Maryland
Highway Safety Improvement Program
2013 Annual Report

Executive Summary

Summary Maryland Highway Safety Improvement Program (HSIP) CY 2013

- HSIP is administered centrally
- Local roads are not allocated HSIP funds
- The Maryland Highway Safety Office (MHSO) along with the Maryland Transportation Authority (MDTA) and the Maryland Institute for Emergency Medical Services are important internal partners with the Maryland State Highway Administration (SHA) in the HSIP process. Several regional planning organizations also coordinate with the SHA as external partners.
- Programs administered under the HSIP
    - Median Barrier
    - Horizontal Curve
    - Skid Hazard
    - Roadway Departure
    - Left-turn crash
    - Intersection Crash Data
    - Low Cost Spot Improvements
    - Pedestrian Safety
    - Rural State Highway
    - Right Angle Crash
    - Highway Sections
- The data types used in the HSIP program methodology are vehicle crashes ,traffic volume and highway mileage
- The project identification methodology used in the HSIP program are crash frequency and relative severity index
- The HSIP projects are advanced for implementation by an SHA selection committee. The criteria considered are Safety, Congestion, Operations and Local Support
- The proportion of HSIP program Funds used in CY 2013 for funding systemic improvements is 77%
- The types of systemic improvements include
    - Cable median barriers
    - Rumble strips
    - Traffic control device rehabilitation
    - Pavement installation and improvement
- Engineering studies are used to identify potential countermeasures
- The HSIP funding for CY 2013
    - Programmed - $29,922,643
        - Non-infrastructure portion - $6,315,573

  - Obligated - $46,617,808
    - Non-infrastructure portion - $9,507,958
- Additional site specific information is expected to be available in CY 2014 for individual HSIP related projects
- The General listing of projects includes various traffic control, roadside, intersection geometry and non-infrastructure projects
- The Overview of safety trends indicates that the reported number of fatalities have decreased from 604 in 2009 to 502 in 2013 (rolling average format) and that the number of serious injuries have decreased from 5,407 in 2009 to 3,608 in 2013 (rolling average format)
- The Roadway ownership indicates that in 2013 the top four road systems experienced the following number of fatalities:
  - MD State Highways – 189
  - County Roads – 110
  - US Highways – 67
  - Interstate Highways – 53
- Older Driver (65+) Fatal and Severe Injury per capita rate has decreased from 2006-10 (3.1) as compared with 2008-2012 (2.8)
- The effectiveness of the HSIP program will be indicated by the crash data trends. Additional site specific data is expected to become available in subsequent HSIP reports
- The significant programmatic change in the HSIP program is the preparations that have begun in response to the projected MAP-21 Safety Target Setting Methodologies. Additionally planning has started for the 2016-20 SHSP
- Overall yearly crash trends for the individual SHSP (Strategic Highway Safety Program) areas along with the HSIP Sub-Program areas are shown in charts in the annual report

Program Structure

Program Administration

How are Highway Safety Improvement Program funds administered in a State?

☒Central

☐District

☐Other: Click here to enter text.

If District, how are the HSIP funds allocated?

☐Formula

☐Crash data

☐Other: Click here to enter text.

Describe how local roads are addressed as part of Highway Safety Improvement Program.

Local Roads are not given HSIP funds from the State

Identify which internal partners are involved with Highway Safety Improvement Program planning. Check all that apply.

☐Design
☐Planning
☐Maintenance
☐Operations
☒Governor's Highway Safety Office
☒Other: Office of Traffic and Safety (SHA), Maryland Highway Safety Office (MVA)

Briefly describe coordination with internal partners.

The Traffic Development and Support Division (TDSD) along with the Maryland Highway Safety Office (MHSO) (Note: MHSO moved from SHA in 2012 and is now part of MVA) and other Office of Traffic and Safety (OOTS) divisions provided leadership, support, and coordination for Maryland's highway safety projects in CY 2013. Part of TDSD and MHSO's responsibility is to work with other State agencies to address highway safety issues. This effort results in a multi agency approach which includes the Motor Vehicle Administration, the Maryland Transportation Authority, the Maryland Institute for Emergency Medical Services and others that have roles in highway safety problems. The seven SHA District Offices also provide a network of field personnel willing to coordinate and provide technical assistance to local agencies. There is a continuing relationship between OOTS and the Federal Highway Administration (FHWA) along with National Highway Traffic Safety Administration and Federal Motor Carrier Safety Administration.

Identify which external partners are involved with Highway Safety Improvement Program planning. Check all that apply.

☒Metropolitan Planning Organizations
☐Governor's Highway Safety Office
☐Local Government Association
☒Other: External partners including MPOs, local government, police agencies and academic organizations are included in the 2016-20 SHSP planning process

Identify any program administration practices used to implement the HSIP that have changed since the last reporting period.

☐Multi-disciplinary HSIP steering committee
☒Other: Planning for the 2016-20 SHSP is underway

Describe any other aspects of Highway Safety Improvement Program Administration on which you would like to elaborate.

Click here to enter text.

Program Methodology

Select the programs that are administered under the HSIP.

XMedian Barrier	XIntersection	☐Safe Corridor
XHorizontal Curve	☐Bicycle Safety	XRural State Highway
XSkid Hazard	XCrash Data	☐Red Light Running
XRoadway Departure	XLow-Cost Spot Improvements	☐Sign Replacement and Improvement
☐Local Safety	XPedestrian Safety	XRight Angle Crash
XLeft-turn Crash	☐Shoulder Improvement	XSegments
☐Other: Click here to enter text.		

For each program checked above, enter the following information:

Program: Median Barrier (2010), Horizontal Curve(2010), Skid Hazard (2012), Roadway Departure (2010), Left-Turn Crash (2010), Intersection (2010), Crash Data (2010), Low Cost Spot Improvements (2010), Pedestrian Safety (2012), Rural State Highway (2010), Right Angle Crash (2010), Segments (2010)

Date of Program Methodology: See Above

What data types were used in the program methodology? Check all that apply

Crashes	***Exposure***	***Roadway***
XAll crashes	☐Traffic	☐Median width
☐Fatal crashes only	XVolume	☐Horizontal curvature
☐Fatal and serious injury crashes only	☐Population	☐Functional classification
☐Other: Click here to enter text.	☐Lane miles	☐Roadside features
	XOther: Highway mileage	☐Other: Click here to enter text.

What project identification methodology was used for this program? Check all that apply.

XCrash frequency

☐Expected crash frequency with EB adjustment
☐Equivalent property damage only (EPDO crash frequency)
☒Relative severity index
☐Crash rate
☐Critical rate
☐Level of service of safety (LOSS)
☐Excess expected crash frequency using SPFs
☐Excess expected crash frequency with EB adjustment
☐Excess expected crash frequency using method of moments
☐Probability of specific crash types
☐Excess proportions of specific crash types
☐Other: Click here to enter text.

Are local roads (non-state owned and operated) included or addressed in this program?
No
If yes, are local road projects identified using the same methodology as state roads?
Choose an item.
If no, describe the methodology used to identify local road projects as part of this program.
Click here to enter text.

How are highway safety improvement projects advanced for implementation?
☐Competitive application process
☒Selection committee
☐Other: Click here to enter text.

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
Safety: 60%
Congestion / Operations: 30%
Support / Opportunity: 10%

☐Rank of Priority Consideration

Ranking based on B/C	Click here to enter text.
Available funding	Click here to enter text.
Incremental B/C	Click here to enter text.

Ranking based on net benefit	Click here to enter text.
Cost effectiveness	Click here to enter text.
Other	Click here to enter text.

What proportion of highway safety improvement program funds address systemic improvements?
77% for CY 2013

Highway safety improvement program funds are used to address which of the following systemic improvements? Please check all that apply.

☒Cable median barriers	☒Upgrade guard rails
☒Rumble strips	☐Clear zone improvements
☒Traffic control device rehabilitation	☐Safety edge
☐Pavement/shoulder widening	☐Install/improve lighting
☐Install/Improve Signing	☒Add/upgrade/modify/remove traffic signal
☒Install/improve pavement marking/delineation	☐Other: Click here to enter text.

What process is used to identify potential countermeasures?
☒Engineering Study
☐Road Safety Assessment
☐Other: Click here to enter text.

Identify any program methodology practices used to implement the HSIP that have changed since the last reporting period.
☐Highway Safety Manual
☐Road Safety Audits
☐Systemic Approach
☐Other: Click here to enter text.

Describe any other aspects of the Highway Safety Improvement Program methodology on which you would like to elaborate.
Click here to enter text.

Progress in Implementing Projects

Funds Programmed

Reporting period for Highway Safety Improvement Program funding.

Calendar Year

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

HSIP Project Funding		
Reporting Period 01/01/2013 to 12/31/2013		
Funding Category	**Programmed***	**Obligated**
HSIP (Section 148)	**$12,903,939.02**	**$14,861,683.00**
HSIP (SAFETEA-LU)	**$11,912,910.71**	**$18,757,462.00**
HSIP (MAP 21)	**$454,981.17**	**$6,687,588.00**
HRRRP (SAFETEA-LU)	**$2,493,598.00**	**$2,555,201.39**
HRRR Special Rule		
Penalty Transfer - Section 154		
Penalty Transfer – Section 164	**$1,483,327.86**	**$2,600,844.00**
Incentive Grants - Section 163		
Incentive Grants (Section 406)	**$213,805.00**	**$250,955.00**
Other Federal-aid Funds (i.e. STP, NHPP)	**$460,081.60**	**$904,075.00**
State and Local Funds		
Total	**$29,922,643.36**	**$46,617,808.39**

How much funding is programmed to local (non-state owned and maintained) safety projects?
None
How much funding is obligated to local safety projects?
None

How much funding is programmed to non-infrastructure safety projects?
$6,315,573.22
How much funding is obligated to non-infrastructure safety projects?
$9,507,958.00

How much funding was transferred in to the HSIP from other core program areas during the reporting period?
None

How much funding was transferred out of the HSIP to other core program areas during the reporting period?
$1,483,327.86 (section 164)

Discuss impediments to obligating Highway Safety Improvement Program funds and plans to overcome this in the future.
None at this time

Describe any other aspects of the general Highway Safety Improvement Program implementation progress on which you would like to elaborate.
Additional site specific information is expected to be available in CY 2014 for individual HSIP related projects

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General Listing of Projects

List each highway safety improvement project obligated during the reporting period.

Project	Improvement Category *(see Attachment 4)*	Output *(i.e. #, miles)*	HSIP Cost*	Total Cost	Funding Category^	Functional Classification**^	AADT**	Speed**	Roadway Ownership^	Relationship to SHSP	
										Emphasis Area^	Strategy
#0703(359)	Interchange Design - other	n/a	350,614	351,097	HSIP – High Risk Rural Road Program	n/a	n/a	25 MPH (advisory)	MD State Highway Frederick Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#1051(027)	Intersection Traffic Control (Pavement Markings)	n/a	142,984	186,861	HSIP – High Risk Rural Road Program	URB FRWY EXPWY	43,977 (2013 mainline)	55 MPH (mainline)	MD State Highway Frederick Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#0703(357)	Interchange Design - other	n/a	2,000,000	2,017,243	HSIP – High Risk Rural Road Program	URB INTERSTATE	69,530 (2013 mainline)	55 MPH (mainline)	MD State Highway Frederick Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#0001(945)	Alcohol Enforcement	n/a	1,258,040	1,397,895	HSIP	n/a	n/a	n/a	MD State Highway	Impaired Driving	Increase enforcement of alcohol and drug impaired driving laws
#000A(506)	Modify existing crosswalk (ADA)	n/a	319,607	355,109	HSIP	n/a	n/a	n/a	MD State Highway	Pedestrian Crashes	Develop and evaluate model approaches to engineering built environments that accommodate safe pedestrian travel
#000A(630)	Rumble Strips	n/a	313,462	438,445	HSIP	n/a	n/a	n/a	MD State Highway Dist 4	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#000A(652)	Rumble Strips	n/a	183,138	251,261	HSIP	n/a	n/a	n/a	MD State Highway Dist 3	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#000A(837)	Data/Traffic records	n/a	297,607	740,189	HSIP	n/a	n/a	n/a	MD State Highway	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#1051(027)	Intersection Traffic Control (Pavement Markings)	n/a	301,338	350,035	HSIP	URB FRWY EXPWY	43,977 (2013 mainline)	55 MPH (mainline)	MD State Highway Frederick Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#2371(019)	Roadway (section improvements)	n/a	2,608,755	2,693,317	HSIP	URB OPA	18,632 (2013 mainline)	50 MPH (mainline)	MD State Highway Carroll Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#3582(016)	Barrier – other (new and upgrades)	n/a	1,103,021	1,103,021	HSIP	URB FRWY EXPWY	44,000 to 65,000 (2013 mainline)	50 MPH (mainline)	MD State Highway Howard Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#0703(357)	Interchange Design - other	n/a	1,000,000	1,000,000	HSIP	URB INTERSTATE	69,530 (2013 mainline)	55 MPH (mainline)	MD State Highway Frederick Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes

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Project	Improvement Category *(see Attachment 4)*	Output *(i.e. #, miles)*	HSIP Cost*	Total Cost	Funding Category^	Functional Classification**^	AADT**	Speed**	Roadway Ownership^	Relationship to SHSP	
										Emphasis Area^	Strategy
#3217(014)	Transportation Safety Planning	n/a	105,840	117,600	HSIP	URB MINOR ART	20,451 (2013 mainline)	35 MPH (mainline)	MD State Highway Baltimore Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#5030(010)	Intersection geometry - other	n/a	5,413,130	6,414,801	HSIP	URB OPA	16,960 (2013 mainline)	40 MPH (mainline)	MD State Highway Prince Georges Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#000A(400)	Barrier – other (upgrades)	n/a	1,581	11,987	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway Dist 1	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#000A(729)	Transportation Safety Planning	n/a	2,602,711	3,114,000	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway Dist 5	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#000A(837)	Transportation Safety Planning	n/a	0	500,000	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#0003(182)	Intersection Geometry – other (Construct Roundabout)	n/a	1,165,058	1,153,954	HSIP (SAFETEA-LU)	URB COLL	1,892 (2013 mainline)	40 MPH (mainline)	MD State Highway Frederick Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#000A(405)	Barrier – other (upgrades)	n/a	5,081	9,481	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway Dist 7	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#000A(425)	Barrier – other (upgrades)	n/a	8,512	10,741	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway Dist 6 & 7	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#000A(801)	Modify existing crosswalk (ADA)	n/a	1,000,000	1,310,057	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway Dist 1	Pedestrian Crashes	Develop and evaluate model approaches to engineering built environments that accommodate safe pedestrian travel
#0703(357)	Interchange Design - other	n/a	3,058,429	3,094,250	HSIP (SAFETEA-LU)	URB INTERSTATE	69,530 (2013 mainline)	55 MPH (mainline)	MD State Highway Frederick Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#1111(028)	Auxiliary lanes – add left turn lane	n/a	649,239	1,542,236	HSIP (SAFETEA-LU)	URB MINOR ART	9,912 (2013 mainline)	40 MPH (mainline)	MD State Highway Montgomery Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes

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Project	Improvement Category *(see Attachment 4)*	Output *(i.e. #, miles)*	HSIP Cost*	Total Cost	Funding Category^	Functional Classification**^	AADT**	Speed**	Roadway Ownership^	Relationship to SHSP	
										Emphasis Area^	Strategy
#3217(014)	Transportation Safety Planning	n/a	118,137	133,617	HSIP (SAFETEA-LU)	URB MINOR ART	20,451 (2013 mainline)	35 MPH (mainline)	MD State Highway Baltimore Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#3217(016)	Intersection geometry - other	n/a	1,922,945	2,206,355	HSIP (SAFETEA-LU)	URB MINOR ART	20,451 (2013 mainline)	35 MPH (mainline)	MD State Highway Baltimore Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#5030(010)	Intersection geometry - other	n/a	905,011	1,072,969	HSIP (SAFETEA-LU)	URB OPA	16,960 (2013 mainline)	40 MPH (mainline)	MD State Highway Prince Georges Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#000A(402)	Barrier – other (upgrades)	n/a	62,829	82,840	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway Dist 3	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#000B(053)	Modify existing crosswalk (ADA)	n/a	413,376	4,134,975	HSIP (SAFETEA-LU)	n/a	n/a	n/a	MD State Highway Dist 1	Pedestrian Crashes	Develop and evaluate model approaches to engineering built environments that accommodate safe pedestrian travel
#0703(365)	Barrier – other (upgrades)	n/a	6,443	410,371	HSIP (MAP 21)	n/a	n/a	n/a	MD State Highway Washington Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#1301(168)	Intersection geometry - other	n/a	13,361	2,274,266	HSIP (MAP 21)	RUR OPA	39,722 (2013 Mainline)	55 MPH (mainline)	MD State Highway Wicomico Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#2571(016)	Intersection geometry - other	n/a	2,619	2,614,955	HSIP (MAP 21)	RUR MINOR ART	18,702 (2013 Mainline)	50 MPH (mainline)	MD State Highway AA Co	Highway Infrastructure	Analyze data to identify system wide improvements to reduce the number and severity of infrastructure crashes
#3271(036)	Intersection geometry – other (Widen/Resurface Construct J Turns)	n/a	85	518,429	HSIP (MAP 21)	RUR OPA	7,960 (2013 Mainline)	55 MPH (mainline)	MD State Highway Worcester Co	Highway Infrastructure	Identify high crash locations (intersections and locations) and make safety improvements statewide
#000B(040)	Modify existing crosswalk (ADA)	n/a	413,471	869,567	HSIP (MAP 21)	n/a	n/a	n/a	MD State Highway Dist 2	Pedestrian Crashes	Develop and evaluate model approaches to engineering built environments that accommodate safe pedestrian travel

Progress in Achieving Safety Performance Targets

Overview of General Safety Trends

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

Performance Measures*	[2009]	[2010]	[2011]	[2012]	[2013]
Number of fatalities	604	581	548	527	502
Number of serious injuries	5407	4780	4304	3895	3608
Fatality rate (per HMVMT)	1.04	1.03	0.97	0.94	0.90
Serious injury rate (per HMVMT)	9.6	8.5	7.68	6.96	6.44

*States should use a 5-year rolling average to present the performance measures

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

Function Classification	[2009]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
FC 1 - PRINCIPAL ARTERIAL – INTERSTATE (RURAL)	21	170	0.04	0.31
FC 2 - PRINCIPAL ARTERIAL – OTHER (RURAL)	39	232	0.07	0.42
FC 6 - MINOR ARTERIAL (RURAL)	51	252	0.09	0.45
FC 7 - MAJOR COLLECTOR (RURAL)	43	194	0.08	0.35
FC 8 - MINOR COLLECTOR (RURAL)	16	103	0.03	0.19
FC 9 – LOCAL (RURAL)	17	152	0.03	0.27
FC 11 - PRINCIPAL ARTERIAL – INTERSTATE (URBAN)	65	670	0.12	1.20
FC 12 - PRINCIPAL ARTERIAL - OTHER FREEWAYS (URBAN)	41	270	0.07	0.49
FC 14 - OTHER PRINCIPAL ARTERIAL (URBAN)	114	1317	0.20	2.37
FC 16 - MINOR ARTERIAL (URBAN)	85	601	0.15	1.08
FC 17 – COLLECTOR (URBAN)	32	320	0.06	0.58
FC 19 – LOCAL (URBAN)	11	315	0.02	0.57

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Function Classification	[2010]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
FC 1 - PRINCIPAL ARTERIAL – INTERSTATE (RURAL)	30	115	0.05	0.20
FC 2 - PRINCIPAL ARTERIAL – OTHER (RURAL)	43	231	0.08	0.41
FC 6 - MINOR ARTERIAL (RURAL)	33	203	0.06	0.36
FC 7 - MAJOR COLLECTOR (RURAL)	34	202	0.06	0.36
FC 8 - MINOR COLLECTOR (RURAL)	19	98	0.03	0.17
FC 9 – LOCAL (RURAL)	17	133	0.03	0.24
FC 11 - PRINCIPAL ARTERIAL – INTERSTATE (URBAN)	40	482	0.07	0.86
FC 12 - PRINCIPAL ARTERIAL - OTHER FREEWAYS (URBAN)	38	265	0.07	0.47
FC 14 - OTHER PRINCIPAL ARTERIAL (URBAN)	126	1246	0.22	2.22
FC 16 - MINOR ARTERIAL (URBAN)	67	558	0.12	0.99
FC 17 – COLLECTOR (URBAN)	26	284	0.05	0.51
FC 19 – LOCAL (URBAN)	15	271	0.03	0.48

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Function Classification	[2011]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
FC 1 - PRINCIPAL ARTERIAL – INTERSTATE (RURAL)	14	75	0.02	0.13
FC 2 - PRINCIPAL ARTERIAL – OTHER (RURAL)	31	194	0.06	0.35
FC 6 - MINOR ARTERIAL (RURAL)	34	173	0.06	0.31
FC 7 - MAJOR COLLECTOR (RURAL)	33	205	0.06	0.37
FC 8 - MINOR COLLECTOR (RURAL)	14	91	0.02	0.16
FC 9 – LOCAL (RURAL)	18	132	0.03	0.24
FC 11 - PRINCIPAL ARTERIAL – INTERSTATE (URBAN)	71	374	0.13	0.67
FC 12 - PRINCIPAL ARTERIAL - OTHER FREEWAYS (URBAN)	51	239	0.09	0.43
FC 14 - OTHER PRINCIPAL ARTERIAL (URBAN)	122	1157	0.22	2.06
FC 16 - MINOR ARTERIAL (URBAN)	58	503	0.10	0.90
FC 17 – COLLECTOR (URBAN)	20	297	0.04	0.53
FC 19 – LOCAL (URBAN)	20	297	0.04	0.53

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Function Classification	[2012]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
FC 1 - PRINCIPAL ARTERIAL – INTERSTATE (RURAL)	26	61	0.05	0.11
FC 2 - PRINCIPAL ARTERIAL – OTHER (RURAL)	27	157	0.05	0.28
FC 6 - MINOR ARTERIAL (RURAL)	35	176	0.06	0.31
FC 7 - MAJOR COLLECTOR (RURAL)	36	184	0.06	0.33
FC 8 - MINOR COLLECTOR (RURAL)	21	69	0.04	0.12
FC 9 – LOCAL (RURAL)	26	124	0.05	0.22
FC 11 - PRINCIPAL ARTERIAL – INTERSTATE (URBAN)	61	273	0.11	0.48
FC 12 - PRINCIPAL ARTERIAL - OTHER FREEWAYS (URBAN)	45	252	0.08	0.45
FC 14 - OTHER PRINCIPAL ARTERIAL (URBAN)	113	1021	0.20	1.81
FC 16 - MINOR ARTERIAL (URBAN)	57	441	0.10	0.78
FC 17 – COLLECTOR (URBAN)	43	244	0.08	0.43
FC 19 – LOCAL (URBAN)	13	219	0.02	0.39

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Function Classification	[2013]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
FC 1 - PRINCIPAL ARTERIAL – INTERSTATE (RURAL)	31	59	0.05	0.10
FC 2 - PRINCIPAL ARTERIAL – OTHER (RURAL)	29	181	0.05	0.32
FC 6 - MINOR ARTERIAL (RURAL)	43	169	0.08	0.30
FC 7 - MAJOR COLLECTOR (RURAL)	32	164	0.06	0.29
FC 8 - MINOR COLLECTOR (RURAL)	19	61	0.03	0.11
FC 9 – LOCAL (RURAL)	20	93	0.04	0.16
FC 11 - PRINCIPAL ARTERIAL – INTERSTATE (URBAN)	71	229	0.13	0.41
FC 12 - PRINCIPAL ARTERIAL - OTHER FREEWAYS (URBAN)	32	219	0.06	0.39
FC 14 - OTHER PRINCIPAL ARTERIAL (URBAN)	127	976	0.22	1.73
FC 16 - MINOR ARTERIAL (URBAN)	62	430	0.11	0.76
FC 17 – COLLECTOR (URBAN)	22	188	0.04	0.33
FC 19 – LOCAL (URBAN)	25	209	0.04	0.37

Roadway Ownership	[2011]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
County Rd	109	1073	0.19	1.91
Government Rd	1	4	0.002	0.007
Interstate Highway	60	277	0.11	0.49
MD State Highway	227	1597	0.40	2.85
Municipal Rd	9	291	0.02	0.52
Other Public Rd	1	9	0.002	0.02
Ramp	0	3	0.00	0.005
Service Rd	0	0	0.00	0.00
US Highway	54	435	0.10	0.78
Unknown Rd	27	125	0.05	0.22

Roadway Ownership	[2012]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
County Rd	133	942	0.24	1.67
Government Rd	2	2	0.004	0.004
Interstate Highway	63	255	0.11	0.45
MD State Highway	220	1418	0.39	2.51
Municipal Rd	4	249	0.01	0.44
Other Public Rd	1	7	0.002	0.01
Ramp	0	3	0.00	0.005
Service Rd	0	2	0.00	0.004
US Highway	56	359	0.10	0.64
Unknown Rd	32	108	0.06	0.19

Roadway Ownership	[2013]			
	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
County Rd	110	747	0.19	1.32
Government Rd	1	5	0.002	0.009
Interstate Highway	53	209	0.09	0.37
MD State Highway	189	1293	0.33	2.29
Municipal Rd	12	246	0.02	0.44
Other Public Rd	0	22	0.00	0.04
Ramp	0	2	0.00	0.004
Service Rd	0	1	0.00	0.002
US Highway	67	337	0.12	0.60
Unknown Rd	34	95	0.06	0.17

Describe any other aspects of the general highway safety trends on which you would like to elaborate.
Click here to enter text.

Application of Special Rules

Present the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65.

Older Driver Performance Measures	[Year]	[Year]	[Year]	[Year]
Fatality rate (per capita)	See calculations			
Serious injury rate (per capita)	See calculations			
Fatality and serious injury rate (per capita)	See Calculations			

Show your calculations.

2006 to 2010 Driver and Pedestrian Fatal and Severe Injury 65 and older

Year	Accidents	Pop Figure	Rate	Years	Total Rate
2006	417	115	3.63	1	
2007	381	118	3.23	1	
2008	366	121	3.02	1	
2009	365	121	3.02	1	
2010	330	123	2.68	1	
			15.58	5	**3.1**

2008 to 2012 Driver and Pedestrian Fatal and Severe Injury 65 and older

Year	Accidents	Pop Figure	Rate	Years	Total Rate
2008	366	121	3.02	1	
2009	365	121	3.02	1	
2010	330	123	2.68	1	
2011	356	126	2.83	1	
2012	310	130	2.38	1	
			13.93	5	**2.8**

Does the older driver special rule apply to your state?

No

If yes, describe the approach to include respective strategies to address the increase in those rates in the State SHSP.

Click here to enter text.

Assessment of the Effectiveness of the Improvements (Program Evaluation)

What indicators of success can you use to demonstrate effectiveness and success in the Highway Safety Improvement Program? Select all that apply.

☐B/C ratio

☐Policy change

☒Other: The effectiveness of the HSIP program will be indicated by the crash data trends. More site specific data is expected to become available in subsequent HSIP reports

What significant programmatic changes have occurred since the last reporting period? Select all that apply.

☐Shift focus to fatalities and serious injuries

☐Organizational changes

☐More systemic programs included in HSIP

☒Other: Preparation for proposed MAP 21 fatality and serious injury goals

Briefly describe significant program changes that have occurred since the last reporting period. Preparations have begun in response to the projected MAP-21 Safety Target Setting Methodologies. Additionally planning has started for the 2016-20 SHSP.

SHSP Emphasis Areas

For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

HSIP-related SHSP Emphasis Areas	Number of fatalities	Number of injuries	Fatality rate (per HMVMT)	injury rate (per HMVMT)
Distracted Driving				
2009	252	30152	0.45	54.20
2010	249	28875	0.44	51.37
2011	231	29144	0.41	52.00
2012	247	28714	0.44	50.92
2013	195	26995	0.35	47.81
Impaired Driving				
2009	162	4525	0.29	8.13
2010	177	4087	0.31	7.27
2011	181	4032	0.32	7.19
2012	173	4057	0.31	7.19
2013	156	3427	0.28	6.07
Aggressive Driving				
2009	54	4050	0.10	7.28
2010	47	3792	0.08	6.75
2011	45	3901	0.08	6.96
2012	55	3637	0.10	6.45
2013	61	3834	0.11	6.79
Occupant Protection				
2009	134	1988	0.24	3.57
2010	47	3792	0.08	6.75
2011	45	3901	0.08	6.96
2012	55	3637	0.10	6.45
2013	61	3834	0.11	6.79
Highway Infrastructure				
2009	367	26154	0.66	47.01
2010	345	27044	0.61	48.12
2011	313	27435	0.56	48.95
2012	321	26964	0.57	47.82
2013	329	25582	0.58	45.31
Pedestrian Crashes				
2009	111	2340	0.20	4.21
2010	101	2339	0.18	4.16
2011	105	2173	0.19	3.88
2012	96	2442	0.17	4.33
2013	119	2345	0.21	4.15

Groups of similar project types

Present the overall effectiveness of HSIP subprograms.

HSIP Sub-program Types	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
Skid Hazard				
2011 – wet surface	69	718	0.12	1.28
2012 – wet surface	72	529	0.13	0.94
2013 – wet surface	103	490	0.18	0.87
Left Turn Crash				
2011 – left turn	22	372	0.04	0.66
2012 – left turn	30	310	0.05	0.55
2013 – left turn	27	228	0.05	0.40
Intersection Crash				
2011 – int related	111	1466	0.20	2.62
2012 – int related	92	1204	0.16	2.14
2013 – int related	111	1144	0.20	2.03
Pedestrian Safety				
2011 - pedestrian	105	353	0.19	0.63
2012 - pedestrian	96	341	0.18	0.60
2013 - pedestrian	119	351	0.21	0.62
Right Angle Crash				
2011 - angle	54	721	0.10	1.29
2012 - angle	62	556	0.11	0.99
2013 - angle	69	555	0.12	0.98

Systemic Treatments

Present the overall effectiveness of systemic treatments.

HSIP Sub-program Types	Number of fatalities*	Number of serious injuries*	Fatality rate (per HMVMT)*	Serious injury rate (per HMVMT)*
Median Barrier				
2011 - opp direction	60	313	0.11	0.56
2012 – opp direction	79	281	0.14	0.50
2013 – opp direction	68	229	0.12	0.41
Horizontal Curve				
2011 – run off road	160	915	0.29	1.63
2012 – run off road	172	845	0.31	1.50
2013 – run off road	165	721	0.29	1.28
Roadway Departure				
2011 – run off road	160	915	0.29	1.63
2012 – run off road	172	845	0.31	1.50
2013 – run off road	165	721	0.29	1.28

*For the target crash type.

Describe any other aspects of the overall Highway Safety Improvement Program effectiveness on which you would like to elaborate.

Note 1: **General Listings of Projects** – the same project may show up more than once in the listing due to being funded under different HSIP funds

Note 2: All injuries were used instead of severe injuries for the "SHSP Emphasis Areas" tables in order to maintain consistency with the MD SHSP injuries goals.

Provide project evaluation data for completed projects (optional).

[Insert project evaluation table]