Highway Safety Improvement Program

Data Driven Decisions

Arizona
Highway Safety Improvement Program
2014 Annual Report

Prepared by: AZ

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

This annual report has been prepared by Arizona Department of Transportation (ADOT) Traffic Safety Section (TSS) based on best available data and information collected from various internal and external sources.

Arizona DOT is continuing to make progress in the HSIP implementation on all public roads statewide. ADOT-TSS has been leading the efforts to deliver the HSIP program. ADOT Local Public Agency (LPA) Section tracks local HSIP funded projects and works with stakeholders to ensure successful project delivery. Apart from core HSIP funded projects, High Risk Rural Roads Program (HRRRP) was implemented to the extent projects were eligible and justified. Road Safety Assessment (RSA) program is very well established with several successful RSAs conducted within State, city/town, county and tribal jurisdictions. Many of the safety projects funded through HSIP were developed based on the RSA recommendations.

Arizona SHSP is currently being updated to reflect MAP-21 requirements and FHWA guidance.

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

☐ District

☐ Other

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

Eighty percent (80%) of Arizona's HSIP funds are set aside for statewide safety projects and twenty percent (20%) for local government after 10% Flex funds has been removed per MAP-21. This 80/20 split was adopted to address traffic safety on all public roads with both ADOT and local agencies (Council of Governments (COGs), Metropolitan Planning Organizations (MPOs), cities, towns, counties and tribal agencies). This split is being re-evaluated as part of the SHSP update process and per MAP-21 legislation. As ADOT and local government agencies identify high crash locations using any acceptable screening method and develop safety improvement projects, ADOT reviews them on a statewide basis and prioritize projects for funding eligibility. ADOT LPA, in consultation with MPOs and COGs, provides assistance to local agencies throughout the process of identifying and developing the projects.

Identify which internal partners are involved with Highway Safety Improvement Program planning.

☐ Design

☐ Planning

☐ Maintenance

☐ Operations

☐ Governors Highway Safety Office

☒ Other: Other-ADOT Traffic Safety Section (TSS) and Local Public Agency Section (LPAS)

Briefly describe coordination with internal partners.

Safety analyses begin with the compilation and correlation of data elements on a statewide system. Coordination takes place within ADOT including the State Engineer's Office, the Director's Office, Project Managers, District Engineers and others involved in safety projects. Once the project is identified, depending on the nature of the project, justification of HSIP funding through evaluation and formal eligibility process is established by ADOT and FHWA Arizona Division Office.

Identify which external partners are involved with Highway Safety Improvement Program planning.

☒ Metropolitan Planning Organizations

☐ Governors Highway Safety Office

☐ Local Government Association

☐ Other:

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

☐ Multi-disciplinary HSIP steering committee

☒ Other: Other-No change.

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

None to report.

Program Methodology

Select the programs that are administered under the HSIP.

☐ Median Barrier	☐ Intersection	☐ Safe Corridor
☐ Horizontal Curve	☐ Bicycle Safety	☐ Rural State Highways
☐ Skid Hazard	☐ Crash Data	☐ Red Light Running Prevention
☒ Roadway Departure	☐ Low-Cost Spot Improvements	☐ Sign Replacement And Improvement
☐ Local Safety	☐ Pedestrian Safety	☐ Right Angle Crash
☐ Left Turn Crash	☒ Shoulder Improvement	☐ Segments
☒ Other: Other-RSA	☒ Other: Other-Tree Removal	

Program: **Roadway Departure**

Date of Program Methodology: **6/29/2012**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☒ All crashes	☐ Traffic	☐ Median width
☐ Fatal crashes only	☐ Volume	☐ Horizontal curvature
☒ Fatal and serious injury crashes only	☐ Population	☐ Functional classification
☐ Other	☐ Lane miles	☐ Roadside features
	☐ Other	☐ Other

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☒ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☒ Other-Based on B/C Ratio and systemic projects based on crash type.

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

☒ Rank of Priority Consideration

☒ Ranking based on B/C	2
☒ Available funding	1
☐ Incremental B/C	
☐ Ranking based on net benefit	
☐ Other	

Program: **Shoulder Improvement**

Date of Program Methodology: **4/30/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☐ All crashes	☐ Traffic	☐ Median width
☐ Fatal crashes only	☒ Volume	☐ Horizontal curvature
☒ Fatal and serious injury crashes only	☐ Population	☒ Functional classification
☐ Other	☐ Lane miles	☐ Roadside features
	☐ Other	☐ Other

What project identification methodology was used for this program?

☐ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☒ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☒ Other-Based on B/C Ratio and systemic projects based on crash type.

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

☒ Rank of Priority Consideration

☒ Ranking based on B/C	2
☒ Available funding	1
☐ Incremental B/C	
☐ Ranking based on net benefit	
☐ Other	

Program: **Other-RSA**

Date of Program Methodology: **1/10/2006**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☒ All crashes	☐ Traffic	☒ Median width
☐ Fatal crashes only	☒ Volume	☒ Horizontal curvature
☐ Fatal and serious injury crashes only	☐ Population	☐ Functional classification
☐ Other	☐ Lane miles	☒ Roadside features
	☐ Other	☐ Other

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

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

☒ Yes

☐ No

If yes, are local road projects identified using the same methodology as state roads?

☒ Yes

☐ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☒ Other-Based on B/C ratio and systemic projects based on crash type

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

☒ Rank of Priority Consideration

☒ Ranking based on B/C	2
☒ Available funding	1

☐ Incremental B/C

☐ Ranking based on net benefit

☐ Other

Program: **Other-Tree Removal**

Date of Program Methodology: **6/15/2010**

What data types were used in the program methodology?

Crashes	*Exposure*	*Roadway*
☐ All crashes	☐ Traffic	☐ Median width
☐ Fatal crashes only	☐ Volume	☐ Horizontal curvature
☒ Fatal and serious injury crashes only	☐ Population	☐ Functional classification
☐ Other	☐ Lane miles	☐ Roadside features
	☐ Other	☐ Other

What project identification methodology was used for this program?

☒ Crash frequency

☐ Expected crash frequency with EB adjustment

☐ Equivalent property damage only (EPDO Crash frequency)

☐ EPDO crash frequency with EB adjustment

☐ Relative severity index

☐ Crash rate

☐ Critical rate

☐ Level of service of safety (LOSS)

☐ Excess expected crash frequency using SPFs

☐ Excess expected crash frequency with the EB adjustment

☐ Excess expected crash frequency using method of moments

☐ Probability of specific crash types

☐ Excess proportions of specific crash types

☐ Other

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

☐ Yes

☒ No

How are highway safety improvement projects advanced for implementation?

☐ Competitive application process

☐ Selection committee

☒ Other-Based on B/C ratio and systemic projects based on crash type.

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

☒ Rank of Priority Consideration

☒ Ranking based on B/C 2

☒ Available funding 1

☐ Incremental B/C

☐ Ranking based on net benefit

☐ Other

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

37

Highway safety improvment program funds are used to address which of the following systemic improvments?

☒ Cable Median Barriers

☒ Rumble Strips

☒ Traffic Control Device Rehabilitation

☒ Pavement/Shoulder Widening

☒ Install/Improve Signing

☒ Install/Improve Pavement Marking and/or Delineation

☒ Upgrade Guard Rails

☐ Clear Zone Improvements

☐ Safety Edge

☒ Install/Improve Lighting

☒ Add/Upgrade/Modify/Remove Traffic Signal

☐ Other

What process is used to identify potential countermeasures?

☒ Engineering Study

☒ Road Safety Assessment

☐ Other:

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: Other-No change.

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

None to report.

Progress in Implementing Projects

Funds Programmed

Reporting period for Highway Safety Improvement Program funding.

☐ Calendar Year

☐ State Fiscal Year

☒ Federal Fiscal Year

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

Funding Category	Programmed*		Obligated	
HSIP (Section 148)	38190000	92 %	18100843	68 %
HRRRP (SAFETEA-LU)	1840000	4 %	845135.23	3 %
HRRR Special Rule				
Penalty Transfer - Section 154				
Penalty Transfer – Section 164	0	0 %	7534692	28 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)				
State and Local Funds	1485432	4 %	0	0 %

Totals	41515432	100%	26480670.23	100%

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

$5,950,000.00

How much funding is obligated to local safety projects?

$11,113,858.00

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

$0.00

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

$2,140,111.00

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

$7,534,692.00

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

$0.00

Discuss impediments to obligating Highway Safety Improvement Program funds and plans to overcome this in the future.

None to report.

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

None to report.

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
I-10,35th Ave. to Sky Habor Blvd. Review crash data and identify hazardous locations and ways to reduce traffic crashes.	Non-infrastructure Transportation safety planning	1 Numbers	565800	600000	HSIP (Section 148)	Principal Arterial-Interstate	236543	65	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Creating more effective processes and safety management system
I-10 (WB); Johnson Rd (MP322) to Redbird Hills (MP333) west of WILLCOX [PE-Prel & Final Deisgn for Pavement Preservation]	Shoulder treatments Widen shoulder - paved or other	14 Miles	565800	600000	Penalty Transfer – Section 164	Principal Arterial-Interstate	15659	75	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road
SR69 from MP 281.1 to MP 289.7; Dewey Humboldt-	Intersection traffic control Modify traffic signal timing	6 Numbers	296929	296929	HSIP (Section 148)	Principal Arterial-Other	0	0	State Highway	Roadway/Roadside (lane departure	Improving the design and

Prescott Valley; 6 intersections--Construction-To modify Traffic Signal	- left-turn phasing (permissive to protected-only)								Agency	and intersections)	operation of highway intersections
SR 69 at Prescott Lakes Pkwy and Heather Hights in Prescott. Left Turn Traffic Signals	Intersection traffic control Modify traffic signal - modify signal mounting (spanwire to mast arm)	2 Numbers	60000	60000	HSIP (Section 148)	Principal Arterial-Other	36311	45	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Improving the design and operation of highway intersections
SR86;MP 114.7-115.5, in the Town fo Sells--PE to Develop two Pedestrian Crossings (HAWK)	Pedestrians and bicyclists Pedestrian signal - Pedestrian Hybrid Beacon	2 Numbers	188600	200000	HSIP (Section 148)	Minor Arterial	2494	45	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Making walking and street crossing easier
SR-87, SR-188 (MP 236.2) to RYE (MP 241.0)--PAVEMENT PRESERVATION	Shoulder treatments Widen shoulder - paved or other	5 Miles	433780	460000	Penalty Transfer – Section 164	Principal Arterial-Other	9789	65	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road
SR-92 MP 324.49-MP 325.31,Buffalo Soldier Trail to	Access management Access	2 Numb	52808	56000	HSIP (Sectio	Minor Arterial	21979	55	State Highway	Roadway/Roadside (lane departure	Making trucks travel

Kachina Trail, in Sierra Vista--Raised Median, Turnaround and roundabout.	management - other	ers			n 148)				Agency	and intersections)	safer
SR-92 MP 324.49-MP 325.31,Buffalo Soldier Trail to Kachina Trail, in Sierra Vista--Raised Median, Turnaround and roundabout.	Access management Access management - other	2 Numbers	1027152	1089239	HSIP (Section 148)	Minor Arterial	21979	55	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Making trucks travel safer
SR-92 MP 324.49-MP 325.31,Buffalo Soldier Trail to Kachina Trail, in Sierra Vista--Raised Median, Turnaround and roundabout.	Access management Access management - other	2 Numbers	3691795	3914946	Penalty Transfer – Section 164	Minor Arterial	21979	55	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Making trucks travel safer
US-191; SR-181 (MP 38) to Pearce Rd (MP 46) south of SUNSITES--CONSTRUCTION OF SHOULDERS AND RUMBLE	Shoulder treatments Widen shoulder - paved or other	7.8 Miles	4104356	4352445	HSIP (Section 148)	Major Collector	0	0	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road

STRIPS											
US-89A; MP 610 to MP 613 in FREDONIA--PAVEMENT PRESERVATION AND SHOULDER WIDENING	Shoulder treatments Widen shoulder - paved or other	3 Miles	570858	605363	HSIP (Section 148)	Major Collector	4545	0	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road
US-89A; MP 610 to MP 613 in FREDONIA--PAVEMENT PRESERVATION AND SHOULDER WIDENING	Shoulder treatments Widen shoulder - paved or other	3 Miles	565800	600000	HSIP (Section 148)	Major Collector	4545	0	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road
SR-95; MP142 Mohave Road in Parker, AZ, DESIGN FOR ROUNDABOUT	Intersection geometry Intersection geometry - other	1 Numbers	300000	300000	HSIP (Section 148)	Principal Other	0	0	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configration

Statewide Tree Removal Program	Roadside Removal of roadside objects (trees, poles, etc.)	700 Miles	660100	700000	HSIP (Section 148)	various locations	0	0	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road
Statewide Roadway Departure Implementation Plan RDSIP	Roadway Roadway - other	1 Numbers	1697400	1800000	HSIP (Section 148)	various locations	0	0	State Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road
Update Arizona Strategic Highway Safety Plan (SHSP)	Non-infrastructure Transportation safety planning	1 Numbers	943000	1000000	HSIP (Section 148)	various locations	0	0	State Highway Agency	Safety Plan Update	Creating more effective processes and safety management system
Statewide Road Safety Assessment Program (RSA)	Miscellaneous	1 Numbers	377200	400000	HSIP (Section 148)	various locations	0	0	State Highway Agency	RSA	Creating more effective processes and safety management system

Statewide MAP-21 GIS Data Collection Support	Non-infrastructure Data/traffic records	1 Numbers	259325	275000	HSIP (Section 148)	various locations	0	0	State Highway Agency	Data Improvement	Creating more effective processes and safety management system
Ocotillo Road, Arizona Ave to McQueen Rod, in Chandler	Intersection geometry Intersection geometry - other	1 Numbers	565800	600000	Penalty Transfer – Section 164	Major Collector	0	45	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configuration
Ocotillo Road, Arizona Ave to McQueen Rod, in Chandler	Intersection geometry Intersection geometry - other	1 Numbers	1157061	1227000	Penalty Transfer – Section 164	Major Collector	0	45	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configurati

											on
Ironwood Dr,Ellioot Rd-Siphon Draw in Apache Junction--PE FOR DESIGN FOR SAFETY PULLOUTS	Shoulder treatments Widen shoulder - paved or other	2 Numbers	37720	40000	HSIP (Section 148)	Major Collector	0	45	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Creating Safety pull outs
IRONWOOD DR;AT SIPHON DRAW WASH IN APACHE JUNCTION--PE TO DESIGN FOR SAFETY PULLOUTS	Shoulder treatments Widen shoulder - paved or other	2 Numbers	29383	31159	HSIP (Section 148)	Major Collector	0	45	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Creating Safety pull outs
IRONWOOD DR;AT SIPHON DRAW WASH IN APACHE JUNCTION--PE TO DESIGN FOR SAFETY PULLOUTS	Shoulder treatments Widen shoulder - paved or other	2 Numbers	56580	60000	HSIP (Section 148)	Major Collector	0	45	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Creating Safety pull outs
Lake Mary Road;MP 290.5-317.5 in Coconino County--TREE	Roadside Removal of roadside objects (trees, poles, etc.)	27 Miles	1508800	1600000	HSIP (Section 148)	Minor Arterial	0	0	County Highway	Roadway/Roadside (lane departure	Reduction of Fixed Object

THINNING PROJECT									Agency	and intersections)	Crashes
COCONINO COUNTY-VARIOUS LOCATIONS-Install 616 rdwy regualtory, warming, or str name signs & 1,232 mounting brackets w/in Coconino.	Roadway signs and traffic control Roadway signs and traffic control - other	0 Numbers	57500	57500	HSIP (Section 148)	Major Collector	0	0	County Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduction of crashes by upgrading signs
Casa Grande-Various Locations--12-inch Traffic Signal heads and Pedestrian Countdown Signals	Intersection traffic control Modify traffic signal - modernization/replacement	76 Numbers	63820	63820	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	decrease in Pedestrian Intersection crashes
City of Cottonwood-Var Locs-PE to procure-Rdway regualatory, warning and street name	Roadway signs and traffic control Roadway signs and traffic control - other	719 Numbers	87797	87797	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	reduction in intersection and ped crashes as well as nighttime

signs.(See Div Remarks for construction info)											crashes
City of Cottonwood-Var Loc PE and Installation to procure-Upgraded(Thermoplastic) pvmt markings	Roadway delineation Longitudinal pavement markings - remarking	0 Miles	91593	91593	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Minimizing the consequences of leaving the road
AGENCIES WITHIN CYMPO-VARIOUS LOCATIONS-YAVAPAI COUNTY, CHINO, DEWEY-HUMBOLDT, PRESCOTT & PRESCOTT VALLEY-Sign Replacement Program	Roadway signs and traffic control Roadway signs and traffic control - other	0 Numbers	1860000	1860000	HSIP (Section 148)	various locations	0	0	Other Local Agency	Roadway/Roadside (lane departure and intersections)	improve retroreflectivity and visibility
AGENCIES WITHIN CYMPO-VARIOUS LOCATIONS-YAVAPAI COUNTY, CHINO, DEWEY-HUMBOLDT,	Roadway signs and traffic control Roadway signs and traffic control - other	0 Numbers	68839	73000	HSIP (Section 148)	various locations	0	0	Other Local Agency	Roadway/Roadside (lane departure and intersections	improve retroreflectivity and visibility

PRESCOTT & PRESCOTT VALLEY-Sign Replacement Program										)	
Tn of Gilbert-Var Locs-PE to procure-Pedestrian Countdown Signal Heads;Proc & Installation of 470 Ped Ct-dn Sig Hds@62 intersec	Pedestrians and bicyclists Pedestrian signal - modify existing	470 Numbers	40528	40528	HSIP (Section 148)	various locations	0	0	Town or Township Highway Agency	Roadway/Roadside (lane departure and intersections)	reduction of Pedestrian crashes at intersections
City of Glendale-Various Locations-PE to procure-Ped ctdown Sig Hds.Procurement & Install 410 Ped Ct-dn Sig Hd@54 Intersections	Pedestrians and bicyclists Pedestrian signal - modify existing	410 Numbers	69040	69040	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	reduction of Pedestrian crashes at intersections
City of Glendale-Various Locations-PE to procure-Ped ctdown Sig	Pedestrians and bicyclists Pedestrian signal - modify existing	410 Numbers	303110	303110	HSIP (Section 148)	various locations	0	0	City of Municipal Highway	Roadway/Roadside (lane departure and intersections	reduction of Pedestrian crashes at intersectio

Hds.Procurement & Install 410 Ped Ct-dn Sig Hd@54 Intersections									Agency	)	ns
City of Glendale-Various Locations -PE TO PROCURE-SIGN INVENTORY MGT SYSTEM for SIGN UPGRADES	Roadway signs and traffic control Roadway signs (including post) - new or updated	0 Numbers	290000	290000	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Creating more effective processes and safety management system and crash reduction
BIA ROUTE 6, SAN CARLOS APACHE TRIBE, GILA COUNTY--ROADWAY SAFETY IMPROVEMENTS	Roadway Roadway - other	0 Numbers	9430	10000	HRRRP	various locations	0	0	Indian Tribe Nation	Roadway/Roadside (lane departure and intersections)	reduction of run off road crashes
City of Kingman-Various Locations-PE to procure -& Construct Ped Installation of 176 Ctdown Signal Heads @22	Pedestrians and bicyclists Pedestrian signal - modify existing	176 Numbers	41131	41131	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	reduction of Pedestrian crashes at intersections

intersection											
Alamo Dam Road:MP 9.0-10.3, North of Wenden--CONSTRUCT NEW GUARDRAIL	Roadside Roadside - other	1.3 Miles	601802	601802	HRRRP	Minor Arterial	0	45	County Highway Agency	Roadway/Roadside (lane departure and intersections)	reduction of run off road crashes
Alamo Dam Road:MP 9.0-10.3, North of Wenden--CONSTRUCT NEW GUARDRAIL	Roadside Roadside - other	1.3 Miles	46246	46246	HRRRP (SAFETEA-LU)	Minor Arterial	0	45	County Highway Agency	Roadway/Roadside (lane departure and intersections)	reduction of run off road crashes
Mammoth-Various Locations--Installation of 194 rdwy regualtory, warning signs,;160 str name signs and 180 mounting brackets	Roadway signs and traffic control Roadway signs and traffic control - other	534 Numbers	33353	33353	HSIP (Section 148)	various locations	0	0	Town or Township Highway Agency	Roadway/Roadside (lane departure and intersections)	improve retroreflectivity and visibility
Town of Miami-Various Locations. Installation of 273 rdway	Roadway signs and traffic control Roadway signs and traffic control -	513 Numbers	10000	10000	Penalty Transfer –	various locations	0	0	Town or Township	Roadway/Roadside (lane departure and	improve retroreflectivity and

reg,warning signs;140 str name signs,25 mt brackets &75 lf Post Exten.	other				Section 164				Highway Agency	intersections)	visibility
City of Page-Various Locations-Procurement and Installation of thermo pavemt striping and marking materials at approx 64 locations	Roadway delineation Longitudinal pavement markings - remarking	0 Miles	92500	92500	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	improve visibility and reduction of run off road crashes
Town of Payson-Various Locations--PE to procure--Upgrade(Thermoplastic) Pavement Markings	Roadway delineation Longitudinal pavement markings - remarking	0 Miles	130000	130000	HSIP (Section 148)	various locations	0	0	Town or Township Highway Agency	Roadway/Roadside (lane departure and intersections)	improve visibility and reduction of run off road crashes
75th Ave & Cactus Rd Intersection - City of Peoria--PE for intersection Safety	Intersection geometry Intersection geometry - other	1 Numbers	647765	860000	HSIP (Section 148)	Major Collector	0	0	City of Municipal Highway	Roadway/Roadside (lane departure and intersections	Reduce the number of intersection related

Improvements.									Agency	)	fatalities through improved geometric configuration
75th Ave & Peoria Avenue Intersection-City of Peoria--PE for intersection Safety improvements	Intersection geometry Intersection geometry - other	1 Numbers	775618	850000	HSIP (Section 148)	Major Collector	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configuration
75th Ave & Peoria Avenue Intersection-City of Peoria--PE for intersection Safety improvements	Intersection geometry Intersection geometry - other	1 Numbers	0	38000	HSIP (Section 148)	Major Collector	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configurati

											on
Lambert Lane and Thornydale Rd Traffic Interchange,Pima County, Tucson Distrtict--PE to Design a new roundabout	Intersection geometry Intersection geometry - other	1 Numbers	296000	296000	HSIP (Section 148)	Major Collector	0	0	County Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configuration
Town of Queen Creek-Various Locations--Installation of 180 Ped Countdown sig heads at 28 intersection w/the Town of Queen Creek.	Pedestrians and bicyclists Pedestrian signal - modify existing	180 Numbers	35920	35920	HSIP (Section 148)	various locations	0	0	Town or Township Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configuration
CITY OF SCOTTSDALE-VARIOUS LOCATION--	Roadway signs and traffic control Roadway signs (including post) -	9 Numbers	5000	5000	HSIP (Section 148)	various locations	0	0	City of Municipal Highwa	Roadway/Roadside (lane departure and	

Procurement of CHANGEABLE SPEED WARNING SIGNS for ind drivers at 9 locations.	new or updated								y Agency	intersections)	
CITY OF SCOTTSDALE-VARIOUS LOCATION--Procurement of CHANGEABLE SPEED WARNING SIGNS for ind drivers at 9 locations.	Roadway signs and traffic control Roadway signs (including post) - new or updated	9 Numbers	70200	70200	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	
SIERRA VISTA-VAR LOCATIONS-Installations of app3350 rdwy reg and warning signs and appx 2709guide signs & install sign posts/poles	Roadway signs and traffic control Roadway signs (including post) - new or updated	6059 Numbers	10000	10000	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	improve visibility and reduction of run off road crashes
SIERRA VISTA-VAR LOCATIONS-Installations of	Roadway signs and traffic control Roadway signs	6059 Numbers	454529	454529	HSIP (Section 148)	various locations	0	0	City of Municipal	Roadway/Roadside (lane departure	improve visibility and

app3350 rdwy reg and warning signs and appx 2709guide signs & install sign posts/poles	(including post) - new or updated								Highway Agency	and intersections)	reduction of run off road crashes
SIERRA VISTA-VAR LOCATIONS-Installations of app3350 rdwy reg and warning signs and appx 2709guide signs & install sign posts/poles	Roadway signs and traffic control Roadway signs (including post) - new or updated	6059 Numbers	203637	215946	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	improve visibility and reduction of run off road crashes
Intersection of Brdway Rd&Priest Dr.Tempe-Intersec Safety improvements includign bus pullout,ADA sdwalks&ramps,widening East bound	Intersection geometry Intersection geometry - other	1 Numbers	36960	36960	HSIP (Section 148)	Major Collector	0	45	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configuration
City of Tempe-Ped Countdown	Pedestrians and bicyclists	154 Numb	5760	5760	HSIP (Sectio	various	0	0	City of Munici	Roadway/Roadside (lane	Reduce the

Signals-Procurement of 154 Ped Countdown Heads	Pedestrian signal - modify existing	ers	0	0	n 148)	locations			pal Highway Agency	departure and intersections)	number of pedestrian intersection related fatalities through improved signals
Yuma-Various Locations PE to procure-12'Traffic Signal Indications--traffic signal upgrades	Intersection traffic control Intersection traffic control - other	0 Numbers	271413	271413	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Roadway/Roadside (lane departure and intersections)	Reduce the number of intersection related fatalities through improved geometric configuration
City of Tempe-Emergency Preemption Cards and TS-2 Tester	Pedestrians and bicyclists Pedestrian signal - modify existing	21 Numbers	57600	57600	HSIP (Section 148)	various locations	0	0	City of Municipal Highway Agency	Data Improvement	
Pima Association Of Governments,	Non-infrastructure Non-infrastructure	1 Numb	250000	265111	HSIP (Sectio	various locations	0	0	County Highwa	Regional Safety Plan	

Regional Strategic Transportation Safety Plan (STSP)	- other	ers			n 148)				y Agency		
Somerton Ave & County 18th St Intersection south of Somerton - intersection improvements	Intersection geometry Intersection geometry - other	1 Numb ers	1225 90	1300 00	HSIP (Sectio n 148)	Major Collector	0	45	County Highwa y Agency	Roadway/Ro adside (lane departure and intersections)	Reduce the number of intersectio n related fatalities through improved geometric configurat

Progress in Achieving Safety Performance Targets

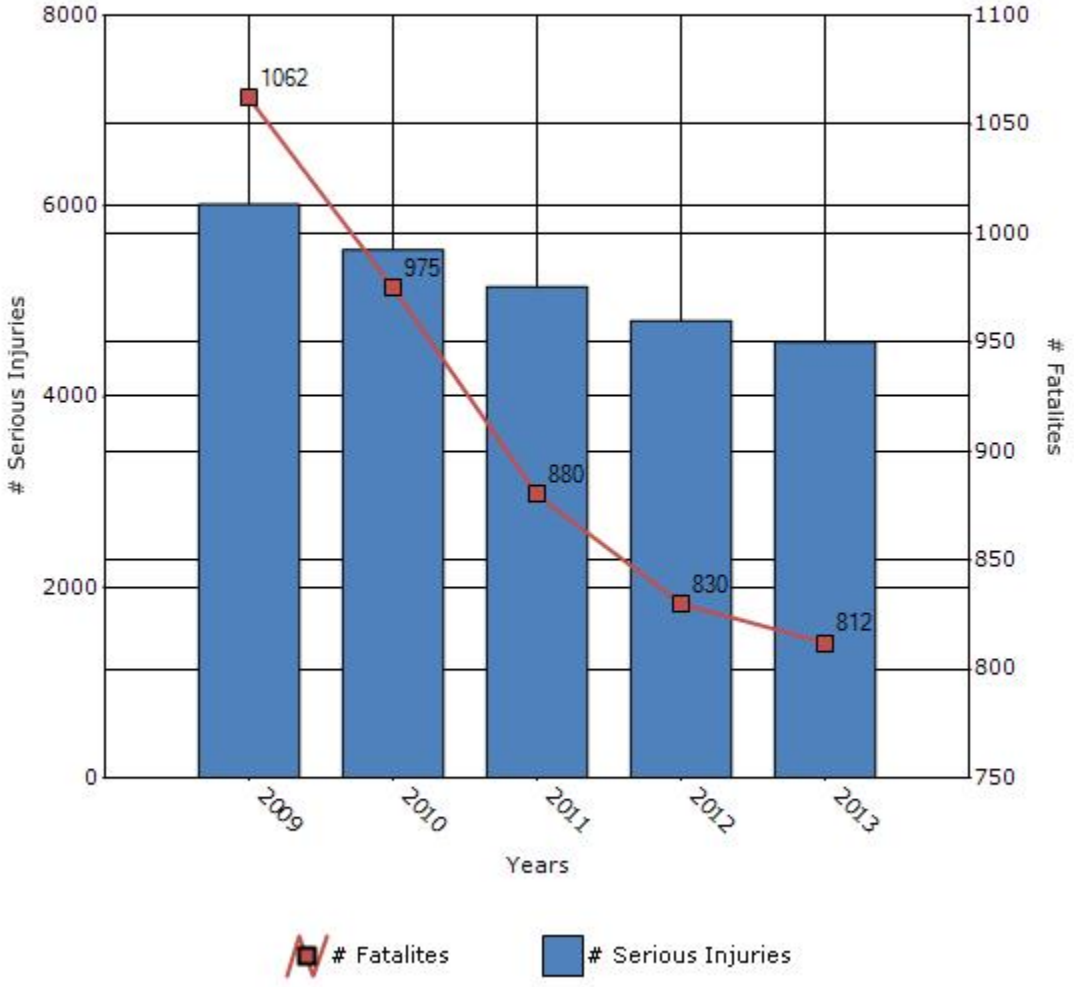
Overview of General Safety Trends

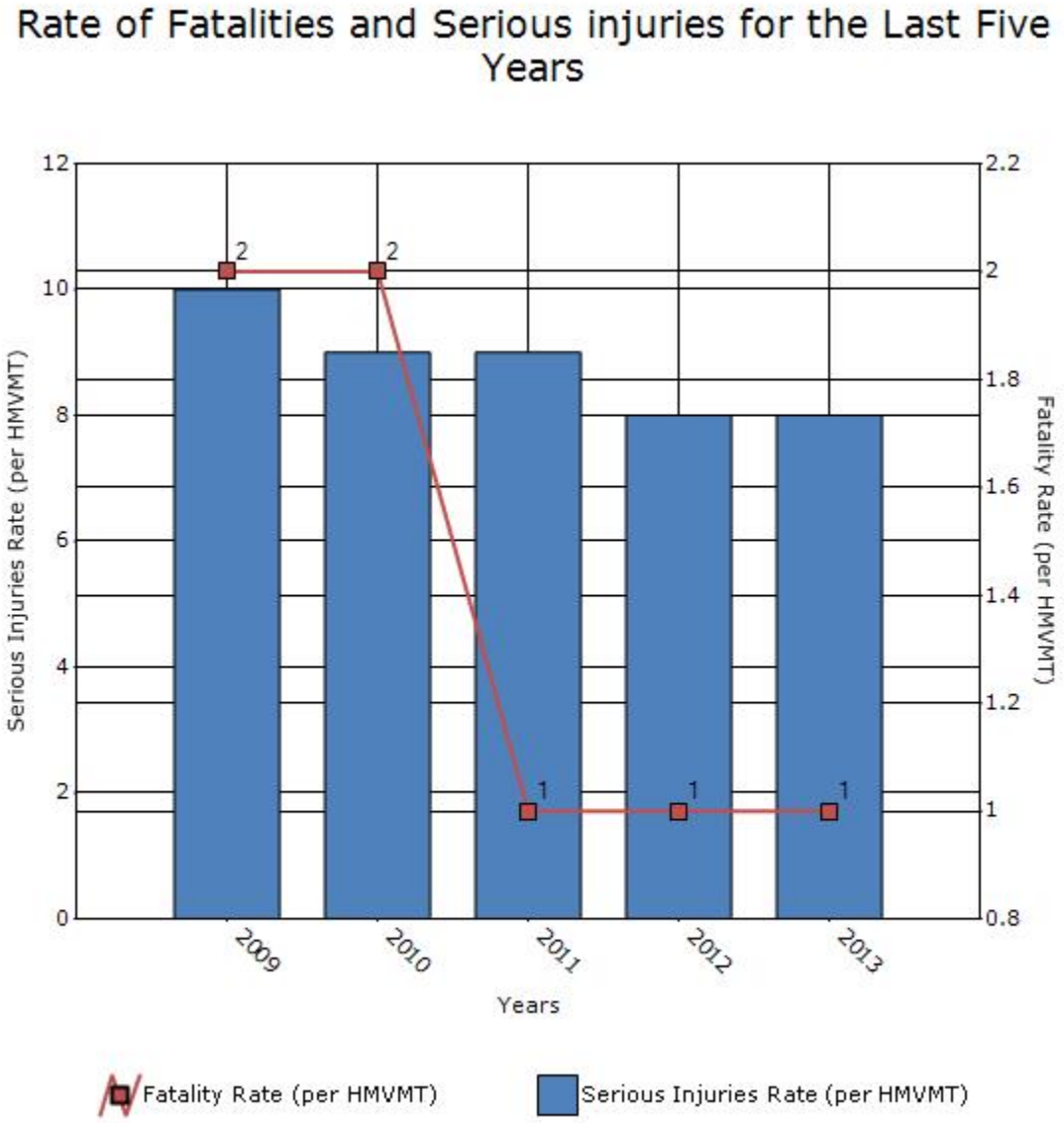
Present data showing the general highway safety trends in the state for the past five years.

Performance Measures*	2009	2010	2011	2012	2013
Number of fatalities	1062	975	880	830	812
Number of serious injuries	6017	5541	5152	4796	4577
Fatality rate (per HMVMT)	2	2	1	1	1
Serious injury rate (per HMVMT)	10	9	9	8	8

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

Number of Fatalities and Serious injuries for the Last Five Years



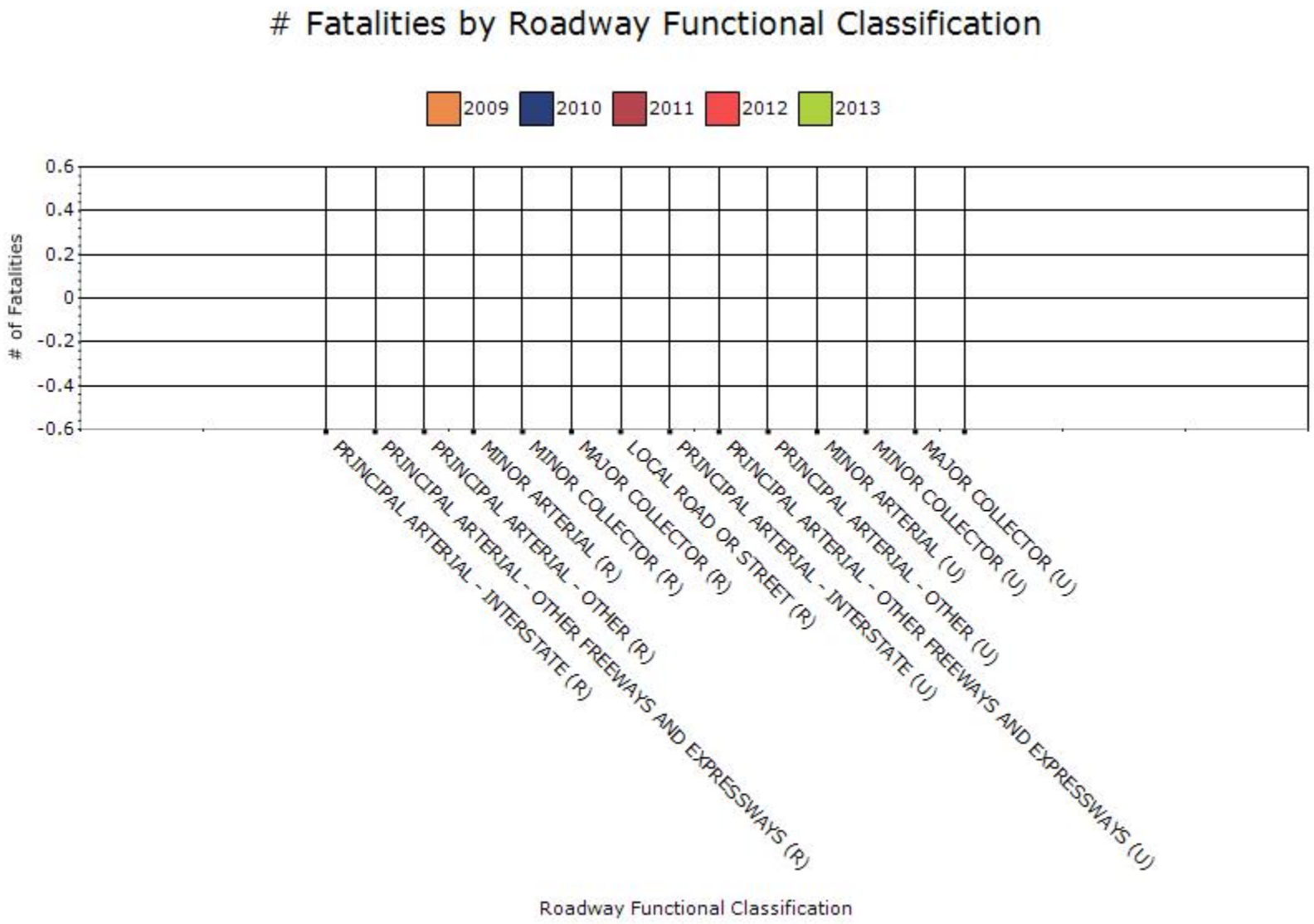

Rate of Fatalities and Serious injuries for the Last Five Years
Serious Injuries Rate (per HMVMT)
Fatality Rate (per HMVMT)
Years
2009
2010
2011
2012
2013
Fatality Rate (per HMVMT)
Serious Injuries Rate (per HMVMT)

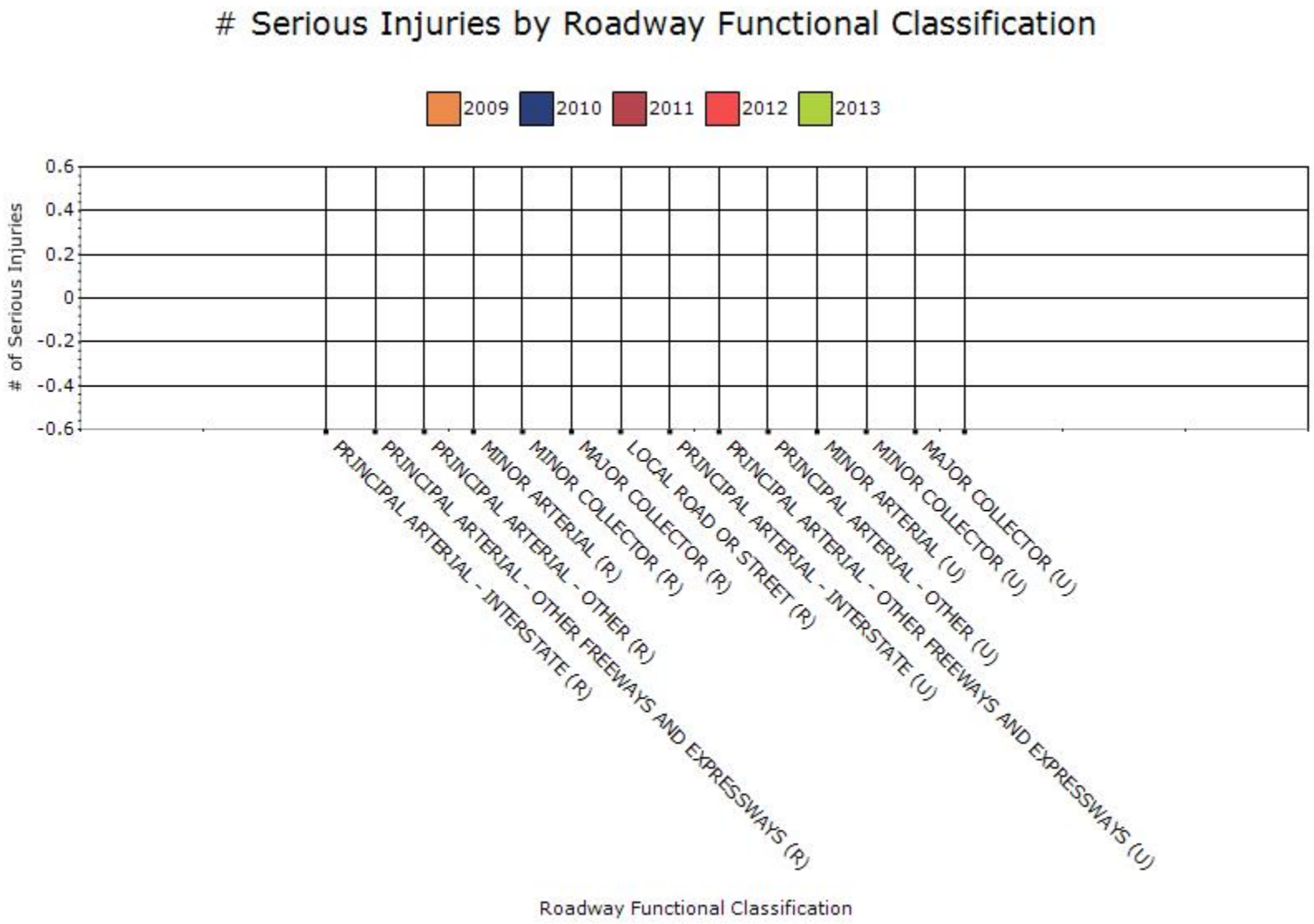
To the maximum extent possible, present performance measure* data by functional classification and ownership.

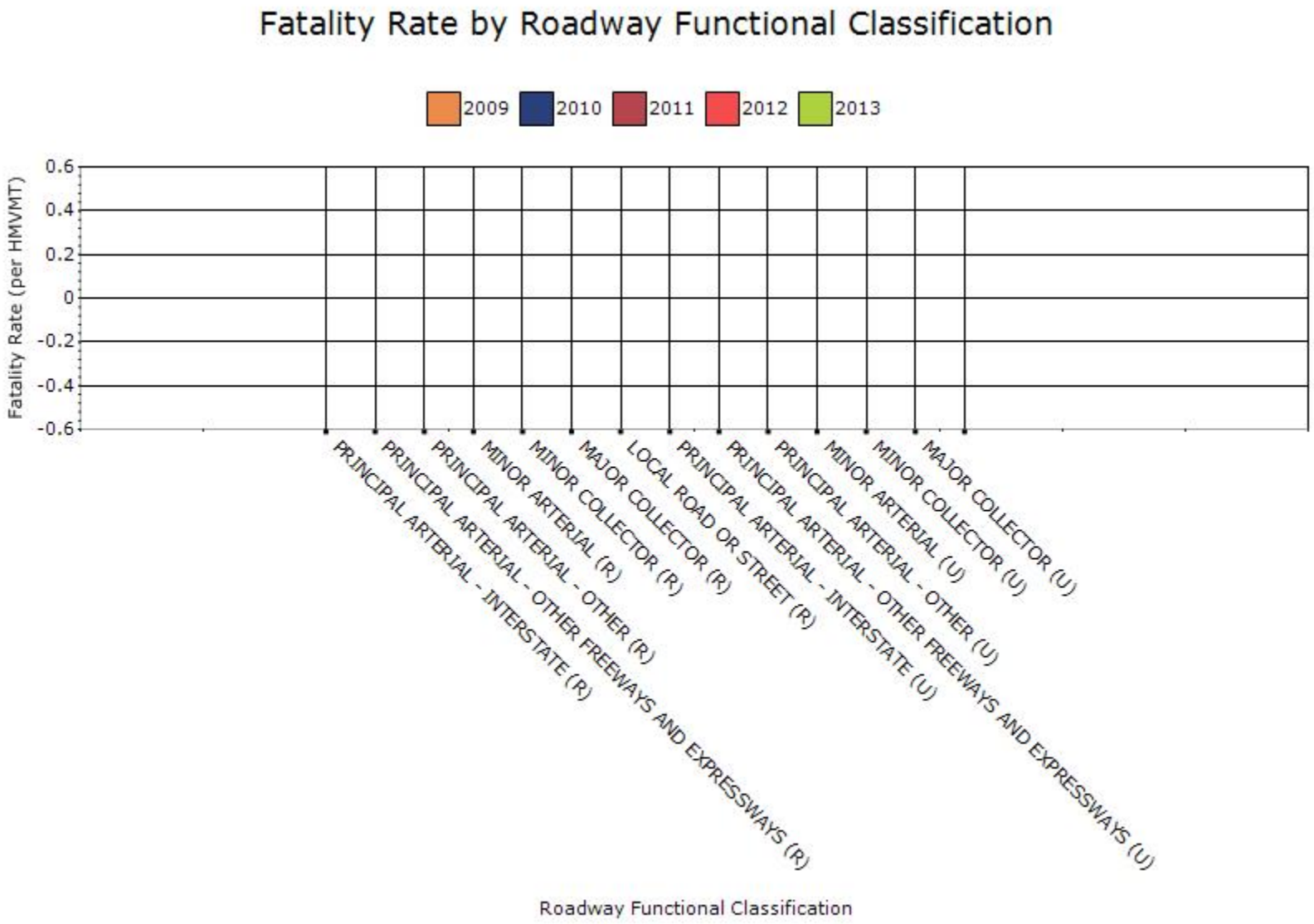
Year - 2013

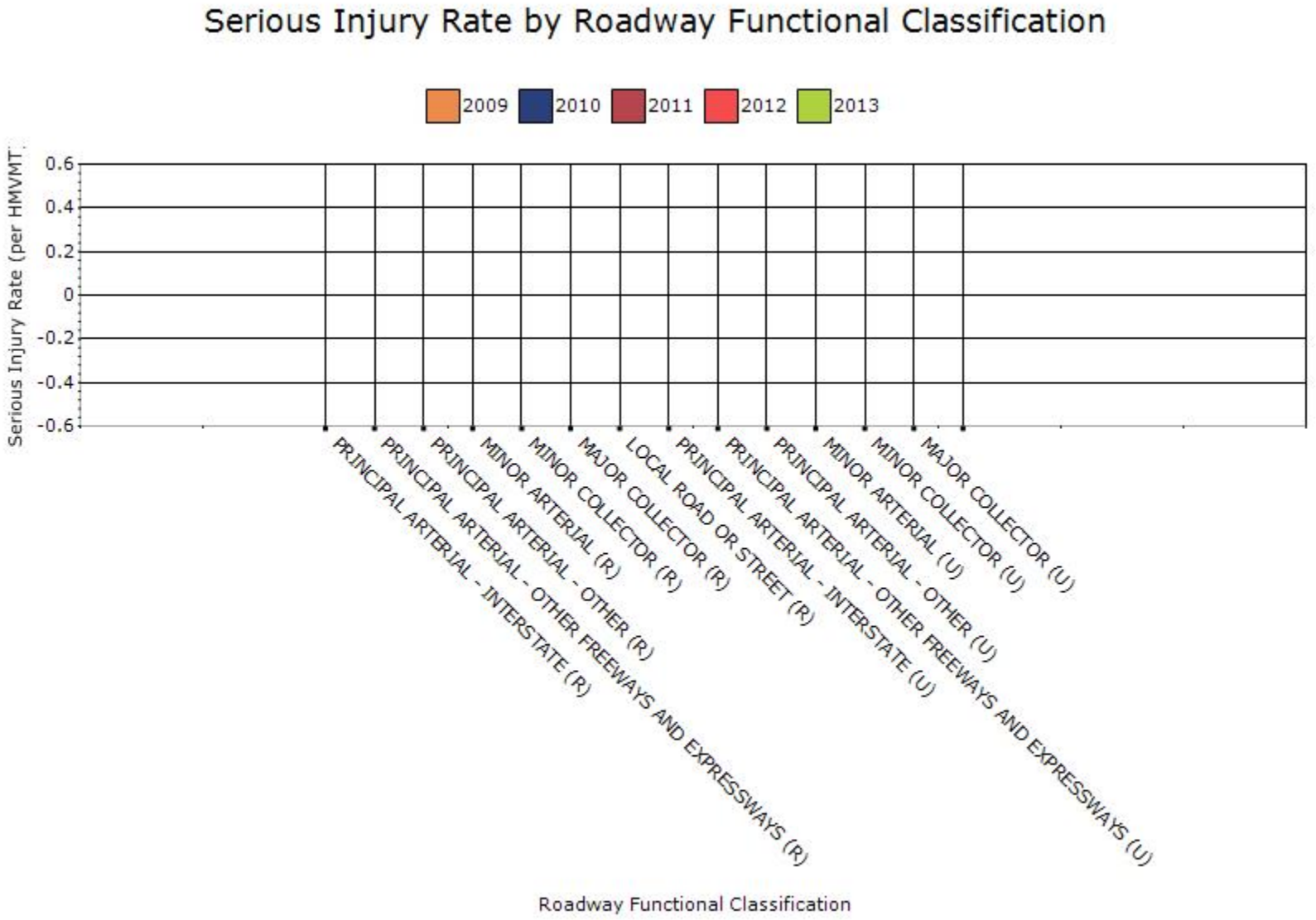
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	e (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	0	0	0	0
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	
RURAL PRINCIPAL ARTERIAL - OTHER	0	0	0	0
RURAL MINOR ARTERIAL	0	0	0	
RURAL MINOR COLLECTOR	0	0	0	0
RURAL MAJOR COLLECTOR	0	0	0	
RURAL LOCAL ROAD OR STREET	0	0	0	0
URBAN PRINCIPAL	0	0	0	

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	0	0	0	0
URBAN PRINCIPAL ARTERIAL - OTHER	0	0	0	0
URBAN MINOR ARTERIAL	0	0	0	0
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	0	0	0	0
URBAN LOCAL ROAD OR STREET	0	0	0	0


Fatalities by Roadway Functional Classification
2009
2010
2011
2012
2013
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# of Fatalities
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

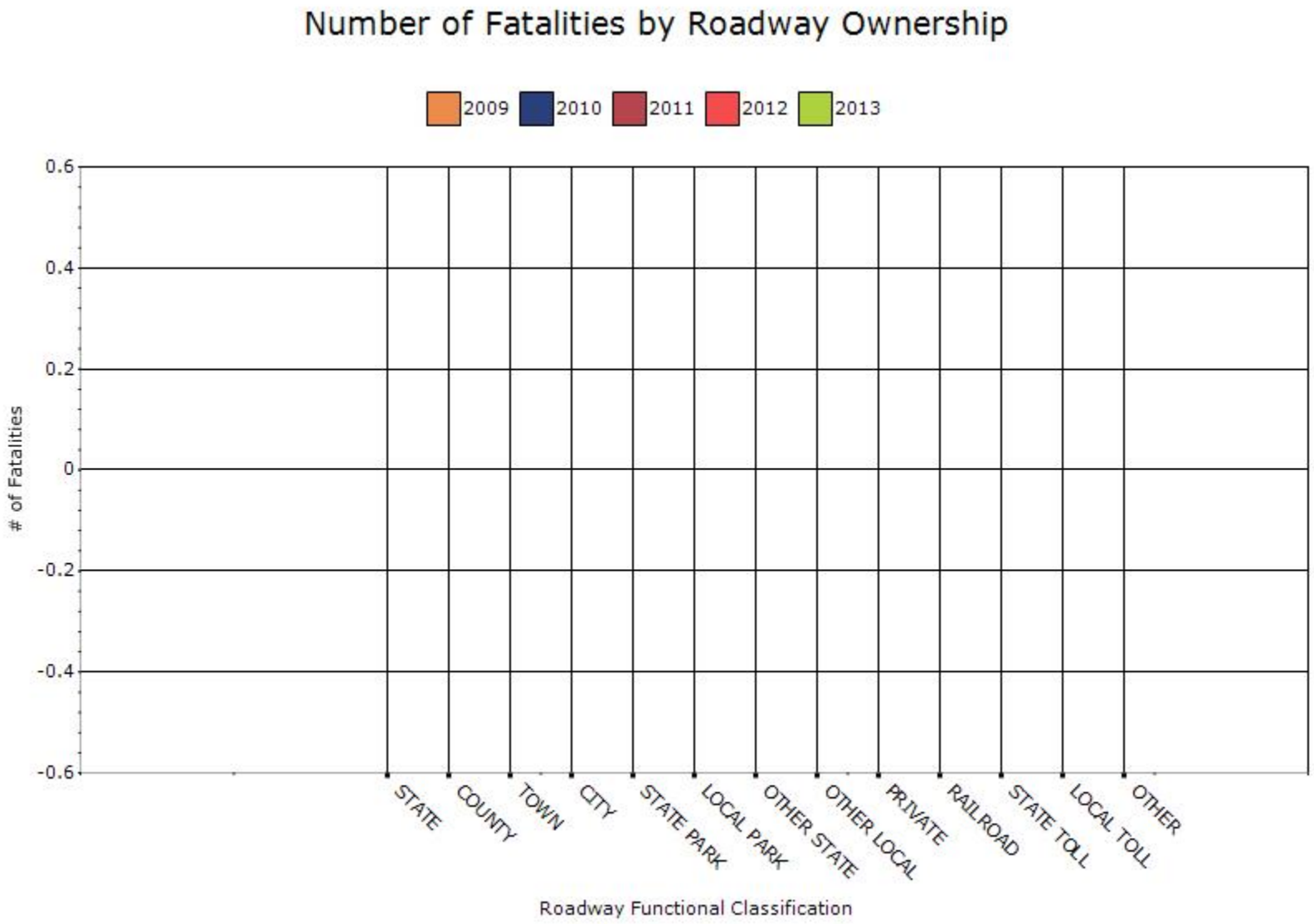

Serious Injuries by Roadway Functional Classification
2009
2010
2011
2012
2013
# of Serious Injuries
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

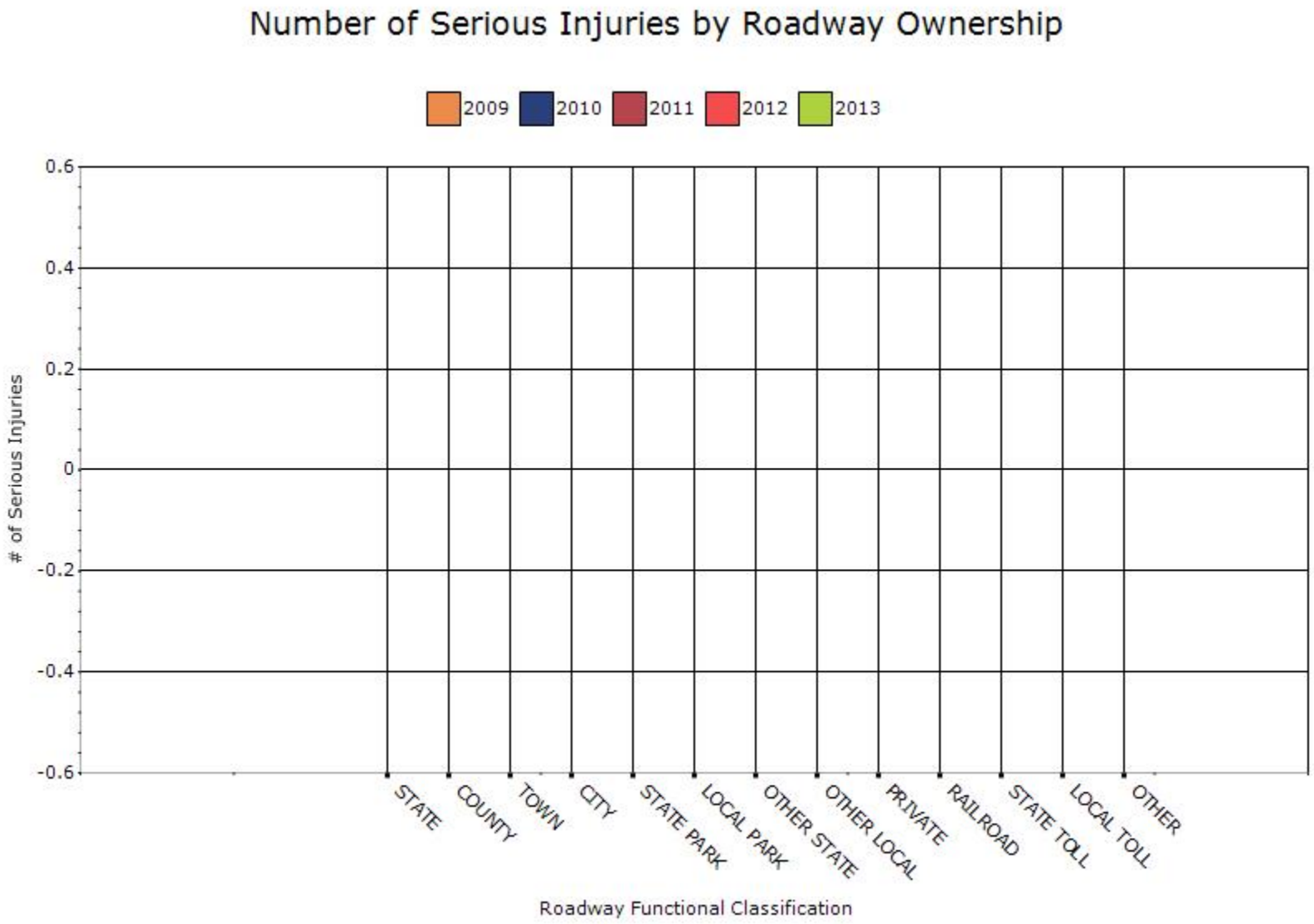

Fatality Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Fatality Rate (per HMVMT)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification


Serious Injury Rate by Roadway Functional Classification
2009
2010
2011
2012
2013
Serious Injury Rate (per HMVMT)
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (R)
LOCAL ROAD OR STREET (R)
PRINCIPAL ARTERIAL - INTERSTATE (U)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (U)
PRINCIPAL ARTERIAL - OTHER (U)
MINOR ARTERIAL (U)
MINOR COLLECTOR (U)
MAJOR COLLECTOR (U)
Roadway Functional Classification

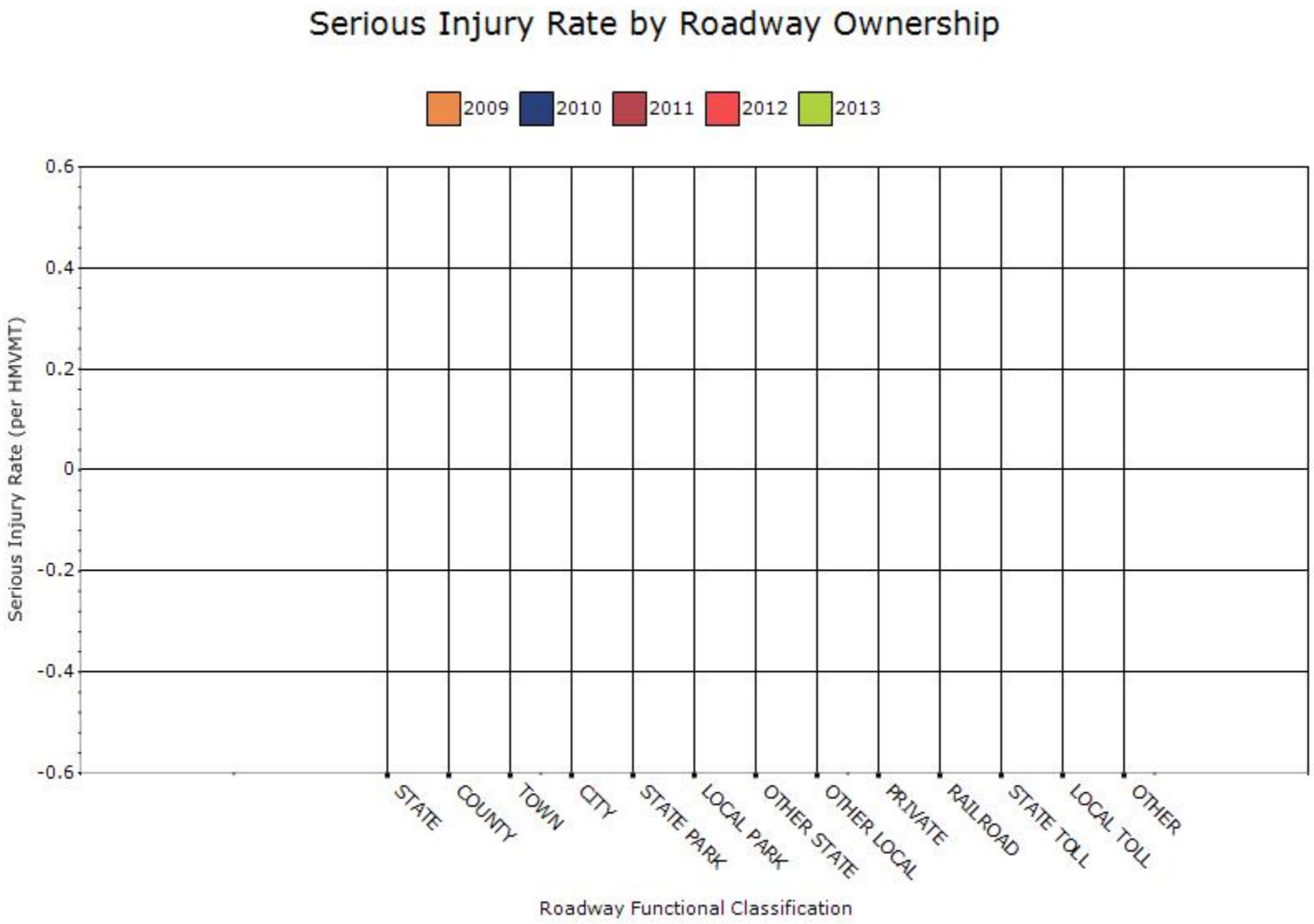
Year - 2013

Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	0	0	0	0
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	0	0	0	0
STATE PARK, FOREST, OR RESERVATION AGENCY	0	0	0	0
LOCAL PARK, FOREST OR RESERVATION AGENCY	0	0	0	0
OTHER STATE AGENCY	0	0	0	0
OTHER LOCAL AGENCY	0	0	0	0
PRIVATE (OTHER THAN RAILROAD)	0	0	0	0
RAILROAD	0	0	0	0
STATE TOLL AUTHORITY	0	0	0	0
LOCAL TOLL AUTHORITY	0	0	0	0
OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UNIVERSITY)	0	0	0	0


Number of Fatalities by Roadway Ownership
2009
2010
2011
2012
2013
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# of Fatalities
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
2009
2010
2011
2012
2013
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
# of Serious Injuries
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Fatality Rate by Roadway Ownership
2009
2010
2011
2012
2013
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Fatality Rate (per HMVMT)
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
2009
2010
2011
2012
2013
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
Serious Injury Rate (per HMVMT)
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER
Roadway Functional Classification

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

Safety trends data by Functional Class and Roadway Ownership is not available at this time. So, the cells are either blank or filled with 0s (zeros).

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	2009	2010	2011	2012	2013
Fatality rate (per capita)	0.81	0.77	0.76	0.73	0.57
Serious injury rate (per capita)	2.84	2.75	2.67	2.54	1.98
Fatality and serious injury rate (per capita)	3.64	3.52	3.43	3.26	2.55

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

Formula used in the calculation of Fatality (F) and Serious Injury (SI) Rate per Capita (an example for 2009 rate calculation):

F+SI 2009 Rate =

(F+SI 2009 Drivers and Pedestrians 65 years of age and older/2009 Population Figure*) + (F+SI 2008 Drivers and Pedestrians 65 years of age and older /2008 Population Figure) + (F+SI 2007 Drivers and Pedestrians 65 years of age and older/2007 Population Figure) + (F+SI 2006 Drivers and Pedestrians 65 years of age and older/2006 Population Figure) + (F+SI 2005 Drivers and Pedestrians 65 years of age and older/2005 Population Figure) / 5

Applying the above equation given in Special Rule Attachment 1 yields the following:

2009 Value = 452/131 +476/133 + 490/129 + 477/128 + 459/126)/5 = 18.20/5 = 3.64

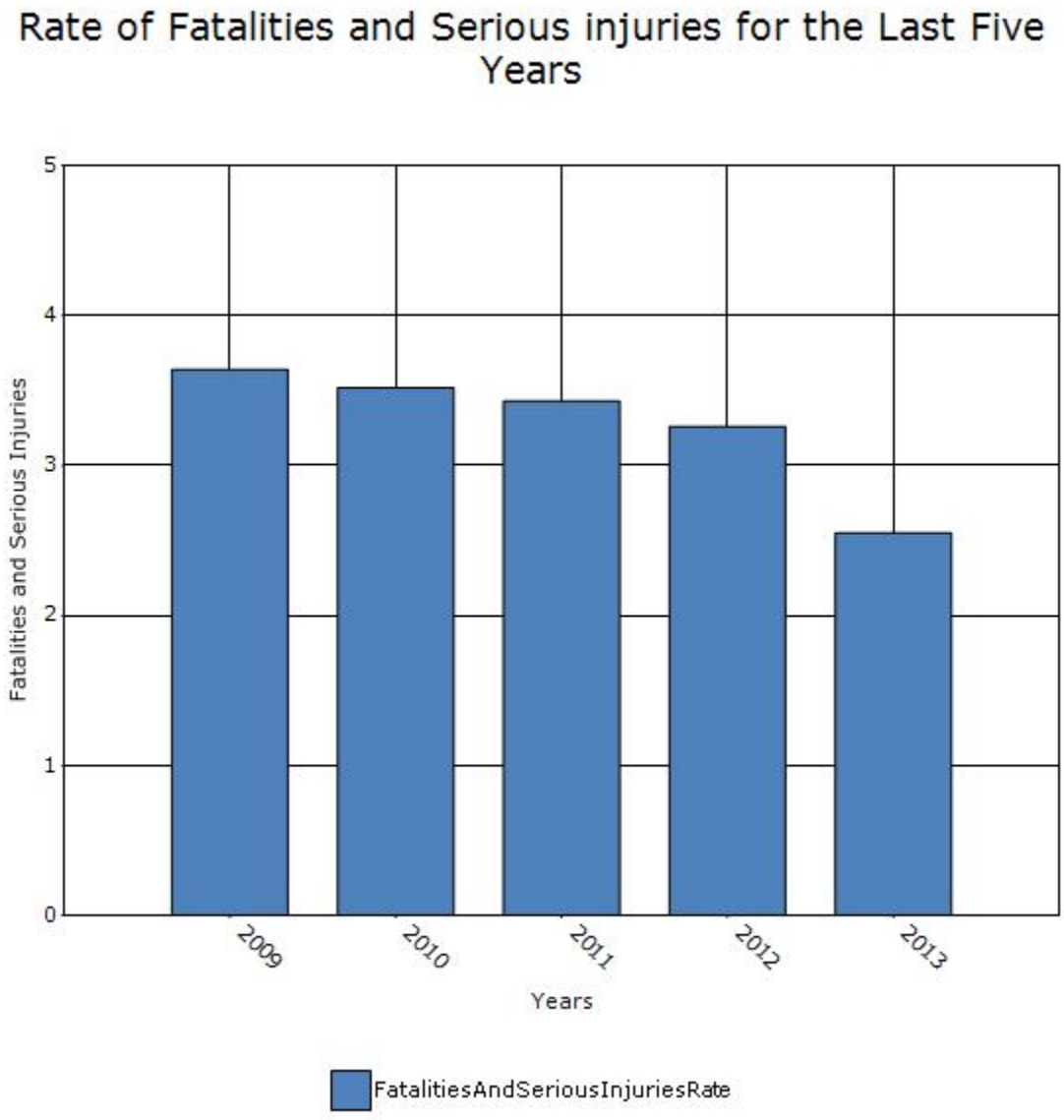
2011 Value = 465/142 + 420/138 + 452/131 +476/133 + 490/129 = 17.15/5 = 3.43

Change = -0.21 use: -0.2 Special rule does not apply to the State of Arizona in FFY14.

2010 Value = 420/138 + 452/131 +476/133 + 490/129 + 477/128 = 17.60/5 = 3.52

2012 Value = 439/148 + 465/142 + 420/138 + 452/131 +476/133 = 16031/5 = 3.26

Change = -0.26 use: -0.3 Special rule does not apply to the State of Arizona in FFY15.



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?

☐ None

☒ Benefit/cost

☐ Policy change

☐ Other:

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

☐ Shift Focus to Fatalities and Serious Injuries

☐ Include Local Roads in Highway Safety Improvement Program

☐ Organizational Changes

☒ None

☐ Other:

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

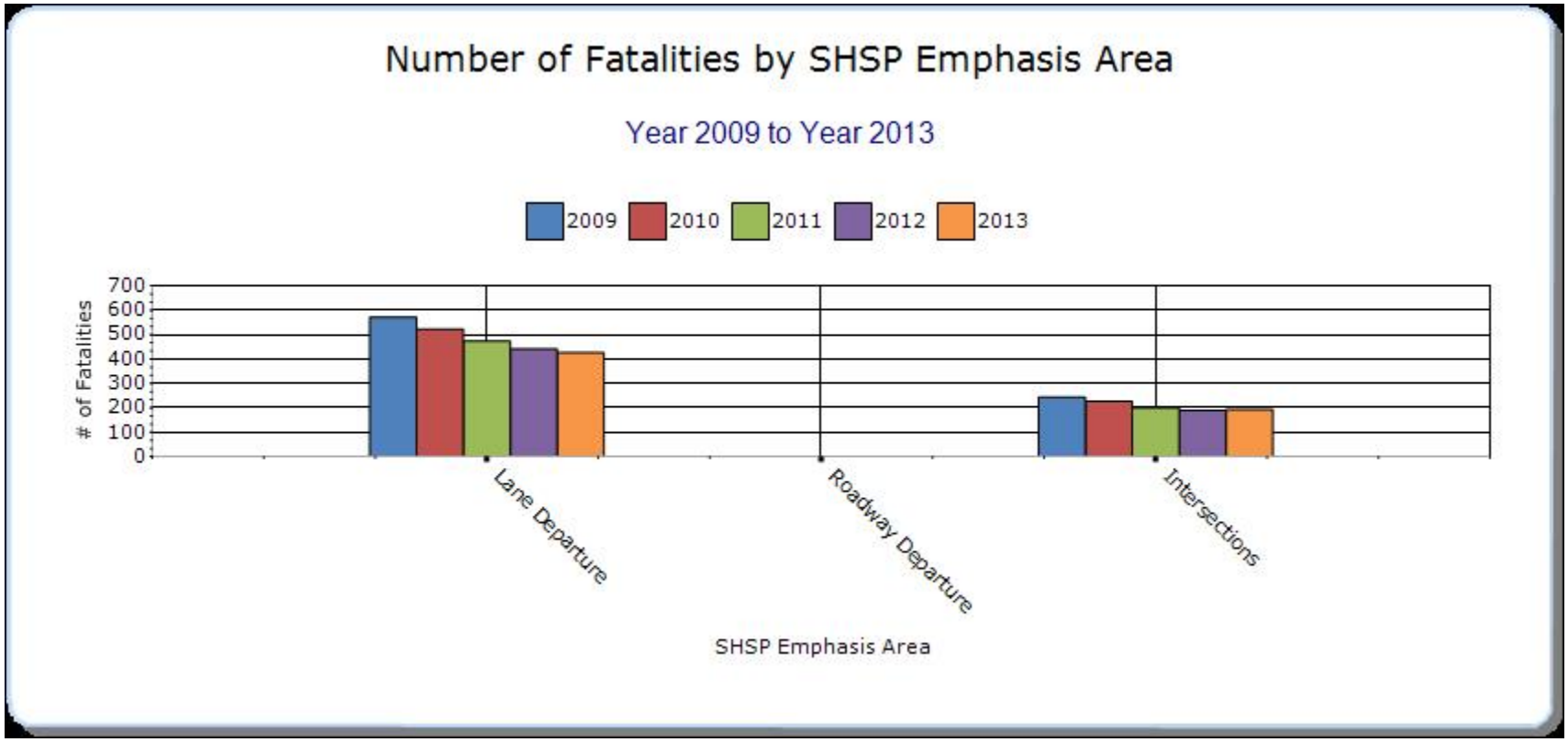
None to report.

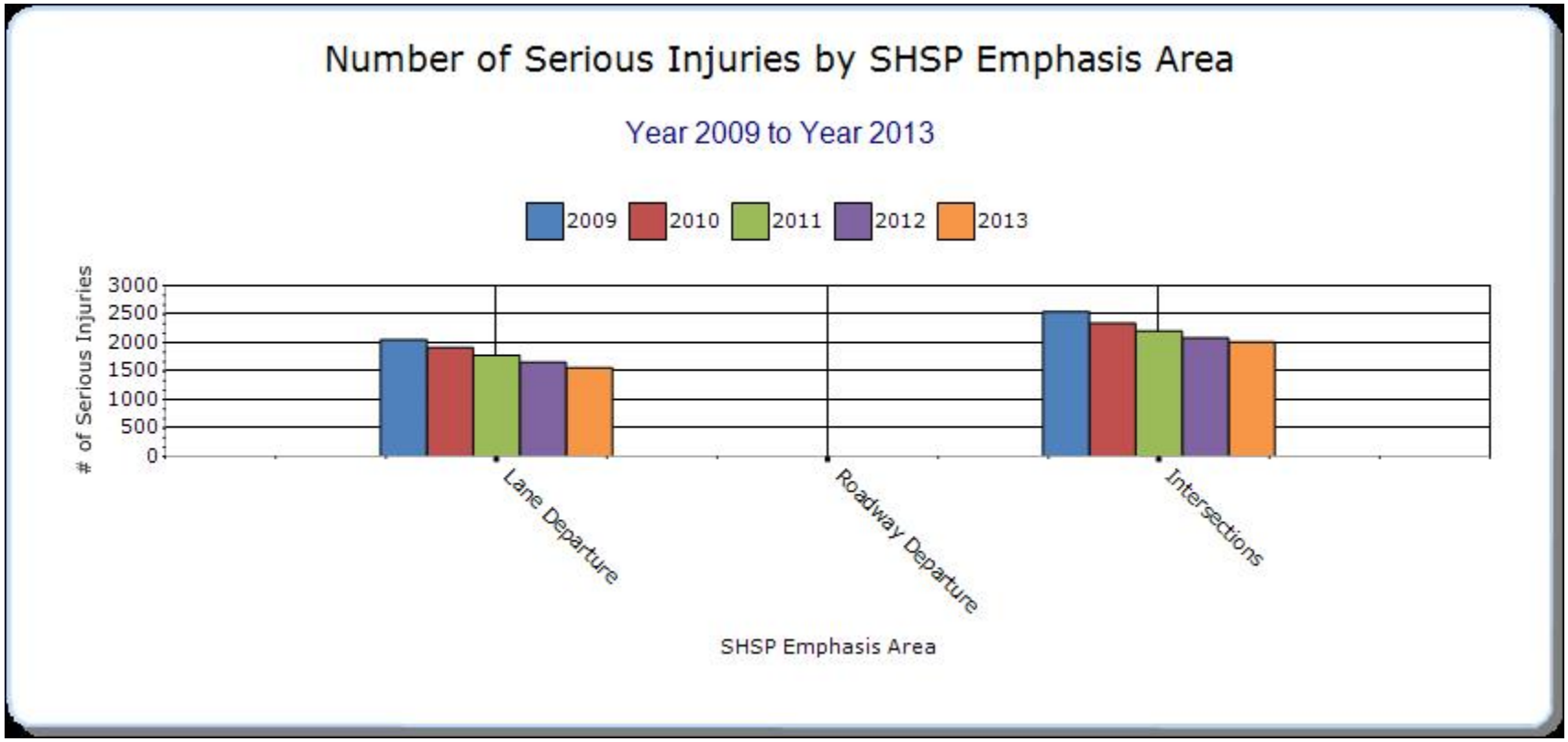
SHSP Emphasis Areas

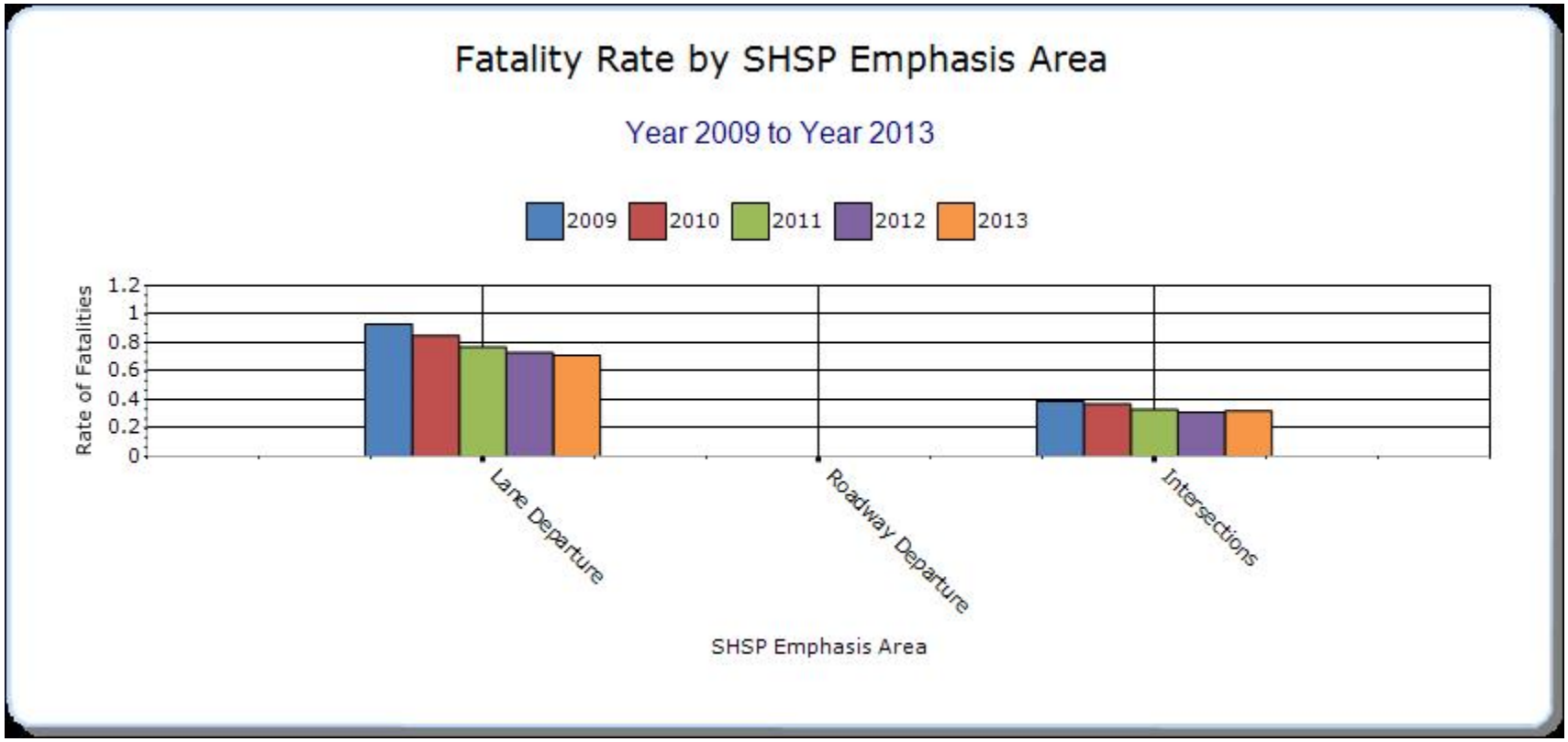
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

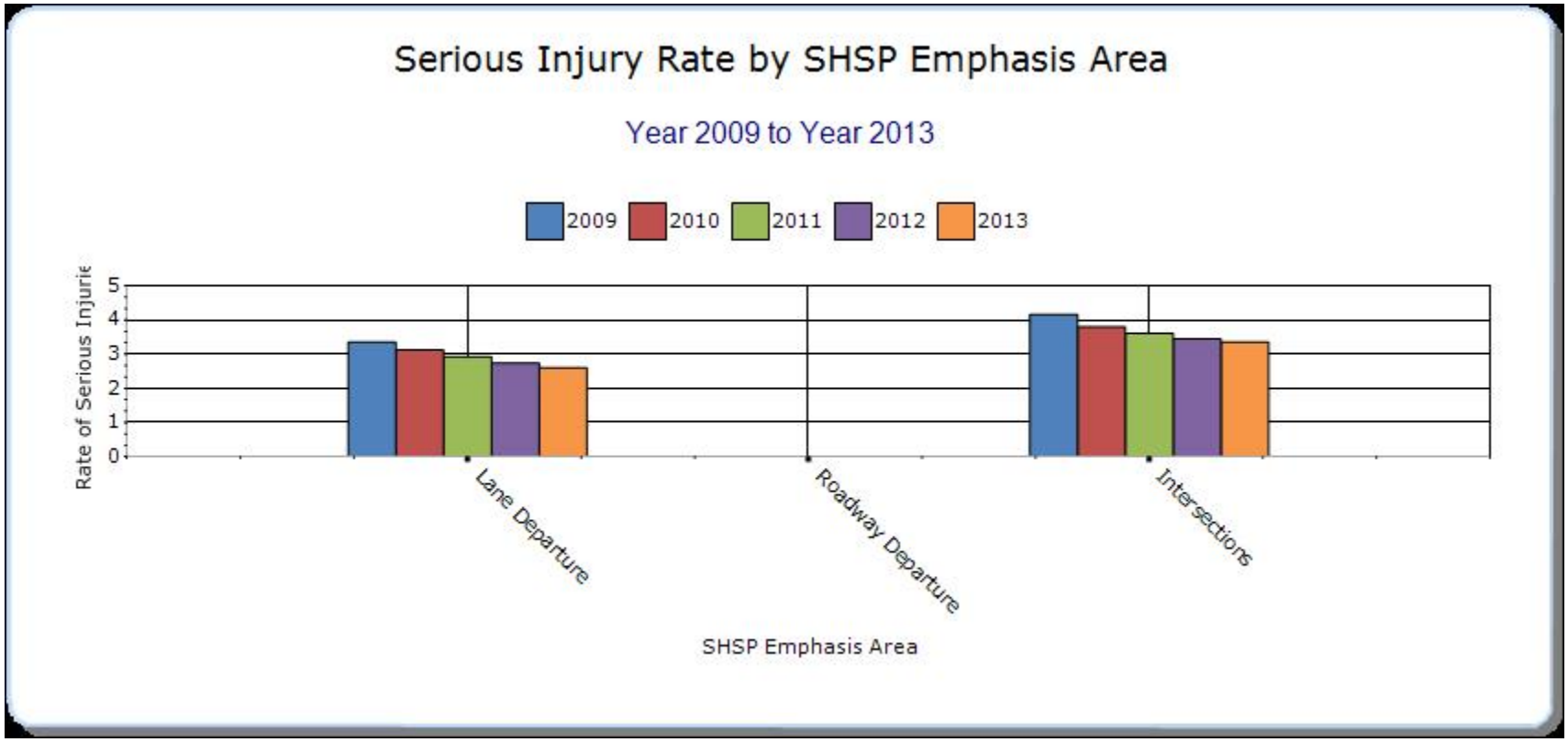
Year - 2013

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
Lane Departure		426	1564	0.71	2.6	0	0	0
Intersections		193	2014	0.32	3.35	0	0	0


Number of Fatalities by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Fatalities
700
600
500
400
300
200
100
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area


Number of Serious Injuries by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Serious Injuries
3000
2500
2000
1500
1000
500
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Fatalities
1.2
1
0.8
0.6
0.4
0.2
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area

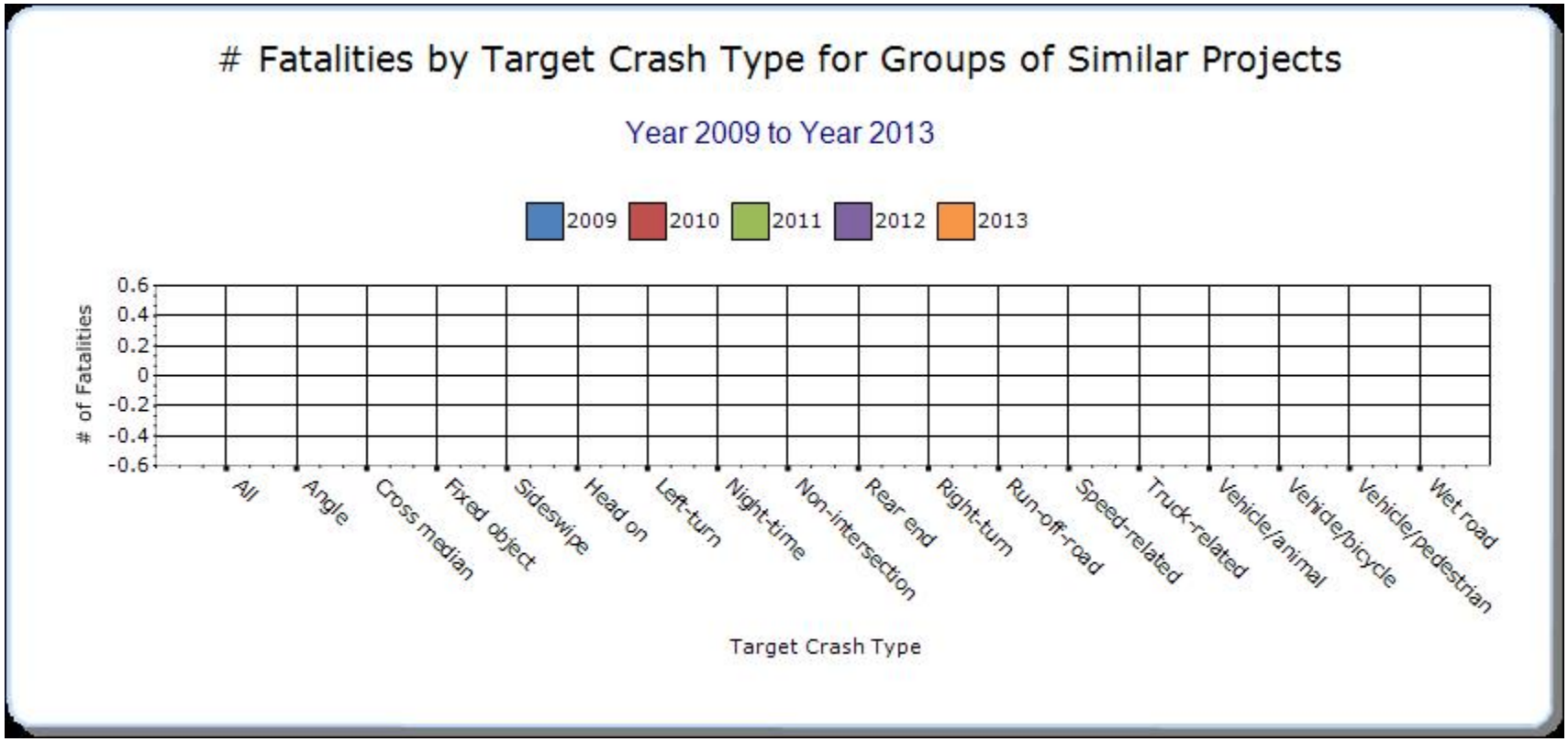

Serious Injury Rate by SHSP Emphasis Area
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Serious Injurie
5
4
3
2
1
0
Lane Departure
Roadway Departure
Intersections
SHSP Emphasis Area

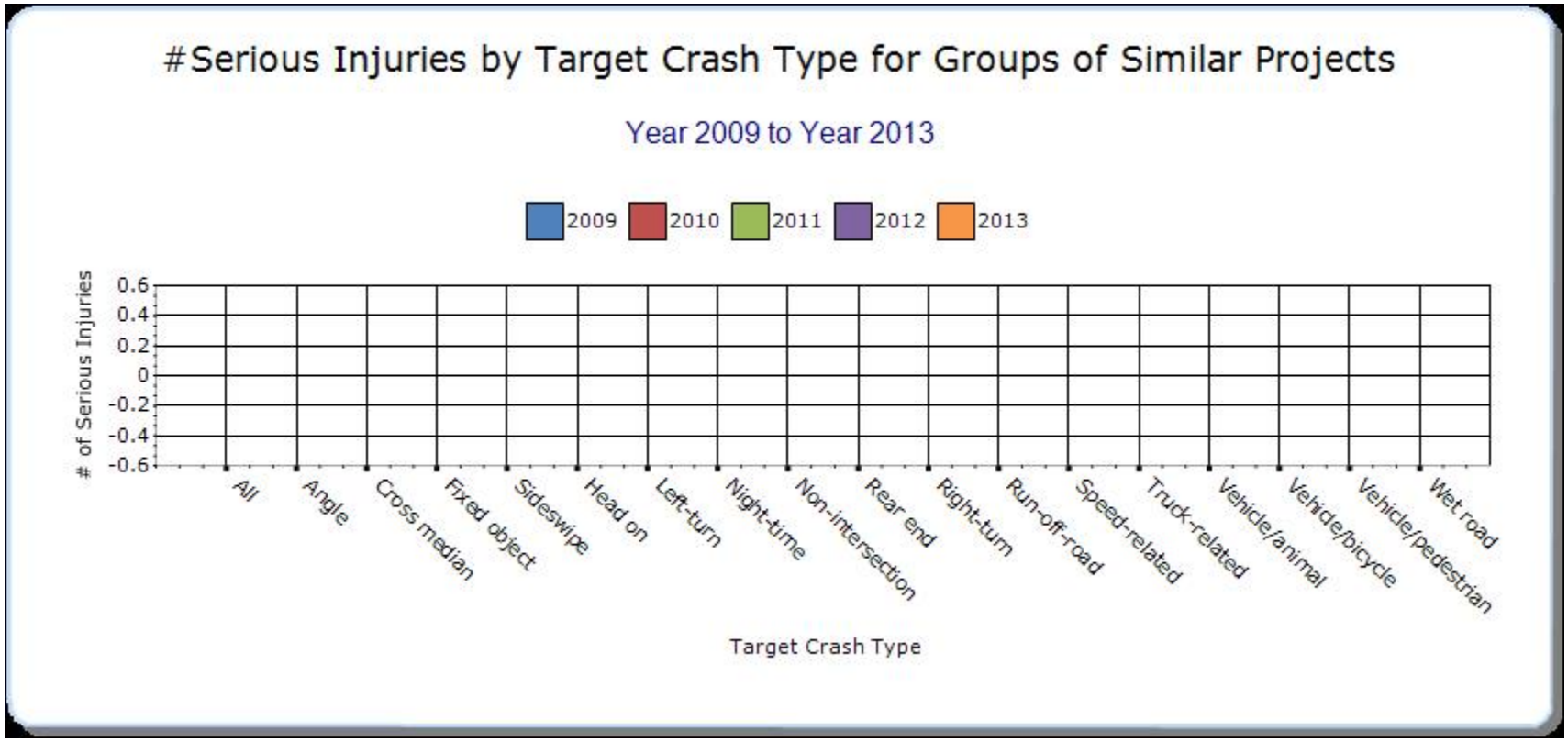
Groups of similar project types

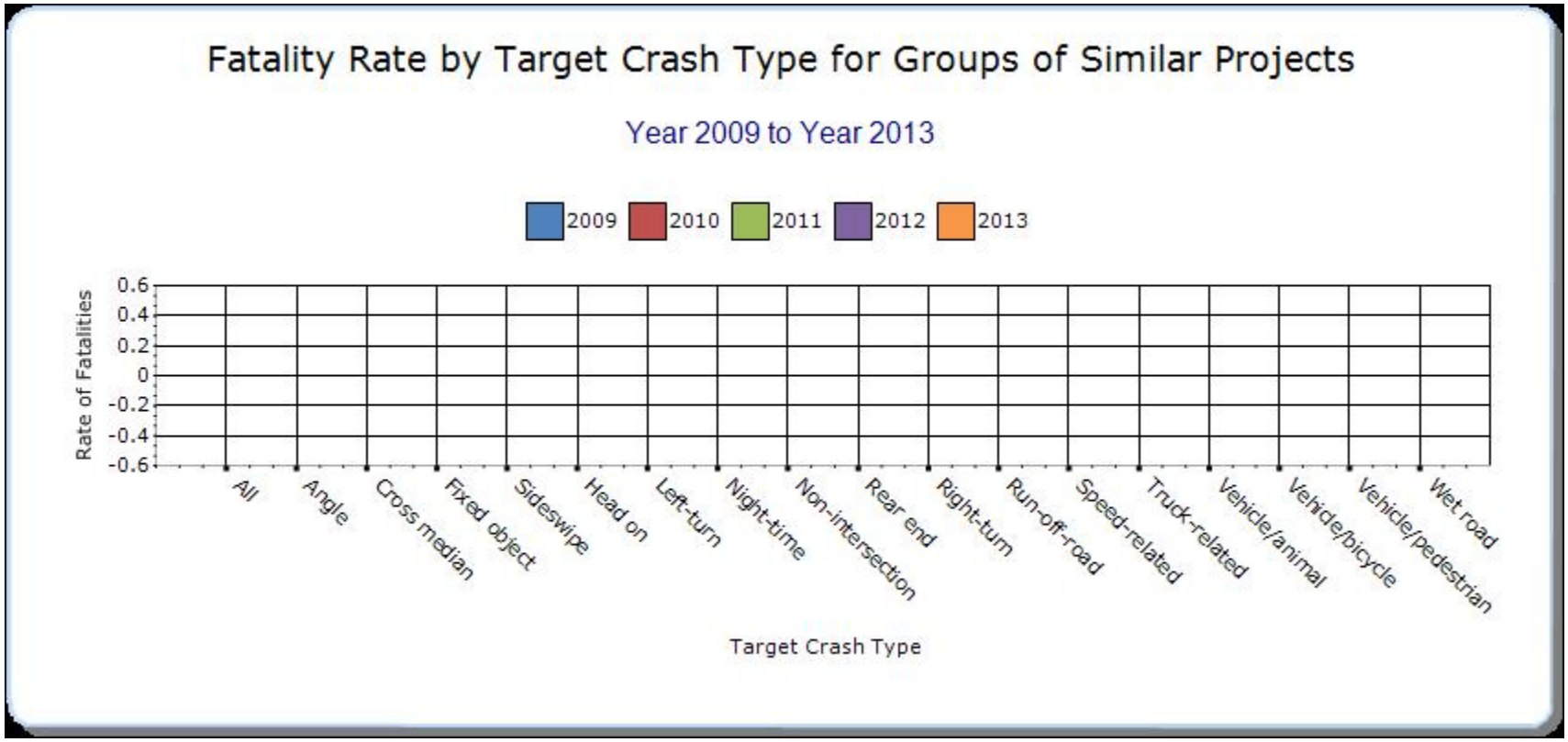
Present the overall effectiveness of groups of similar types of projects.

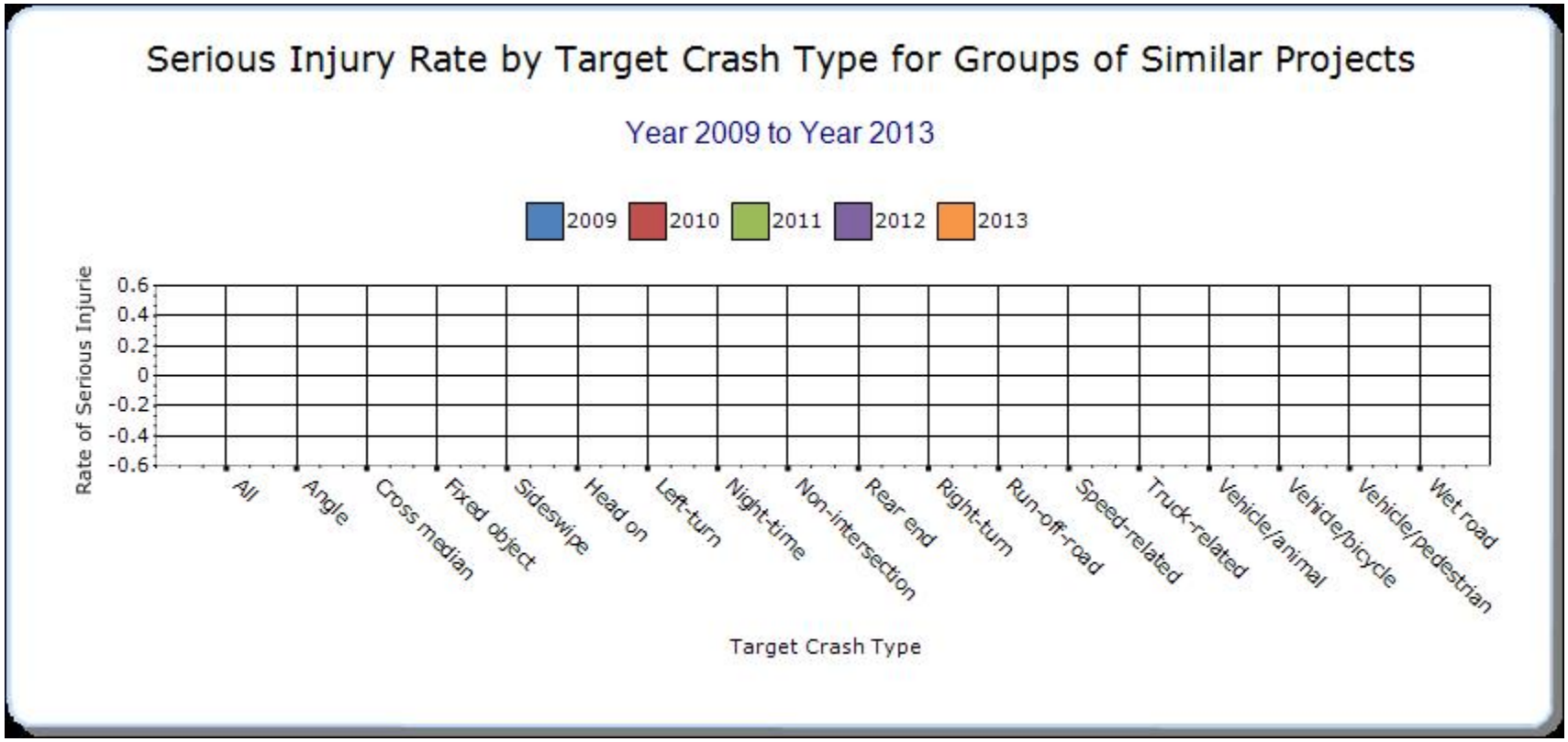
Year - 2013

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
Other-RSA	Data not available.	0	0	0	0	0	0	0


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Fatalities
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
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
Year 2009 to Year 2013
2009
2010
2011
2012
2013
# of Serious Injuries
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
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
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Fatalities
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

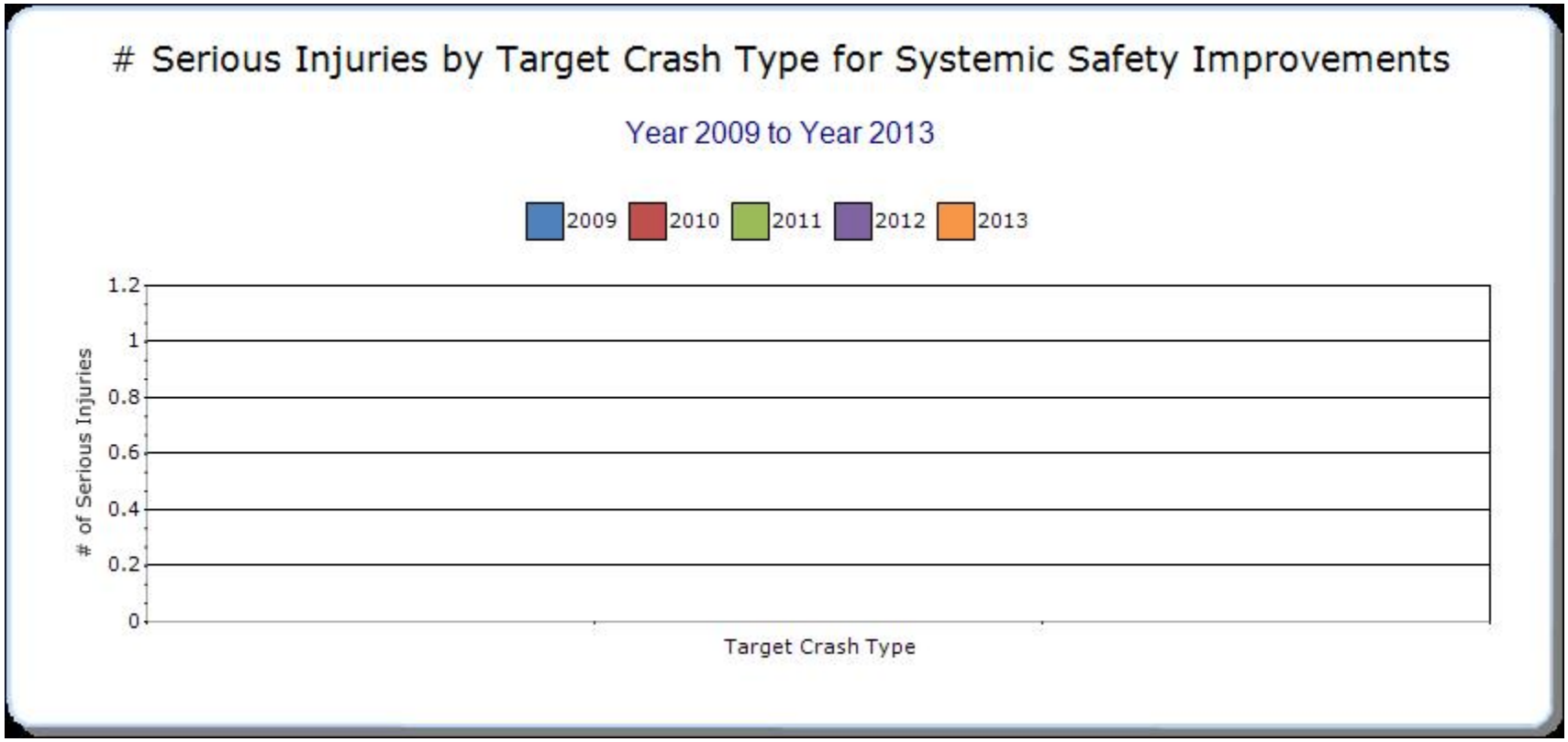

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2009 to Year 2013
2009
2010
2011
2012
2013
Rate of Serious Injurie
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

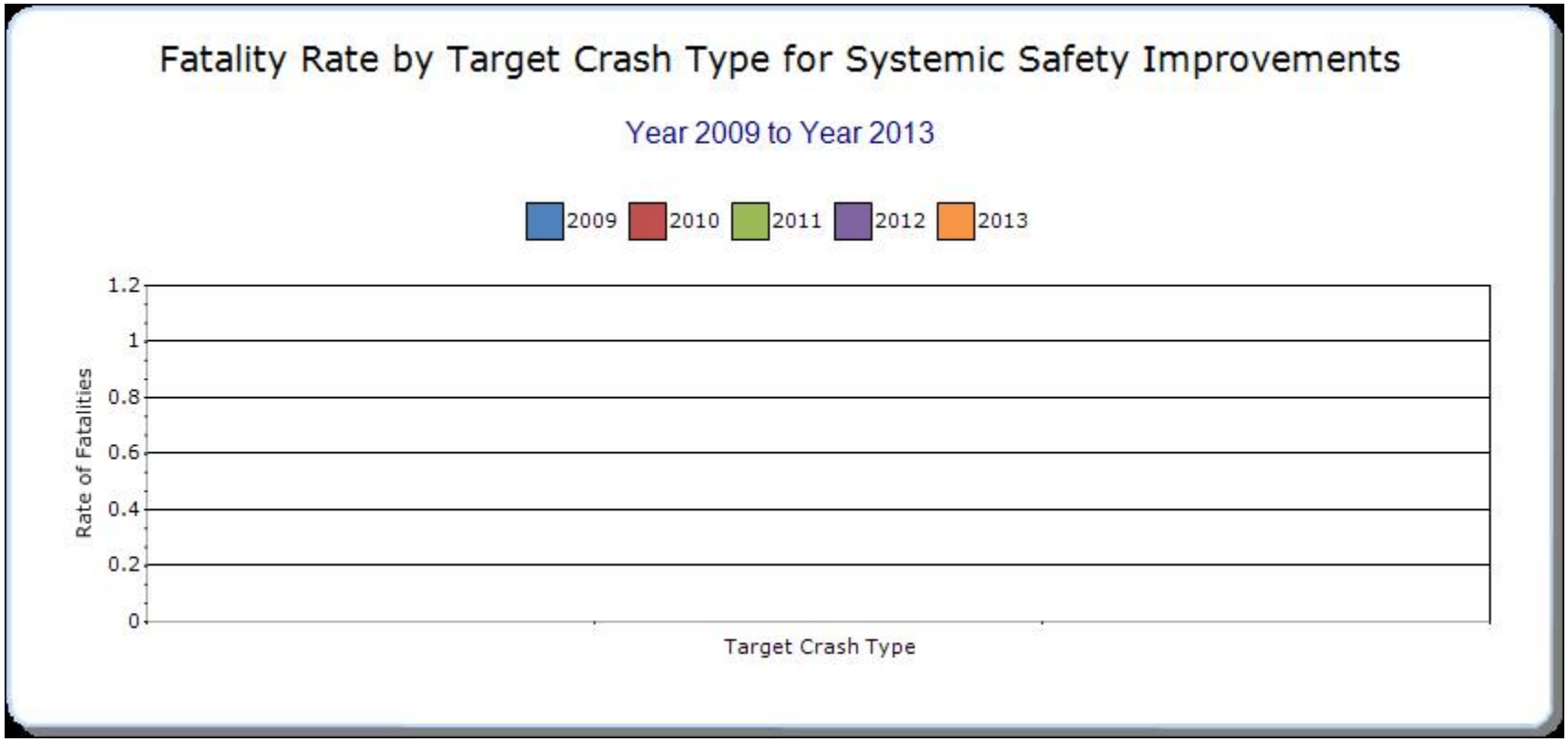
Systemic Treatments

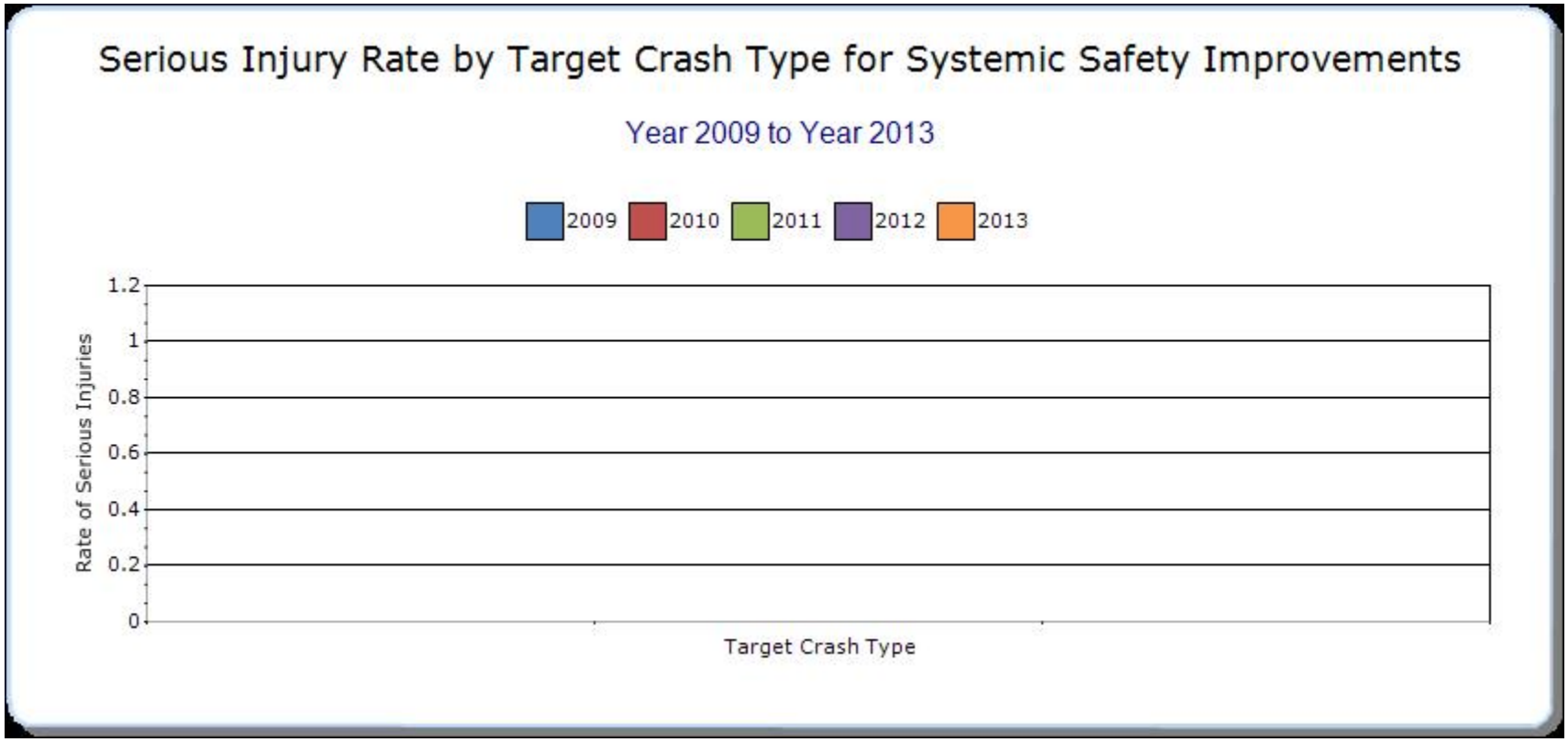
Present the overall effectiveness of systemic treatments.

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


Fatalities by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
# of Fatalities
Target Crash Type


Serious Injuries by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
# of Serious Injuries
Target Crash Type


Fatality Rate by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
Target Crash Type


Serious Injury Rate by Target Crash Type for Systemic Safety Improvements
Year 2009 to Year 2013
2009
2010
2011
2012
2013
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Serious Injuries
Target Crash Type

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

Arizona SHSP is currently being updated and is expected to be published in September 2014. After the release of SHSP, Arizona HSIP Manual will be updated.

Provide project evaluation data for completed projects (optional).

Location	Functional Class	Improvement Category	Improvement Type	Bef-Fatal	Bef-Serious Injury	Bef-Other Injury	Bef-PDO	Bef-Total	Aft-Fatal	Aft-Serious Injury	Aft-Other Injury	Aft-PDO	Aft-Total	Evaluation Results (Benefit/ Cost Ratio)
Data Not Available	None	None	None	0	0	0		0	0	0	0	0	0	0

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.

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.