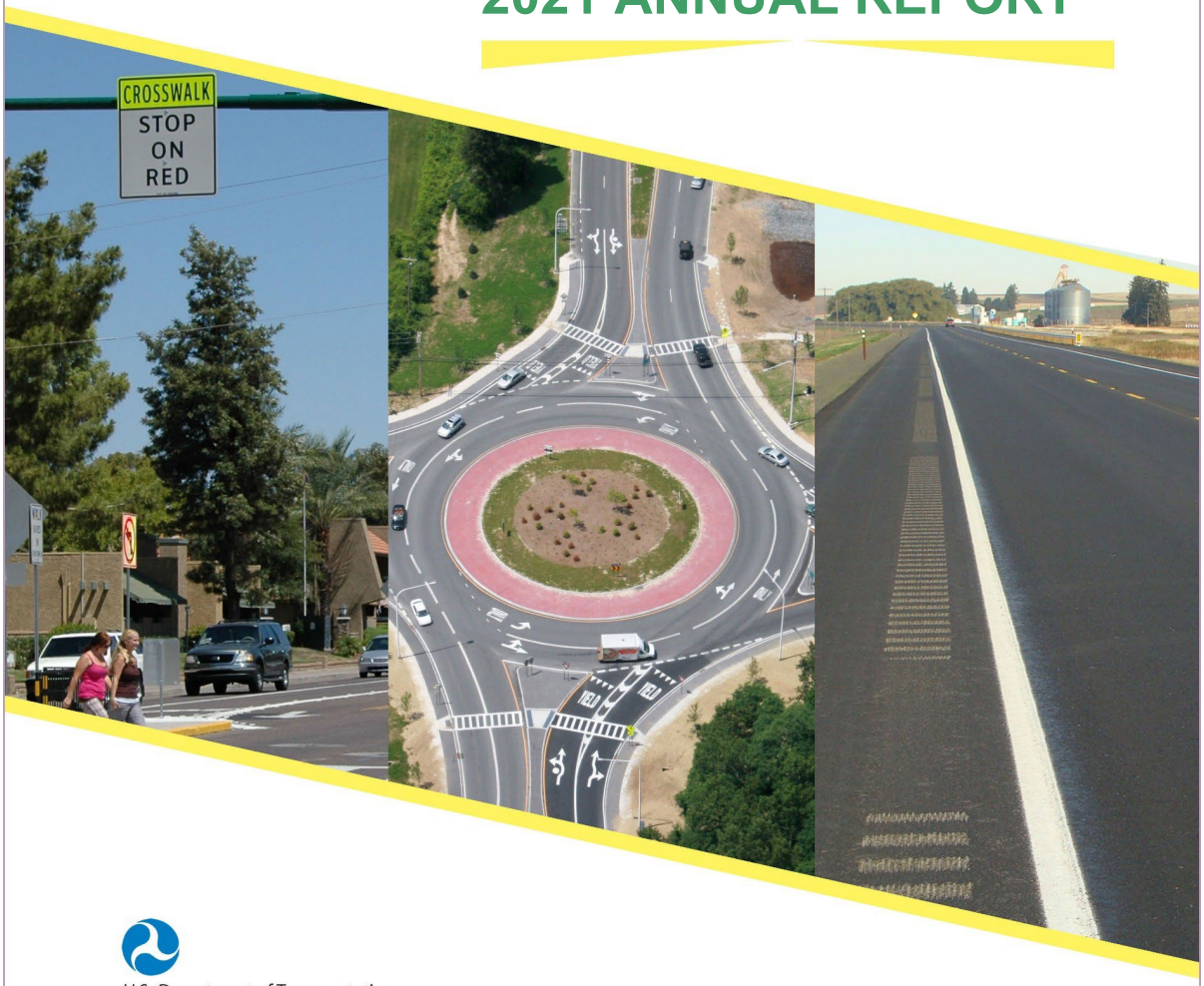
NORTH DAKOTA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2021 ANNUAL REPORT



U.S. Department of Transportation
Federal Highway Administration

Photo source: Federal Highway Administration

Table of Contents

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Protection of Data from Discovery Admission into Evidence

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

23 U.S.C. 148(h)(4) states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for any purpose relating to this section[HSIP], shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location identified or addressed in the reports, surveys, schedules, lists, or other data.23 U.S.C. 409 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

The North Dakota HSIP is administered through the Programming Division in the North Dakota Department of Transportation (NDDOT). Safety investments are based on the state's current Strategic Highway Safety Plan (SHSP). The current SHSP document is called ND Vision Zero Plan and has six priority emphasis areas:

- Lane departure
- Intersections
- Alcohol and/or drug related
- Unbelted vehicle occupants
- Speeding/aggressive driving
- Young drivers

Safety projects are developed by a reactive process (high crash listings, road safety reviews, fatal crash review teams) and a systemic process (local road safety plans). Project solicitation takes place every fall and HSIP applications are submitted from local agencies and NDDOT district offices. Projects are reviewed for eligibility and are then prioritized into the Statewide Transportation Improvement Program (STIP).

The evaluation of past safety projects is based on the fatality and serious injury data (presented in this report). In 2020 the vehicle-miles traveled dropped while the overall number of fatalities remained the same as in 2019. The number of serious injuries has increased. NDDOT is examining the data and are looking at what adjustments are needed in order to return to the downward trend we've seen in the last few years.

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 NDDOT solicits state and local agencies to submit safety project applications each year. Potential projects are identified through the traditional "reactive" approach that address high crash locations, fatal crash locations or areas where road safety reviews took place. Projects are also developed using a "systemic" approach that apply low-cost treatments over a large area. The NDDOT central office reviews applications and selects/prioritizes. After projects are programmed, they get designed and implemented with the same process as regular federally funded transportation projects. Overall evaluation of the program is done though monitoring of the fatal and serious injury statistics as part of this annual report.

Where is HSIP staff located within the State DOT?

Other-Programming

The Office of Transportation Programs at NDDOT has HSIP staff within the "Programming" division.

How are HSIP funds allocated in a State?

- Central Office via Statewide Competitive Application Process

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

The NDDOT addresses safety on local and tribal roads through the Local Road Safety Program (LRSP). Local public agencies and tribal nations can also submit applications for non-LRSP safety projects each year during the solicitation period. Selection of local and tribal road projects use the same methodology as State roads.

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
- Planning
- Traffic Engineering/Safety
- Other-Safety Division, Local Government

Describe coordination with internal partners.

Design

The Design Division is included in the distribution of the high crash listings. All road safety reviews require at least one member of the Design Division. Their participation and review of at-risk locations helps in the development of potential project countermeasures.

Planning

The Planning Division provides data for the development of the HSIP. Roadway features are collected and maintained in the Planning Division include: traffic volume, truck volumes, traffic projections, roadway features, roadway viewer (for state highways) and mapping. The Planning Division is also included in the distribution of the high crash listings.

Safety Highway Safety Office (SHSO)

The SHSO is the lead entity for the State's Strategic Highway Safety Plan (SHSP) and involves law enforcement and other partners in the process. In North Dakota, the behavioral strategies in the SHSP are largely funded through the National Highway Traffic Safety Administration (NHTSA) funds with funding going to various traffic safety partners including law enforcement agencies statewide for overtime enforcement of traffic safety laws. The SHSP process drives HSIP project priorities. Infrastructure strategies in the North Dakota SHSP are largely funded through HSIP and deployed through the State's Local Road Safety Program (LRSP) and State Road Safety Program (SRSP). These programs identify proven, low-cost road safety strategies and prioritize the road safety strategies for implementation at identified at-risk locations on the local and state road systems.

Local Government

Members of the Local Government Division provide project development through city, county and tribal agencies. The local government assists in the solicitation of safety projects. They also participate in road safety reviews.

Identify which external partners are involved with HSIP planning.

- Academia/University
- FHWA
- Law Enforcement Agency
- Local Government Agency
- Local Technical Assistance Program
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Tribal Agency
- Other-and other traffic safety advocates/partners

Describe coordination with external partners.

All the entities are involved at SHSP at some level (Executive Leadership Team, SHSP Steering Committee, SHSP Implementation Team or general SHSP stakeholder).

Regional Planning Organizations: North Dakota has 3 MPO's that must approve any HSIP applications that are submitted by their respective cities. The MPO's were also included in the team that developed the ND Local Road Safety Program (LRSP).

Local Government Agency, Tribal Agency: The cities, counties, and tribal agencies are solicited each year for potential safety projects. They are encouraged to submit projects directly from the LRSP or at high crash locations.

Law Enforcement Agency: Law enforcement and HSIP personnel are extensively involved in North Dakota's SHSP process. The Programming Division Director serves on the SHSP Steering Committee and as chairperson for two SHSP emphasis area teams (Lane Departure and Intersection implementation Teams). Law enforcement serve at all levels of the SHSP including the SHSP Executive Leadership Team, the SHSP Steering Committee and SHSP Implementation Teams.

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

Schedule for HSIP requests:

- Fall – send out HSIP solicitation letter, HSIP application forms (SFN 59959) are due by the end of the year
- Winter – NDDOT analysis of HSIP requests and Draft HSIP project listing
- Spring – verify the construction year for previously approved projects
- Summer – finalize HSIP project listing, send responses out on approvals (or non-approvals) for the HSIP applications and send out high crash location lists/maps
- August 31st – Final HSIP project list due to FHWA, HSIP online reporting due

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.

- HSIP (no subprograms)

Program: HSIP (no subprograms)

Date of Program Methodology:3/1/2017

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• All crashes	• Traffic	• Horizontal curvature

What project identification methodology was used for this program?

- Crash frequency
- Equivalent property damage only (EPDO Crash frequency)
- Other-Systemic

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

Yes

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

Yes

How are projects under this program advanced for implementation?

- 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

Available funding:1

What percentage of HSIP funds address systemic improvements?

53

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

- Cable Median Barriers
- Horizontal curve signs
- Install/Improve Lighting
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Rumble Strips
- Traffic Control Device Rehabilitation

What process is used to identify potential countermeasures?

- Crash data analysis

- Engineering Study
- Road Safety Assessment
- SHSP/Local road safety plan
- Stakeholder input
- Other-National Cooperative Highway Research Program (NCHRP) and other evidence-based practices

Does the State HSIP consider connected vehicles and ITS technologies?

Yes

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

The NDDOT has implemented the ITS technology of ICWS (Intersection Conflict Warning Systems). An upcoming HSIP project is proposed to install environmental sensor stations (ESS) to show messages on message boards and possibly to vehicles (V2i).

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

No

NDDOT is currently working on integrating the HSM into its HSIP process using AASHTO software.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

Federal Fiscal Year
2021 Federal Fiscal Year (Oct 1, 2020 through Aug 9, 2021)

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$14,145,000	$15,537,966	109.85%
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)	$4,940,094	$4,940,094	100%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$0	$0	0%
State and Local Funds	$0	$0	0%
Totals	$19,085,094	$20,478,060	107.3%

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

$4,661,000

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

$6,590,608

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

$483,000

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

$225,000

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?

$6,376,358

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

None

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
21884: Grand Forks 32nd Ave S	Intersection geometry	Add/modify auxiliary lanes	8	Intersections	$5439000	$60043000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	17,000	40	City or Municipal Highway Agency	Spot	Intersections	
22835: Bismarck Century Ave Positive Left Turns	Intersection geometry	Add/modify auxiliary lanes	2	Intersections	$770000	$856000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	12,000	35	City or Municipal Highway Agency	Spot	Intersections	
22442: Median Barrier: I-94, W of Sunset Dr to E of Mandan Ave	Roadside	Barrier – cable	3.1	Miles	$776000	$862000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	27,000	60	State Highway Agency	Systemic	Roadway Departure	
22260: US 2 at Turtle River State Park	Intersection geometry	Add/modify auxiliary lanes	2	Intersections	$437000	$486000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	6,000	70	State Highway Agency	Spot	Intersections	
21875: Mountrail Co 21 - skid surfacing	Roadway	Pavement surface – high friction surface	1	Approaches	$23000	$26000	HSIP (23 U.S.C. 148)	Rural	Major Collector	850	45	County Highway Agency	Spot	Intersections	
21876: Cass Co 5 & Cass Co 10 - Radial-T	Intersection geometry	Intersection realignment	1	Intersections	$694000	$771000	HSIP (23 U.S.C. 148)	Rural	Major Collector	400	55	County Highway Agency	Spot	Intersections	
23058: Bismarck Restriping - Interstate Ave, 26th St	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	3.05	Miles	$504000	$560000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	0		City or Municipal Highway Agency	Systemic	Intersections	
22440: Median Barrier: I-194, S of I-94 to Memorial Hwy	Roadside	Barrier – concrete	0.6	Miles	$2587000	$2874000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	18,000	55	State Highway Agency	Systemic	Roadway Departure	
22441: Median Barrier: ND	Roadside	Barrier – concrete	0.4	Miles	$1462000	$1624000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	18,000	55	State Highway Agency	Systemic	Roadway Departure	

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
810, Memorial Hwy to McKenzie Dr															
23062: Various US/State Hwys Pvmt Markings - Bismarck Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$714000	$793000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
23064: Various US/State Hwys Pvmt Markings - Valley City Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$714000	$793000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
22190: ND 200 & ND 49 Roundabout	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$769000	$854000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	4,420	65	State Highway Agency	Spot	Intersections	
22831: US 12, W of 3rd Ave SE	Intersection geometry	Add/modify auxiliary lanes	3	Intersections	$513000	$570000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	2,600	35	State Highway Agency	Spot	Intersections	
22620: Killdeer Ped Crossing on ND 22	Pedestrians and bicyclists	Rapid Rectangular Flashing Beacons (RRFB)	1	Crosswalks	$41000	$46000	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	2,675	25	State Highway Agency	Spot	Intersections	
23068: Various US/State Hwys Pvmt Markings - Dickinson Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$1007000	$1119000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
23069: Various US/State Hwys Pvmt Markings - Grand Forks Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$818000	$909000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
22627: 38th St S & I-29 Ramp SB Ramp	Intersection geometry	Add/modify auxiliary lanes	1	Intersections	$510000	$567000	HSIP (23 U.S.C. 148)	Urban	Major Collector	10,100	35	City or Municipal Highway Agency	Spot	Intersections	

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
23071: Various US/State Hwys Pvmt Markings - Fargo Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$939000	$1043000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
23063: Various Hys - Standing Rock Reservation	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$46000	$46000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
22836: Bismarck 7th & 9th St - RRFBs	Pedestrians and bicyclists	Rapid Rectangular Flashing Beacons (RRFB)	4	Intersections	$300000	$334000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	12,000	25	State Highway Agency	Spot	Intersections	
23065: Various US/State Hwys Pvmt Markings - Devils Lake Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$826000	$918000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
23066: Various Hwys - Spirit Lake Reservation	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$12000	$12000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
21872: Guardrail on Bottineau Co. Bridge	Roadside	Barrier- metal	1	Locations	$311000	$346000	HSIP (23 U.S.C. 148)	Rural	Major Collector	430	45	County Highway Agency	Spot	Roadway Departure	
23060: Williams County Roads	Roadway	Rumble strips – edge or shoulder	45.5	Miles	$0	$0	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		County Highway Agency	Systemic	Roadway Departure	
23067: Various US/State Hwys Pvmt Markings - Minot Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$1064000	$1182000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
22768: Burke Co 11 & 16 - Grade Raise	Alignment	Vertical alignment or elevation change	1	Locations	$0	$0	HSIP (23 U.S.C. 148)	Rural	Major Collector	0		County Highway Agency	Spot	Roadway Departure	

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
23070: Various US/State Hwys Pvmt Markings - Williston Dist	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$1431000	$1590000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
23072: Various Hwys - Fort Berthold Reservation	Roadway delineation	Longitudinal pavement markings - remarking	1	Locations	$405000	$405000	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	
23121: Wells County - 3 St SE Inslope Repair	Roadside	Roadside grading	0.33	Miles	$0	$0	HSIP (23 U.S.C. 148)	Rural	Major Collector	70		County Highway Agency	Spot	Roadway Departure	
22829: Minot--US 2/52 from Burdick to Evergreen Ave	Intersection geometry	Intersection geometry - other	1	Intersections	$1360000	$1511000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	18,300	50	State Highway Agency	Spot	Intersections	
23056: Grand Forks School Flashing Beacons	Pedestrians and bicyclists	Pedestrian beacons	22	Crosswalks	$630000	$700000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		City or Municipal Highway Agency	Systemic	Intersections	
22715: Stanley Ped Crossings	Pedestrians and bicyclists	Pedestrian warning signs	41	Crosswalks	$0	$0	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		City or Municipal Highway Agency	Spot	Intersections	
21874: Charlie Bob Creek Road	Alignment	Horizontal and vertical alignment	0.62	Miles	$1029155	$1143506	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	70		Town or Township Highway Agency	Spot	Roadway Departure	
22550: Grand Forks Traffic Signals - Leading Pedestrian Intervals	Pedestrians and bicyclists	Leading pedestrian interval	18	Intersections	$56000	$62000	HSIP (23 U.S.C. 148)	Urban	Multiple/Varies	0		City or Municipal Highway Agency	Spot	Intersections	
22651: Statewide crash report evaluation	Miscellaneous	Data analysis	1	Locations	$142000	$175000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Spot	Data	

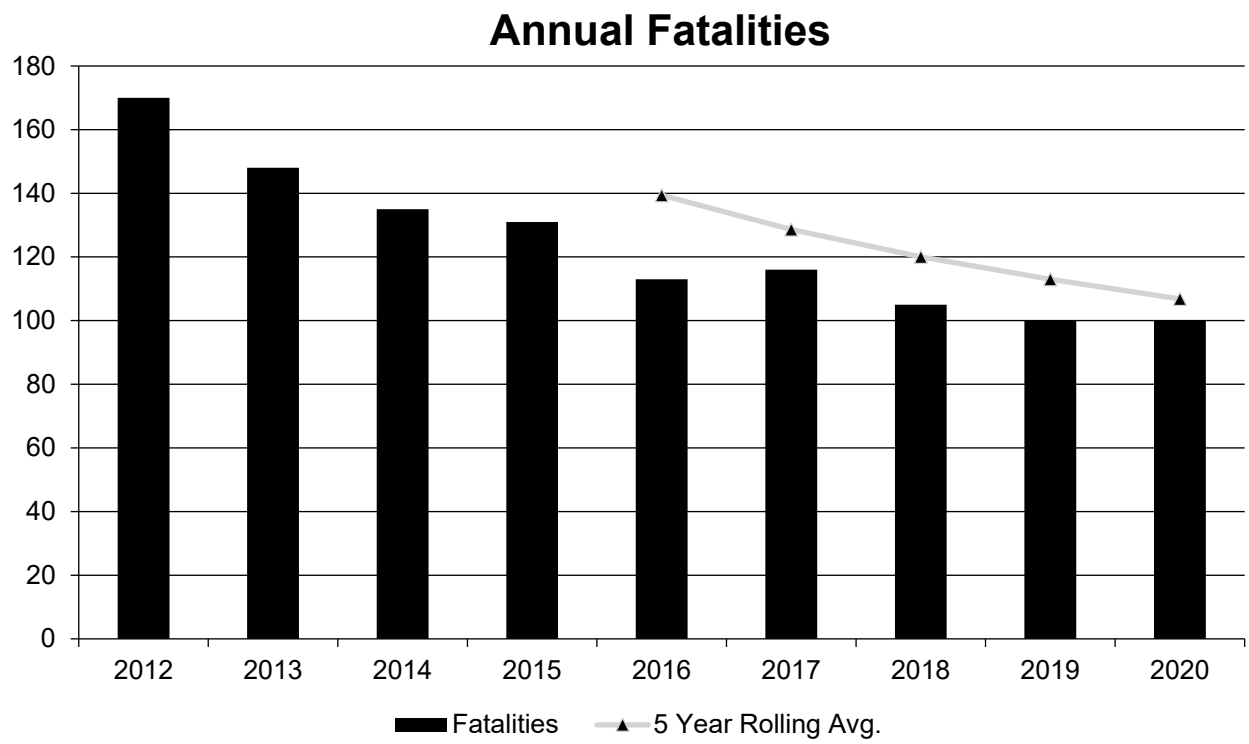
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
22892: Pavement Marking Data Collection	Miscellaneous	Data collection	1	Locations	$45000	$50000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Spot	Data	
23094: Statewide crash report evaluation	Miscellaneous	Data analysis	1	Locations	$0	$0	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency			

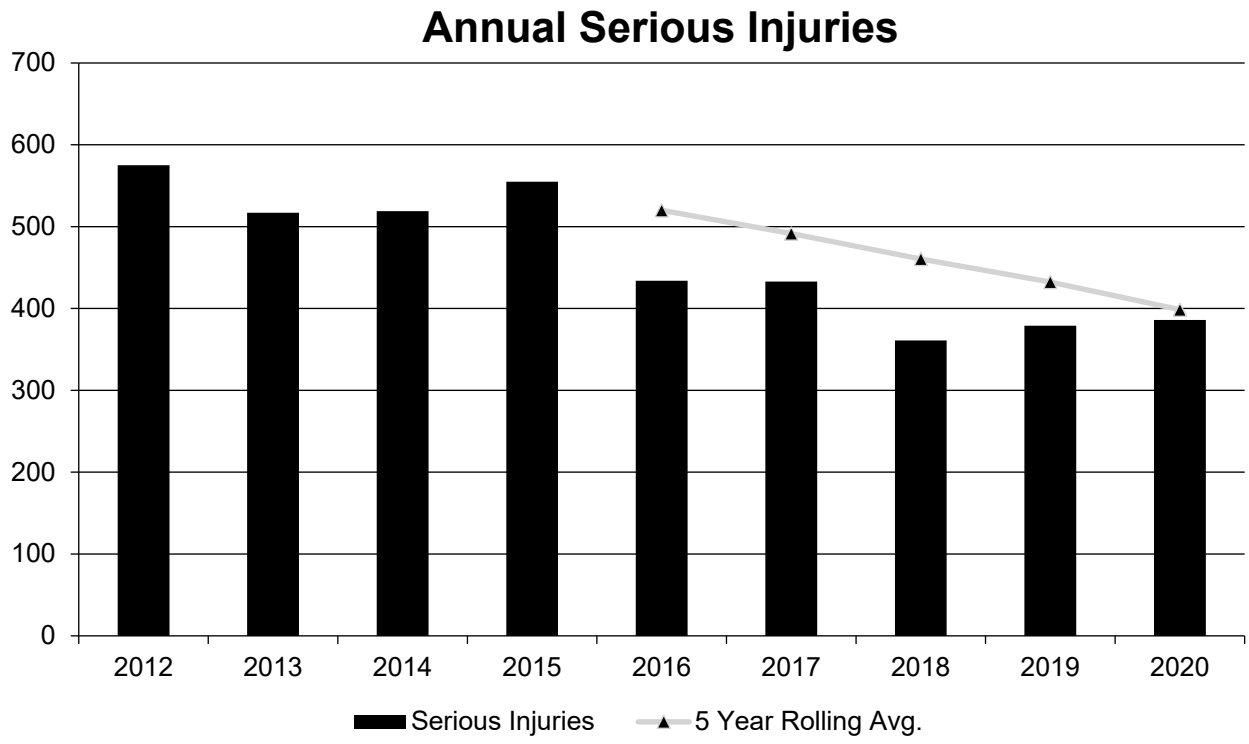
Safety Performance

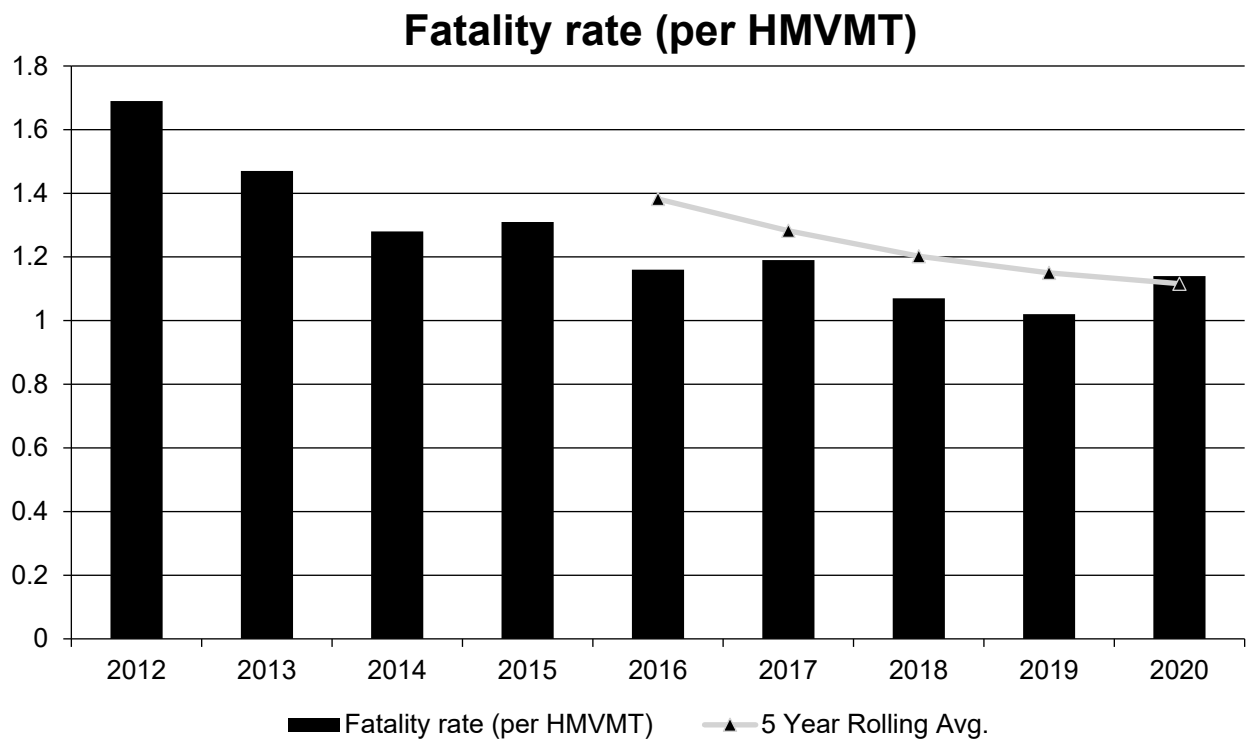
General Highway Safety Trends

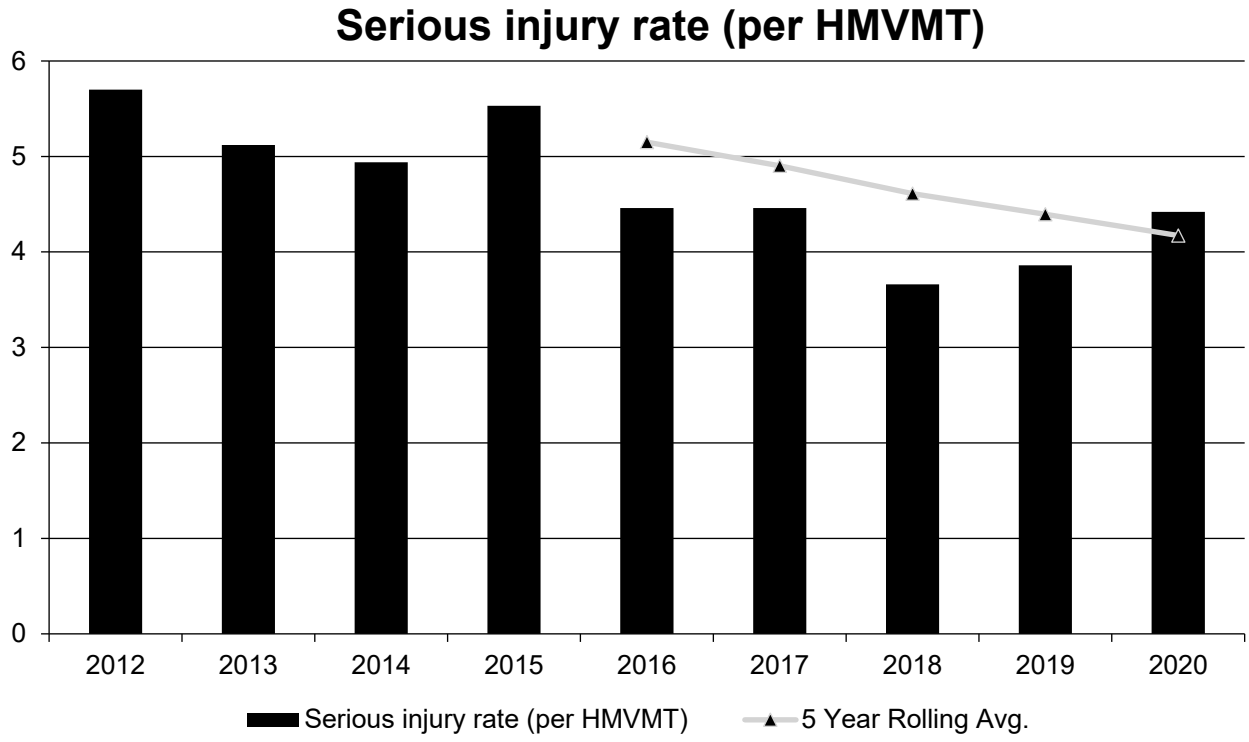
Present data showing the general highway safety trends in the State for the past five years.

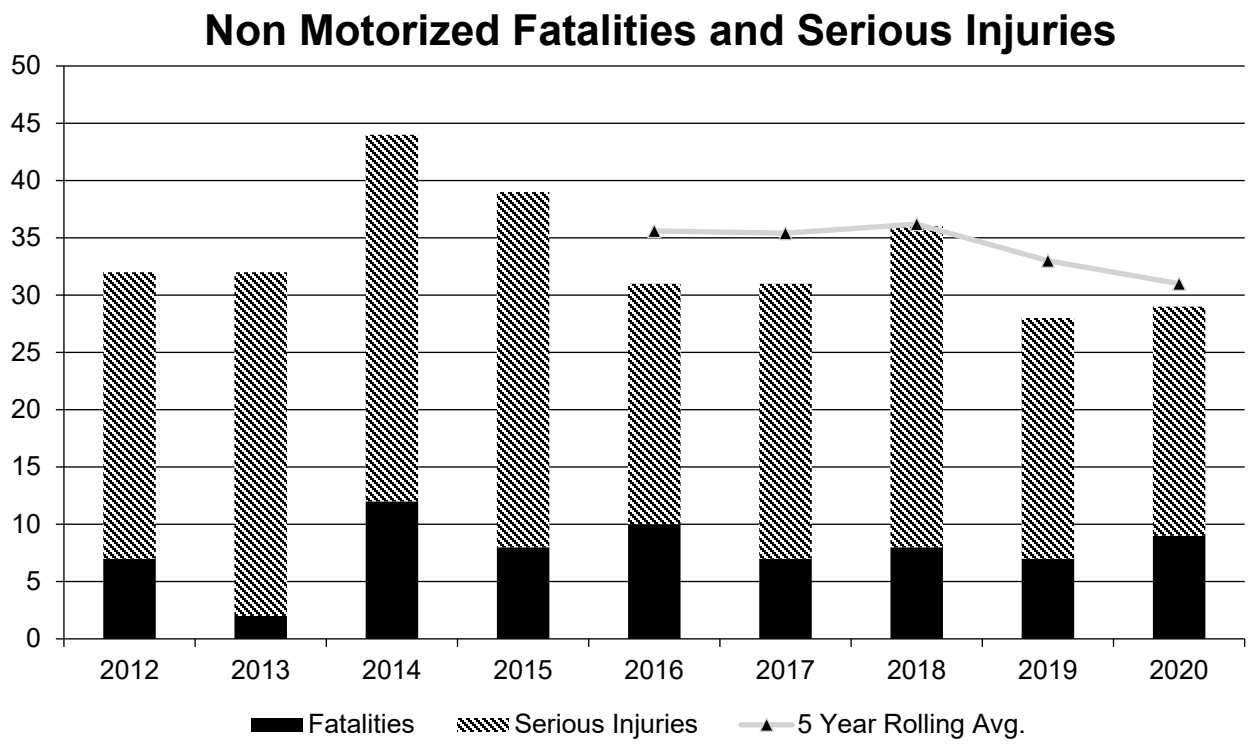
PERFORMANCE MEASURES	2012	2013	2014	2015	2016	2017	2018	2019	2020
Fatalities	170	148	135	131	113	116	105	100	100
Serious Injuries	575	517	519	555	434	433	361	379	386
Fatality rate (per HMVMT)	1.690	1.470	1.280	1.310	1.160	1.190	1.070	1.020	1.140
Serious injury rate (per HMVMT)	5.700	5.120	4.940	5.530	4.460	4.460	3.660	3.860	4.420
Number non-motorized fatalities	7	2	12	8	10	7	8	7	9
Number of non-motorized serious injuries	25	30	32	31	21	24	28	21	20


Annual Fatalities
180
160
140
120
100
80
60
40
20
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
700
600
500
400
300
200
100
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
6
5
4
3
2
1
0
2012
2013
2014
2015
2016
2017
2018
2019
2020
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Describe fatality data source.

State Motor Vehicle Crash Database

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	8.4	29.2	0.54	1.91
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	28.8	74.2	1.32	3.41
Rural Minor Arterial	13.2	36.8	1.61	4.56
Rural Minor Collector				
Rural Major Collector	21.4	66.2	2.01	6.23

Functional Classification	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Rural Local Road or Street	17.2	53.2	1.5	4.68
Urban Principal Arterial (UPA) - Interstate	0.8	6.8		1.35
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other	6	48.2	0.73	5.9
Urban Minor Arterial	5.2	32.8	0.84	5.23
Urban Minor Collector				
Urban Major Collector	1.2	15.6	0.42	5.5
Urban Local Road or Street	3.8	22.6	0.68	4.19

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	61.4	202		
County Highway Agency	26.2	88.4		
Town or Township Highway Agency				
City or Municipal Highway Agency	9.4	74		
State Park, Forest, or Reservation Agency	3.4	3.4		
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

Safety Performance Targets

Safety Performance Targets

Calendar Year 2022 Targets *

Number of Fatalities:96.4

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

Review of historical data and expert group input. The current NDDOT SHSP has a short term goal of fewer than 75 fatalities by 2025. The target set for 2022 matches this trend line.

Number of Serious Injuries:359.7

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

Review of historical data and expert group input.

Fatality Rate:1.094

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

Review of historical data and expert group input.

Serious Injury Rate:4.089

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

Review of historical data and expert group input.

Total Number of Non-Motorized Fatalities and Serious Injuries:29.8

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

Review of historical data and expert group input.
The long-term goal of the North Dakota SHSP is to move toward zero deaths. Targets were established with consideration of this long term goal but also considering SMART objectives. The targets were considered specific, measurable, achievable, relevant and time-oriented.

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

The State Highway Safety Office (SHSO) resides in the NDDOT. The SHSO (i.e., the NDDOT Safety Division) and other NDDOT Divisions including Local Government, Programming and planning/Asset Management review performance measure data and define the method to set the targets. Proposed targets are then shared by the NDDOT at a regular meeting between NDDOT and the MPOs.

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	108.3	106.8
Number of Serious Injuries	413.9	398.6
Fatality Rate	1.106	1.116
Serious Injury Rate	4.230	4.172
Non-Motorized Fatalities and Serious Injuries	33.4	31.0

The actual fatality rate was higher than the target but still met the baseline data. The NDDOT is currently evaluating new strategies for implementation to improve safety to help lower the fatality rate. The other performance measures have actual outcomes lower than the targets.

Applicability of Special Rules

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

No

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	10	11	9	14	19	17	16
Number of Older Driver and Pedestrian Serious Injuries	36	37	36	28	29	39	23

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Change in fatalities and serious injuries

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

The downward fatality trend seen over the last few years has flattened. The number of 2020 fatalities remained the same as in 2019. However, the fatality rate has increased. The number of serious injuries and the serious injury rate has increased over the previous couple of years. These trends are being investigated and internal discussions on how to address this are occurring. ND is confident that its program of HSIP projects will ultimately provide long-term safety benefits.

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

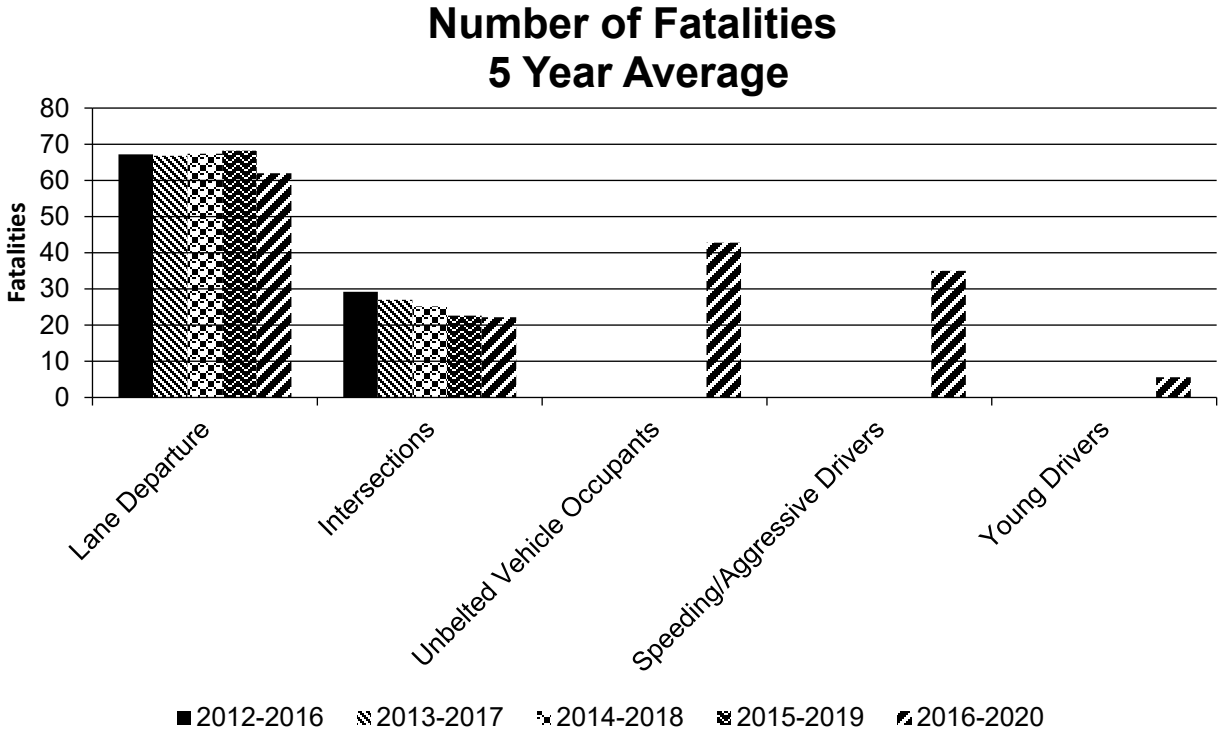
- More systemic programs

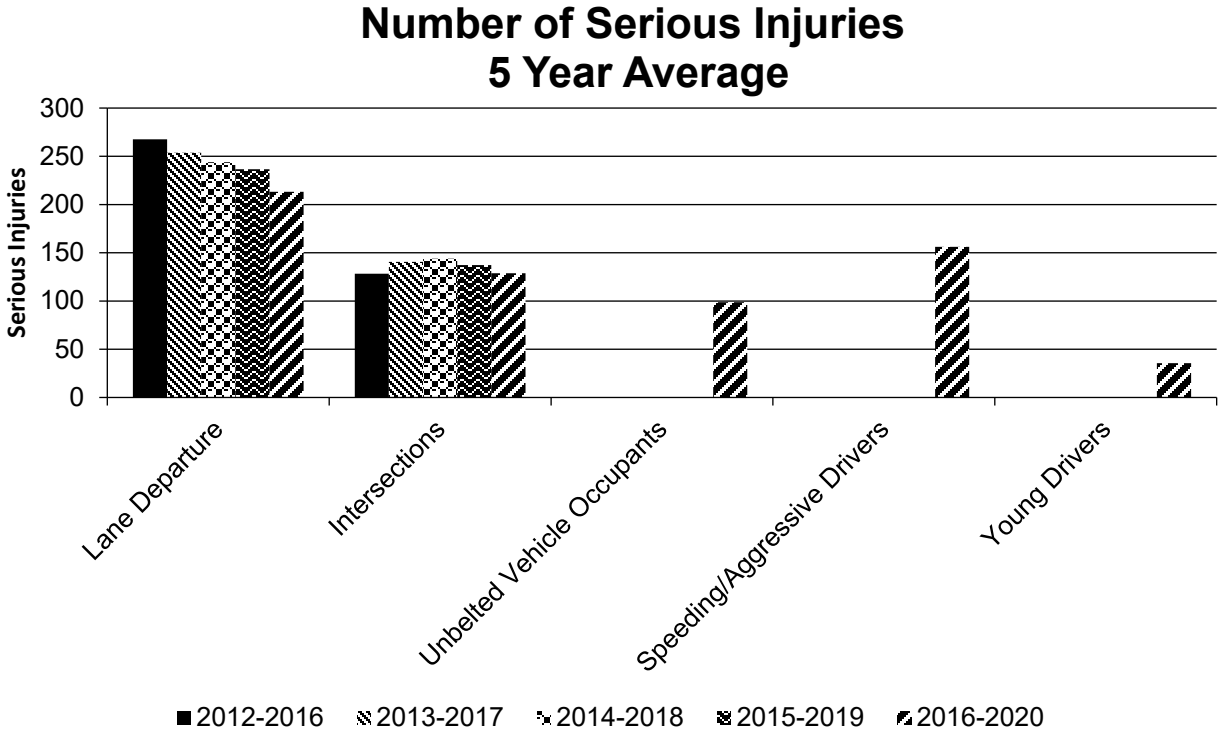
Effectiveness of Groupings or Similar Types of Improvements

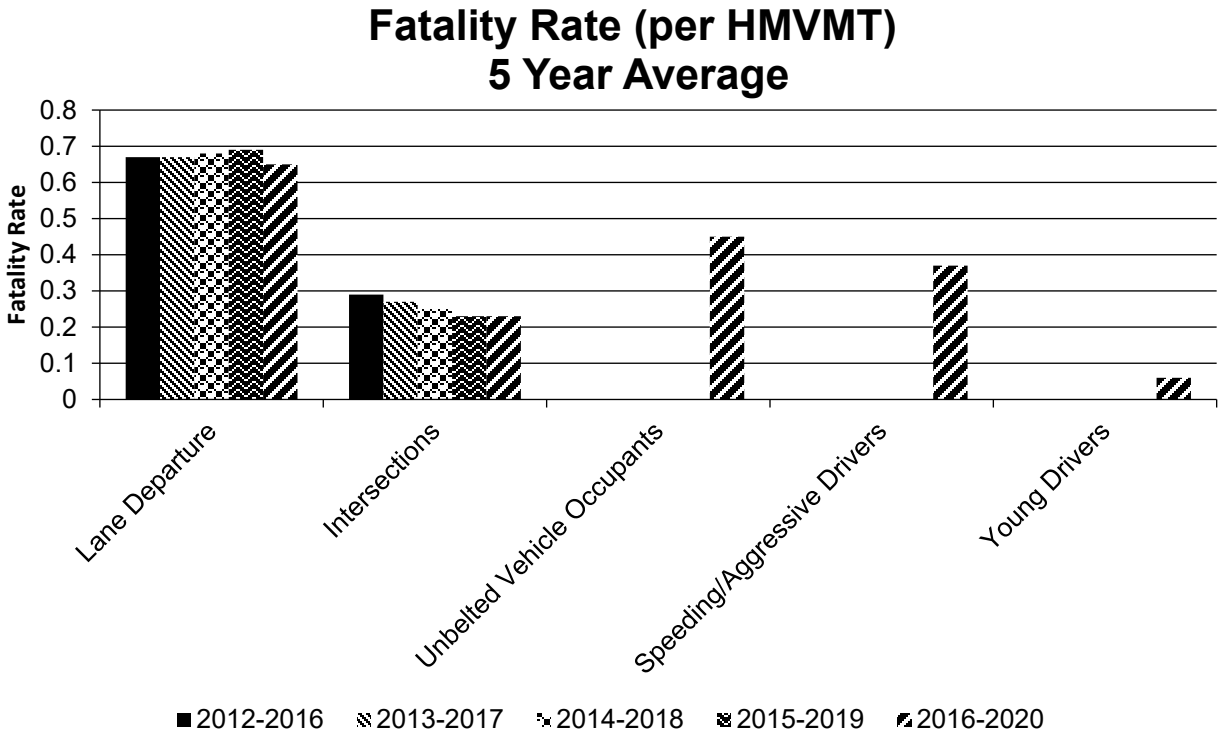
Present and describe trends in SHSP emphasis area performance measures.

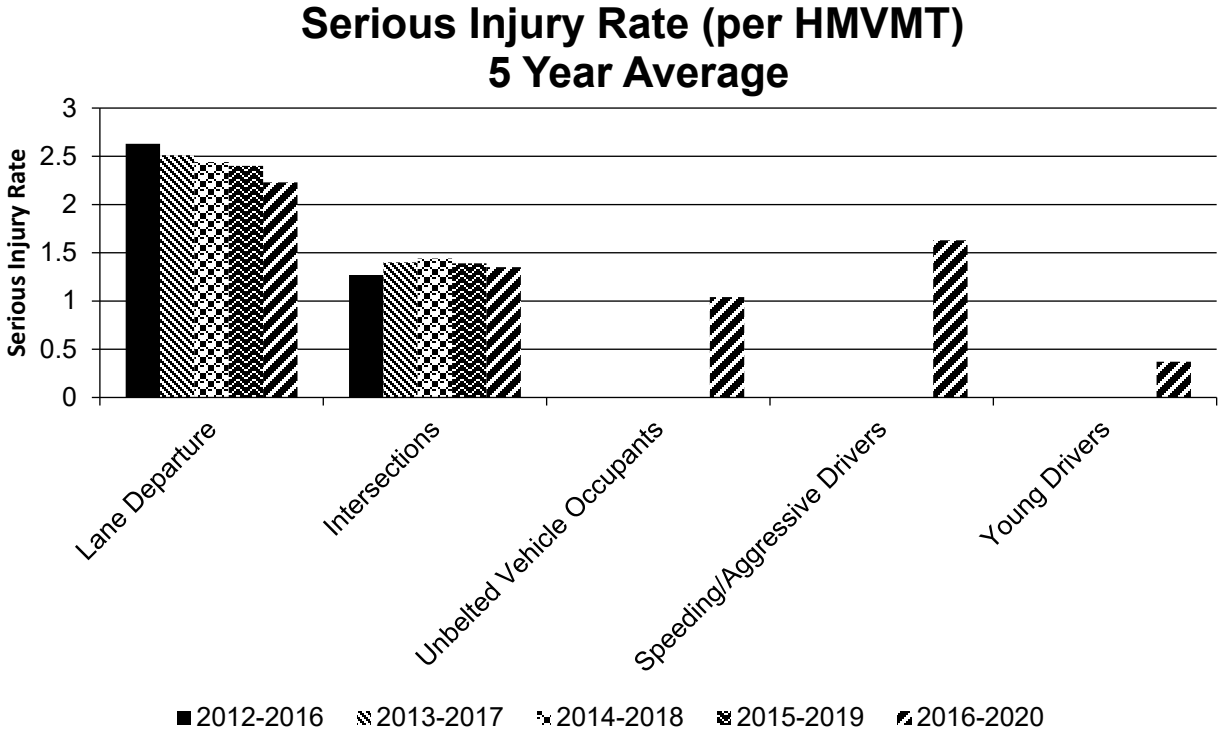
Year 2020

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Lane Departure	All	62	213.2	0.65	2.23
Intersections	All	22.2	128.8	0.23	1.35
Unbelted Vehicle Occupants	All	42.8	98.8	0.45	1.04
Speeding/Aggressive Drivers	All	35	156.2	0.37	1.63
Young Drivers	All	5.6	35.6	0.06	0.37


Number of Fatalities
5 Year Average
Fatalities
80
70
60
50
40
30
20
10
0
Lane Departure
Intersections
Unbelted Vehicle Occupants
Speeding/Aggressive Drivers
Young Drivers
2012-2016
2013-2017
2014-2018
2015-2019
2016-2020


Number of Serious Injuries
5 Year Average
Serious Injuries
300
250
200
150
100
50
0
Lane Departure
Intersections
Unbelted Vehicle Occupants
Speeding/Aggressive Drivers
Young Drivers
2012-2016
2013-2017
2014-2018
2015-2019
2016-2020





*Speeding/Aggressive driving crashes are defined as crashes involving at least one driver with at least one of the following identified: speeding, driving too fast for conditions, following too close, or operating a vehicle in an erratic, reckless, careless, negligent or aggressive manner. Counts reflect the fatal injury and incapacitating (serious) injury severities for all people involved in the speed/aggressive driving crashes, not just the speeding/aggressive drivers.

**Young Drivers are defined as operators age 14-20. Counts reflect the fatal injury and incapacitating (serious) injury severities of young drivers.

Project Effectiveness

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

Compliance Assessment

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

09/18/2018

What are the years being covered by the current SHSP?

From: 2018 To: 2023

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

2023

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					42	42	42	42
	Route Number (8) [8]	20	20								
	Route/Street Name (9) [9]	100	100								
	Federal Aid/Route Type (21) [21]	20	20								
	Rural/Urban Designation (20) [20]	20	20					20	20		
	Surface Type (23) [24]	20	20					20	20		
	Begin Point Segment Descriptor (10) [10]	100	100					42	42	42	42
	End Point Segment Descriptor (11) [11]	100	100					42	42	42	42
	Segment Length (13) [13]	100	100								
	Direction of Inventory (18) [18]	20	20								
	Functional Class (19) [19]	20	20					20	20	20	20

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]	20	20								
	Access Control (22) [23]	20	20								
	One/Two Way Operations (91) [93]	20	20								
	Number of Through Lanes (31) [32]	20	20					20	20		
	Average Annual Daily Traffic (79) [81]	20	20					20	20		
	AADT Year (80) [82]	20	20								
	Type of Governmental Ownership (4) [4]	20	20					20	20	20	20
INTERSECTION	Unique Junction Identifier (120) [110]			40	40						
	Location Identifier for Road 1 Crossing Point (122) [112]			40	40						
	Location Identifier for Road 2 Crossing Point (123) [113]			40	40						
	Intersection/Junction Geometry (126) [116]			40	40						
	Intersection/Junction Traffic Control (131) [131]										
	AADT for Each Intersecting Road (79) [81]			40	40						
	AADT Year (80) [82]			40	40						
	Unique Approach Identifier (139) [129]										
INTERCHANGE/RAMP	Unique Interchange Identifier (178) [168]					100	100				
	Location Identifier for Roadway at					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
	Beginning of Ramp Terminal (197) [187]										
	Location Identifier for Roadway at Ending Ramp Terminal (201) [191]					100	100				
	Ramp Length (187) [177]					100	100				
	Roadway Type at Beginning of Ramp Terminal (195) [185]					100	100				
	Roadway Type at End Ramp Terminal (199) [189]					100	100				
	Interchange Type (182) [172]					100	100				
	Ramp AADT (191) [181]					100	100				
	Year of Ramp AADT (192) [182]					100	100				
	Functional Class (19) [19]					100	100				
	Type of Governmental Ownership (4) [4]					100	100				
Totals (Average Percent Complete):		**42.22**	**42.22**	**30.00**	**30.00**	**100.00**	**100.00**	**27.33**	**27.33**	**33.20**	**33.20**

*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.

The NDDOT has developed the following goals to meet MIRE requirements and future road data management:

- Develop a robust/integrated data warehouse to connect all geodatabased items with each other
- More efficiently and effectively extract information from the database:
  - Querying will be the initial capability of data warehouse
  - Develop a framework that allows tools and models to be shared by NDDOT
  - Application of AI/ML-based techniques over the data warehouse
- The data warehouse will be an efficient framework for data governance in NDDOT
  - Other geo-databases (safety, construction, maintenance, etc.) could be integrated into the data warehouse

Optional Attachments

Program Structure:

HSIP Guidebook 2021.pdf
HSIP Guidebook 2021.pdf
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.