IOWA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2024 ANNUAL REPORT

Disclaimer: This report is the property of the State Department of Transportation (State DOT). The State DOT completes the report by entering applicable information into the Federal Highway Administration's (FHWA) Highway Safety Improvement Program (HSIP) online reporting tool. Once the State DOT completes the report pertaining to its State, it coordinates with its respective FHWA Division Office to ensure the report meets all legislative and regulatory requirements. FHWA's Headquarters Office of Safety then downloads the State's finalized report and posts it to the website (https://highways.dot.gov/safety/hsip/reporting) as required by law (23 U.S.C. 148(h)(3)(A)).

Photo source: Federal Highway Administration

Table of Contents

HIGHWAY SAFETY 1
IMPROVEMENT PROGRAM 1
Disclaimer 3
Protection of Data from Discovery Admission into Evidence 3
Executive Summary 4
Introduction 5
Program Structure 5
Program Administration 5
Program Methodology 7
Project Implementation 12
Funds Programmed 12
General Listing of Projects 14
Safety Performance 17
General Highway Safety Trends 17
Safety Performance Targets 23
Applicability of Special Rules 25
Evaluation 27
Program Effectiveness 27
Effectiveness of Groupings or Similar Types of Improvements 28
Project Effectiveness 32
Compliance Assessment 33
Optional Attachments 36
Glossary 37

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

This 2024 HSIP Annual Report summarizes how Iowa DOT has continued to develop and implement a data-informed safety program consistent with the 2024-2028 Strategic Highway Safety Plan (SHSP) completed since the 2023 HSIP Annual Report.

The 2024-2028 Strategic Highway Safety Plan organized Key Emphasis Areas (KEAs) and strategies following the Safe System Approach, developing strategies for Safer People, Vehicles, Roads, Speeds, and Post Crash Care. The Highway Safety Improvement Program projects summarized in this report follow this framework, focusing on Safer Roads and Safer People with emphases on:

- **lane/roadway departure** through systemic improvements of paved shoulders, shoulder and centerline rumble strips, high-contrast pavement markings, and high friction surface treatments;

- **intersection** improvements ranging from conventional and offset turn lanes to innovative intersections such as roundabouts and reduced conflict intersections (RCIs), as well as median closures and wrong way driving projects

- **safer speeds** through 4-lane to 3-lane roadway reconfigurations and roundabouts.

- In addition, numerous SHSP Safer People strategies for KEAs such as distracted/impaired driving and older/younger drivers identified **public awareness** campaigns. The ‘What Drives You’ media campaign has been supported by the HSIP program as well.

We have continued pursuing **systemic improvements** across Iowa’s highway system through the federal HSIP program and also through State funding sources for Local improvements (TSIP and HSIP-Local). This year’s annual report summarizes the projects included as part of the High-Risk Rural Road (HRRR) Special Rule. These three HRRR projects are from the three Local Systems Regions and all focus on rural systemic, proven safety countermeasure improvements on Secondary highways.

Iowa DOT has continued further integration of the Highway Safety Manual and Safe System Approach into our project development. Specifically:

-Currently testing version 2 of the Intersection Control Evaluation (ICE) tool on some District project concepts.

-The SPF-based Potential for Crash Reduction (PCR) tool has been updated for intersection crashes (2018-2022) and new and additional intersection segment categories are expected this fall.

-Additional user friendly dashboards have been released and are in development for next step analysis for users of the Iowa Crash Analysis Tool (ICAT) and PCR tool websites, as we seek to make our data useful to the broadest audience of safety practitioners within and outside the DOT.

We are encouraged by progress in these areas, however the most recent calendar year 2023 experienced the highest statewide crash fatality year (377) since 2016. While year-to-date CY2024 fatal and severe crash data appear to be returning to a lower, more average trend so far, the Department will continue to implement the new Strategic Highway Safety Plan to integrate safety in more stages of project development and system operations.

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 state's HSIP funds are programmed through three different categories: District Initiatives, Statewide Initiatives, and Interstate High Contrast Pavement Markings (for 5-years FY2022-2027).

District Initiative projects are identified by the six districts, based on their local knowledge or results of a safety study combined with data-driven methods such as their District Road Safety Plan or the SPF-based Potential for Crash Reduction (PCR) tool developed for Primary segments and statewide intersections.**Statewide Initiative** projects are identified by Traffic and Safety Bureau staff based on research/study results, and can involve a mixture of reactive/site-specific and proactive/risk-based/systemic improvements, especially when they can be applied at multiple locations across various districts, or additional District projects. An example of these would be multi-corridor centerline rumble strip retrofit projects. All projects are approved for funding by central office Traffic and Safety Bureau staff. District projects are approved for funding based on whether they were identified by their respective District Road Safety Plan, if a benefit-cost ratio exceeds one, or (most-often) based on the SPF-based Potential for Crash Reduction tool (High or Medium PCR Level). District projects are typically designed in-house, and statewide projects are sometimes designed by DOT or by an outside consultant. The 5-year **Interstate High Contrast Pavement Markings** plan is being developed with Traffic and Safety Bureau and Maintenance Bureau staff, and designed by relevant District staff. All projects are tracked by central office staff, including crashes, costs, and construction dates.

Where is HSIP staff located within the State DOT?

Operations

How are HSIP funds allocated in a State?

- Formula via Districts/Regions

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

Iowa utilizes "State" funds to address safety on local City/County/Tribal roads through the HSIP-Local and TSIP programs.

HSIP-Local (formerly called HSIP-Secondary) addresses safety issues on the local roadway system, especially Secondary (County) highways. and is focused on funding projects incorporating systemic, low- to medium-cost safety improvements. Typical countermeasures include rumble strips, grooved-in pavement

markings, paved shoulders, improved signage, and guardrail updates. Beginning in FY23, funding for this program increased from $2 million to $5 million per year, and expanded to also include City applications. In addition to City corridors that have rural cross sections similar to the typical County projects, additional City applications primarily address roadway reconfiguration (e.g. 4-lane to 3-lane conversions) and pedestrian crossing treatments (e.g. RRFBs and PHBs) - both consistent with the November 2023 Vulnerable Road User Assessment (VRU). The program is also providing local match for County and MPO/RPA SS4A Safety Action Plan development.

For years where Iowa may have a **High-Risk Rural Road (HRRR)** special rule target, we will work with HSIP-Local partners to identify projects that can be converted to HRRR project codes/funds. A majority of HSIP-Local projects have HRRR elements and goals.

Additional safety improvements on other local roads are addressed via the state's**Transportation Safety Improvement Program (TSIP)**. Eligible TSIP applicants include DOT, County, City, Institutional, and Tribal roadways. TSIP is a competitive, application-based program that annually awards approximately $8 million in State funds for safety projects on and off the State system. Funding is provided in three categories: Studies and Outreach ($0.5 million), Traffic Control Devices ($0.5 million), and the construction of larger infrastructure projects ('Site Specific', approx. $7 million).

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

- Districts/Regions
- Maintenance
- Planning
- Traffic Engineering/Safety

Describe coordination with internal partners.

State Safety Targets are coordinated with an interdepartmental review team including the DOT Systems Planning Bureau, and reviewed by management as well as external MPO/RPA partners.

Most HSIP projects are designed and administered by staff in the six Iowa DOT Districts. Therefore, the Districts are consulted early and often in the HSIP planning process. Districts identify projects based on local knowledge combined with data-driven methods such as recommendations from the risk-factor based District Road Safety Plans and the SPF based "Potential for Crash Reduction" tool.

Approximately 80% of the HSIP project funding is designated to these "District Initiatives" (between 12-16% per district) which are submitted as candidates and selected based on funding availability and alignment with SHSP emphasis areas and strategies, most frequently Lane Departures and Intersections. A majority of funding goes toward addressing lane departure crashes through shoulder improvements and associated shoulder and centerline rumble strips. A variety of intersection projects were included this year, including skewed approach realignments, left- and right-turn lanes, median access reductions, roundabouts, and Reduced Conflict Intersection (RCI) improvements.

Interstate High Contrast pavement marking projects are coordinated with the DOT Maintenance Bureau, as are potential rumble strip shoulder and centerline retrofit projects. DOT Program Management Bureau also reviews the HSIP before submittal to FHWA.

Identify which external partners are involved with HSIP planning.

- FHWA

Describe coordination with external partners.

The State Safety Engineer and HSIP manager meet annually with FHWA Iowa Division personnel to review the state's HSIP approval process and update it, if necessary. FHWA Division staff and DOT Traffic and Safety Bureau staff also communicate through emails and phone calls throughout the year, as well as conferences and trainings, and regional multi-agency highway safety groups (called MDSTs), conferences, and in-field visits such as Road Safety Audits (RSAs) requested by various local agencies.

In addition, as mentioned in the Internal Partners section, safety target setting is reviewed and shared with external MPO/RPA partners.

Program Methodology

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

Yes

The State HSIP Manual (2017 for FY 2019) will receive minor updates in calendar year 2025. These will address the additional tools that have been developed at Iowa DOT such as the Safety Performance Function (SPF) based "Potential for Crash Reduction" (PCR) tool as it is further integrated into the project development process (discussed in Question 19), minor updates to a version 2 of the current Safety Analysis Guide (December 2021), and other updates such as new Access Management Manual (December 2022), the new 2024-2028 SHSP, updated MUTCD expected to be adopted by State in 2025, and the release of AASHTO HSM 2.

Select the programs that are administered under the HSIP.

- HRRR
- HSIP (no subprograms)

FY 2024 HRRR projects programmed per the High-Risk Rural Roads (HRRR) Special Rule.

Program: HRRR

Date of Program Methodology:12/1/2023

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety
- Other-HRRR Special Rule

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway

- All crashes

- Volume
- Lane miles

- Median width
- Horizontal curvature
- Functional classification
- Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Excess expected crash frequency with the EB adjustment

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.

HRRR projects were identified from candidate projects in the otherwise State funded HSIP-Local program discussed in Question 6. These projects apply systematic, proven safety countermeasures (e.g. paved shoulders, centerline and shoulder rumble strips, grooved-in 6-inch wide edgeline markings, curve signage) to high-risk Secondary and Local local rural roads per the HRRR and SHSP definitions.

How are projects under this program advanced for implementation?

- 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:2
Other-Systematic Proven Safety Countermeasures:1

Program: HSIP (no subprograms)

Date of Program Methodology:5/1/2017

What is the justification for this program?

- Addresses SHSP priority or emphasis area

What is the funding approach for this program?

Funding set-aside

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• All crashes • Other-with consideration of fatal and serious injury crashes	• Volume • Lane miles	• Functional classification • Roadside features

What project identification methodology was used for this program?

- Crash frequency
- Excess expected crash frequency using SPFs
- Expected crash frequency with EB adjustment
- Other-Risk Factors
- Probability of specific crash types

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

No

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

How are projects under this program advanced for implementation?

- 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:3
Available funding:2
Cost Effectiveness:1

What percentage of HSIP funds address systemic improvements?

88

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

- High friction surface treatment
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing

- Other-4-lane to 3-lane conversions along corridors
- Pavement/Shoulder Widening
- Rumble Strips
- Wrong way driving treatments

21 of the 28 projects from Q23/Q29 were "Systemic" projects. Most of the projects with Improvement Category or SHSP Emphasis Area are identified in Q29 as "Spot" (except multi-site Wrong-way driving and 4-3 lane projects.)

What process is used to identify potential countermeasures?

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

All projects use crash data from SPF-based PCR tool or individual B/C analysis. Eligible HSIP improvements are based on eligible proven countermeasures with effective CRFs. Numerous projects came from corridor, intersection studies (often Iowa DOT TEAP program) and some are based on RSAs and District Road Safety Plan (DRSPs). All project involve some level of stakeholder input, and often direct DOT District and City/County coordination and often public information meetings.

Does the State HSIP consider connected vehicles and ITS technologies?

No

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.

Iowa is making steady progress for increasing incorporation of the Highway Safety Manual (HSM) in project development and design. Many of the efforts described below have been part of a multi-Division/Bureau Safety Analysis Incorporation (SAI) Committee described in Section 4.4 of the SHSP, and/or part of research partnerships with Iowa State University and the University of Iowa.

With respect to safety project candidate identification and development, safety performance functions (SPF) have been developed by category (and calibrated) for **Primary road segments** and for **all statewide Intersections** (that have AADT traffic data and at least one paved approach).**Secondary road segments** have been added, which assists in evaluation of the State funded local road safety improvements (see HSIP-Local and TSIP discussions).

In the PCR tool, these SPF values are compared with 5-year intersection/segment crash data (corrected using empirical bayes methodology) to develop Potential for Safety Improvement, referred to for Iowa DOT as "Potential for Crash Reduction" (PCR). This PCR tool is incorporated into a GIS webpage and has been updated based on crash data from 2014-2018, 2016-2020, and now 2018-2022 for intersections with segments updates in progress for 2019-2023. This is being used by various DOT Bureaus as well as local agencies and project consultants for project concepts, data-driven network screening, and safety project prioritization.

Once project candidates are identified, intersection and segment crash distribution dashboards are being generated to compare individual intersection and segment crash distributions to similar locations within the same category, identify crash types that are over-represented, and thus identify potential countermeasures.

Although the state has been using crash modification factors (CMFs) for years, the number of CMFs available on the CMF clearinghouse has grown exponentially, and there remain many countermeasures for which a good CMF does not exist, or the most appropriate is difficult to select. Therefore, the need for state-specific CMFs was identified, and a list of approximately 70 commonly used CMF/CRFs was published in August 2019. This list will be updated as needed with refined values or new countermeasures, likely on a 2-4 year basis.

Finally, a consultant has developed a state-specific framework for conducting safety evaluations consistent with HSM Part C methods, via a spreadsheet tool. The rural two-lane, rural multilane, and urban/suburban arterial versions of the tool have been delivered to the state. These will not be used on every project but project candidates are being evaluated, such as alternatives analysis on Super-2 corridors and alternative intersection improvement projects (e.g. signals, roundabout, or RCI comparisons along with FHWA CAP-X and SPICE tools). Our ICE process tool is being finalized and currently being implemented in studies and proposals for multiple potential future HSIP-funded projects.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

The State of Iowa fiscal year begins July 1 and ends June 30 of the following year

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$29,569,500	$32,529,852	110.01%
HRRR Special Rule (23 U.S.C. 148(g)(1))	$2,671,790	$2,671,790	100%
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	$0	$0	0%
Totals	$32,241,290	$35,201,642	109.18%

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

$2,671,790

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

$2,671,790

Typically, state funds are used for local projects. (See Question 6 regarding $5 million HSIP-Local systemic program and
$8 million TSIP program.) Due to the High-Risk Rural Road (HRRR) Special Rule for FY 2024, three local projects were also programmed and obligated for HRRR, totaling $2,671,790.00.

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

$400,000

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

$400,000

The "What Drives You" Highway Safety Media Campaign was funded as a Specific Safety Project that "promotes public awareness and informs the public regarding highway safety matters" consistent with 23 U.S.C. 148(a)(11) and 23 U.S.C. 148(e)(3).

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

$0

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

$0

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

There is an adequate supply of HSIP project candidates identified by the six Iowa DOT Districts and the Traffic and Safety Bureau. Minor impediments to fully obligating programmed HSIP funds include:

Cost estimating and development timelines between initial HSIP project identification and ultimate project design and bidding. Initial cost estimates are sometimes 'conservative' in order to account for contingencies and price changes to avoid a funding shortfall.

Rapid changes in material availability have affected estimates differently depending on when in the year the project was bid. Shortages of steel cable have resulted in a lack of high-tension cable guardrail (HTCG) median barrier projects in for a couple years. Systematic, multi-location HSIP projects have been focusing more on other systemic treatments like friction, wrong-way driving, and centerline rumble strips until those timelines return to normal.

Another impediment is uncertainty regarding internal design resources for more complicated intersection HSIP projects vs more 'standard' roadway departure type HSIP projects, which sometimes result in a need for Outside Services.

Project development timelines can be affected by multiple external forces including interagency coordination, ROW, NEPA clearances, and other unforeseen circumstances. These happen infrequently as we continue to work with project sponsors and project managers to improve the accuracy of cost estimates and to minimize time delays in project development to account for realistic scheduling in order to obligate HSIP funds to the fullest extent. Due to the supply of HSIP project concepts, replacement projects are easily identified by Districts or the Bureau if such a delay is discovered during candidate and program selection process as the HSIP and Statewide TIP FY programs are being assembled.

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 OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
HSIPX-000-T(282)--3L-00	Roadway	Rumble strips – center	150	Miles	$790083	$877870	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	0	55	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-003-5(088)--3L-35	Shoulder treatments	Pave existing shoulders	8.43	Miles	$1633291	$1814768	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	2,920	55	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-003-6(071)--3L-09	Shoulder treatments	Pave existing shoulders	4.6	Miles	$1046454	$1162727	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	4,250	55	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-017-1(021)--3L-77	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1739353	$2807122	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	6,400	45	State Highway Agency	Spot	Intersections	Safer Roads - Intersections - 4
HSIPX-020-1(200)--3L-97	Shoulder treatments	Pave existing shoulders	8.7	Miles	$2481546	$2757274	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	8,700	55-65	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-020-3(179)--3L-94	Intersection geometry	Innovative Intersection (e.g. MUT, RCUT, QR)	1	Miles	$600598	$667331	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	11,400	65	State Highway Agency	Spot	Intersections	Safer Roads - Intersections - 4
HSIPX-020-8(056)--3L-28	Shoulder treatments	Pave existing shoulders	11.8	Miles	$2942684	$3363564	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	9,900	65	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-020-9(275)--3L-31	Intersection geometry	Add/modify auxiliary lanes	1	Intersections	$251943	$279937	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	12,400	65	State Highway Agency	Spot	Intersections	Safer Roads - Intersections - 4
HSIPX-030-4(110)--3L-08	Intersection geometry	Intersection geometry - other	1	Intersections	$120318	$133687	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	18,400	65	State Highway Agency	Spot	Intersections	Safer Roads - Intersections - 4

PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
HSIPX-063-5(076)--3L-86	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	3.65	Miles	$500000	$1055556	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	6,600	35-45	State Highway Agency	Systemic	Intersections	Safer Roads - Intersections - 4, Safer Speeds - 3
HSIPX-065-3(090)--3L-91	Intersection geometry	Add/modify auxiliary lanes	1	Intersections	$409066	$454518	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	18,200	65	State Highway Agency	Spot	Intersections	Safer Roads - Intersections - 4
HSIPX-092-6(040)--3L-63	Intersection geometry	Add/modify auxiliary lanes	1	Intersections	$843897	$937663	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,940	55	State Highway Agency	Spot	Intersections	Safer Roads - Intersections - 4
HSIPX-141-6(078)--3L-25	Shoulder treatments	Pave existing shoulders	6.79	Miles	$2530832	$2812036	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	9,600	55-65	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-146-2(044)--3L-79	Intersection geometry	Intersection realignment	1	Intersections	$40417	$544908	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	2,250	55	State Highway Agency	Spot	Intersections	Safer Roads - Intersections - 4
HSIPX-218-1(085)--3L-56	Shoulder treatments	Pave existing shoulders	7.66	Miles	$2392348	$2903551	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	9,900	65	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-218-6(61)--3L-06	Shoulder treatments	Pave existing shoulders	2.35	Miles	$120882	$134313	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	4,500	45	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-000-T(289)--3L-00	Roadway signs and traffic control	Roadway signs (including post) - new or updated	135	Locations	$1158287	$1292236	HSIP (23 U.S.C. 148)	Multiple/Varies	Multiple/Varies	0		State Highway Agency	Systemic	Intersections	Safer People - Impairment Involved 4
HSIPX-000-T(290)--3L-00	Roadway	Pavement surface – high friction surface	8	Locations	$4300470	$4828175	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Interstate	70,500	55	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategy 2
HSIPX-021-4(029)--3L-06	Roadway	Roadway narrowing (road diet, roadway reconfiguration)	1.5	Miles	$1023340	$1218617	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	4,200	30-35	State Highway Agency	Systemic	Intersections	Safer Roads - Intersections - 4, Safer Speeds - 3

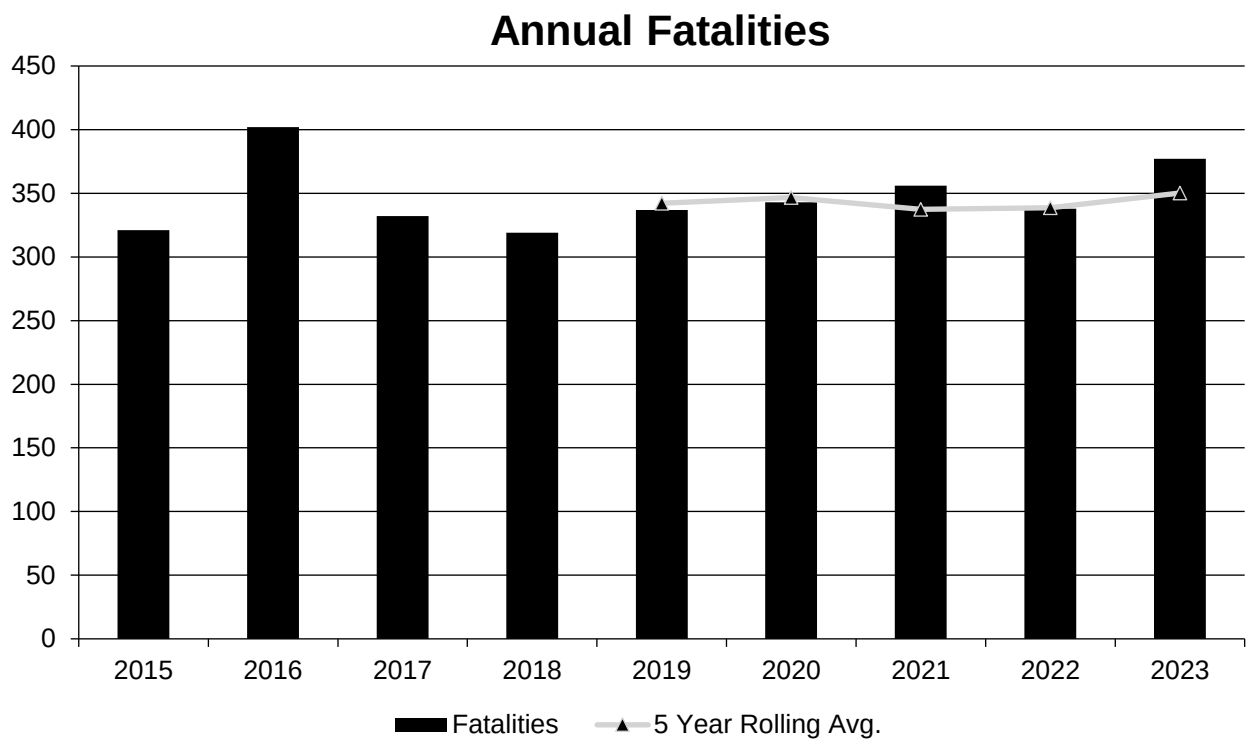
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED OR SPEED RANGE	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
HSIPX-163-3(060)--3L-63	Shoulder treatments	Pave existing shoulders	4.99	Miles	$2355955	$2814546	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other Freeways & Expressways	11,500	65	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HSIPX-000-T(330)--3L-00	Miscellaneous	Miscellaneous - other	0	Public Awareness, 'Specified Safety Project'	$360000	$400000	HSIP (23 U.S.C. 148)	N/A	N/A	0		State Highway Agency	Systemic	Various - Older, Younger Drivers, Impariment, Speed Related	Safer People - Targeted Campaigns
IHSIPX-029-2(098)36--08-65	Roadway delineation	Improve retroreflectivity	35	Miles	$1233038	$1370042	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	21,200	70	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3
IHSIPX-035-1(200)0--08-27	Roadway delineation	Improve retroreflectivity	24.5	Miles	$1052291	$1169212	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	15,500	70	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3
IHSIPX-035-1(201)24--08-20	Roadway delineation	Improve retroreflectivity	31.77	Miles	$1025012	$1138902	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	18,000	70	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3
IHSIPX-080-1(551)8--08-78	Roadway delineation	Improve retroreflectivity	41.02	Miles	$1577747	$1753052	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	26,000	70	State Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3
HRRR-C033(149)--5R-33	Shoulder treatments	Pave existing shoulders	4.5	Miles	$513934	$812637	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	320	55	County Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HRRR-C050(131)--5R-50	Shoulder treatments	Pave existing shoulders	5.8	Miles	$837322	$837322	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	2,260	55	County Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5
HRRR-C072(80)--5R-72	Shoulder treatments	Pave existing shoulders	19.56	Miles	$1320534	$1320534	HRRR Special Rule (23 U.S.C. 148(g)(1))	Rural	Major Collector	850	55	County Highway Agency	Systemic	Lane Departure	Safer Roads - Lane Departures Strategies 3, 5

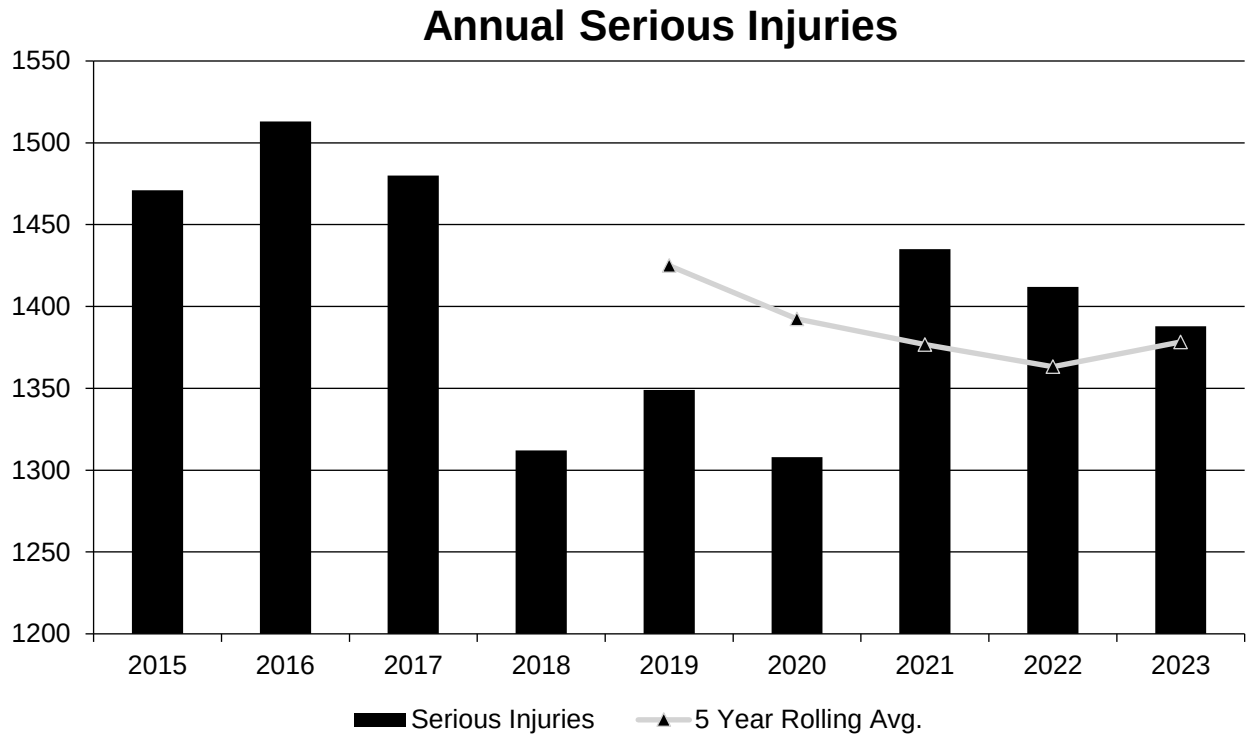
Safety Performance

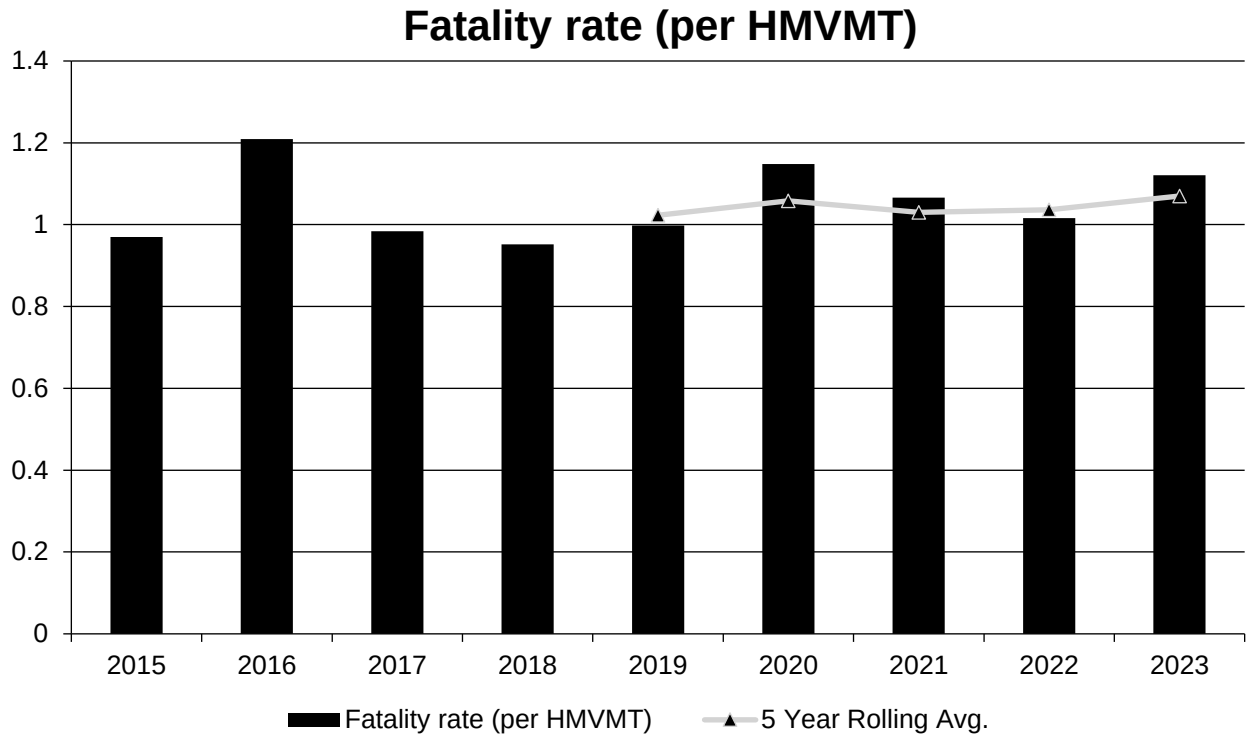
General Highway Safety Trends

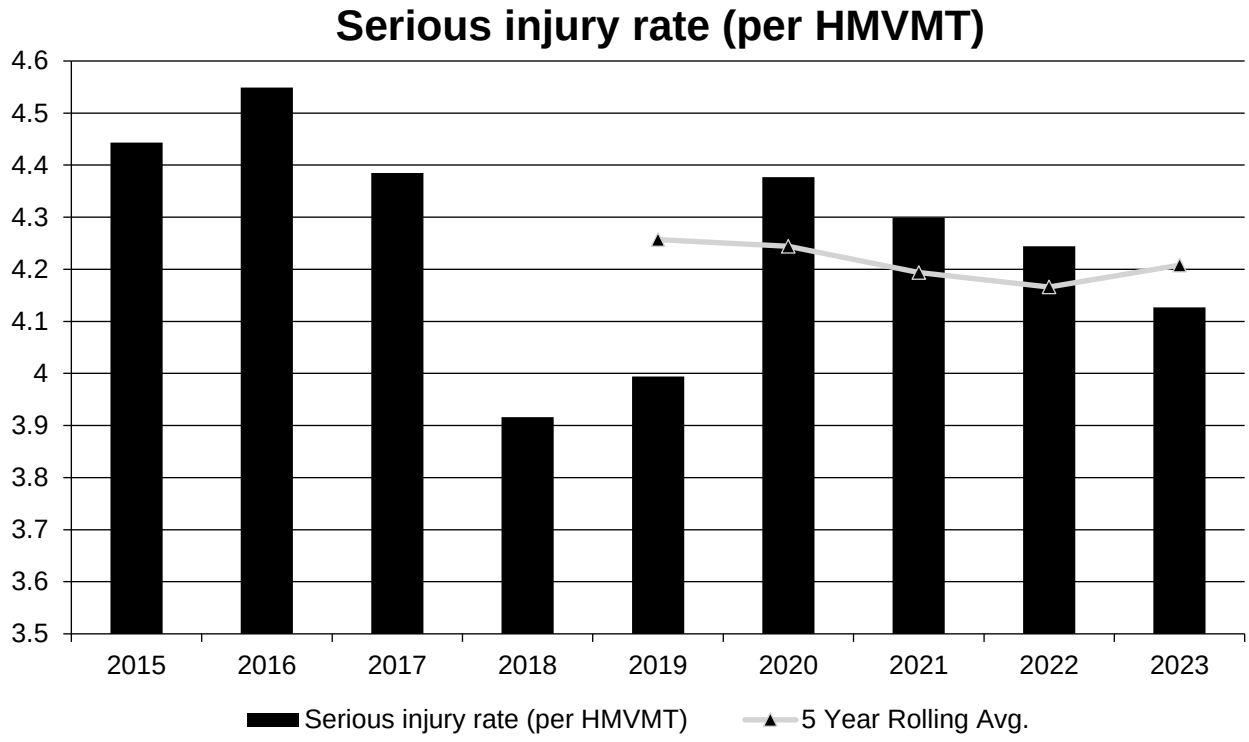
Present data showing the general highway safety trends in the State for the past five years.

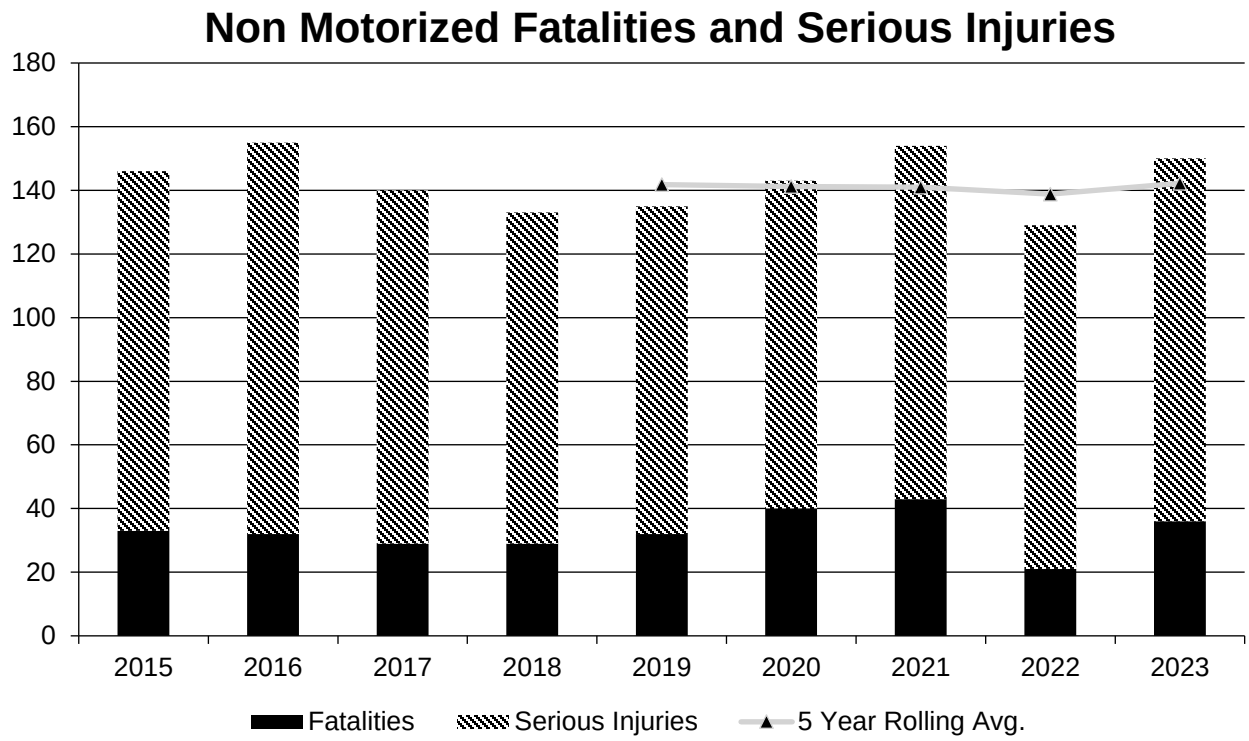
PERFORMANCE MEASURES	2015	2016	2017	2018	2019	2020	2021	2022	2023
Fatalities	321	402	332	319	337	343	356	338	377
Serious Injuries	1,471	1,513	1,480	1,312	1,349	1,308	1,435	1,412	1,388
Fatality rate (per HMVMT)	0.970	1.209	0.984	0.952	0.998	1.148	1.066	1.016	1.121
Serious injury rate (per HMVMT)	4.443	4.549	4.385	3.916	3.994	4.377	4.299	4.244	4.127
Number non-motorized fatalities	33	32	29	29	32	40	43	21	36
Number of non-motorized serious injuries	113	123	111	104	103	103	111	108	114


Annual Fatalities
450
400
350
300
250
200
150
100
50
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
1550
1500
1450
1400
1350
1300
1250
1200
2015
2016
2017
2018
2019
2020
2021
2022
2023
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2015
2016
2017
2018
2019
2020
2021
2022
2023
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
4.6
4.5
4.4
4.3
4.2
4.1
4
3.9
3.8
3.7
3.6
3.5
2015
2016
2017
2018
2019
2020
2021
2022
2023
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 2023

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	21.8	65.6		
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	51	155.8		
Rural Minor Arterial	30.2	100.2		
Rural Minor Collector	24	79.8		
Rural Major Collector	66.4	236		
Rural Local Road or Street	41	168		
Urban Principal Arterial (UPA) - Interstate	15.6	51.6		
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other	33.6	130.6		
Urban Minor Arterial	24.6	166.6		
Urban Minor Collector				
Urban Major Collector	13.4	70.4		
Urban Local Road or Street	23.2	140		

Year 2023

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	157.8	515.8	0.77	2.53
County Highway Agency	114.8	421.6	2.11	7.76
Town or Township Highway Agency				
City or Municipal Highway Agency	57.4	348.8	0.85	5.16
State Park, Forest, or Reservation Agency				
Local Park, Forest or Reservation Agency				
Other State Agency				
Other Local Agency				
Private (Other than Railroad)				
Railroad				
State Toll Authority				
Local Toll Authority				
Other Public Instrumentality (e.g. Airport, School, University)				
Indian Tribe Nation				

Safety Performance Targets

Safety Performance Targets

Calendar Year 2025 Targets *

Number of Fatalities:365.8

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

A trendline analysis was performed with fatal crash data from 2001-2023, and an autoregressive integrated moving average (ARIMA) model was developed with 70-97.5% prediction intervals/confidence levels to estimate how much risk would be associated with each set of predictions. This is consistent with procedures since 2017. For the forecast values in 2025, our working group selected an 85% confidence level. The 5-year rolling average target for 2021-2025 is based on crash history from 2021-2023, the forecast value for 2024 (higher confidence due to year partially complete at time of modeling), and the upper 85% prediction interval/confidence level value for 2025. Consistent with the Strategic Highway Safety Plan (SHSP) and Highway Safety Improvement Plan (HSIP) goals, this "data driven" approach focuses on Fatal and Serious Injury crashes and is developed with internal and external stakeholders.

Number of Serious Injuries:1496.1

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

A trendline analysis was performed with serious injury crash data from 2001-2023, and an autoregressive integrated moving average (ARIMA) model was developed with 70-97.5% prediction intervals/confidence levels to estimate how much risk would be associated with each set of predictions. This is consistent with procedures since 2017. For the forecast values in 2025, our working group selected an 85% confidence level. The 5-year rolling average target for 2021-2025 is based on crash history from 2021-2023, the forecast value for 2024 (higher confidence due to year partially complete at time of modeling), and the upper 85% prediction interval/confidence level value for 2025. Consistent with the Strategic Highway Safety Plan (SHSP) and Highway Safety Improvement Plan (HSIP) goals, this "data driven" approach focuses on Fatal and Serious Injury crashes and is developed with internal and external stakeholders.

Fatality Rate:1.085

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

A trendline analysis was performed with fatality rate data from 2001-2023, and an autoregressive integrated moving average (ARIMA) model was developed with 70-97.5% prediction intervals/confidence levels to estimate how much risk would be associated with each set of predictions. This is consistent with procedures since 2017. For the forecast values in 2025, our working group selected an 85% confidence level. The 5-year rolling average target for 2021-2025 is based on crash history from 2021-2023, the forecast value for 2024 (higher confidence due to year partially complete at time of modeling), and the upper 85% prediction interval/confidence level value for 2025. The Fatality Injury target is converted to a Fatality Rate target using Iowa DOT Systems Planning Bureau VMT forecasts. Consistent with the Strategic Highway Safety Plan (SHSP) and Highway Safety Improvement Plan (HSIP) goals, this "data driven" approach focuses on Fatal and Serious Injury crashes and is developed with internal and external stakeholders.

Serious Injury Rate:4.391

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

A trendline analysis was performed with serious injury rate data from 2001-2023, and an autoregressive integrated moving average (ARIMA) model was developed with 70-97.5% prediction intervals/confidence levels to estimate how much risk would be associated with each set of predictions. This is consistent with procedures since 2017. For the forecast values in 2025, our working group selected an 85% confidence level. The 5-year rolling average target for 2021-2025 is based on crash history from 2021-2023, the forecast value for 2024 (higher confidence due to year partially complete at time of modeling), and the upper 85% prediction interval/confidence level value for 2025. The Serious Injury target is converted to a Serious Injury rate target using Iowa DOT Systems Planning Bureau VMT forecasts. Consistent with the Strategic Highway Safety Plan (SHSP) and Highway Safety Improvement Plan (HSIP) goals, this "data driven" approach focuses on Fatal and Serious Injury crashes and is developed with internal and external stakeholders.

Total Number of Non-Motorized Fatalities and Serious Injuries:148.4

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

A trendline analysis was performed with non-motorized crash data from 2004-2023, and an autoregressive integrated moving average (ARIMA) model was developed with 70-97.5% prediction intervals/confidence levels to estimate how much risk would be associated with each set of predictions. This is consistent with procedures since 2017. For the forecast values in 2025, our working group selected an 85% confidence level. The 5-year rolling average target for 2021-2025 is based on crash history from 2021-2023, the forecast value for 2024 (higher confidence due to year partially complete at time of modeling), and the upper 85% prediction interval/confidence level value for 2025. Consistent with the Strategic Highway Safety Plan (SHSP) and Highway Safety Improvement Plan (HSIP) goals, t his "data driven" approach focuses on Fatal and Serious Injury crashes and is developed with internal and external stakeholders.

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

Each May, Iowa DOT's Safety Target working group reviews the safety performance target methodology and new data, and begins the target setting process and stakeholder coordination. This group includes members from various Iowa DOT Bureaus - Traffic and Safety, Systems Planning, and Organizational Improvement. The group also coordinates with the Governor's Traffic Safety Bureau (GTSB) in the Iowa Department of Public Safety. In the past the DOT and GTSB targets were identical. Due to legislative changes a joint Final Rule was published by FHWA and NHTSA in May 2024 that FY 2025 safety targets would differ for FHWA and NHTSA reporting agencies such as the Iowa DOT and Iowa GTSB, similar to FY 2024.

In June 2024 a Draft memo summarizing the targets and methodology was provided for review and comment and provided the targets to the the state MPOs and RPAs. Their limited comments were supportive and encouraged continued coordination, especially regarding SS4A plans and the safe system approach, and the 2021-2025 safety performance targets were finalized.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2023 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	351.4	350.2
Number of Serious Injuries	1398.2	1378.4
Fatality Rate	1.073	1.070
Serious Injury Rate	4.264	4.208
Non-Motorized Fatalities and Serious Injuries	134.4	142.2

In general, this table indicates progress is being achieved, showing four the 5-year average for (4) of the five (5) targets are better than the target value - for number of fatalities, number of serious injuries, as well as the fatality rate and serious injury rate. Non-motorized fatalities and serious injuries are higher than the target. The State experienced a spike in pedestrian fatalities in 2020 and 2021 that has declined in 2022 and 2023.

Applicability of Special Rules

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

Yes

Based on 2017-2021 Safety Performance Target Assessment letter received April 2023, the High-Risk Rural Roads special rule was determined to apply per 23 U.S.C. 148(g)(1), and Iowa DOT was requested to "Obligate in FY 2024 an amount equal to at least 200 percent of the FY 2009 high-risk rural roads set-aside in the amount of $2,671,790." This was accomplished through three HRRR projects in the three (3) Iowa DOT Local Systems Regions - Western (Osceola County), Central (Jasper County), and Eastern (Fayette County) with a total HRRR obligation of $2,691,790.

Does the VRU Safety 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	2017	2018	2019	2020	2021	2022	2023
Number of Older Driver and Pedestrian Fatalities	51	51	50	51	66	61	70
Number of Older Driver and Pedestrian Serious Injuries	156	127	142	119	150	139	136

Based on 2017-2021 Safety Performance Target Assessment letter received April 2023, the Older Drivers and Pedestrians special rule was determined to apply per 23 U.S.C. 148(g)(2), and Iowa DOT was requested to "Include strategies to address the increase in older driver and pedestrian fatal and serious injury rates in the next SHSP update. Additionally, a secondary analysis should be conducted to determine whether the emphasis on safety programs and countermeasures should be focused on drivers and/or pedestrians.."

The 2024-2028 Strategic Highway Safety Plan (SHSP) includes strategies for older drivers and pedestrians in Special Rules Section 4.5 and Key Emphasis Areas (KEAs) Section 3.4. The associated Vulnerable Road User (VRU) assessment includes additional analysis and strategies. In addition to the design standards/considerations from the FHWA 'Handbook for Designing Roadways for the Aging Population' discussed in the SHSP Section 4.5, Iowa DOT has targeted funding for 4-lane to 3-lane reconfigurations and RRFB and PHB pedestrian crossing treatments through the TSIP and HSIP-Local programs.

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Benefit/Cost Ratio

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

As a summary since fiscal year 2001, the state's various HSIP expenditure evaluations have resulted in a benefit-cost ratio of approximately 6 to 1. Some of the highest B-C ratios resulted from extremely low-cost improvements such as supplemental roadway signs, lighting, or roadside clearing. The ongoing trend of reduced "lane departure" crashes shown in the Emphasis Area question of this report (#44) supports the effectiveness of the widespread implementation of paved shoulders and centerline and shoulder rumble strips, safety edge, and curve treatments.

Iowa DOT Traffic and Safety Bureau is currently partnering with our research partners at Iowa State University Institute for Transportation (InTrans) on a safety effectiveness dashboard tool to provide consistent project based evaluations. This tool will be used for federal fund HSIP projects and also the State funded HSIP-Local and TSIP program projects. Ultimately, these will also allow additional summaries for groupings of projects, facility types, programs, etc., as well. This effort will be ongoing, but results will be available next year.

Past evaluations have shown positive impacts, and the majority of our HSIP projects include FHWA "Proven Safety Countermeasures". We look forward to examining the ranges of impact these countermeasures on a range of projects, and reporting on more of these in the upcoming annual reports. We expect to have additional data from the above-mentioned safety effectiveness dashboard tool in next year's HSIP Annual Report, and in the meantime will coordinate review of this evaluation project with FHWA Iowa Division.

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

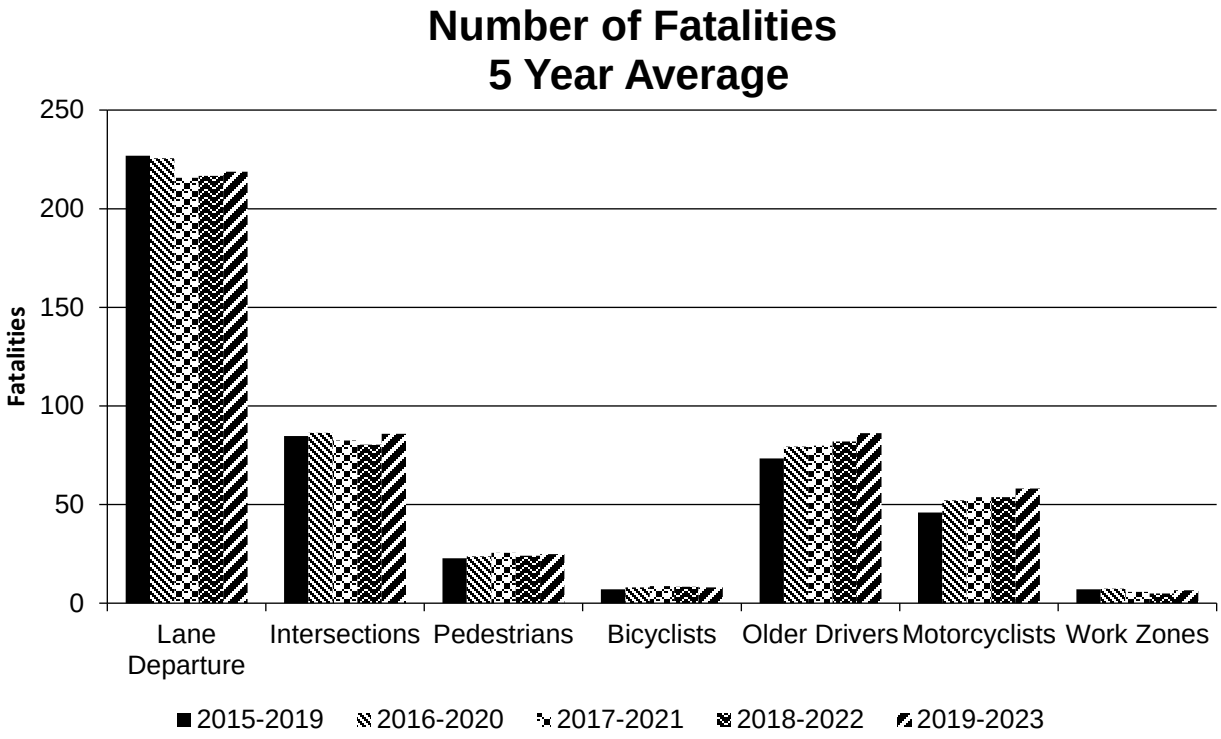
- HSIP Obligations
- Increased awareness of safety and data-driven process
- Increased focus on local road safety
- More systemic programs
- Organizational change
- Policy change

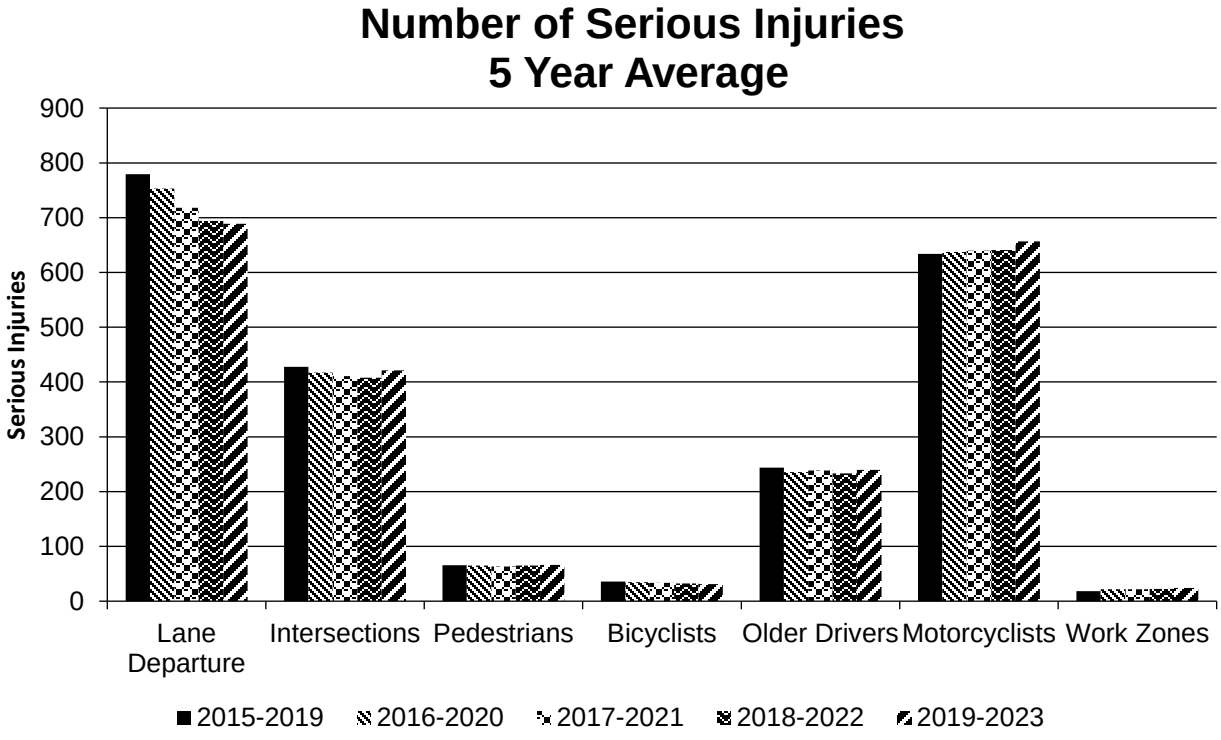
Effectiveness of Groupings or Similar Types of Improvements

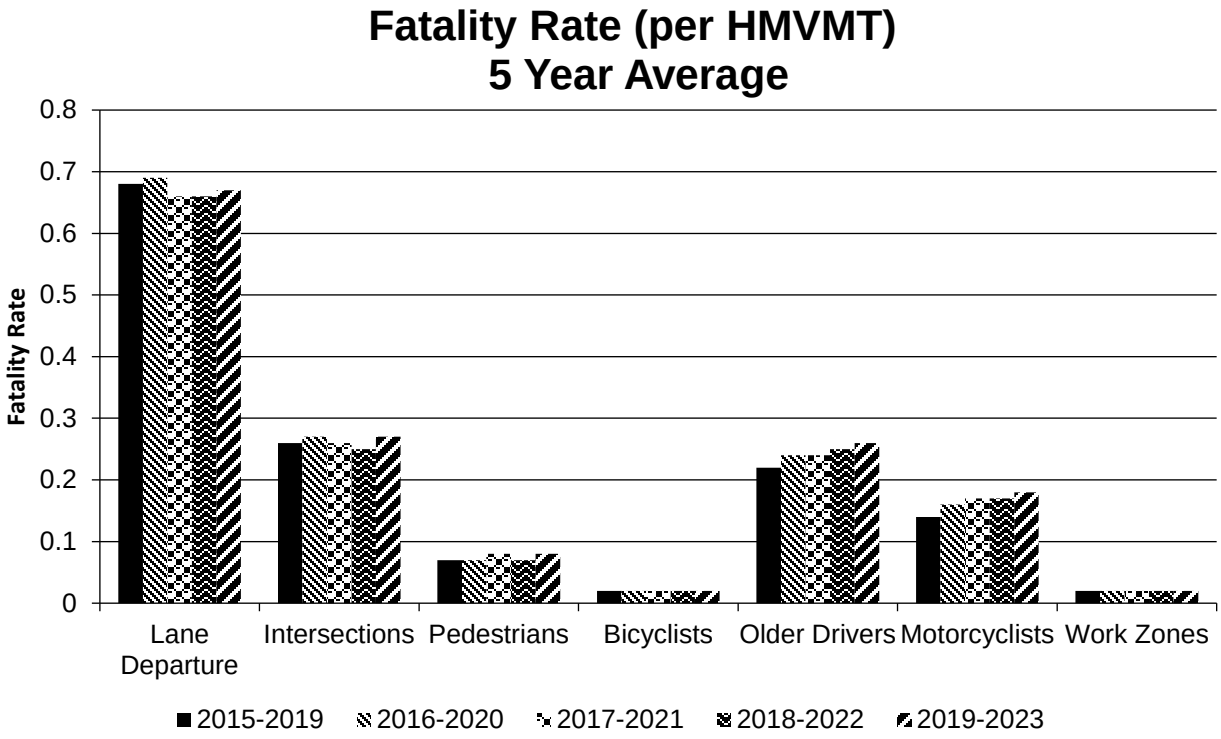
Present and describe trends in SHSP emphasis area performance measures.

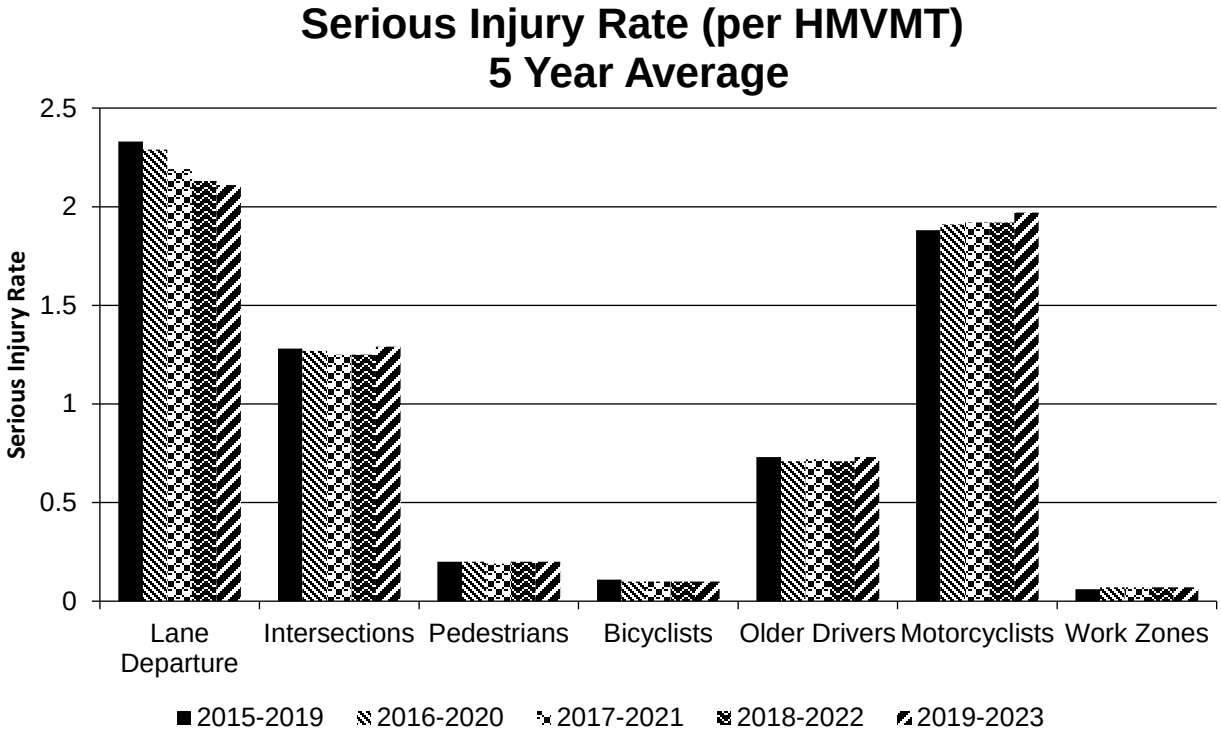
Year 2023

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	218.8	688.6	0.67	2.11
Intersections	All	85.8	421	0.27	1.29
Pedestrians	All	24.8	66	0.08	0.2
Bicyclists	All	8	31	0.02	0.1
Older Drivers	All	86.2	239.6	0.26	0.73
Motorcyclists	All	58.2	656.8	0.18	1.97
Work Zones	All	6.6	24	0.02	0.07


Number of Fatalities
5 Year Average
Fatalities
250
200
150
100
50
0
Lane Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023


Number of Serious Injuries
5 Year Average
Serious Injuries
900
800
700
600
500
400
300
200
100
0
Lane Departure
Intersections
Pedestrians
Bicyclists
Older Drivers
Motorcyclists
Work Zones
2015-2019
2016-2020
2017-2021
2018-2022
2019-2023





This current data comes from the most recent updates to the state motor vehicle crash database, TRACS and Iowa Crash Analysis Tool (ICAT) data, and recently developed Iowa Crash Analysis Tool (ICAT) dashboards. These dashboards allow better filtering and "person level" and "crash level" data where required.

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

No

As discussed in responses to Q41 and Q46, Iowa DOT Traffic and Safety Bureau is currently partnering with our research partners at Iowa State University Institute for Transportation (InTrans) on a safety effectiveness dashboard tool to provide consistent project based evaluations. Ultimately, these will also allow additional summaries for groupings of projects, facility types, programs, etc., as well. These project groupings will allow for ongoing evaluation of countermeasures and we look forward to reporting more on these in upcoming annual reports beginning next year.

In the meantime, the charts generated by the responses to Q44 Emphasis Area show some trends with respect to countermeasure groupings. For example, "Lane Departure" crashes have been and will continue to be the predominant statewide crash type given Iowa's high-speed, rural roadway network. For the past 10+ years, much of Iowa's SHSP and HSIP programming, as well as other State funded programs and design standard changes, have focused on systemic improvements targeting these crashes through paved shoulders, safety edge, curve signing, and centerline and/or shoulder/edgeline rumble strips. While all crashes were higher this past year, lane departure crashes did not increase as much as some of other categories. Therefore these charts continue to show a consistent statewide/systemwide decline for the successive 5-year averages in Lane Departure crash Fatal and Serious Injury Rates, indicating the effectiveness of this sustained effort and systemic improvements, and need to continue prioritizing these systemic improvements for remaining untreated roadways.

Project Effectiveness

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

As discussed in Q41, Iowa DOT Traffic and Safety Bureau is currently partnering with our research partners at Iowa State University Institute for Transportation (InTrans) on a safety effectiveness dashboard tool to provide consistent project based evaluations. Ultimately, these will also allow additional summaries for groupings of projects, facility types, programs, etc., as well. Past evaluations have shown positive impacts, and the majority of our HSIP projects include FHWA Proven Safety Countermeasures. We look forward to examining the ranges of impact these countermeasures on a range of projects, and reporting on more of these in upcoming annual reports.

Compliance Assessment

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

12/01/2023

What are the years being covered by the current SHSP?

From: 2024 To: 2028

When does the State anticipate completing its next SHSP update?

2028

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								

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	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]			100	100						
	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]					100	100				
	Location Identifier for Roadway at Beginning of Ramp Terminal (197) [187]					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
	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):		**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

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

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

No actions are required at this time. The State of Iowa is already compliant.

Optional Attachments

Program Structure:

HSIP Manual FINAL FY 19.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.