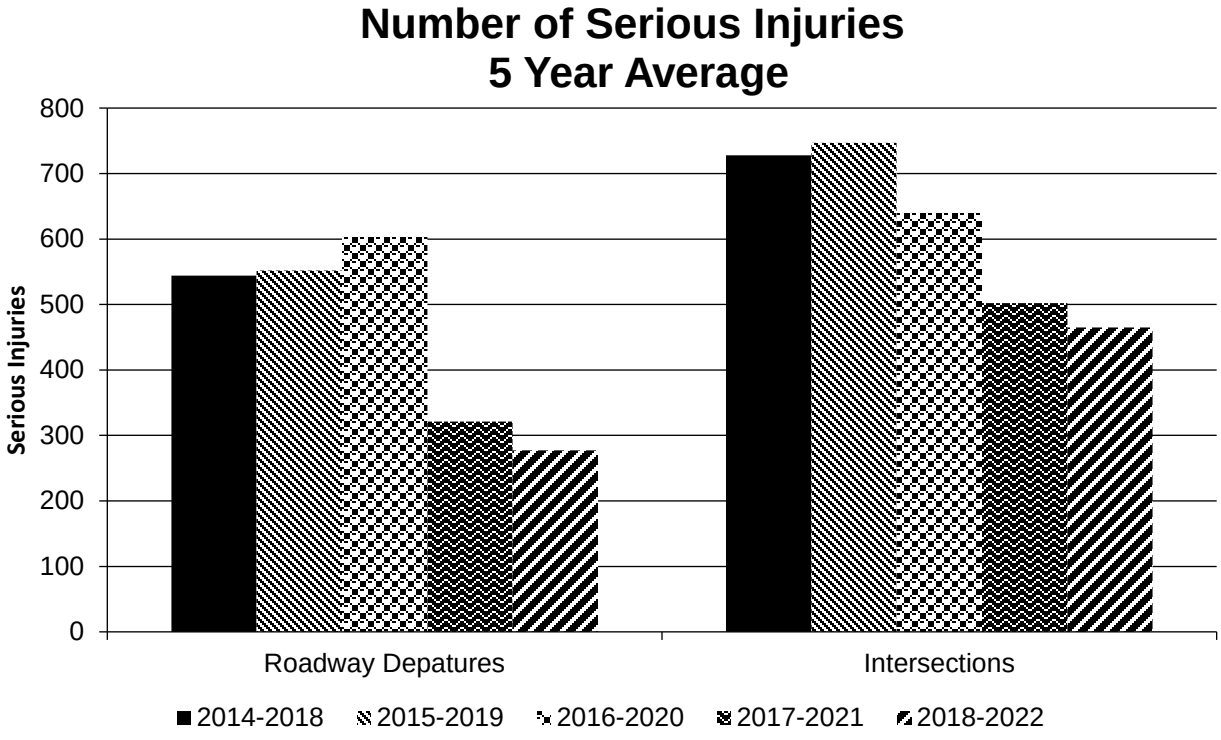
Effectiveness of Groupings or Similar Types of Improvements

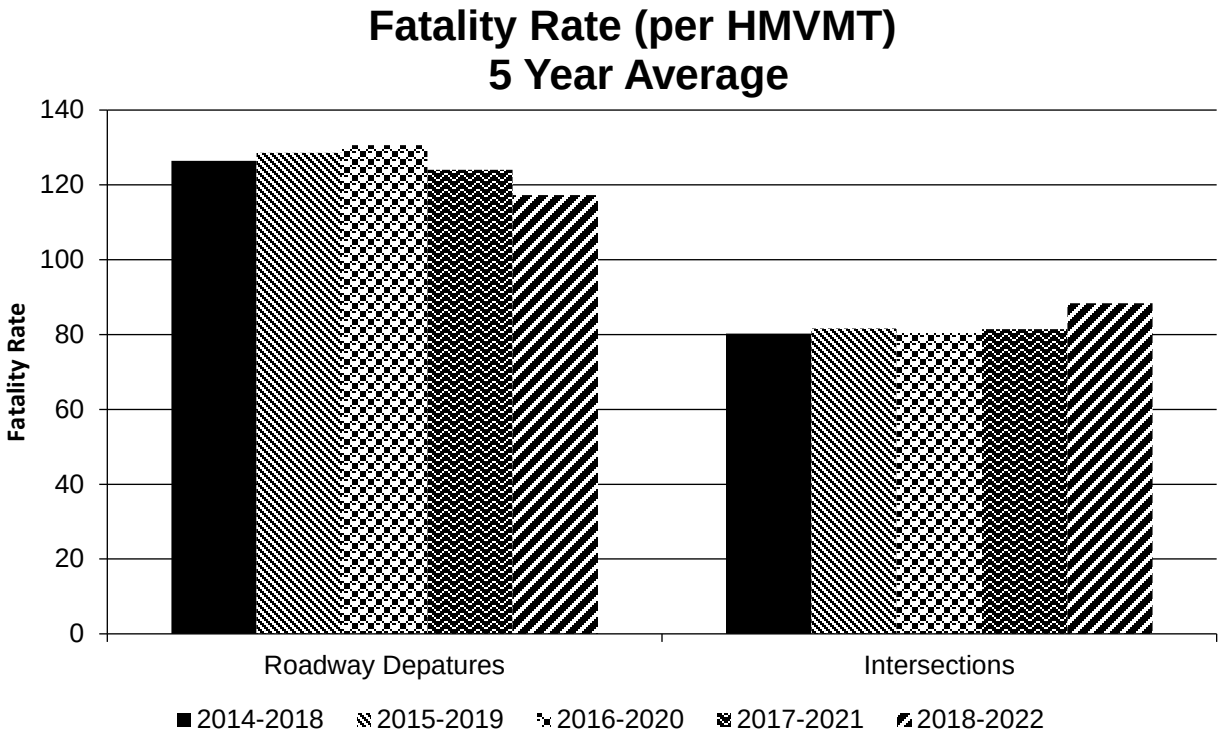
Present and describe trends in SHSP emphasis area performance measures.

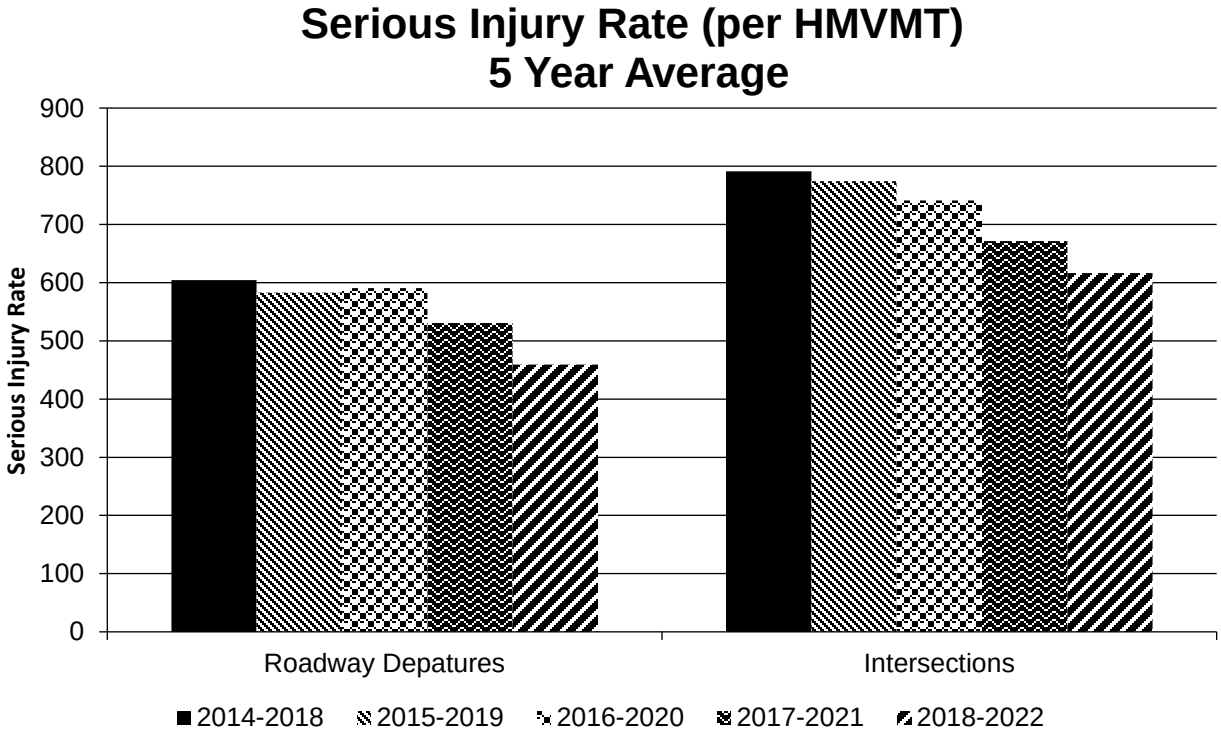
Year 2022

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 Depatures	Run-off-road	98	277	117.3	459.4
Intersections	Intersections	115	465	88.4	616.4


Number of Fatalities
5 Year Average
Fatalities
160
140
120
100
80
60
40
20
0
Roadway Depatures
Intersections
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022


Number of Serious Injuries
5 Year Average
Serious Injuries
800
700
600
500
400
300
200
100
0
Roadway Depatures
Intersections
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022


Fatality Rate (per HMVMT)
5 Year Average
Fatality Rate
140
120
100
80
60
40
20
0
Roadway Depatures
Intersections
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022


Serious Injury Rate (per HMVMT)
5 Year Average
Serious Injury Rate
900
800
700
600
500
400
300
200
100
0
Roadway Depatures
Intersections
2014-2018
2015-2019
2016-2020
2017-2021
2018-2022

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)
Saunders County – Intsx US-77 & Co Rd 'W'	Rural Principal Arterial (RPA) - Other	Intersection geometry	Add/modify auxiliary lanes					2.00		2.00		4.00		7.8
Saunders County - Intx N-66 & Co Rd 4 & Co Rd 'C'	Rural Major Collector	Intersection geometry	Intersection realignment		3.00					2.00		2.00	3.00	0.0

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?

09/01/2022

What are the years being covered by the current SHSP?

From: 2017 To: 2026

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

2026

NDOT plans to complete the Vulnerable Road User assessment by November 15, 2023. The Nebraska VRU assessment will be published as an appendix to the 2022-2026 Nebraska SHSP.

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	65	100	99
	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	65		
	Begin Point Segment Descriptor (10) [10]	100	100					100	65	100	99
	End Point Segment Descriptor (11) [11]	100	100					100	65	100	99
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	100	100								
	Functional Class (19) [19]	100	100					100	100	100	100

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Median Type (54) [55]	100	100								
	Access Control (22) [23]	100	100								
	One/Two Way Operations (91) [93]	100	100								
	Number of Through Lanes (31) [32]	100	100					100	65		
	Average Annual Daily Traffic (79) [81]	100	100					100	1		
	AADT Year (80) [82]	100	100								
	Type of Governmental Ownership (4) [4]	100	100					100	100	100	100
INTERSECTION	Unique Junction Identifier (120) [110]			98	95						
	Location Identifier for Road 1 Crossing Point (122) [112]			98	95						
	Location Identifier for Road 2 Crossing Point (123) [113]			98	95						
	Intersection/Junction Geometry (126) [116]			98	95						
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]			98	95						
	AADT Year (80) [82]			98	95						
	Unique Approach Identifier (139) [129]			98	95						
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					100	100				
	Location Identifier for Roadway at					98					

ROAD TYPE	*MIRE NAME (MIRE NO.)	NON LOCAL PAVED ROADS - SEGMENT		NON LOCAL PAVED ROADS - INTERSECTION		NON LOCAL PAVED ROADS - RAMPS		LOCAL PAVED ROADS		UNPAVED ROADS	
		STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE	STATE	NON-STATE
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					98					
	Ramp Length (187) [177]					98					
	Roadway Type at Beginning of Ramp Terminal (195) [185]					98					
	Roadway Type at End Ramp Terminal (199) [189]					98					
	Interchange Type (182) [172]					100	100				
	Ramp AADT (191) [181]					100	50				
	Year of Ramp AADT (192) [182]					100	50				
	Functional Class (19) [19]					98					
	Type of Governmental Ownership (4) [4]					98					
Totals (Average Percent Complete):		**100.00**	**100.00**	**85.75**	**83.13**	**98.73**	**27.27**	**100.00**	**69.56**	**100.00**	**99.40**

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

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

We are continuing to inventory ramps and add them to the database. We have inventoried 95% 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 2022.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.