MONTANA

HIGHWAY SAFETY IMPROVEMENT PROGRAM

2022 ANNUAL REPORT

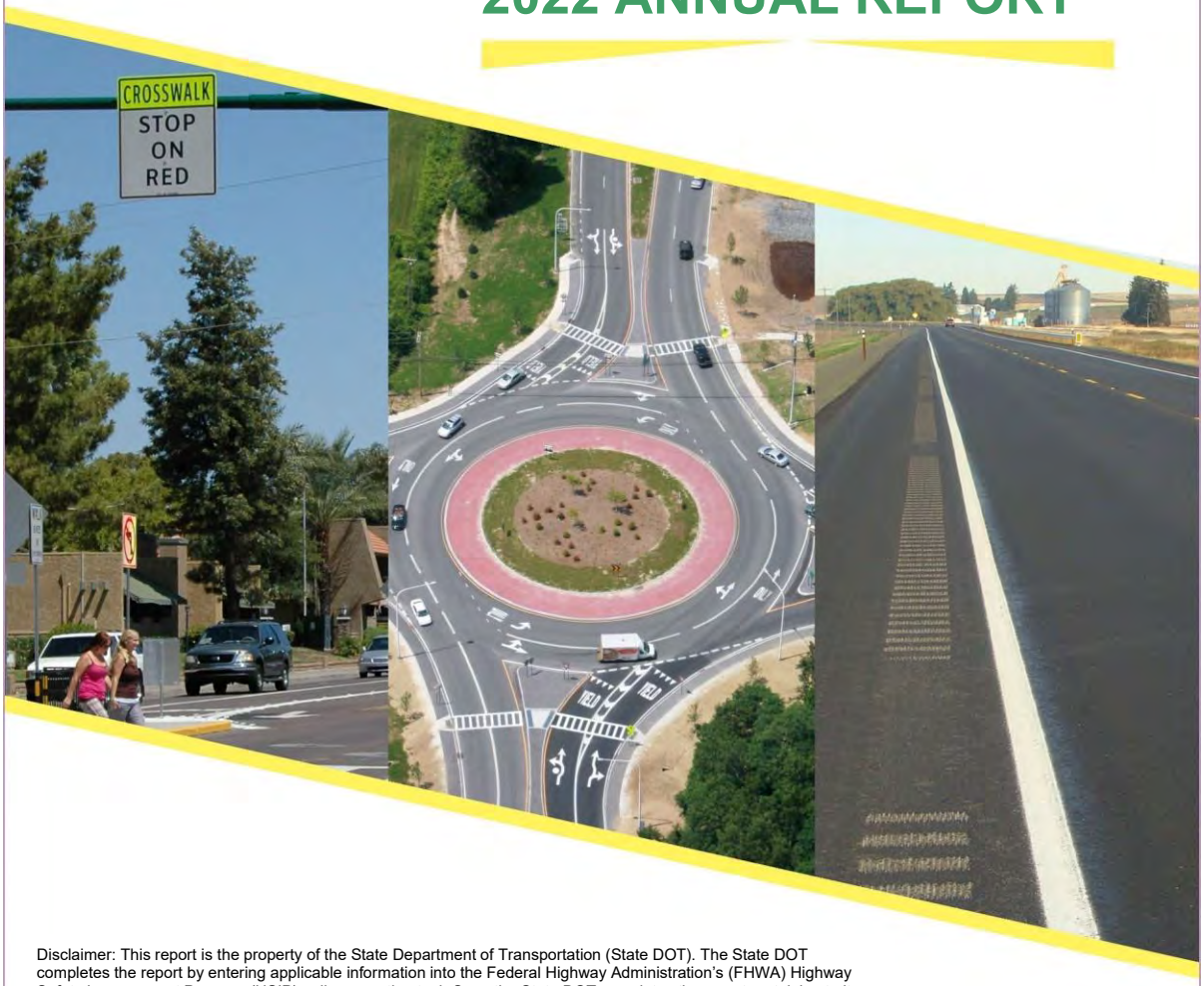

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Photo source: Federal Highway Administration

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Disclaimer

Protection of Data from Discovery Admission into Evidence

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

23 U.S.C. 407 states “Notwithstanding any other provision of law, reports, surveys, schedules, lists, or data compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential accident sites, hazardous roadway conditions, or railway-highway crossings, pursuant to sections 130, 144, and 148 of this title or for the purpose of developing any highway safety construction improvement project which may be implemented utilizing Federal-aid highway funds shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.”

Executive Summary

The Montana Department of Transportation (MDT) continues to successfully implement the Highway Safety Improvement Program (HSIP) Funds throughout the State. The program continues to identify safety improvements on all public roads including state, county, city, tribal, BIA and local roads. This past year two large scale systemic projects were implemented across multiple Districts. This included centerline rumble strips on primarily two-lane routes and high tension median cable barrier on the interstate system. Spot safety improvements have ranged from roundabouts, curve reconstructions, shoulder widening to intersection signing upgrades and roadway lighting projects.

MDT recently updated its Safety Management System to an AASHTOWare product called Numetrics.. Using this new system and Montana Specific Safety Performance Functions, the HSIP program is able to provide Montana with effective tools to identify, analyze and implement HSIP projects.

Montana did see severe injuries increase for another year in 2021. The COVID pandemic affected driver behavior on Montana's roadways resulting in more fatal and serious injury crashes. This included higher speeds and riskier driving behaviors. This increase was also the case in neighboring states.

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 Safety Engineering Section, within the Traffic & Safety Bureau, administers MDT's HSIP Program.

Each year, the Safety Engineering Section uses a data-driven approach to identify locations for potential safety improvements. This includes spot locations and also longer highway segments or entire corridors for systemic safety improvements. Sites are then reviewed through an established process which includes reviewing Montana Highway Patrol crash records, completing an office review and usually a field review. The last step is completing a benefit cost for a potential safety countermeasure that addresses the identified crash trend. The sites that meet the minimum benefit cost threshold established by FHWA and are within Montana's HSIP available funding, are nominated as HSIP Funded Safety Projects.

Where is HSIP staff located within the State DOT?

Engineering

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.

All crashes investigated by the Montana Highway Patrol (MHP), or submitted to the MHP by a local enforcement agency, are available to MDT. MDT's database and program allows MDT staff the ability to query local road crash data by route and reference post as well as spatially via GIS tools. Fatal crash data is available for the Tribal reservations; however, other crashes investigated by the Tribal enforcement agencies or Bureau of Indian Affairs are not consistently submitted. MDT solicits participation from local and Tribal agencies, who can submit documentation of sites to be evaluated and prioritized under the Highway Safety Improvement Program. These governments may also work through MDT's District Offices to request a location be reviewed by MDT's Safety Program.

A nomination/application for HSIP projects is included on the MDT internet page at https://mt.accessgov.com/mdt/Forms/Page/mdt-tp/a0f2b61b-96af-4527-9f99-0092c3c434dc/28f1e5ac-bbc9-4af9-9f21-24d2a1a133e9/0

Potential HSIP projects on local and Tribal roads are currently evaluated using the same methodologies as are applied to potential projects on the state owned system. For future HSIP projects, other data-driven tools are being explored to assist with identifying potential projects on low volume local and Tribal 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
- Maintenance
- Operations
- Planning
- Traffic Engineering/Safety
- Other-Motor Carriers

Describe coordination with internal partners.

The MDT Planning Division administers the Comprehensive Highway Safety Plan (CHSP) and the Highway Safety Plan while MDT's Engineering Division manages the HSIP Program. There is significant coordination between the two Divisions and their corresponding CHSP Emphasis Areas. In addition, both Divisions are represented on the Traffic Records Coordinating Committee (TRCC). MDT's CHSP was updated in 2020.

The most current CHSP is available at:
https://www.mdt.mt.gov/visionzero/plans/chsp.aspx

The Highway Safety Improvement Program is administered centrally by the MDT Traffic and Safety Bureau. Crash clusters are identified by roadway system and by various criteria. Coordination with MDT's District Staff, Environmental Staff, Maintenance and other engineering disciplines is on-going with the program. This takes place as sites are analyzed and as projects are identified, designed and constructed.

Identify which external partners are involved with HSIP planning.

- Local Government Agency
- Regional Planning Organizations (e.g. MPOs, RPOs, COGs)
- Other-Tribes
- Other-Law Enforcement

Describe coordination with external partners.

MDT routinely receives requests for specific sites identified for review from law enforcement, local government entities and tribal governments. MDT coordinates with these governments to gather additional input for addressing the crash trends. MDT coordinates with the MPO's in the same manner; however, the coordination is done through MDT's District and Planning Division Offices rather than the Traffic and Safety Bureau.

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

Since 2006 Montana has had a Traffic Records Coordinating Committee (TRCC). The TRCC has representation from State agencies involved with safety records and Federal agencies for oversight and input. They meet regularly and attempt to coordinate and share projected record upgrades, new projects and pertinent records among participants. As the systems mature, the TRCC may include MPO and Tribal

representation.

Starting September 2008, the Montana Highway Patrol (MHP) implemented the CTS America Public Safety System dispatch-crash-record systems, including a MMUCC based crash reporting form. MHP investigates approximately 50% of all statewide crashes. This CTS America System is presently only used by the MHP via a mobile client in each patrol unit; however, a web-based crash reporting system was developed and is being used by a few local agencies. This web based system allows local enforcement agencies to input crash information via the internet, if they choose to participate. Law enforcement agencies are now working with other vendors to collect their local crash data. MDT and MHP are working with these agencies to develop ways for this crash data to be imported into MHP's crash database and become usable by MDT for it's HSIP Program. Approximately eight departments report about 80% of all local crashes.

In late 2021 MDT was under contract with AASHTOWare to upgrade its safety database and analysis tools. This new system, AASHTOWare Numetrics will allow MDT to access the MMUCC compliant crash data being collected by the Montana Highway Patrol. The system also will have access to many roadway data elements including the Fundamental Data Elements identified by FHWA. Additionally, MDT will retain access to the MHP crash investigator’s reports, if additional detail on the particular crash is required. Lastly, the upgraded system will continue to allow access to MHP citation data for traffic and safety engineering purposes.

The Traffic and Safety Bureau is actively involved in the update and implementation of the CHSP. Traffic and Safety continues to take the lead in the areas of roadway departure crashes and intersection crashes.

Program Methodology

Does the State have an HSIP manual or similar that clearly describes HSIP planning, implementation and evaluation processes?
No

MDT's Safety Program has a safety manual used by Safety Staff. This is an internal document.

Select the programs that are administered under the HSIP.

- Intersection
- Roadway Departure
- Other-Hot Spot

Program: Intersection

Date of Program Methodology:1/1/2015

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	

- Fatal and serious injury crashes only
- Volume

What project identification methodology was used for this program?

- Level of service of safety (LOSS)

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.

LOSS Intersection Models for local intersections have been developed. Phase II of the Intersection Safety Study has produced results from a statewide network screening list. It has identified both state and local intersections of interest for further review.

How are projects under this program advanced for implementation?

- Other-Benefit Cost

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

Relative Weight in Scoring

Ranking based on B/C:100
Total Relative Weight:100

Program: Roadway Departure

Date of Program Methodology:1/1/2015

What is the justification for this program?

- Addresses SHSP priority or emphasis area
- FHWA focused approach to safety

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• All crashes • Fatal and serious injury crashes only	• Volume	

What project identification methodology was used for this program?

- Level of service of safety (LOSS)

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.

LOSS models are not developed for local roads. Local road roadway departure crashes can be identified using other parameters and thresholds including collision type.

How are projects under this program advanced for implementation?

- Other-Benefit Cost

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

Relative Weight in Scoring

Ranking based on B/C:100
Total Relative Weight:100

Program: Other-Hot Spot

Date of Program Methodology:10/1/1989

What is the justification for this program?

- Other-All public roads

What is the funding approach for this program?

Competes with all projects

What data types were used in the program methodology?

Crashes	Exposure	Roadway
• All crashes • Fatal and serious injury crashes only	• Volume	

What project identification methodology was used for this program?

- Level of service of safety (LOSS)
- Other-Requests - Areas to be investigated as requested by any agency or individual
- Other-See additional description provided in question #15.

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.

LOSS is not available for local roads. Other methods are utilized to identify crash trends on local roads.

How are projects under this program advanced for implementation?

- Other-Projects are evaluated and ranked on a benefit/cost system.

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

Relative Weight in Scoring

Ranking based on B/C:100
Total Relative Weight:100

What percentage of HSIP funds address systemic improvements?

35

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

- Cable Median Barriers
- Horizontal curve signs
- Install/Improve Pavement Marking and/or Delineation
- Install/Improve Signing
- Rumble Strips

MDT identifies and funds systemic projects each year. The percentage of systemic projects varies by year. In State Fiscal Year (SFY) 2022, MDT obligated two (2) large median cable barrier projects along the interstate system. These two projects accounted for 26% of HSIP funds expended for SFY 22.

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

MDT uses available engineering resources to determine the most appropriate safety countermeasure(s) for a given location. Any new FHWA guidance or academic research is utilized to help in this process.

Does the State HSIP consider connected vehicles and ITS technologies?

No

As these technologies continue to evolve, the HSIP program may consider appropriate applications to address safety on Montana's roadways. However, at this time, the HSIP Program doesn't consider these technologies.

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.

MDT developed both its Roadway Departure Study and Intersection Safety Study using Montana specific Safety Performance Functions (SPF) and Levels of Service of Safety (LOSS). These SPF's and LOSS's were developed based on methodologies in the Highway Safety Manual. MDT recently updated its Roadway Departure Montana Specific SPF's utilizing the same methodology.

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

Criteria for the HSIP Program's annual list is primarily focused on roadway departure and/or intersection related crashes which is in line with Montana's Comprehensive Highway Safety Plan.

Once the sites are identified, a preliminary office review identifies the sites where there are near-term reconstruction projects, currently programmed safety projects, or sites that were recently field reviewed. After the preliminary office review, further review establishes the sites that need on-site field reviews. The sites showing no crash trend are not field reviewed. The field review team establishes crash causations and contributing factors. The team members identify potential countermeasures. Conceptual designs are developed with cost estimates.

The project prioritization process is based on a benefit-cost analysis. The costs are the annualized cost of construction over the service life of the proposed improvement plus the annual increase in operation and maintenance costs due to the improvement. The benefits are the anticipated annualized cost reductions due to a lower number of crashes and lower crash severity. The projects with the highest benefit-cost ratios are nominated for improvements.

MDT has several state-wide systemic projects including horizontal curve signing, centerline rumble strips and interstate median barriers. These projects are being installed on a large district-wide scale.

MDT recently updated its Roadway Departure Safety Performance Functions (SPFs), Levels of Service of Safety (LOSS), and diagnostic norms. MDT is using the updated tools for continued evaluation of the HSIP as well as analysis for other agency projects.

Project Implementation

Funds Programmed

Reporting period for HSIP funding.

State Fiscal Year

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

FUNDING CATEGORY	PROGRAMMED	OBLIGATED	% OBLIGATED/PROGRAMMED
HSIP (23 U.S.C. 148)	$45,110,098	$45,110,098	100%
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)	$9,139,153	$9,139,153	100%
RHCP (for HSIP purposes) (23 U.S.C. 130(e)(2))	$0	$0	0%
Other Federal-aid Funds (i.e. STBG, NHPP)	$35,771,913	$35,771,913	100%
State and Local Funds	$0	$0	0%
Totals	$90,021,164	$90,021,164	100%

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

$1,860,698

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

$1,860,698

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

$1,655,550

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

$1,655,550

The yearly project that funds MDT's HSIP Planning Process is HSIP STWD (892). The funds identified above are for State Fiscal Year (FY23) July 1, 2022 to June 30, 2023 (FY 2023 HSIP Program)

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.

Retaining/recruiting experienced design staff and acquiring right of way are two significant challenges for constructing HSIP safety improvements. Both of these impede obligating HSIP funds.

For retaining and recruiting experienced design staff, the agency has pursued multiple avenues to improve this situation. This has included identifying alternative design and delivery methods. However, this results in higher project costs and fewer HSIP projects being delivered.

On larger roadway departure and intersection safety improvements, the right of way acquisition has added significant delivery time and overall project cost. This has particularly been challenging with intersection projects in urban and urban-fringe areas. MDT is pursuing innovative intersection treatments to minimize impacts as well as alternative delivery methods.

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

Historically, MDT has been very successful in utilizing HSIP Funds and has strong support for the program from MDT Management. MDT is utilizing recently completed studies to identify locations for safety improvements. These studies include the Median Cable Barrier Study, the Intersection Safety Study and the Roadway Departure Study (2020 Update). These studies use data-driven tools, HSM methodologies and Montana specific data to assist MDT in implementing HSIP projects across the state.

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
SAFETY MANAGEMENT PROGRAM (23)	Miscellaneous	Transportation safety planning			$1489995	$1655550	HSIP (23 U.S.C. 148)			0					
HSIP PROGRAM JOC- BILLINGS	Roadway signs and traffic control	Roadway signs and traffic control - other	1	District-wide	$9341	$10379	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		County Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
HSIP PROGRAM JOC-BUTTE	Roadway signs and traffic control	Roadway signs and traffic control - other	1	District-wide	$38322	$42580	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
HSIP PROGRAM JOC-MISSOULA	Roadway signs and traffic control	Roadway signs and traffic control - other	1	District-wide	$23198	$25775	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
HSIP PROGRAM JOC-MISSOULA	Roadway signs and traffic control	Roadway signs and traffic control - other	1	District-wide	$117739	$122740	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven

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
															problem identification and the use of best practices
I-90 WYOLA SAFETY IMPROVEMENTS	Roadway delineation	Roadway delineation - other	6.2	Miles	$11552	$11552	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	4,067	75	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
I-90 WYOLA SAFETY IMPROVEMENTS	Roadway delineation	Roadway delineation - other	6.2	Miles	$115513	$115513	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	4,067	75	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
LINCOLN RD-MONTANA TO I-15	Intersection traffic control	Modify control – Modern Roundabout	2	Intersections	$3500000	$3500000	Penalty Funds (23 U.S.C. 164)	Urban	Minor Arterial	7,395	45	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF109-GR NE OF BOZ (PH2)	Roadside	Increase clear zone – tangent	1	Locations	$3969	$4410	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	2,637	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use

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															of best practices
SF 119-SLOPE FLATTEN S-206	Roadway	Roadway widening - travel lanes	9	Miles	$1017234	$1130260	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	7,735	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 119-SLOPE FLATTEN S-206	Roadway	Roadway widening - travel lanes	9	Miles	$4838265	$5375850	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	7,735	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 119-SLOPE FLATTEN S-206	Roadway	Roadway widening - travel lanes	9	Miles	$2697434	$2697434	Penalty Funds (23 U.S.C. 164)	Rural	Minor Arterial	7,735	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 129-RNDABOUT KING 56TH	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$10378	$10378	HSIP (23 U.S.C. 148)	Rural	Major Collector	5,511	60	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices

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SF 129-RNDABOUT KING 56TH	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$375559	$417288	HSIP (23 U.S.C. 148)	Rural	Major Collector	5,511	60	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 129-RNDABOUT KING 56TH	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$3129655	$3477394	HSIP (23 U.S.C. 148)	Rural	Major Collector	5,511	60	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 139-CENTRAL & 56TH RNDABOUT	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$223285	$248094	HSIP (23 U.S.C. 148)	Rural	Minor Collector	1,076	60	County Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 139-CENTRAL & 56TH RNDABOUT	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$1860698	$2067442	HSIP (23 U.S.C. 148)	Rural	Minor Collector	1,076	60	County Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 139-ROUNDABOUT S OF SIDNEY	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$29171	$29171	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	7,095	65	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven

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
															problem identification and the use of best practices
SF149 S OF STEVENSVLL SFTY IMP	Roadway	Roadway widening - travel lanes	6	Miles	$76347	$84830	HSIP (23 U.S.C. 148)	Rural	Major Collector	4,933	65	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF149 S OF STEVENSVLL SFTY IMP	Roadway	Roadway widening - travel lanes	6	Miles	$110299	$122554	HSIP (23 U.S.C. 148)	Rural	Major Collector	4,933	65	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF149 S OF STEVENSVLL SFTY IMP	Roadway	Roadway widening - travel lanes	6	Miles	$121688	$135209	HSIP (23 U.S.C. 148)	Rural	Major Collector	4,933	65	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF149 S OF STEVENSVLL SFTY IMP	Roadway	Roadway widening - travel lanes	6	Miles	$842158	$935731	HSIP (23 U.S.C. 148)	Rural	Major Collector	4,933	65	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification

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															and the use of best practices
SF 149 - YORK RD ROUNDABOUT	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$470	$470	HSIP (23 U.S.C. 148)	Rural	Major Collector	2,561	60	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 149 N-8 SHLD WDNG	Roadway	Roadway widening - curve	2	Curves	$253738	$281931	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	6,537	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 BLGS DIST RUMBLE STRIPS	Roadway	Rumble strips – other	3	Locations	$1974	$2193	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 BLGS DIST RUMBLE STRIPS	Roadway	Rumble strips – other	3	Locations	$5032	$5591	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices

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
SF 159 E OF MOLT SFTY IMPRV	Roadway	Rumble strips – edge or shoulder	1	Locations	$2544	$2827	HSIP (23 U.S.C. 148)	Rural	Major Collector	315	65	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 LOLA SHEPHARD INT IMPRV	Intersection geometry	Intersection realignment	1	Locations	$1167300	$1297000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	20,702	55	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 159 N HUNTLEY GUARDRAIL	Roadside	Barrier- metal	1	Intersections	$4935	$5483	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	3,016	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 N HUNTLEY GUARDRAIL	Roadside	Barrier- metal	1	Intersections	$37859	$42066	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	3,016	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 N HUNTLEY GUARDRAIL	Roadside	Barrier- metal	1	Intersections	$265490	$294989	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	3,016	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway

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
															departure crashes through data driven problem identification and the use of best practices
SF 159 N OF HARDIN SLP FLTN	Roadway	Roadway widening - curve	1	Locations	$75207	$83563	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	300	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 N OF HARDIN SLP FLTN	Roadway	Roadway widening - curve	1	Locations	$227182	$252425	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	300	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 N OF HARDIN SLP FLTN	Roadway	Roadway widening - curve	1	Locations	$1035000	$1150000	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	300	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 NE PARK CITY SHLDR WID	Roadway	Roadway widening - curve	1	Locations	$117000	$130000	HSIP (23 U.S.C. 148)	Rural	Major Collector	748	65	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes

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
															through data driven problem identification and the use of best practices
SF 159 SE COLUMBUS SHLDR WID	Roadway	Roadway widening - travel lanes	2	Miles	$255486	$283873	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,116	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO INGOMAR SLP FLTN	Roadway	Roadway widening - travel lanes	5	Miles	$11699	$12999	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	193	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO INGOMAR SLP FLTN	Roadway	Roadway widening - travel lanes	5	Miles	$6202642	$6891825	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	193	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO INGOMAR SLP FLTN	Roadway	Roadway widening - travel lanes	5	Miles	$58874	$58874	Penalty Funds (23 U.S.C. 164)	Rural	Minor Arterial	193	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven

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
															problem identification and the use of best practices
SF 159 SO WIBAUX CRV IMPRV	Roadway	Roadway widening - curve	1	Locations	$2029	$2254	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	859	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO WIBAUX CRV IMPRV	Roadway	Roadway widening - curve	1	Locations	$27775	$30861	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	859	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO WIBAUX CRV IMPRV	Roadway	Roadway widening - curve	1	Locations	$46934	$52149	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	859	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO WIBAUX CRV IMPRV	Roadway	Roadway widening - curve	1	Locations	$244846	$272051	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	859	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification

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
															and the use of best practices
SF 159 SO WIBAUX CRV IMPRV	Roadway	Roadway widening - curve	1	Locations	$1857531	$2063924	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	859	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO WIBAUX CRV IMPRV	Roadway	Roadway widening - curve	1	Locations	$181367	$181367	Penalty Funds (23 U.S.C. 164)	Rural	Minor Arterial	859	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 159 SO WIBAUX CRV IMPRV	Roadway	Roadway widening - curve	1	Locations	$1375949	$1375949	Penalty Funds (23 U.S.C. 164)	Rural	Minor Arterial	859	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 169 BATAVIA INTX IMPRV	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$990000	$1100000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	7,032	60	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices

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
SF 169 CONRAD & 2ND INTX-KAL	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$540000	$600000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	6,999	25	City or Municipal Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 169 FAIRFIELD CURVE IMPRV	Roadway	Roadway widening - curve	1	Locations	$15329	$17032	HSIP (23 U.S.C. 148)	Rural	Major Collector	366	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 169 FAIRFIELD CURVE IMPRV	Roadway	Roadway widening - curve	1	Locations	$187942	$208825	HSIP (23 U.S.C. 148)	Rural	Major Collector	366	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 169 FAIRFIELD CURVE IMPRV	Roadway	Roadway widening - curve	1	Locations	$1566190	$1740211	HSIP (23 U.S.C. 148)	Rural	Major Collector	366	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 169 FRNTG RD WISE LN INTX	Advanced technology and ITS	Intersection Conflict Warning System (ICWS)	1	Intersections	$1480	$1480	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	4,574	55	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection

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															crashes through data-driven problem identification and the use of best practices
SF 169 I-15 HT CABLE RAIL	Roadside	Barrier – cable	10	Miles	$566866	$629851	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	10,173	80	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 169 I-15 HT CABLE RAIL	Roadside	Barrier – cable	10	Miles	$2834328	$3149253	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	10,173	90	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 169 KOOTENAI CR RD SFTY	Intersection geometry	Intersection geometry - other	1	Intersections	$2422	$2691	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,354	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 169 KOOTENAI CR RD SFTY	Intersection geometry	Intersection geometry - other	1	Intersections	$81327	$90363	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,354	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem

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
															identification and the use of best practices
SF 169 KOOTENAI CR RD SFTY	Intersection geometry	Intersection geometry - other	1	Intersections	$175479	$194976	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,354	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 169 KOOTENAI CR RD SFTY	Intersection geometry	Intersection geometry - other	1	Intersections	$280719	$311910	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	9,354	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 169 KOOTENAI CR RD SFTY	Intersection geometry	Intersection geometry - other	1	Intersections	$330928	$330928	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other	9,354	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 169 KOOTENAI CR RD SFTY	Intersection geometry	Intersection geometry - other	1	Intersections	$350000	$350000	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other	9,354	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices

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
SF169 RIMROCK & 62ND ST W-BLGS	Intersection traffic control	Modify control – Modern Roundabout	1	Intersections	$315000	$350000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	3,864	55	City or Municipal Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 169 S288 CURVES	Roadway	Roadway widening - curve	1	Locations	$288000	$320000	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,765	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 CURVE S OF CHURCHILL	Roadway	Roadway widening - curve	1	Locations	$145800	$162000	HSIP (23 U.S.C. 148)	Rural	Major Collector	622	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 CURVE S OF DILLON	Roadway	Roadway widening - curve	1	Locations	$139500	$155001	HSIP (23 U.S.C. 148)	Rural	Major Collector	1,709	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 D5 SAFETY IMPROVEMENTS	Advanced technology and ITS	Advanced technology and ITS - other	1	Locations	$1615	$1794	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway

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
															departure crashes through data driven problem identification and the use of best practices
SF 179 D5 SAFETY IMPROVEMENTS	Advanced technology and ITS	Advanced technology and ITS - other	1	Locations	$39366	$43740	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 D5 SAFETY IMPROVEMENTS	Advanced technology and ITS	Advanced technology and ITS - other	1	Locations	$171156	$190173	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 GALLATIN CANYON VMS	Advanced technology and ITS	Dynamic message signs	2	Locations	$29608	$32898	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	10,047	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 GALLATIN CANYON VMS	Advanced technology and ITS	Dynamic message signs	2	Locations	$61339	$68154	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	10,047	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes

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
															through data driven problem identification and the use of best practices
SF 179 GALLATIN CANYON VMS	Advanced technology and ITS	Dynamic message signs	2	Locations	$504836	$560929	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	10,047	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 GALLATIN CANYON VMS	Advanced technology and ITS	Dynamic message signs	2	Locations	$15428	$15428	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Other	10,047	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 HENDERSON CURVE SFTY	Advanced technology and ITS	Advanced technology and ITS - other	1	Locations	$16283	$18092	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	9,002	75	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 I-15 CURVE SFTY DILLON	Roadside	Barrier - other	1	Locations	$23858	$26509	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	5,835	80	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven

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
															problem identification and the use of best practices
SF 179 I-15 CURVE SFTY DILLON	Roadside	Barrier - other	1	Locations	$140342	$155935	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	5,835	80	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 INTX IMPROVEMENTS D4	Lighting	Intersection lighting	1	Locations	$2221	$2468	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 INTX IMPROVEMENTS D4	Lighting	Intersection lighting	1	Locations	$5435	$5435	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 INTX IMPROVEMENTS D4	Lighting	Intersection lighting	1	Locations	$22612	$25124	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices

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
SF 179 INTX IMPROVEMENTS D4	Lighting	Intersection lighting	1	Locations	$113058	$125620	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 INTX IMPRV CR 350 P-201	Lighting	Intersection lighting	1	Locations	$2221	$2468	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	337	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 INTX IMPRV CR 350 P-201	Lighting	Intersection lighting	1	Locations	$7969	$7969	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	337	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 INTX IMPRV CR 350 P-201	Lighting	Intersection lighting	1	Locations	$16970	$18855	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	337	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 INTX IMPRV CR 350 P-201	Lighting	Intersection lighting	1	Locations	$84846	$94273	HSIP (23 U.S.C. 148)	Rural	Minor Arterial	337	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven

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
															problem identification and the use of best practices
SF 179 MARION SFTY IMPRV	Roadway	Roadway widening - travel lanes	8	Miles	$36101	$40112	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,782	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 MARION SFTY IMPRV	Roadway	Roadway widening - travel lanes	8	Miles	$38463	$42737	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,782	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 MARION SFTY IMPRV	Roadway	Roadway widening - travel lanes	8	Miles	$202516	$225018	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	3,782	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 N-10 SFTY IMPROVEMENTS	Roadway signs and traffic control	Roadway signs (including post) - new or updated	3	Locations	$987	$1097	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	4,211	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification

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
															and the use of best practices
SF 179 N-10 SFTY IMPROVEMENTS	Roadway signs and traffic control	Roadway signs (including post) - new or updated	3	Locations	$65739	$73043	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	4,211	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 N-10 SFTY IMPROVEMENTS	Roadway signs and traffic control	Roadway signs (including post) - new or updated	3	Locations	$82656	$91840	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	4,211	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 PARK DR 1ST AVE N SFTY	Intersection traffic control	Modify traffic signal –other	1	Intersections	$6389	$6389	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	15,986	30	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 PARK DR 1ST AVE N SFTY	Intersection traffic control	Modify traffic signal –other	1	Intersections	$10680	$11867	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	15,986	30	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices

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
SF 179 PARK DR 1ST AVE N SFTY	Intersection traffic control	Modify traffic signal –other	1	Intersections	$89001	$98890	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	15,986	30	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF 179 PIPE CREEK RD CURVES	Roadway	Roadway widening - curve	1	Locations	$5400	$6000	HSIP (23 U.S.C. 148)	Rural	Major Collector	485	55	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 PIPE CREEK RD CURVES	Roadway	Roadway widening - curve	1	Locations	$105150	$116833	HSIP (23 U.S.C. 148)	Rural	Major Collector	485	55	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 PIPE CREEK RD CURVES	Roadway	Roadway widening - curve	1	Locations	$525748	$584164	HSIP (23 U.S.C. 148)	Rural	Major Collector	485	55	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF 179 S OF LIBBY CURVE SFTY	Roadway	Roadway widening - curve	1	Locations	$45000	$50000	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	2,711	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway

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
															departure crashes through data driven problem identification and the use of best practices
SF 179 S OF LIBBY CURVE SFTY	Roadway	Roadway widening - curve	1	Locations	$134672	$149635	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	2,711	70	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF189 CURVE S OF RAVALLI	Advanced technology and ITS	Advanced technology and ITS - other	1	Locations	$73855	$73855	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	8,495	60	State Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF189 D1 CLRS KALISPELL AREA	Roadway	Rumble strips – center	1	District-wide	$134394	$149327	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF189 D1 CLRS MISSOULA AREA	Roadway	Rumble strips – center	1	District-wide	$225474	$225982	HSIP (23 U.S.C. 148)	Rural	Multiple/Varies	0		State Highway Agency	Systemic	Roadway Departure	Reduce and mitigate roadway departure crashes

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
															through data driven problem identification and the use of best practices
SF189 D2 HT MEDIAN CABLE RAIL	Roadside	Barrier – cable	1	District-wide	$1233675	$1370750	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	80	State Highway Agency	Systemic	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF189 D2 HT MEDIAN CABLE RAIL	Roadside	Barrier – cable	1	District-wide	$8354048	$9282275	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	80	State Highway Agency	Systemic	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF189 GLOVER RD SAFETY	Roadside	Barrier- metal	1	Locations	$61654	$61654	HSIP (23 U.S.C. 148)	Rural	Local Road or Street	477		County Highway Agency	Spot	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF189 MINESINGER SAFETY	Intersection geometry	Intersection geometry - other	1	Locations	$94769	$94769	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Other	12,515	70	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem

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
															identification and the use of best practices
SF189 RUSSELL ST LIGHTING	Lighting	Continuous roadway lighting	1	Miles	$112500	$125000	HSIP (23 U.S.C. 148)	Urban	Minor Arterial	12,125	35	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF199 MARYJANE BROADWAY INTX	Intersection traffic control	Modify control – new traffic signal	1	Intersections	$13931	$15479	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	16,617	55	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF199 MARYJANE BROADWAY INTX	Intersection traffic control	Modify control – new traffic signal	1	Intersections	$31500	$35000	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	16,617	55	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF199 MARYJANE BROADWAY INTX	Intersection traffic control	Modify control – new traffic signal	1	Intersections	$60006	$66674	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	16,617	55	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices

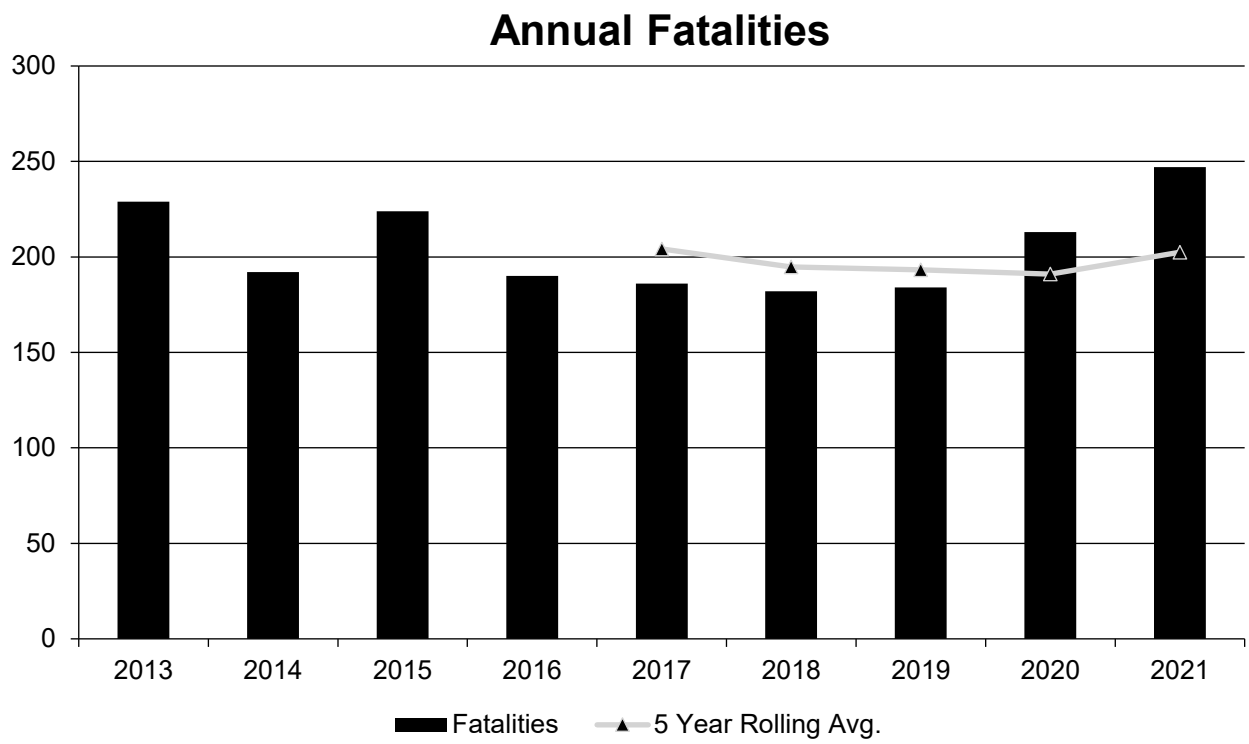
PROJECT NAME	IMPROVEMENT CATEGORY	SUBCATEGORY	OUTPUTS	OUTPUT TYPE	HSIP PROJECT COST($)	TOTAL PROJECT COST($)	FUNDING CATEGORY	LAND USE/AREA TYPE	FUNCTIONAL CLASSIFICATION	AADT	SPEED	OWNERSHIP	METHOD FOR SITE SELECTION	SHSP EMPHASIS AREA	SHSP STRATEGY
SF199 MARYJANE BROADWAY INTX	Intersection traffic control	Modify control – new traffic signal	1	Intersections	$592304	$658115	HSIP (23 U.S.C. 148)	Urban	Principal Arterial-Other	16,617	55	State Highway Agency	Spot	Intersections	Reduce and mitigate intersection crashes through data-driven problem identification and the use of best practices
SF199 MSLA HT MEDIAN CABLERAIL	Roadside	Barrier – cable	1	District-wide	$449950	$499944	HSIP (23 U.S.C. 148)	Rural	Principal Arterial-Interstate	0	80	State Highway Agency	Systemic	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF199 MSLA HT MEDIAN CABLERAIL	Roadside	Barrier – cable	1	District-wide	$565846	$565846	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Interstate	0	80	State Highway Agency	Systemic	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices
SF199 MSLA HT MEDIAN CABLERAIL	Roadside	Barrier – cable	1	District-wide	$877280	$877280	Penalty Funds (23 U.S.C. 164)	Rural	Principal Arterial-Interstate	0	80	State Highway Agency	Systemic	Roadway Departure	Reduce and mitigate roadway departure crashes through data driven problem identification and the use of best practices

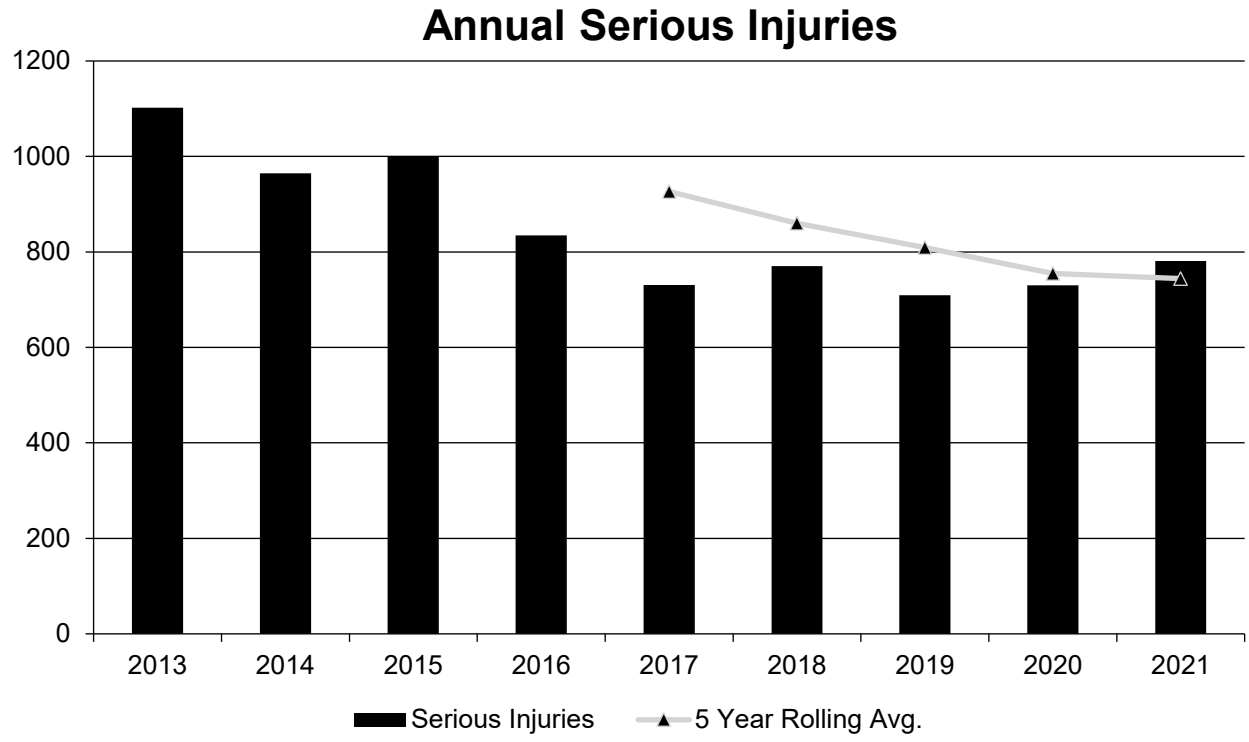
Safety Performance

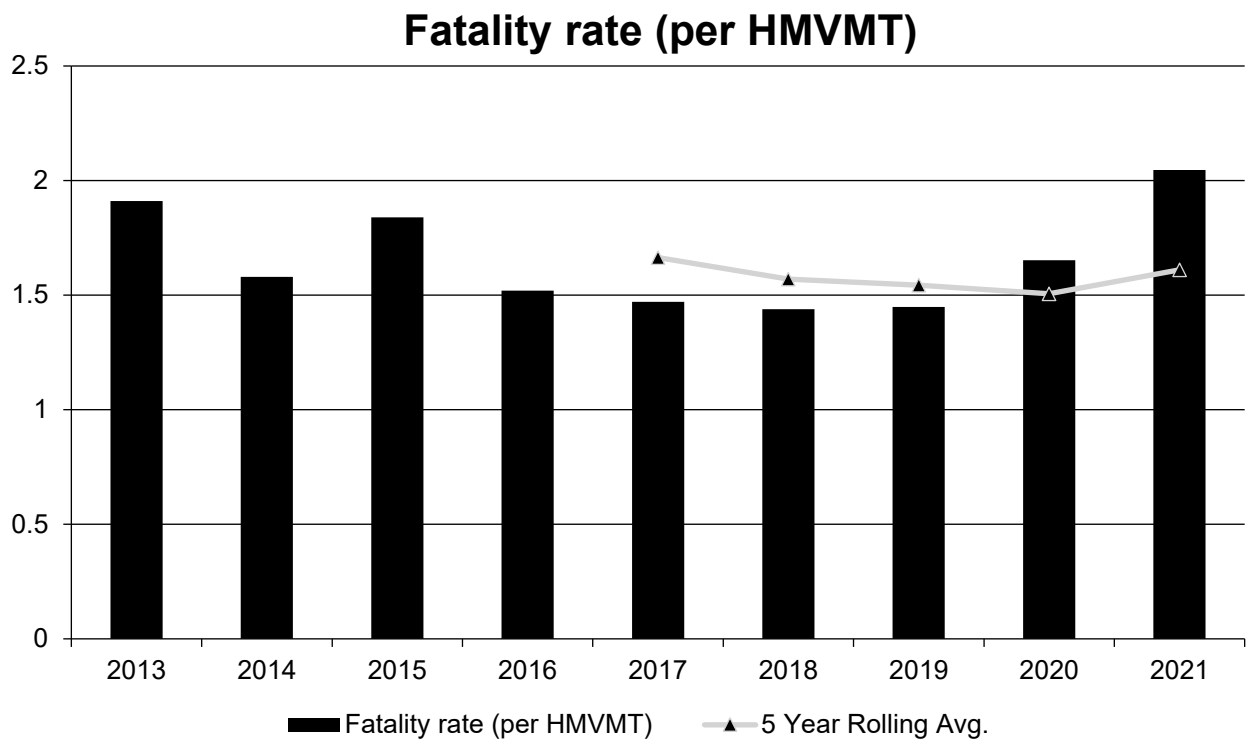
General Highway Safety Trends

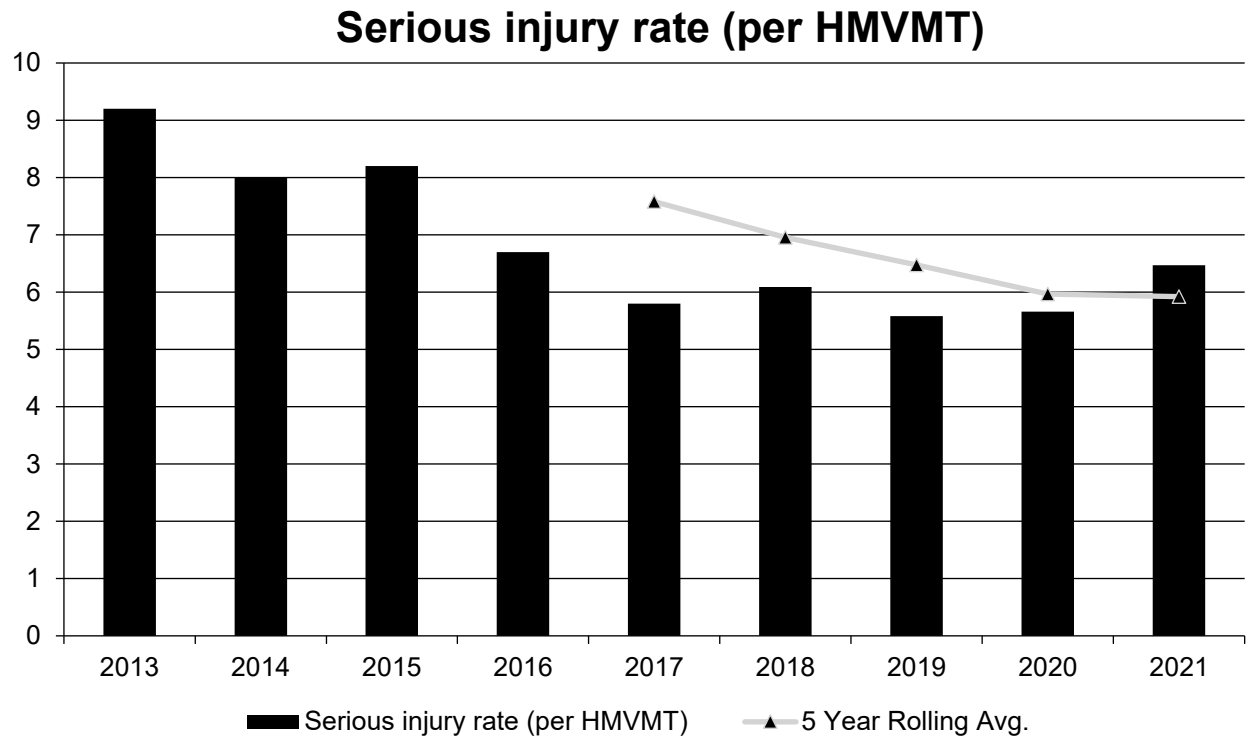
Present data showing the general highway safety trends in the State for the past five years.

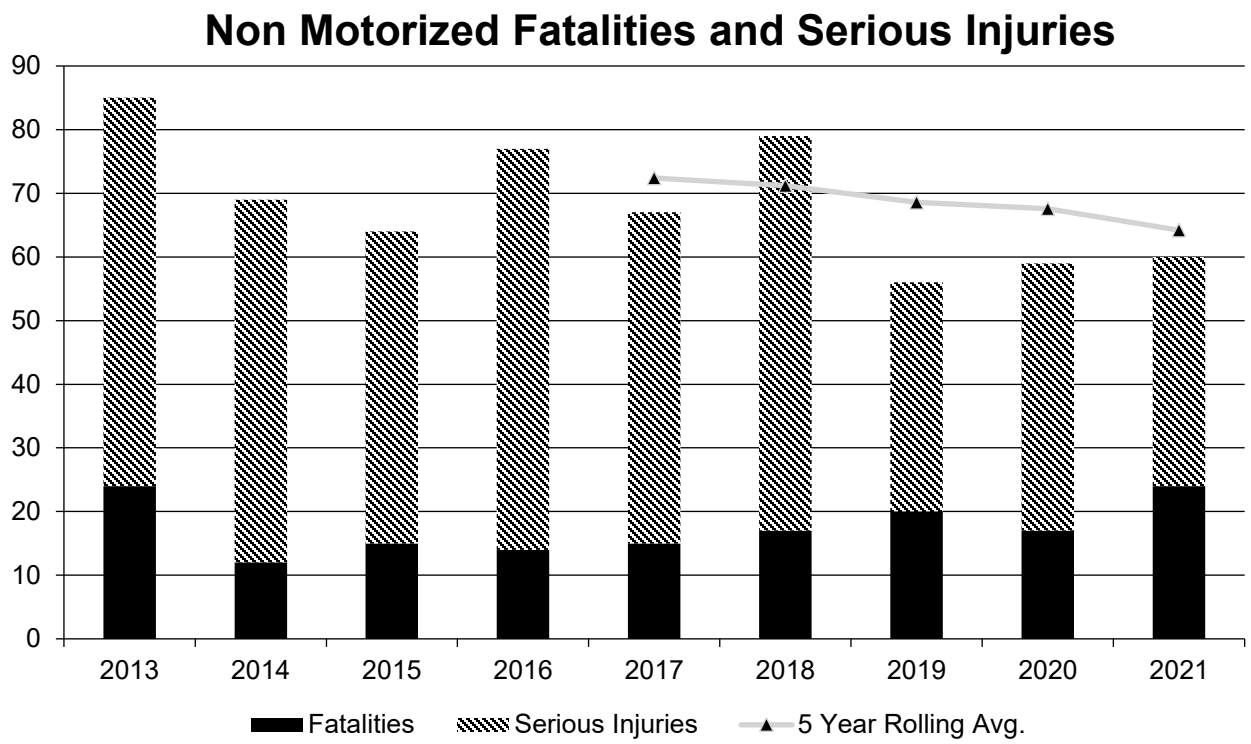
PERFORMANCE MEASURES	2013	2014	2015	2016	2017	2018	2019	2020	2021
Fatalities	229	192	224	190	186	182	184	213	247
Serious Injuries	1,102	965	1,000	835	731	770	709	730	781
Fatality rate (per HMVMT)	1.910	1.580	1.840	1.520	1.471	1.439	1.449	1.652	2.046
Serious injury rate (per HMVMT)	9.200	8.000	8.200	6.700	5.800	6.089	5.583	5.662	6.470
Number non-motorized fatalities	24	12	15	14	15	17	20	17	24
Number of non-motorized serious injuries	61	57	49	63	52	62	36	42	36


Annual Fatalities
300
250
200
150
100
50
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
Fatalities
5 Year Rolling Avg.


Annual Serious Injuries
1200
1000
800
600
400
200
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
Serious Injuries
5 Year Rolling Avg.


Fatality rate (per HMVMT)
2.5
2
1.5
1
0.5
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
Fatality rate (per HMVMT)
5 Year Rolling Avg.


Serious injury rate (per HMVMT)
10
9
8
7
6
5
4
3
2
1
0
2013
2014
2015
2016
2017
2018
2019
2020
2021
Serious injury rate (per HMVMT)
5 Year Rolling Avg.



Describe fatality data source.

FARS

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

Year 2021

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	29	81.4	1.1	3.08
Rural Principal Arterial (RPA) - Other Freeways and Expressways				
Rural Principal Arterial (RPA) - Other	46	135.8	1.79	5.26
Rural Minor Arterial	24	76.4	2.1	6.73
Rural Minor Collector	9.6	45.2	2.1	9.93
Rural Major Collector	27.4	82.4	3.18	9.58

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	27	106	2.28	8.99
Urban Principal Arterial (UPA) - Interstate	9	23.4	1.41	3.68
Urban Principal Arterial (UPA) - Other Freeways and Expressways				
Urban Principal Arterial (UPA) - Other	11.4	79.2	0.91	6.29
Urban Minor Arterial	4.8	27.6	0.76	4.36
Urban Minor Collector	0.2	1.4	0.69	5.03
Urban Major Collector	5	23.2	1.22	5.68
Urban Local Road or Street	9	62.2	0.94	6.61

Year 2021

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	142.2	471	1.67	5.49
County Highway Agency	22	98.4	1.75	7.84
Town or Township Highway Agency				
City or Municipal Highway Agency	19.2	118.6	6	53.64
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	13.4	26.4	8.1	15.92
Bureau of Indian Affairs	1.28	2.55	6.7	16.7
US Forest Service	5.31	22.33	2.01	8.4
Other Federal Agency	0.14	1.5	0.08	2.19
National Park Service	0.64	0.12	0.7	0.1

Safety Performance Targets

Safety Performance Targets

Calendar Year 2023 Targets *

Number of Fatalities:223.2

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

The 2020 CHSP update established the target setting methodology for the five federal performance measures for the five-year life of the plan. The *methodology is based on historical trend data and considers potential impacts of COVID-19.* Trend analysis identified ambitious yet achievable targets for each of the performance areas.

Based on this approach and with input from the safety stakeholders, the methodology that will be used to calculate and set annual targets for each performance measure were established. Performance measures are a five-year roiling average expressed as an annual number.

This supports the state's SHSP (known as Montana's Comprehensive Highway Safety Plan (CHSP)) by working towards the overall Vision Zero Goal and an interim safety goal of halving fatalities and serious injuries from 952 in 2018 to 476 in 2030.

Performance Measures for fatalities is moderate. The target is for an annual reduction of 3 fatalities,

Number of Serious Injuries:715.6

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

The 2020 CHSP update established the target setting methodology for the five federal performance measures for the five-year life of the plan. The *methodology is based on historical trend data and considers potential impacts of COVID-19.* Trend analysis identified ambitious yet achievable targets for each of the performance areas.

Based on this approach and with input from the safety stakeholders, the methodology that will be used to calculate and set annual targets for each performance measure were established. Performance measures are a five-year roiling average expressed as an annual number.

This supports the state's SHSP (known as Montana's Comprehensive Highway Safety Plan (CHSP)) by working towards the overall Vision Zero Goal and an interim safety goal of halving fatalities and serious injuries from 952 in 2018 to 476 in 2030.

Performance Measures for serious injuries is moderate. The target is for an annual reduction of 41 serious injuries.

Fatality Rate:1.693

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

The 2020 CHSP update established the target setting methodology for the five federal performance measures for the five-year life of the plan. The *methodology is based on historical trend data and considers potential*

impacts of COVID-19. Trend analysis identified ambitious yet achievable targets for each of the performance areas.

Based on this approach and with input from the safety stakeholders, the methodology that will be used to calculate and set annual targets for each performance measure were established. Performance measures are a five-year roiling average expressed as an annual number.

This supports the state's SHSP (known as Montana's Comprehensive Highway Safety Plan (CHSP)) by working towards the overall Vision Zero Goal and an interim safety goal of halving fatalities and serious injuries from 952 in 2018 to 476 in 2030.

Performance Measures for fatality rate is conservative. The target is for an annual reduction of 0.041 per 100 million annual vehicle miles traveled.

Serious Injury Rate:5.593

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

The 2020 CHSP update established the target setting methodology for the five federal performance measures for the five-year life of the plan. The *methodology is based on historical trend data and considers potential impacts of COVID-19.* Trend analysis identified ambitious yet achievable targets for each of the performance areas.

Based on this approach and with input from the safety stakeholders, the methodology that will be used to calculate and set annual targets for each performance measure were established. Performance measures are a five-year roiling average expressed as an annual number.

This supports the state's SHSP (known as Montana's Comprehensive Highway Safety Plan (CHSP)) by working towards the overall Vision Zero Goal and an interim safety goal of halving fatalities and serious injuries from 952 in 2018 to 476 in 2030.

Performance Measures for serious injury rate is conservative. The target is for an annual reduction of 0.114 per 100 million annual vehicle miles traveled.

Total Number of Non-Motorized Fatalities and Serious Injuries:61.9

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

The 2020 CHSP update established the target setting methodology for the five federal performance measures for the five-year life of the plan. The *methodology is based on historical trend data and considers potential impacts of COVID-19.* Trend analysis identified ambitious yet achievable targets for each of the performance areas.

Based on this approach and with input from the safety stakeholders, the methodology that will be used to calculate and set annual targets for each performance measure were established. Performance measures are a five-year roiling average expressed as an annual number.

This supports the state's SHSP (known as Montana's Comprehensive Highway Safety Plan (CHSP)) by working towards the overall Vision Zero Goal and an interim safety goal of halving fatalities and serious injuries from 952 in 2018 to 476 in 2030.

Performance Measures for non-motorized fatalities & serious injuries is low moderate. The target is for an annual reduction of 1 fatality or serious injury.

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

Montana's Safety Performance Target Setting is a collaborative effort. Representatives from MDT Engineering, the State's 3 MPO's and the State Highway Traffic Office met in the spring of 2022 to establish the 2023 Safety Performance Targets. These targets were then advanced to the CHSP Advisory Committee to vote their concurrence.

Does the State want to report additional optional targets?

No

Describe progress toward meeting the State's 2022 Safety Performance Targets (based on data available at the time of reporting). For each target, include a discussion of any reasons for differences in the actual outcomes and targets.

PERFORMANCE MEASURES	TARGETS	ACTUALS
Number of Fatalities	182.7	202.4
Number of Serious Injuries	652.5	744.2
Fatality Rate	1.367	1.611
Serious Injury Rate	5.450	5.921
Non-Motorized Fatalities and Serious Injuries	63.5	64.2

Montana followed the national trend in 2021 with increased fatal and serious injury crashes. This trend began in 2020 with the onset of the COVID pandemic and continued throughout 2021. Behavioral choices played a significant role in this high severity crash increase. The major contributing factors included increased highway speeds and high risk behavior.

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	24	31	26	20	26	41	28

PERFORMANCE MEASURES	2014	2015	2016	2017	2018	2019	2020
Number of Older Driver and Pedestrian Serious Injuries	91	88	86	86	66	77	57

Evaluation

Program Effectiveness

How does the State measure effectiveness of the HSIP?

- Other-Observational before/after studies

MDT utilizes observational before/after studies to evaluate the effectiveness of a particular safety improvement or groups of improvements. An observational before/after study requires crash data and volume data from both before and after the installation of a safety improvement.

MDT has elected to evaluate the HSIP based on groups of similar projects on an annual basis. At this time, the evaluation process focuses on nominated projects having a construction and construction engineering (CN+CE) cost exceeding $100,000. Additional evaluations or site specific evaluations are completed on a case-by-case basis. Typically, a minimum of 5-years of after data is used for the treatment sites.

The following steps highlight the process for MDT’s annual evaluation of safety improvements. It is not meant to be all encompassing and is meant to be a living process. Modifications to the following process will be made as additional data sets and analysis tools are available.

1. Identify completed projects with a construction plus construction engineering (CN+CE) cost of greater than $100,000 and which have sufficient crash data following completion of the project.

2. Group the projects completed in the identified year by improvement type. The following project groups are identified to guide the evaluation:

Geometric improvements at a specific location (curve realignment or shoulder widening as examples);

Slope flattening or elimination of roadside hazards;

Signing, striping and delineation including the installation of warning flashers;

Installation of guardrail;

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

This method of program level evaluation is fairly new to MDT. With MDT's recent Roadway Departure Study and newly implemented Intersection Safety Study, the program level evaluation will continue to be improved upon each year.

There are 2 challenges with this type of evaluation:
1. This form of program level evaluation is difficult for low volume roads. On these types of roads, 10 years of data is needed to determine a crash trend and ultimately a project being constructed. In addition, MDT's evaluation is based on 5 years "before" and "after" data which may not correspond with the original trend identification due to the regression to the mean. Consequently, the naïve before/after study may not produce results that are consistent with the anticipated CMF that was used.
2. Due to the severity of one fatal crash, the overall countermeasure results of a naïve before/after study can

show a negative benefit cost ratio. The benefit cost ratio heavily weighs the fatal crash in the calculation and negates any other crash reduction being attained. Thus, the negative benefit cost ratio does not always accurately represent a safety improvement as a overall positive benefit.

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

Another method MDT uses to indicate the HSIP Program's Success is the ability to identify and obligate HSIP Funds to address safety needs throughout the state on all public roads. MDT's HSIP Funding has grown over the last several years which has allowed MDT to identify and fund more significant sized safety projects. This has included large infrastructure type projects, including several roundabouts on non-MDT routes (local road safety) and shoulder widening/slope flattening on secondary roadways which have limited funding sources.

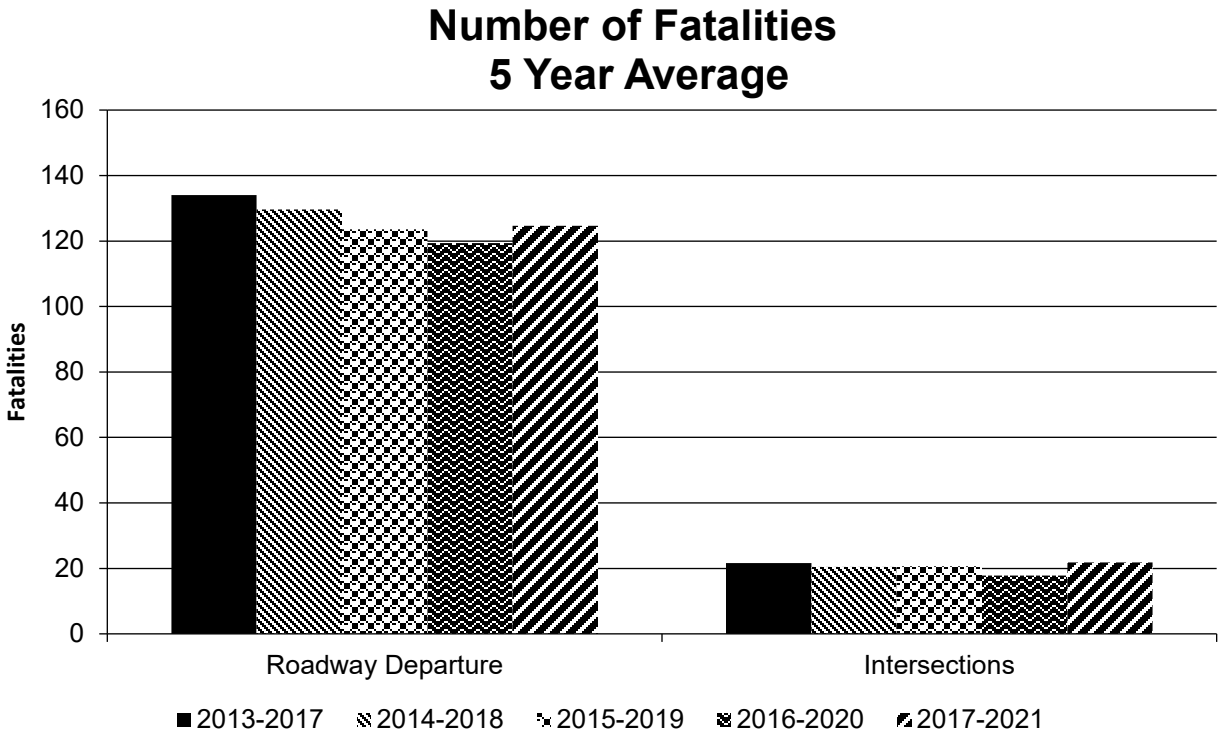
The HSIP Program's success has also increased the awareness of safety within the agency as a whole. This has translated into more collaboration between bureaus as other projects are designed and implemented benefiting both the safety program and ultimately the traveling public.

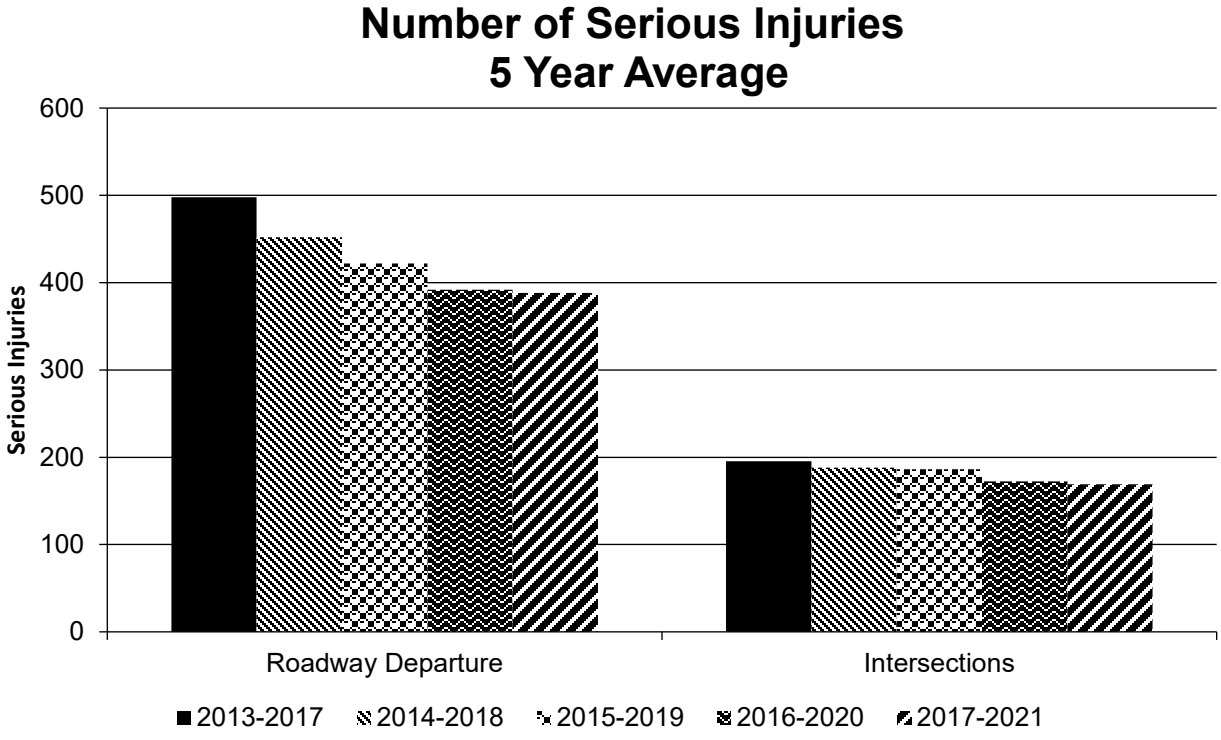
Effectiveness of Groupings or Similar Types of Improvements

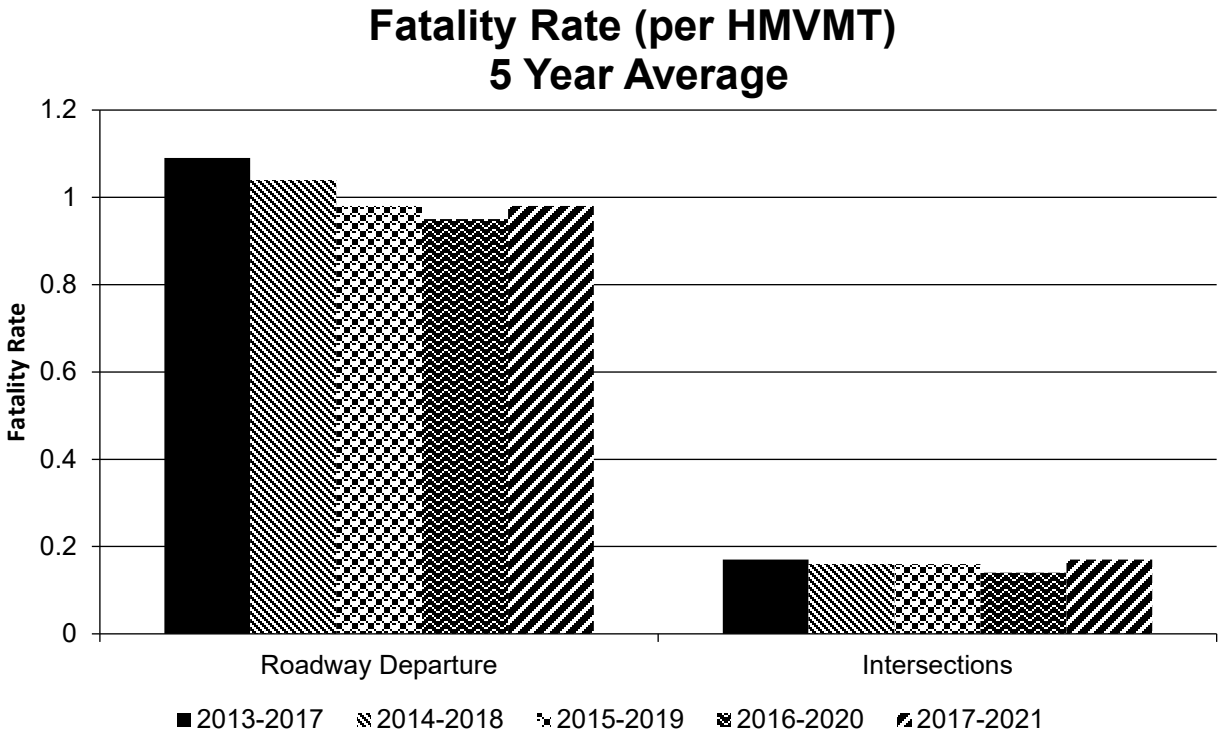
Present and describe trends in SHSP emphasis area performance measures.

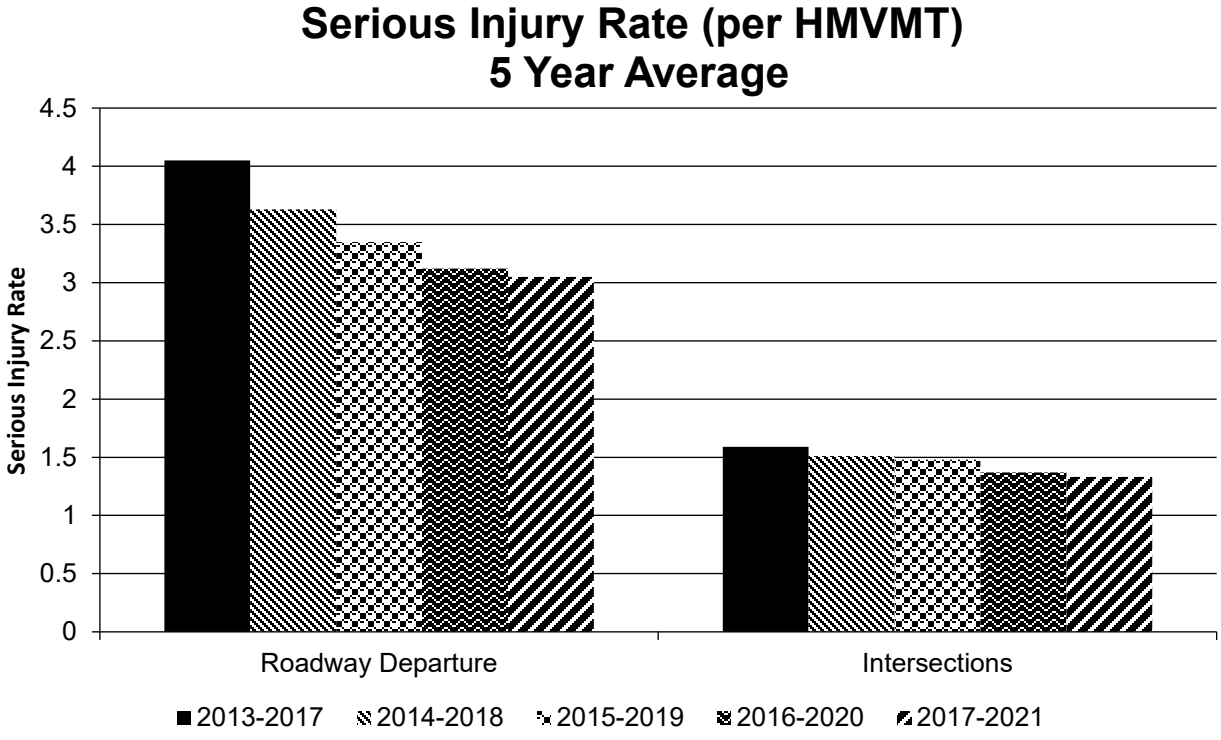
Year 2021

SHSP Emphasis Area	Targeted Crash Type	Number of Fatalities (5-yr avg)	Number of Serious Injuries (5-yr avg)	Fatality Rate (per HMVMT) (5-yr avg)	Serious Injury Rate (per HMVMT) (5-yr avg)
Roadway Departure		124.6	388.2	0.98	3.05
Intersections		21.8	169.2	0.17	1.33


Number of Fatalities
5 Year Average
160
140
120
100
80
60
40
20
0
Fatalities
Roadway Departure
Intersections
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021


Number of Serious Injuries
5 Year Average
600
500
400
300
200
100
0
Serious Injuries
Roadway Departure
Intersections
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021


Fatality Rate (per HMVMT)
5 Year Average
Fatality Rate
1.2
1
0.8
0.6
0.4
0.2
0
Roadway Departure
Intersections
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021


Serious Injury Rate (per HMVMT)
5 Year Average
Serious Injury Rate
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Roadway Departure
Intersections
2013-2017
2014-2018
2015-2019
2016-2020
2017-2021

Project Effectiveness

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

LOCATION	FUNCTIONAL CLASS	IMPROVEMENT CATEGORY	IMPROVEMENT TYPE	PDO BEFORE	PDO AFTER	FATALITY BEFORE	FATALITY AFTER	SERIOUS INJURY BEFORE	SERIOUS INJURY AFTER	ALL OTHER INJURY BEFORE	ALL OTHER INJURY AFTER	TOTAL BEFORE	TOTAL AFTER	EVALUATION RESULTS (BENEFIT/COST RATIO)
Statewide	Varies	Roadside	Fencing	6.00						1.00		7.00		3.15
Statewide	Varies	Roadway	Roadway - other	5.00	2.00	2.00		3.00		4.00	2.00	14.00	4.00	12.71
Statewide	Varies	Roadside	Barrier - other	15.00	20.00			1.00	2.00	14.00	7.00	30.00	29.00	0.71
Statewide	Varies	Intersection geometry	Intersection geometry - other	7.00	4.00			7.00		8.00	5.00	22.00	9.00	38.3
Statewide	Varies	Roadway signs and traffic control	Roadway signs (including post) - new or updated	139.00	113.00	6.00	4.00	13.00	2.00	25.00	34.00	183.00	153.00	20.99

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

MDT has an annual process in place to evaluate safety projects. This evaluation process includes a simple before/after 5-year study. In addition, small projects with similar scope are grouped together for analysis. MDT is looking to improve upon the evaluation process in the next 2-4 years. The current process does not provide for regression to the mean for low volume roads.

Compliance Assessment

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

12/21/2020

What are the years being covered by the current SHSP?

From: 2021 To: 2025

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

2025

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.

MDT has met this goal.

Optional Attachments

Program Structure:

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.