Highway Safety Improvement Program

Data Driven Decisions

Maryland
Highway Safety Improvement Program
2016 Annual Report

Prepared by: MD

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

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Executive Summary

Summary Maryland Highway Safety Improvement Program (HSIP) CY 2015

- 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 2015 for funding systemic improvements is 88%
- 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 2015
    - Programmed - $98,644,178
        - Non-infrastructure portion - $11,000,220
    - Obligated - $112,330,808
        - Non-infrastructure portion - $14,178,529
- Additional site specific information is expected to be available in future years 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 548 in 2011 to 486 in 2015 (rolling average format) and that the number of serious injuries have decreased from 4439 in 2011 to 3166 in 2015 (rolling average format)
- Older Driver (65+) Fatal and Severe Injury per capita rate is 0.49 for 2012 as compared to the 2014 rate of 0.42.
- The effectiveness of the HSIP program will be indicated by the crash data trends.

- The significant programmatic change in the HSIP program is that efforts have progressed in response to the projected MAP-21 Safety Target Setting Methodologies. Work on the 2016-20 SHSP has been completed.

- Overall yearly crash trends for the individual SHSP (Strategic Highway Safety Program) areas along with the HSIP Sub-Program areas are shown in tables in the annual report

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 MAP-21 Reporting Guidance dated February 13, 2013 and consists of four sections: program structure, progress in implementing HSIP projects, progress in achieving safety performance targets, and assessment of the effectiveness of the improvements.

Program Structure

Program Administration

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

Central

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.

Governors Highway Safety Office
Other-Maryland State Highway District Offices

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 2015. 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.

Metropolitan Planning Organizations
Other-External partners including MPOs, local government, police agencies and academic organizations were 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.

Other-Implementation of MAP 21 requirements in the 2016-SHSP and MDSHA Business Plan

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

none at this time

Program Methodology

Select the programs that are administered under the HSIP.

Median Barrier	Intersection	Horizontal Curve
Rural State Highways	Skid Hazard	Crash Data
Roadway Departure	Low-Cost Spot Improvements	Pedestrian Safety
Right Angle Crash	Left Turn Crash	Segments

Program: **Median Barrier**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Intersection**

Date of Program Methodology: 1/1/2010

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes		

What project identification methodology was used for this program?

Crash frequency
Relative severity index

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

No

How are highway safety improvement projects advanced for implementation?

selection committee

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

Relative Weight in Scoring

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: Horizontal Curve
Date of Program Methodology: 1/1/2010

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	
	Other-Highway mileage	

What project identification methodology was used for this program?

Crash frequency
Relative severity index
Crash rate

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

No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Rural State Highways**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	Roadside features
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Skid Hazard**
Date of Program Methodology: **1/1/2012**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Saftey	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Crash Data**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	Functional classification
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Roadway Departure**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

Select the processes used to prioritize projects for implementation. For the methods selected, indicate the relative importance of each process in project prioritization. Enter either the weights or numerical

rankings. If weights are entered, the sum must equal 100. If ranks are entered, indicate ties by giving both processes the same rank and skip the next highest rank (as an example: 1, 2, 2, 4).
Relative Weight in Scoring

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Low-Cost Spot Improvements**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Opeartions	30
Support / Opportunity	10

Program: **Pedestrian Safety**
Date of Program Methodology: **1/1/2012**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Right Angle Crash**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes		

What project identification methodology was used for this program?
Crash frequency
Relative severity index

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Left Turn Crash**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?
Crashes *Exposure* *Roadway*
All crashes

What project identification methodology was used for this program?
Crash frequency
Relative severity index

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

Program: **Segments**
Date of Program Methodology: **1/1/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
All crashes	Volume	Functional classification
	Other-Highway mileage	

What project identification methodology was used for this program?
Crash frequency
Relative severity index
Crash rate

Are local roads (non-state owned and operated) included or addressed in this program?
No

How are highway safety improvement projects advanced for implementation?
selection committee

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

Safety	60
Congestion / Operations	30
Support / Opportunity	10

What proportion of highway safety improvement program funds address systemic improvements?

88%

Highway safety improvement program funds are used to address which of the following systemic improvements?

Cable Median Barriers
Rumble Strips
Pavement/Shoulder Widening

Install/Improve Pavement Marking and/or Delineation
Upgrade Guard Rails
Other-Sidewalk Improvements

What process is used to identify potential countermeasures?

Engineering Study
Road Safety Assessment

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

Highway Safety Manual
Systemic Approach

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

none at this time

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.

Funding Category	Programmed*	Obligated

HSIP (Section 148)	$17,275,574.77	18 %	$18,980,596.43	17 %
HRRRP (SAFETEA-LU)	$1,596,037.00	2 %	$1,674,831.00	1 %
Penalty Transfer – Section 164	$3,704,581.00	4 %	$4,902,310.00	4 %
Other Federal-aid Funds (i.e. STP, NHPP)	$925,121.00	1 %	$1,020,000.00	1 %
Other Other HSIP (SAFETEA-LU)	$19,545,395.84	20 %	$23,494,573.67	21 %
Other Other HSIP (Map 21)	$55,597,468.21	56 %	$62,258,496.70	55 %
Totals	$98,644,177.82	100%	$112,330,807.80	100%

How much funding is programmed to local (non-state owned and operated) safety projects?
$0.00
How much funding is obligated to local safety projects?
$0.00

How much funding is programmed to non-infrastructure safety projects?
$11,000,221.00
How much funding is obligated to non-infrastructure safety projects?
$14,178,529.00

How much funding was transferred in to the HSIP from other core program areas during the reporting period?
$0.00
How much funding was transferred out of the HSIP to other core program areas during the reporting

period?
$3,704,584.00

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.

All police crash reports used for the crash database are in electronic format as of January 1, 2015.

General Listing of Projects

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

Project	Improvement Category	Output	HSIP Cost	Total Cost	Funding Category	Functional Classification	AADT	Speed	Roadway Ownership	Relationship to SHSP	
										Emphasis Area	Strategy
#000A629	Roadway Rumble strips - unspecified or other	Miles	242151.4	276471	HRRRP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor saftey improvements
#000A650	Roadway Rumble strips - unspecified or other	Miles	117287	130319	HRRRP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#0682048	Roadside Barrier- metal	Miles	943206.48	943206.48	HRRRP (SAFETEA-LU)	Rural Principal Arterial - Interstate	160500	65	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#2571016	Intersection geometry Intersection geometry - other	Numbers	293392.12	324834.12	HRRRP (SAFETEA-LU)	Rural Minor Arterial	19134	40	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000A439	Pedestrians and bicyclists Modify existing crosswalk	Numbers	996035	1216481	HSIP (Section 148)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#000A7	Roadside Barrier - other	Miles	404038.	404038.	HSIP	areawide			State	Highway	Corridor

12			89	89	(Section 148)				Highway Agency	Infrastructure	safety improvements
#000A813	Roadside Barrier - other	Miles	491030.67	491030.67	HSIP (Section 148)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#0953185	Interchange design Interchange design - other	Numbers	5137552	5204817	HSIP (Section 148)	Urban Principal Arterial - Interstate	183483	55	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#3025014	Intersection geometry Intersection geometry - other	Numbers	663317.46	726193.12	HSIP (Section 148)	Urban Principal Arterial - Other	19882	40	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#5030009	Intersection geometry Intersection geometry - other	Numbers	853793	948659	HSIP (Section 148)	Urban Principal Arterial - Other	17352	35	State Highway Agency	Highway Infrastructure	Safety improvements-high crash sites
#5030010	Intersection geometry Intersection geometry - other	Numbers	6224129.2	7483698.2	HSIP (Section 148)	Urban Principal Arterial - Other	17352	35	State Highway Agency	Highway Infrastructure	Safety Improvements - high crash sites
#6956347	Interchange design Interchange design - other	Numbers	2505678.55	2505678.55	HSIP (Section 148)	Urban Principal Arterial - Interstate	196041	55	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000A439	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	2915.83	5925.92	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#000A7	Roadside Barrier - other	Miles	43426.4	43426.4	HSIP	areawide			State	Highway	Corridor

12			5	5	(SAFETEA-LU)				Highway Agency	Infrastructure	safety improvements
#000A726	Non-infrastructure Transportation safety planning	Numbers	1341900	1491000	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000A731	Non-infrastructure Transportation safety planning	Numbers	1588618.84	1805219	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000A813	Roadside Barrier - other	Miles	605673	605673	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000A932	Roadway Roadway - other	Miles	3069318.75	3578246.75	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000A934	Roadside Barrier - other	Miles	761040	853481	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000A940	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Miles	1762000	1762000	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#000B034	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	885358.81	1575017.8	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Pedestrian crashes	Develop safe pedestrian travel approaches

#000B053	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	1767190	1963544	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#1111028	Intersection geometry Auxiliary lanes - miscellaneous/other/unspecified	Numbers	777835.66	2395298.75	HSIP (SAFETEA-LU)	Urban Minor Arterial	10144	40	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#1189007	Intersection geometry Intersection geometry - other	Numbers	268056	297840	HSIP (SAFETEA-LU)	Urban Principal Arterial - Other	11202	50	State Highway Agency	Highway Infrastructure	Safety Improvements - high crash sites
#1191029	Intersection geometry Intersection geometry - other	Numbers	407105	508854.87	HSIP (SAFETEA-LU)	Urban Principal Arterial - Other	64011	50	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#1271053	Intersection geometry Intersection geometry - other	Numbers	1406015.79	1406015.79	HSIP (SAFETEA-LU)	Rural Principal Arterial - Other	20411	55	State Highway Agency	Highway Infrastructure	Safety improvements - high crash sites
#2721023	Intersection geometry Intersection geometry - other	Numbers	171454.66	241454.66	HSIP (SAFETEA-LU)	Rural Minor Arterial	27011	50	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#3025014	Intersection geometry Intersection geometry - other	Numbers	189165	206151	HSIP (SAFETEA-LU)	Urban Principal Arterial - Other	19882	40	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#5030010	Intersection geometry Intersection geometry - other	Numbers	987310.93	1072969.43	HSIP (SAFETEA-LU)	Urban Principal Arterial - Other	17352	35	State Highway Agency	Highway Infrastructure	Safety improvements - high crash sites

#000A932	Roadway delineation Roadway delineation - other	Miles	1511024.25	1511024.25	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B053	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	1999987	2171431	HSIP (SAFETEA-LU)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#0003369	Non-infrastructure Outreach		684000	760000	HSIP (MAP 21)				State Highway Agency	Pedestrian Crashes	Pedestrian and motorist education and enforcement
#0003370	Non-infrastructure Transportation safety planning		180000	260000	HSIP (MAP 21)				State Highway Agency	Data	SHSP Management
#0003426	Non-infrastructure Transportation safety planning		250000	250000	HSIP (Map 21)				State Highway Agency	Data	SHSP Management
#0003427	Non-infrastructure Outreach		315000	350000	HSIP (MAP 21)				State Highway Agency	Pedestrian Crashes	Pedestrian and motorist education and enforcement
#0003428	Non-infrastructure Outreach		250000	250000	HSIP (MAP				State Highwa	Pedestrian Crashes	Pedestrian and

					21)				y Agency		motorist education and enforcement
#0003432	Non-infrastructure Enforcement		117000	130000	HSIP (MAP 21)				State Highway Agency	Pedestrian Crashes	Pedestrian and motorist education and enforcement
#0003433	Non-infrastructure Outreach		600000	1800000	HSIP (MAP 21)				State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B048	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	43718	48575	HSIP (MAP 21)				State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#000B053	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	1864642.67	2071824.74	HSIP (MAP 21)				State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#000B058	Roadway delineation Roadway delineation - other	Miles	2011099	2025518	HSIP (MAP 21)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B059	Roadway delineation Roadway delineation - other	Miles	2501831	2638446	HSIP (MAP 21)	areawide			State Highway	Highway Infrastructure	Corridor safety improveme

									Agency		nts
#000B087	Roadside Barrier - other	Miles	139415	340081	HSIP (MAP 21)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B094	Roadway delineation Raised pavement markers	Miles	1541519	1712776	HSIP (MAP 21)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B124	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	3156263	3494051	HSIP (MAP 21)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#000B125	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	4099416	4540708	HSIP (MAP 21)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches
#000B127	Roadway Rumble strips - unspecified or other	Miles	1045044	1161160	HSIP (MAP 21)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B128	Roadside Barrier - other	Miles	1780884	2003341	HSIP (MAP 21)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B136	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	3117666	3117666	HSIP (MAP 21)	areawide			State Highway Agency	Pedestrian Crashes	Develop safe pedestrian travel approaches

#000B147	Non-infrastructure Road safety audits	Numbers	945000	1050000	HSIP (MAP 21)				State Highway Agency	Pedestrian Crashes	ID systemwide pedestrian safety issues
#000B154	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	2799996	3456785	HSIP (MAP 21)	areawide			State Highway Agency	Pedsetrian Crashes	Develop safe pedestrian travel approaches
#000B160	Roadside Barrier - other	Miles	935386	1050501	HSIP (MAP 21)	areawide			State Highway Agency	Highway Infrastructure	Corridor safety improvements
#0682048	Roadside Barrier- metal	Miles	858459.22	858459.22	HSIP (MAP 21)	Rural Principal Arterial - Interstate	16050	65	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#0703367	Roadside Barrier- metal	Miles	1290724	1290724	HSIP (MAP 21)	Urban Principal Arterial - Interstate	69060	70	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#0811070	Roadside Barrier - other	Miles	2368038	2368038	HSIP (MAP 21)	Urban Principal Arterial - Interstate	76900	65	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#1041021	Roadside Barrier- metal	Miles	334466	334466	HSIP (MAP 21)	Rural Principal Arterial - Other	23431	55	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#1066009	Roadway Roadway - other	Miles	537840.59	593753.97	HSIP (MAP	Rural Minor	6624	40	State Highwa	Highway Infrastuct	Corridor safety

					21)	Arterial			y Agency	ure	improvements
#1189009	Intersection geometry Intersection geometry - other	Numbers	2741379.52	3015109.43	HSIP (MAP 21)	Urban Principal Arterial - Other	11202	50	State Highway Agency	Highway Infrastructure	Safety Improvemnts - high crash sites
#1251063	Roadway Roadway - other	Numbers	5169387.26	5703455.82	HSIP (MAP 21)	Urban Principal Arterial - Other	37980	50	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#2431016	Roadway Roadway - other	Numbers	1000000	2043838	HSIP (MAP 21)	Rural Minor Arterial	24355	50	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#3003009	Roadside Barrier- metal	Miles	1191685	1191685	HSIP (MAP 21)	Urban Principal Arterial - Other Freeways and Expressways	51110	55	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#3121011	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Miles	1723.55	1723.55	HSIP (MAP 21)	Urban Principal Arterial - Other	10241	40	State Highway Agency	Pedestrian Crashes	Develop safe pedestrain travel approaches
#5030010	Intersection geometry Intersection geometry - other	Numbers	358286	358286	HSIP (MAP 21)	Urban Principal Arterial - Other	17352	35	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#6956347	Interchange design Interchange design -	Numb	70693.48	70693.48	HSIP (Map	Urban Principal	196041	55	State Highwa	Highway Infrastruct	Corridor safety

	other	ers			21)	Arterial - Interstate			y Agency	ure	improvements
#000B034	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	123013.07	136681.2	HSIP (MAP 21)	areawide			State Highway Agency	Pedestrian crashes	Develop safe pedestrian travel approaches
#0703365	Roadside Barrier - other	Miles	372002.33	372002.33	HSIP (MAP 21)	Rural Principal Arterial - Interstate	48113	70	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#2361037	Roadside Barrier - other	Miles	801595	801595	HSIP (MAP 21)	Urban Principal Arterial - Other	41640	45	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#2571016	Intersection geometry Intersection geometry - other	Numbers	2626629.52	2626629.52	HSIP (MAP 21)	Rural Minor Arterial	19134	40	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#000B048	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Numbers	1828028	2005548	HSIP (MAP 21)	areawide			State Highway Agency	Pedstrian crashes	Develop safe pedestrian travel approaches
#2431016	Roadway Roadway - other	Numbers	3926262	4343999	HSIP (MAP 21)	Rural Minor Arterial	24355	50	State Highway Agency	Highway Infrastructure	Corridor safety improvements
#3121011	Pedestrians and bicyclists Miscellaneous pedestrians and bicyclists	Miles	1520376	1520376	HSIP (MAP 21)	Urban Principal Arterial - Other	10241	40	State Highway Agency	Pedestrain crashes	Develop safe pedestrian travel approaches

#0003424	Non-infrastructure Transportation safety planning		54000	60000	HSIP (MAP 21)				State Highway Agency	Highway Infrastructure	ID systemwide infrastructure crash reduction
#0003425	Non-infrastructure Road safety audits	Numbers	45000	50000	HSIP (MAP 21)				State Highway Agency	Pedestrain crashes	ID systemwide pedestrain safety issues

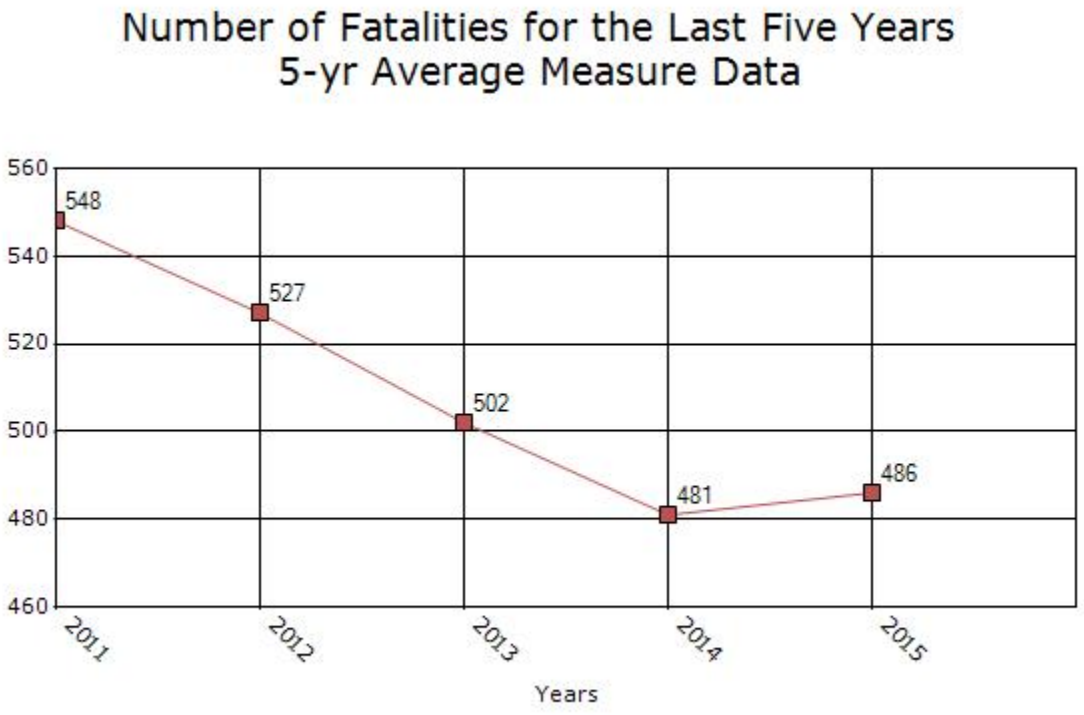
Progress in Achieving Safety Performance Targets

Overview of General Safety Trends

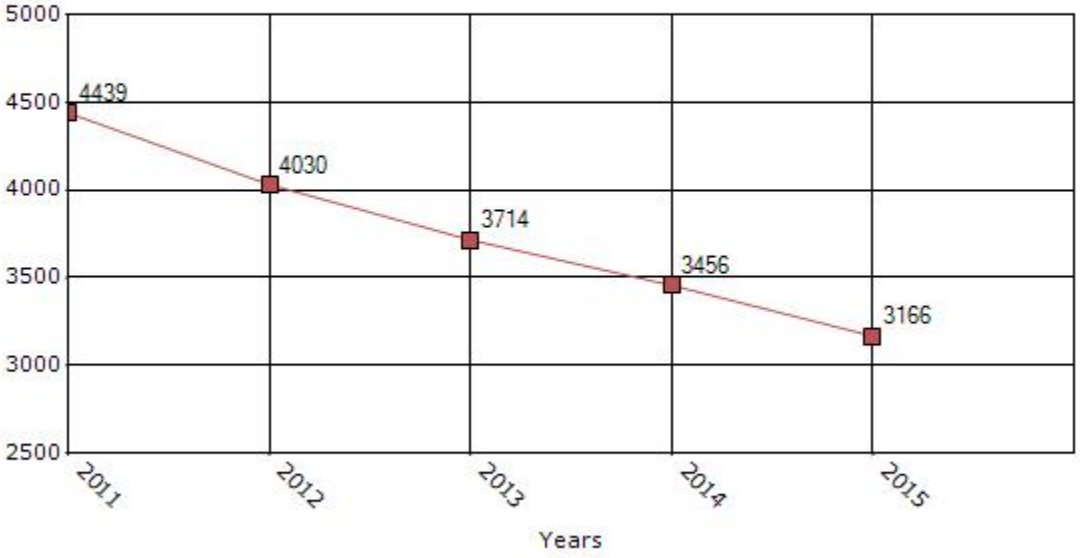
Present data showing the general highway safety trends in the state for the past five years.

Performance Measures*	2011	2012	2013	2014	2015
Number of fatalities	548	527	502	481	486
Number of serious injuries	4439	4030	3714	3456	3166
Fatality rate (per HMVMT)	0.97	0.94	0.9	0.86	0.86
Serious injury rate (per HMVMT)	7.9	7.19	6.62	6.14	5.61

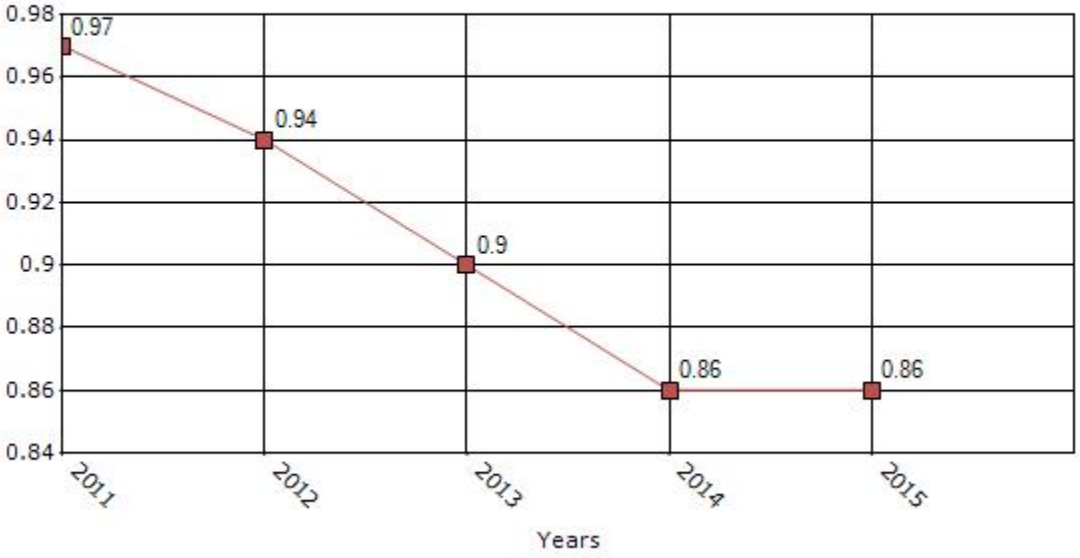
*Performance measure data is presented using a five-year rolling average.



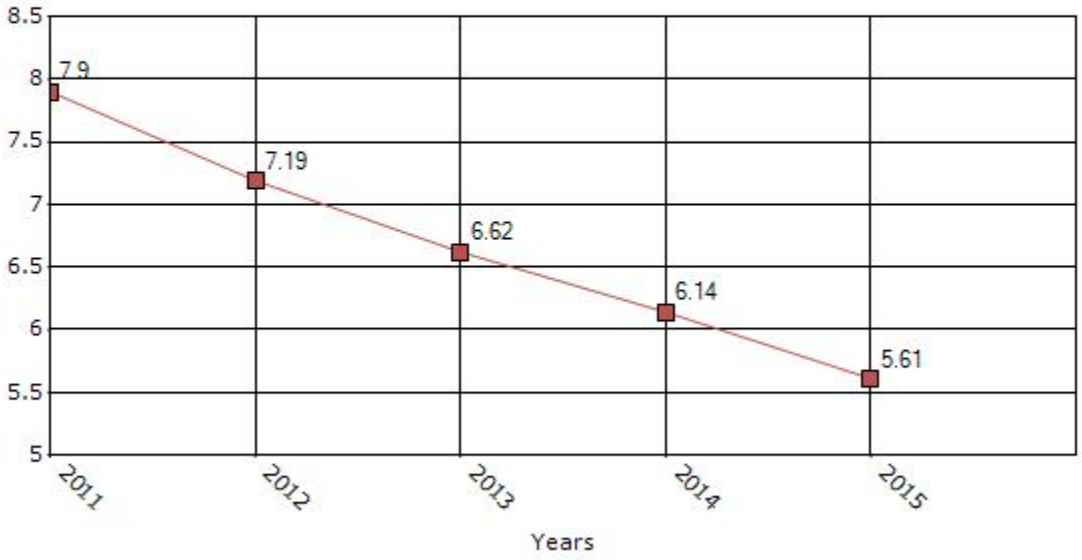
Number of Serious Injuries for the Last Five Years
5-yr Average Measure Data



Rate of Fatalities for the Last Five Years
5-yr Average Measure Data



Rate of Serious Injuries for the Last Five Years
5-yr Average Measure Data

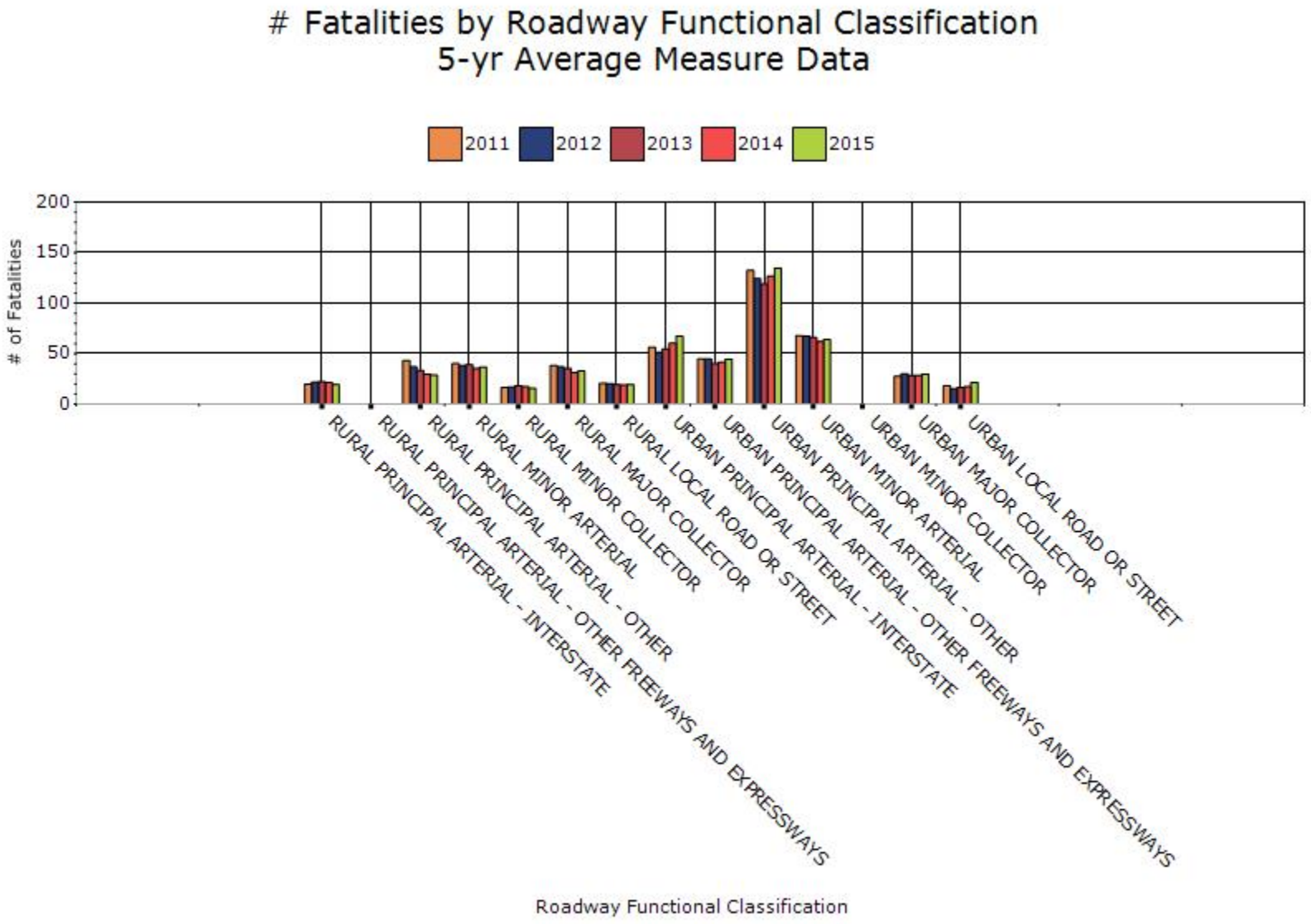


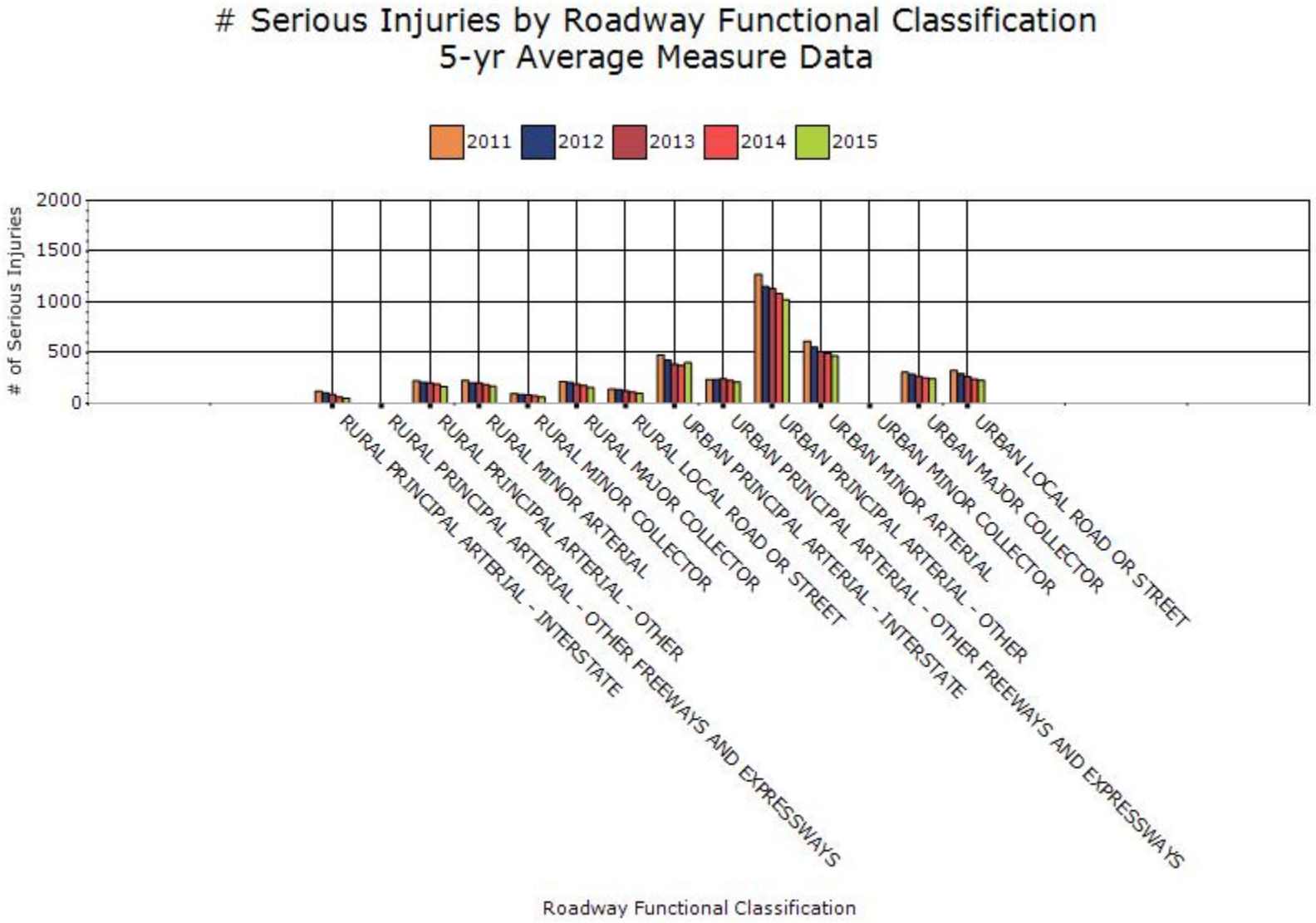
To the maximum extent possible, present performance measure* data by functional classification and ownership.

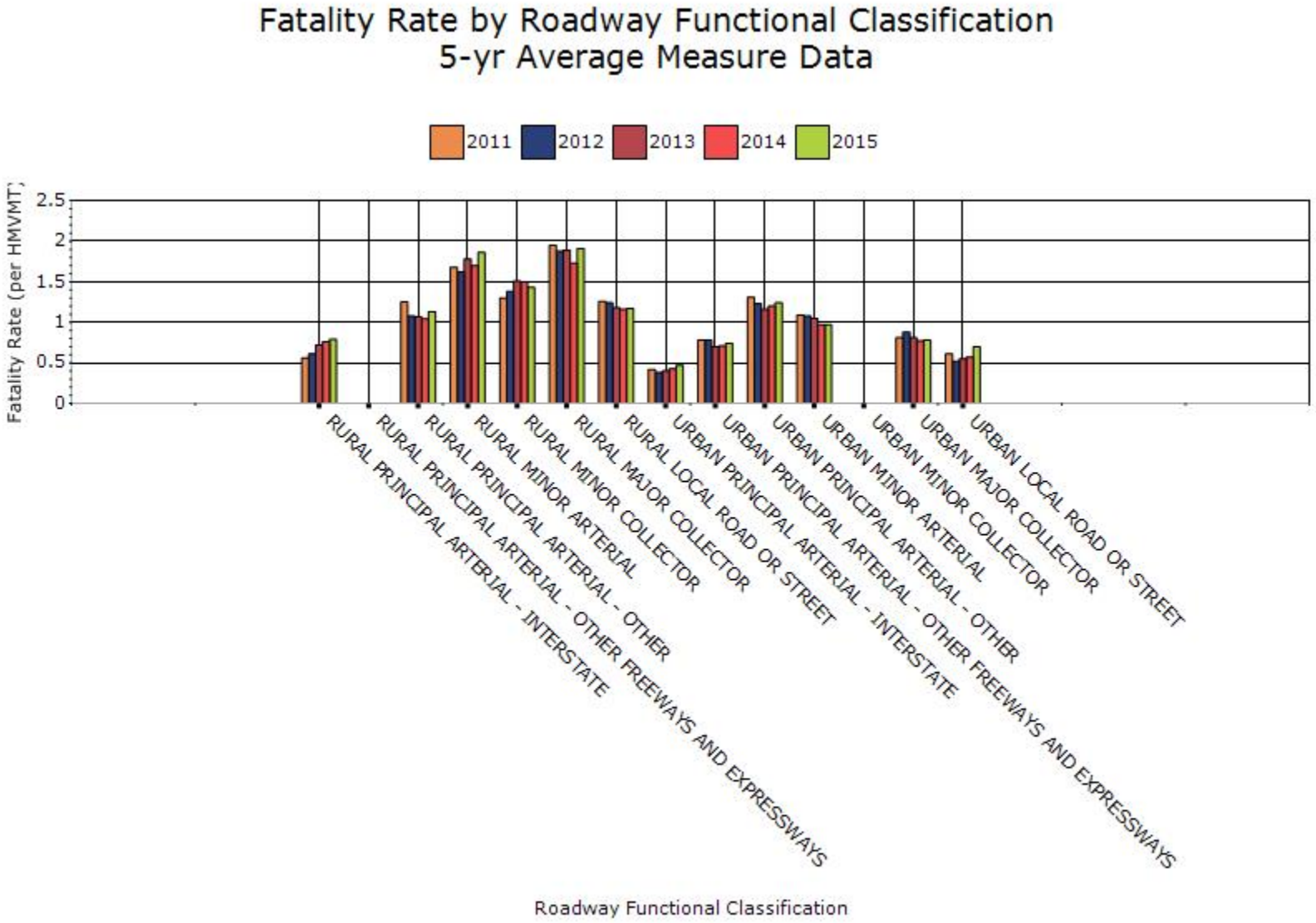
Year - 2015

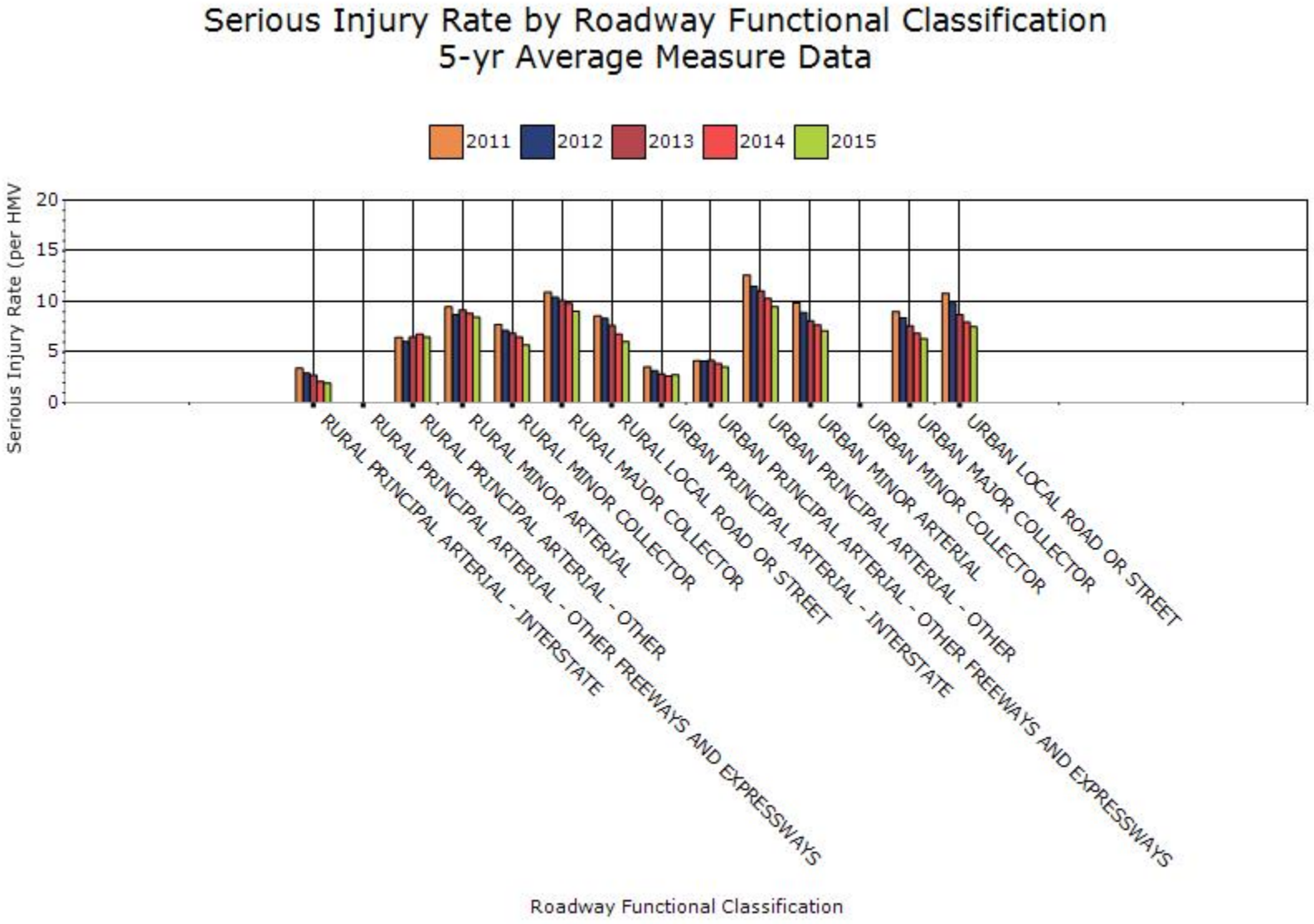
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	19.6	49.6	0.79	1.93
RURAL PRINCIPAL ARTERIAL - OTHER	28.8	166	1.13	6.5
RURAL MINOR ARTERIAL	36.8	169	1.86	8.46
RURAL MINOR COLLECTOR	15.8	63	1.43	5.71
RURAL MAJOR COLLECTOR	32.8	157.6	1.91	9.03
RURAL LOCAL ROAD OR STREET	19.4	99.6	1.17	6.03
URBAN PRINCIPAL ARTERIAL - INTERSTATE	67.4	402.2	0.47	2.77
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	44.4	211.2	0.74	3.54

URBAN PRINCIPAL ARTERIAL - OTHER	134.8	1023.6	1.24	9.49
URBAN MINOR ARTERIAL	64	468	0.97	7.12
URBAN MAJOR COLLECTOR	29.8	242.6	0.78	6.35
URBAN LOCAL ROAD OR STREET	21.6	229	0.7	7.51


Fatalities by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Fatalities
200
150
100
50
0
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification

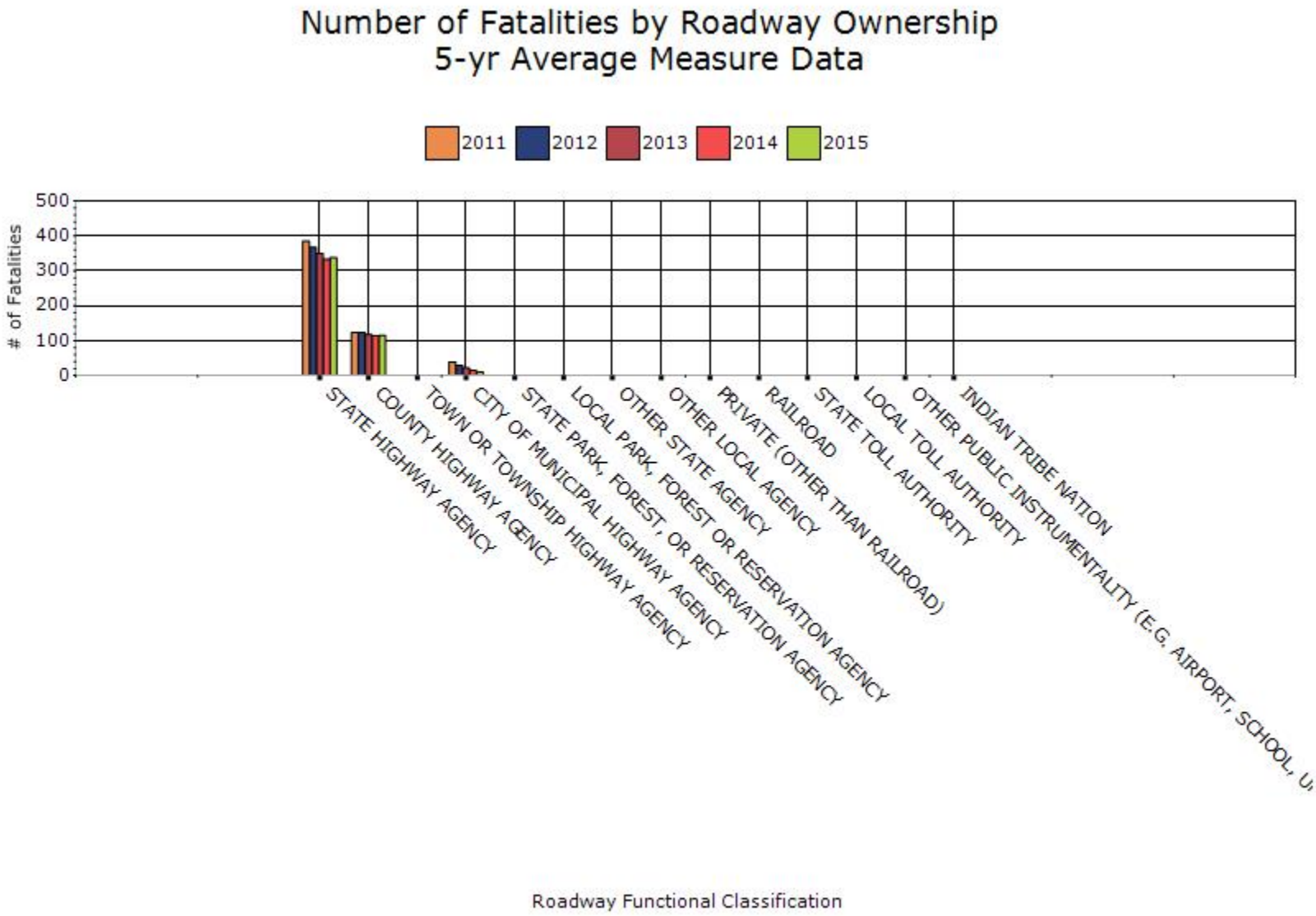

Serious Injuries by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Serious Injuries
2000
1500
1000
500
0
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification

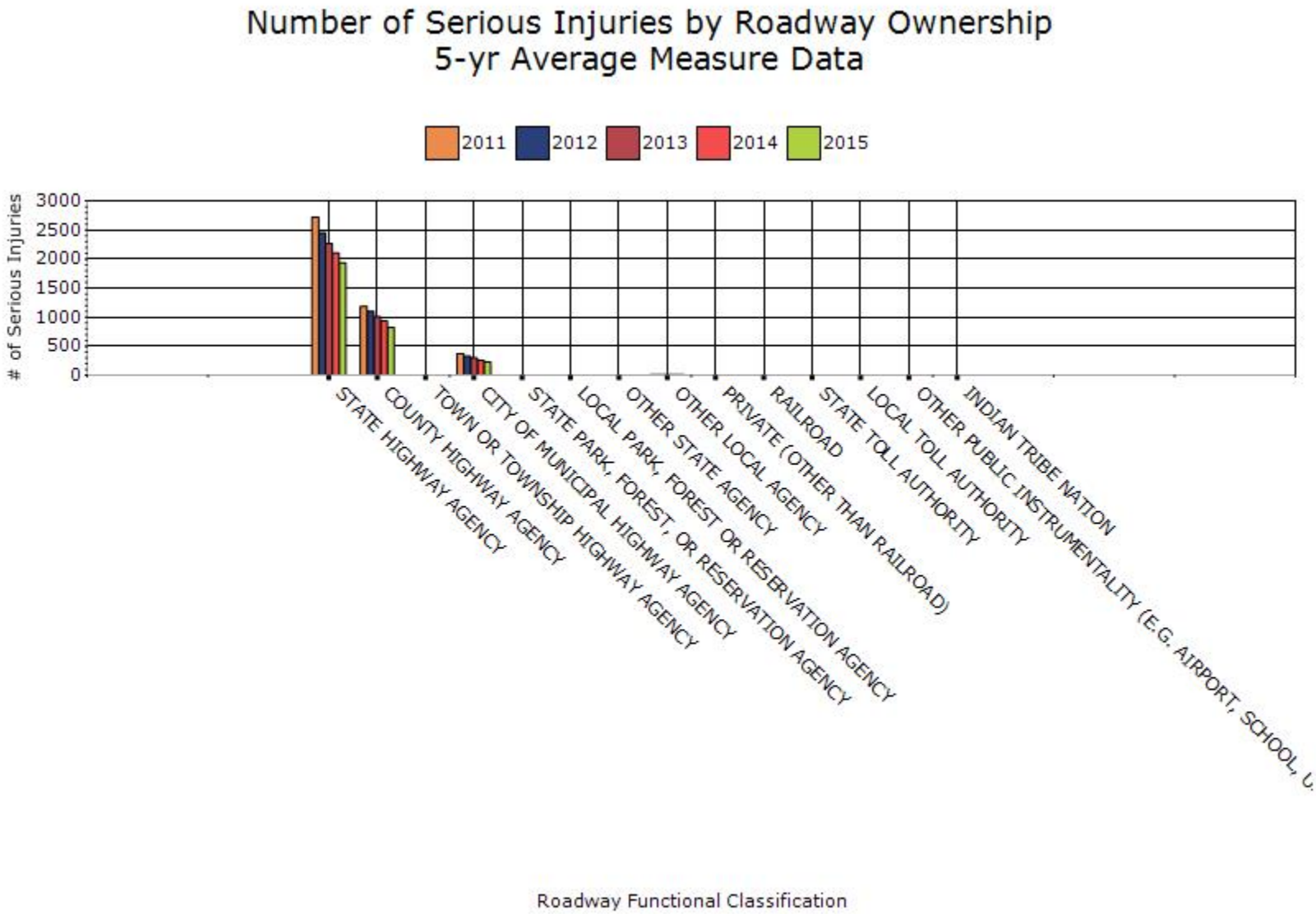

Fatality Rate by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
Fatality Rate (per HMVMT)
2.5
2
1.5
1
0.5
0
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification


Serious Injury Rate by Roadway Functional Classification
5-yr Average Measure Data
2011
2012
2013
2014
2015
Serious Injury Rate (per HMV
20
15
10
5
0
RURAL PRINCIPAL ARTERIAL - INTERSTATE
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
RURAL PRINCIPAL ARTERIAL - OTHER
RURAL MINOR ARTERIAL
RURAL MINOR COLLECTOR
RURAL MAJOR COLLECTOR
RURAL LOCAL ROAD OR STREET
URBAN PRINCIPAL ARTERIAL - INTERSTATE
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS
URBAN PRINCIPAL ARTERIAL - OTHER
URBAN MINOR ARTERIAL
URBAN MINOR COLLECTOR
URBAN MAJOR COLLECTOR
URBAN LOCAL ROAD OR STREET
Roadway Functional Classification

Year - 2015

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	337.8	1932.4		
COUNTY HIGHWAY AGENCY	114.6	824.6		
CITY OF MUNICIPAL HIGHWAY AGENCY	10	231.4		
OTHER LOCAL AGENCY	0.8	9.6		


Number of Fatalities by Roadway Ownership
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Fatalities
500
400
300
200
100
0
STATE HIGHWAY AGENCY
COUNTY HIGHWAY AGENCY
TOWN OR TOWNSHIP HIGHWAY AGENCY
CITY OF MUNICIPAL HIGHWAY AGENCY
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, U
INDIAN TRIBE NATION
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
5-yr Average Measure Data
2011
2012
2013
2014
2015
# of Serious Injuries
3000
2500
2000
1500
1000
500
0
STATE HIGHWAY AGENCY
COUNTY HIGHWAY AGENCY
TOWN OR TOWNSHIP HIGHWAY AGENCY
CITY OF MUNICIPAL HIGHWAY AGENCY
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, U
INDIAN TRIBE NATION
Roadway Functional Classification

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

none at this time

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	2010	2011	2012	2013	2014
Fatality rate (per capita)	0.056	0.074	0.09	0.084	0.078
Serious injury rate (per capita)	0.248	0.328	0.394	0.366	0.344
Fatality and serious injury rate (per capita)	0.306	0.404	0.486	0.45	0.422

*Performance measure data is presented using a five-year rolling average.

2006 to 2014 Driver and Pedestrian Fatal 65 and older

Fatality

Year	Drivers	Peds	Combined	Pop Figure	Rate
2006	63	13	76	N/A	N/A
2007	40	11	51	N/A	N/A
2008	51	13	64	679	0.09
2009	57	21	78	691	0.11
2010	42	16	58	710	0.08
2011	47	19	66	732	0.09
2012	39	19	58	763	0.08
2013	35	15	50	794	0.06
2014	45	19	64	822	0.08

Severe Injury

Year	Drivers	Peds	Combined	Pop Figure	Rate
2006	312	29	341	N/A	N/A
2007	287	43	330	N/A	N/A
2008	259	43	302	679	0.44
2009	238	49	287	691	0.42
2010	230	42	272	710	0.38

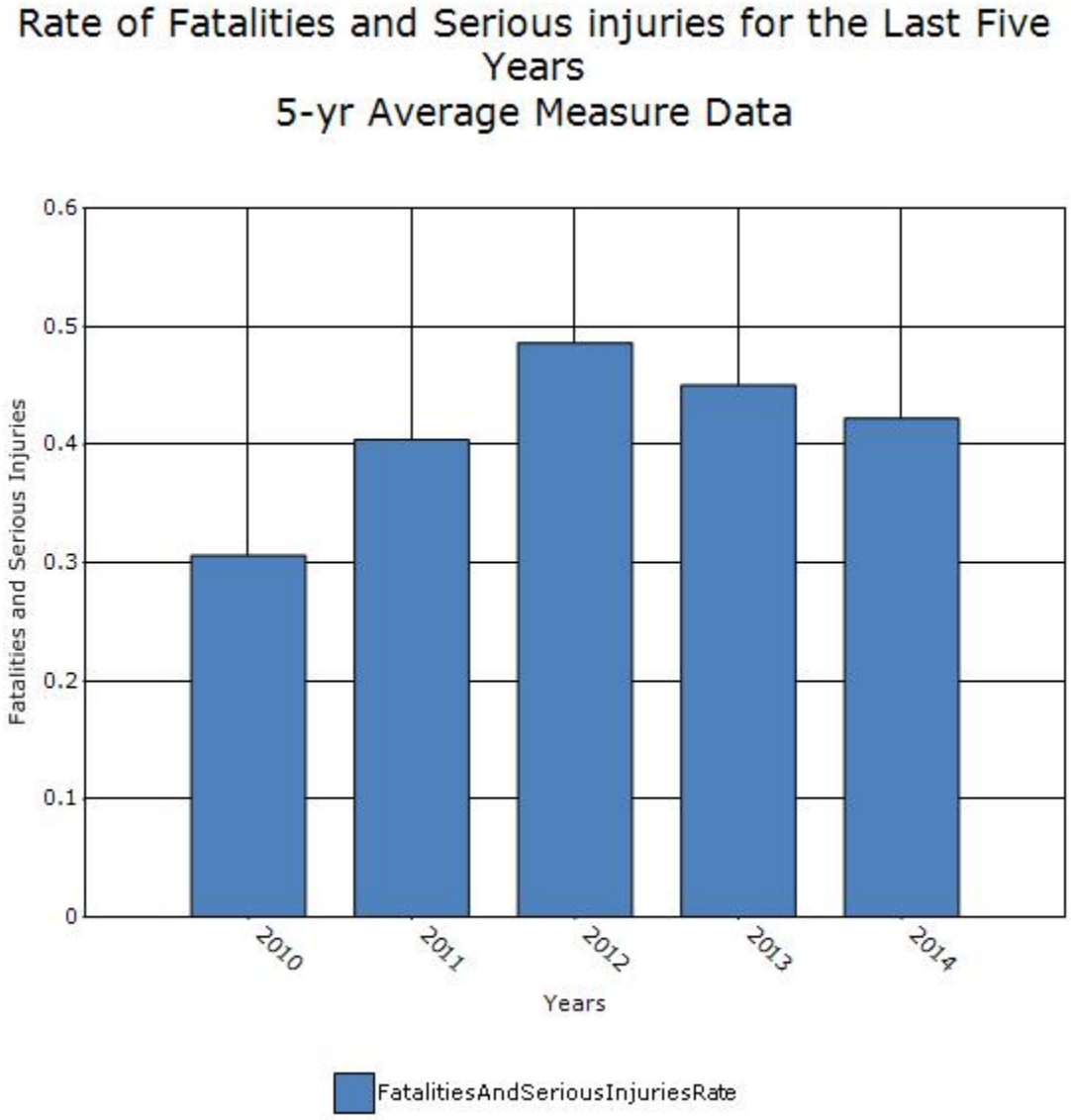
2011	241	54	295	732	0.40
2012	214	40	254	763	0.33
2013	199	36	235	794	0.30
2014	221	37	258	822	0.31

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

Year	Accidents	Pop Figure	Rate	Years	Total Rate
2008	366	679	0.54	1	
2009	365	691	0.53	1	
2010	330	710	0.46	1	
2011	361	732	0.49	1	
2012	312	763	0.41	1	
			2.43	5	**0.5**

2010 to 2014 Driver and Pedestrian Fatality and Severe Injury 65 and older

Year	Accidents	Pop Figure	Rate	Years	Total Rate
2010	330	710	0.46	1	
2011	361	732	0.49	1	
2012	312	763	0.41	1	
2013	283	794	0.36	1	
2014	322	822	0.39	1	
			2.12	5	**0.4**



Does the older driver special rule apply to your state?

No

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?

Other-The long term effectiveness of the HSIP program will be indicated by the crash data trends over a period of years.

What significant programmatic changes have occurred since the last reporting period?

Shift Focus to Fatalities and Serious Injuries
Other-The change from a paper based crash reporting system to an electronic system was required by 2015. The shift in focus to Fatalities and Serious Injuries continued reflected in the amended goals of the Strategic Highway Safety Program (2011-15).

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

The 2016-20 SHSP is now complete and will go into effect in 2016.

Continued emphasis has been placed on fatality and severe injury crash goals as reflected in the 2016 SHSP.

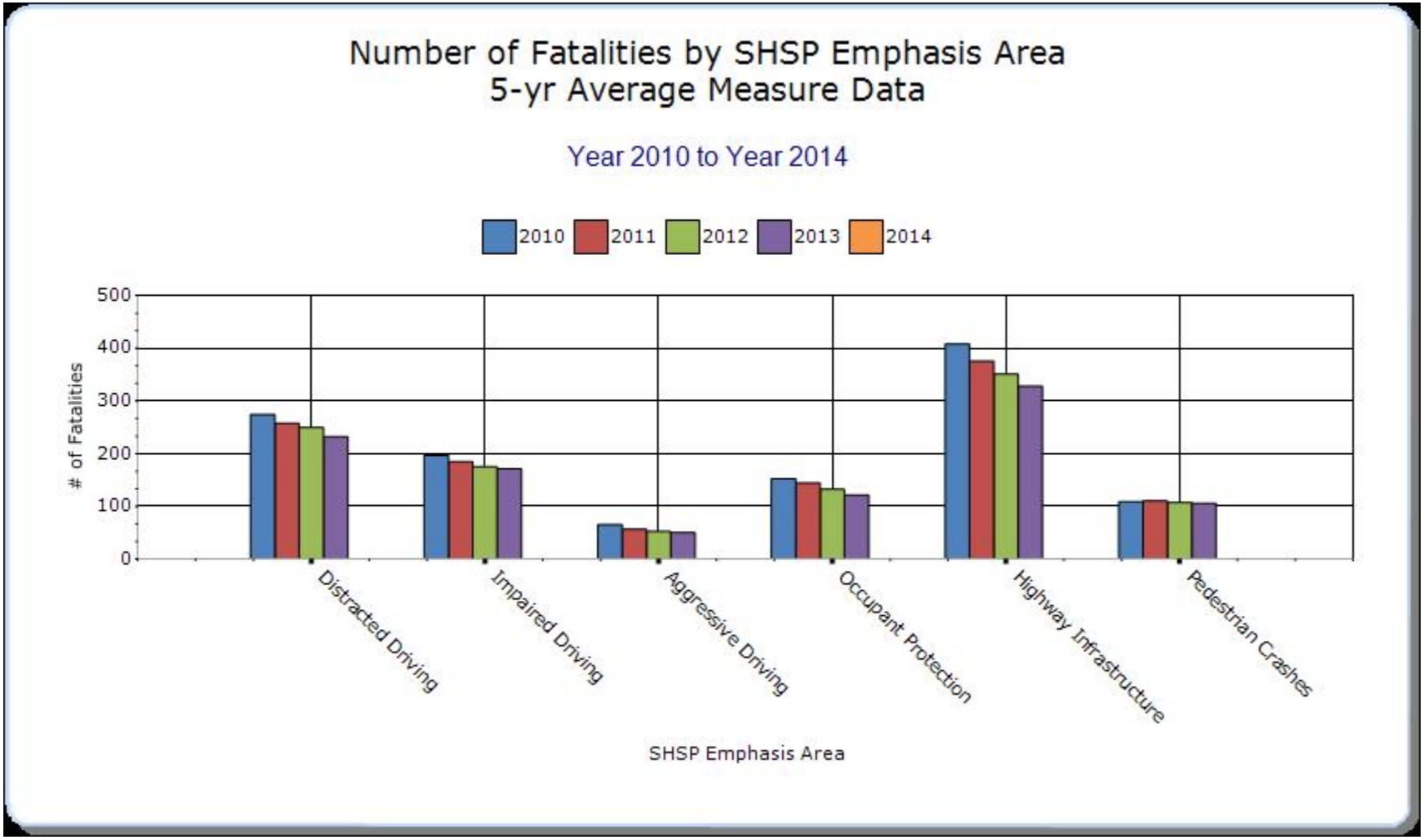
Police crash reporting is now required to be in electronic format.

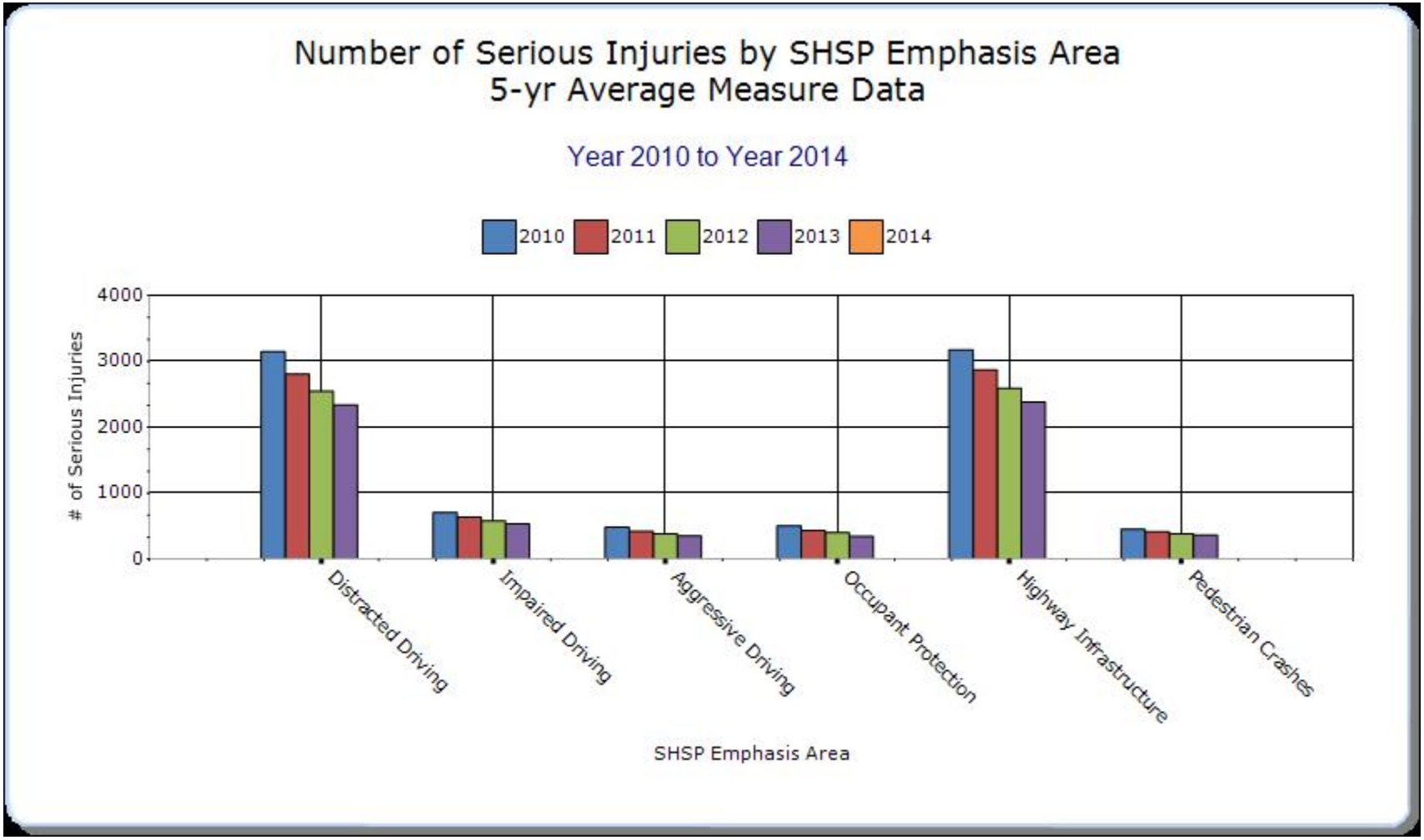
SHSP Emphasis Areas

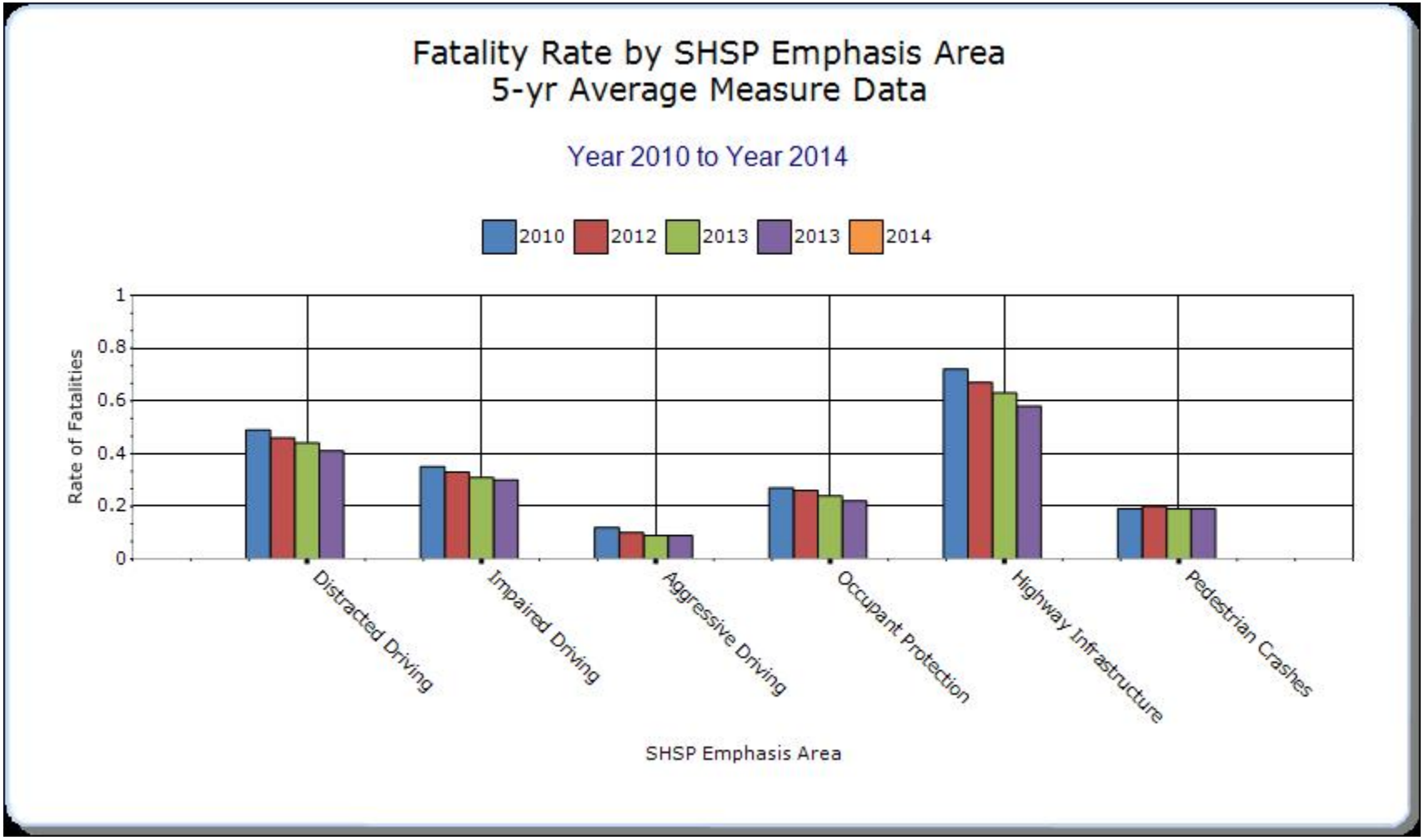
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

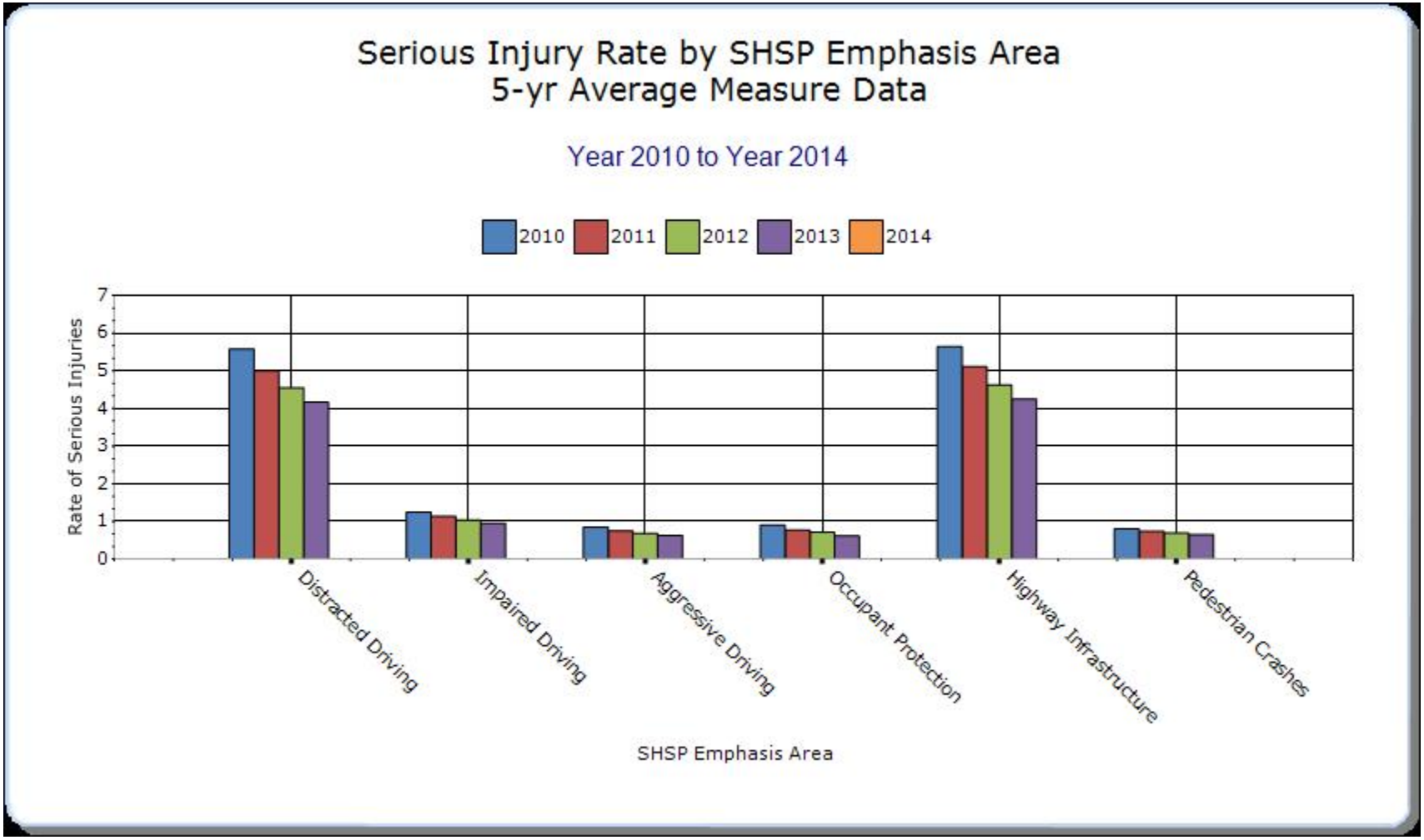
Year - 2013

HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Distracted Driving	All	232	2339.6	0.41	4.17			
Impaired Driving	All	171.2	531.6	0.3	0.95			
Aggressive Driving	All	50.6	351.4	0.09	0.63			
Occupant Protection	All	121.6	344.8	0.22	0.61			
Highway Infrastructure	Intersection, CZ, ROR	328	2383.8	0.58	4.25			
Pedestrian Crashes	Vehicle/pedestrian	106	363.8	0.19	0.65			


Number of Fatalities by SHSP Emphasis Area
5-yr Average Measure Data
Year 2010 to Year 2014
2010
2011
2012
2013
2014
500
400
300
200
100
0
# of Fatalities
Distracted Driving
Impaired Driving
Aggressive Driving
Occupant Protection
Highway Infrastructure
Pedestrian Crashes
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
5-yr Average Measure Data
Year 2010 to Year 2014
2010
2011
2012
2013
2014
4000
3000
2000
1000
0
# of Serious Injuries
Distracted Driving
Impaired Driving
Aggressive Driving
Occupant Protection
Highway Infrastructure
Pedestrian Crashes
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
5-yr Average Measure Data
Year 2010 to Year 2014
2010
2012
2013
2013
2014
Rate of Fatalities
1
0.8
0.6
0.4
0.2
0
Distracted Driving
Impaired Driving
Aggressive Driving
Occupant Protection
Highway Infrastructure
Pedestrian Crashes
SHSP Emphasis Area

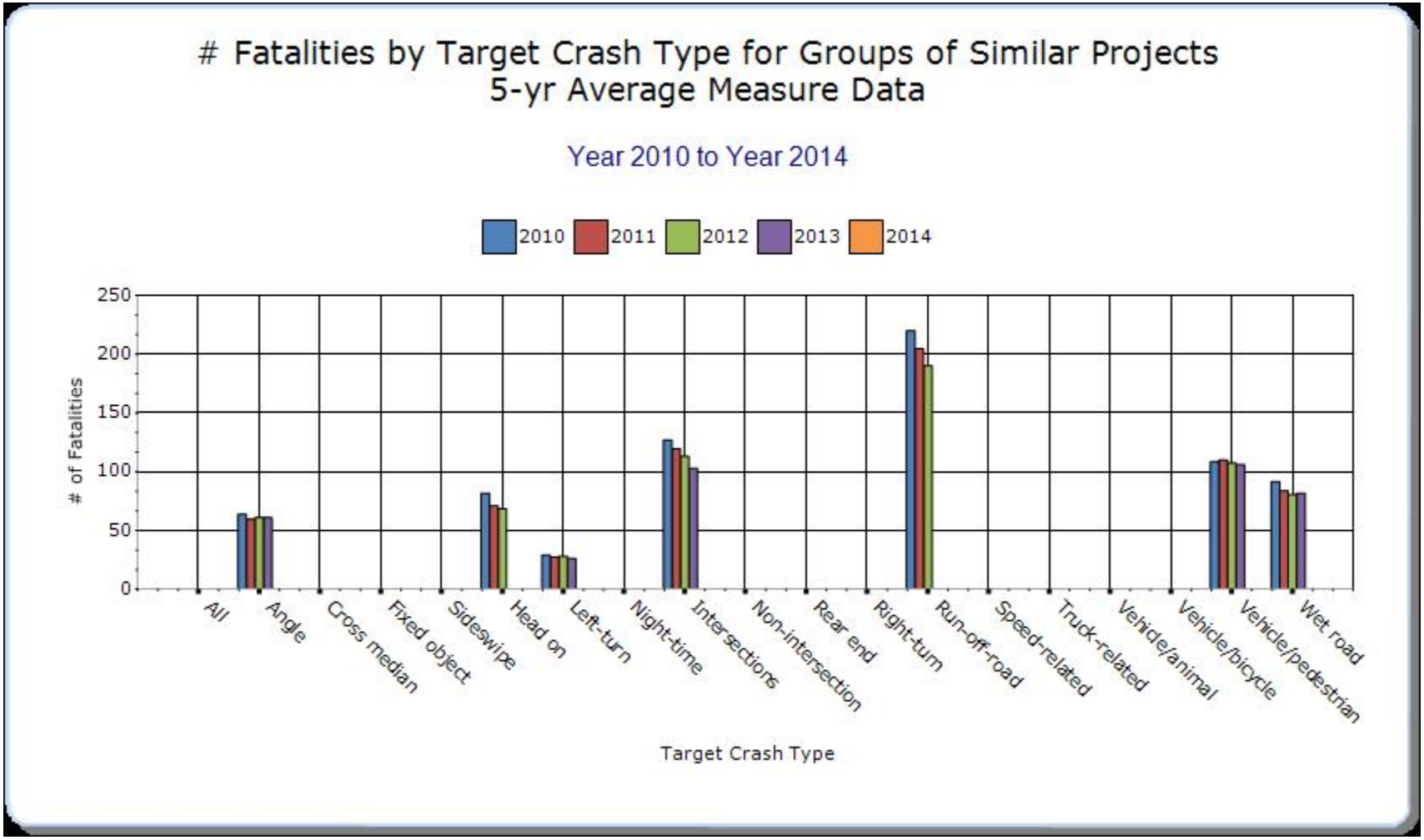


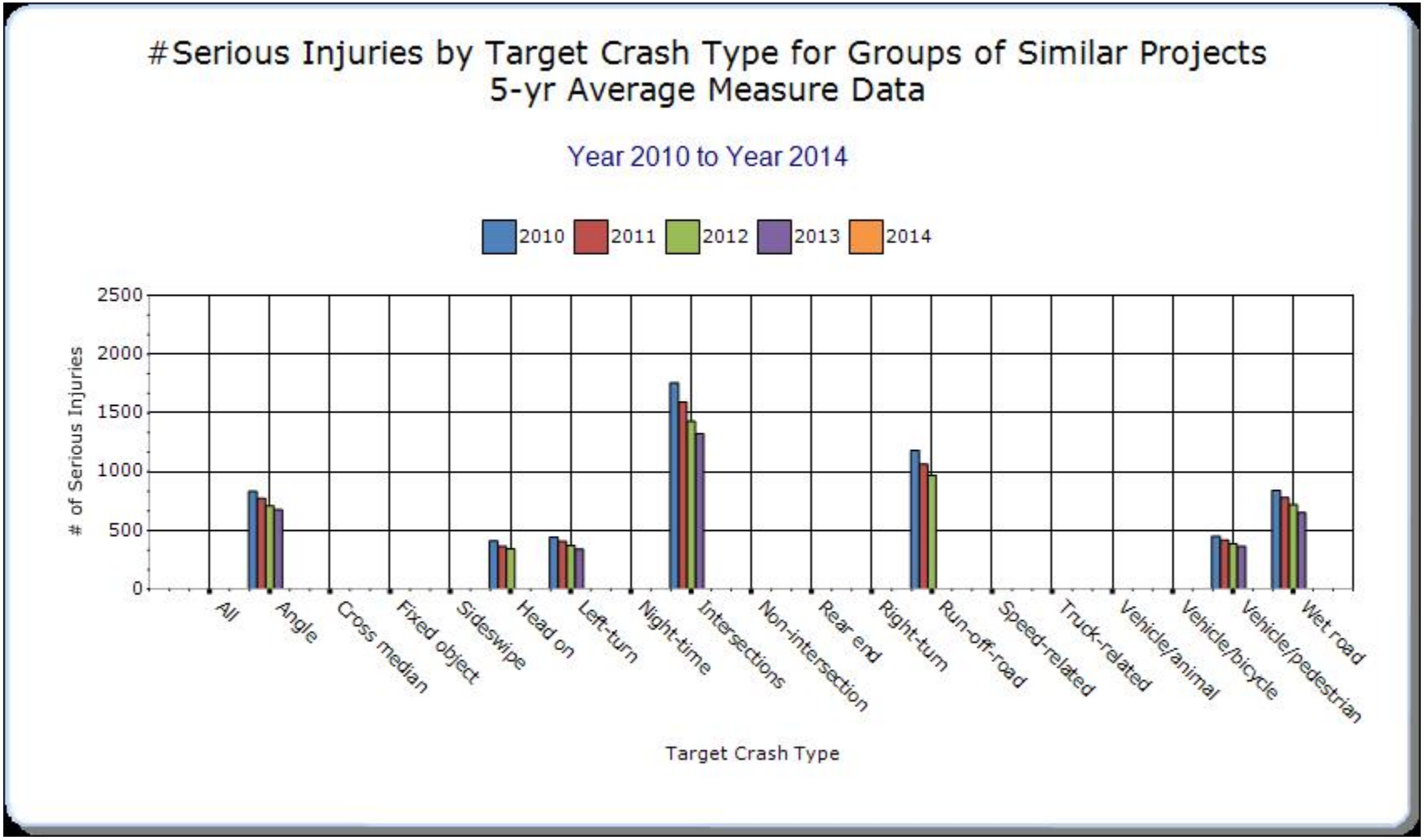
Groups of similar project types

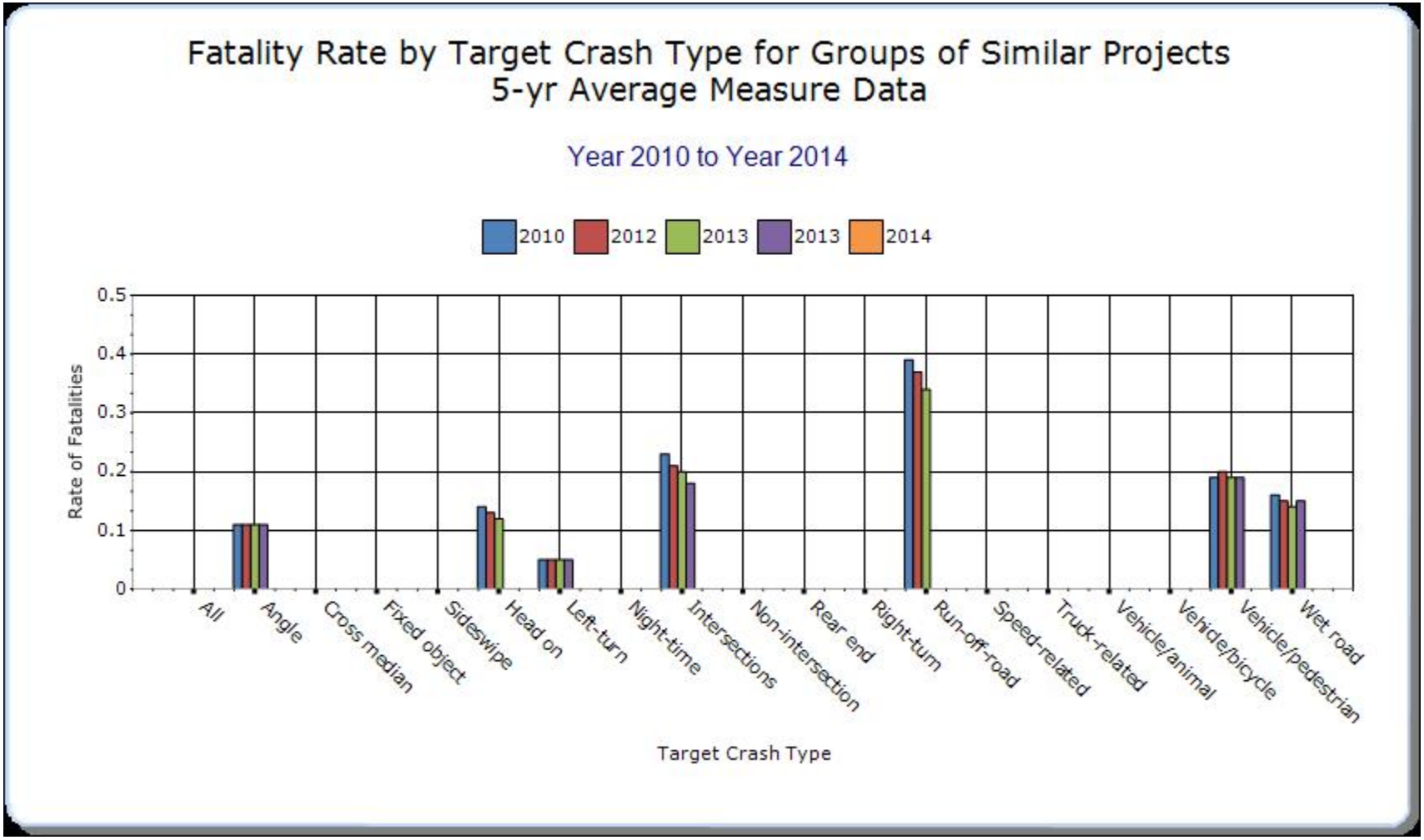
Present the overall effectiveness of groups of similar types of projects.

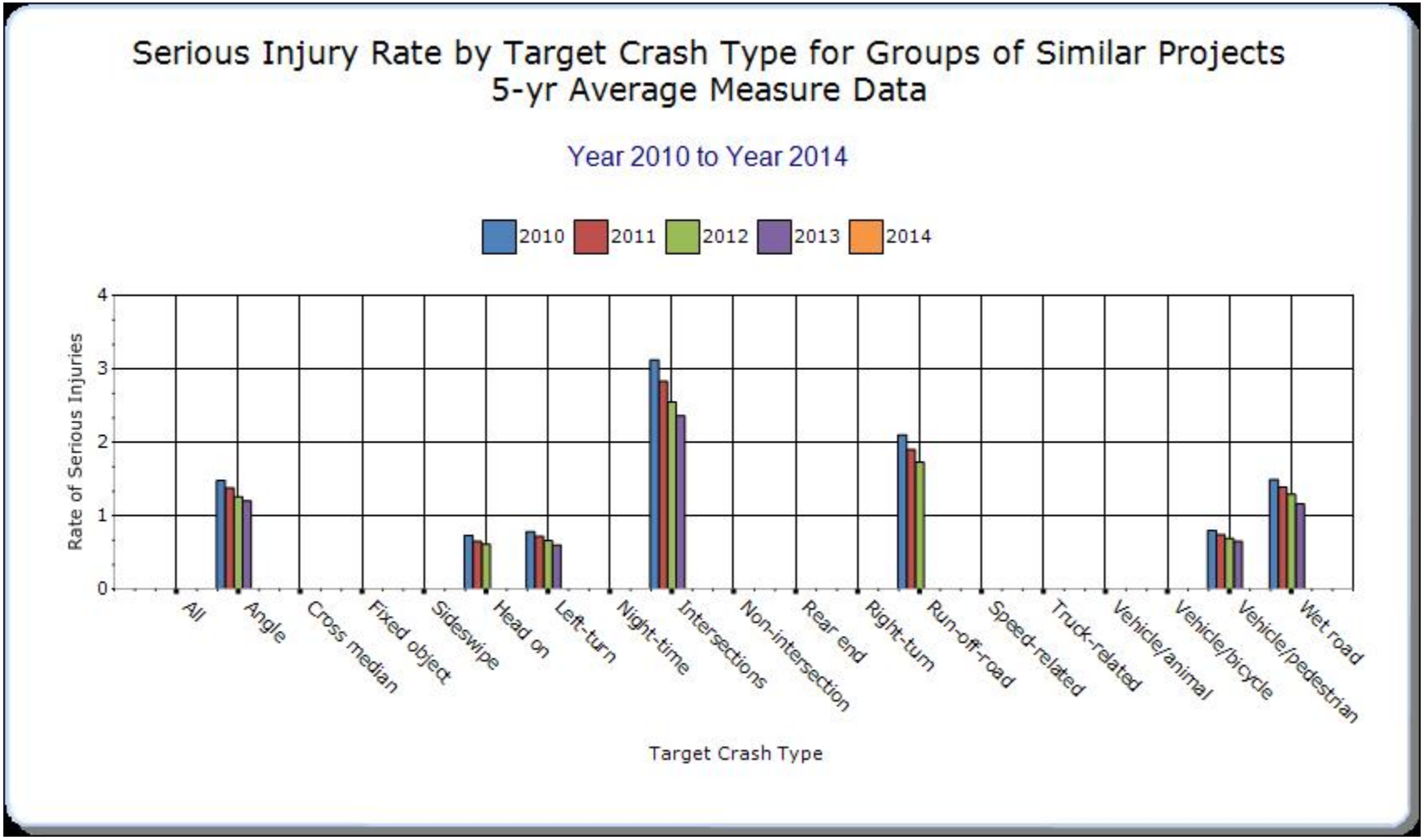
Year - 2013

HSIP Sub-program Types	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Angle Crash	Angle	60.8	675.4	0.11	1.2			
Wet Surface Crashes	Wet road	81.6	652.2	0.15	1.16			
Intersection	Intersections	102.8	1322.2	0.18	2.36			
Left Turn Crash	Left-turn	26	340	0.05	0.6			
Pedestrian Safety	Vehicle/pedestrian	106	363.8	0.19	0.65			


Fatalities by Target Crash Type for Groups of Similar Projects
5-yr Average Measure Data
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Fatalities
250
200
150
100
50
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


#Serious Injuries by Target Crash Type for Groups of Similar Projects
5-yr Average Measure Data
Year 2010 to Year 2014
2010
2011
2012
2013
2014
# of Serious Injuries
2500
2000
1500
1000
500
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type


Fatality Rate by Target Crash Type for Groups of Similar Projects
5-yr Average Measure Data
Year 2010 to Year 2014
2010
2012
2013
2013
2014
Rate of Fatalities
0.5
0.4
0.3
0.2
0.1
0
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Intersections
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type



Systemic Treatments

Present the overall effectiveness of systemic treatments.

Year - 2014

Systemic improvement	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Median Barrier		61	275.8	0.11	0.49			

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

1. 2006 and 2007 population figures were unavailable for the Older Driver information.

2. 2014 and 2015 crash data was unavailable as of reporting time for certain categories. The data is expected to be available in 2016.

3. Under "Roadway Ownership" SHA and MDTA totals are combined under "State Highway Agency" category.

4. No overall crash totals (except for fatalities) are available for federally maintained highways in Maryland.

Project Evaluation

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-All Injuries	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-All Injuries	Aft-PDO	Aft-Total	Evaluation Results (Benefit/ Cost Ratio)
None														

Optional Attachments

Sections	Files Attached

Glossary

5 year rolling average means the average of five individual, 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.