Highway Safety Improvement Program

Data Driven Decisions

South Carolina
Highway Safety Improvement Program
2013 Annual Report

Prepared by: SC

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 report provides an overview of SCDOT's administration of the Highway Safety Improvement Program (HSIP). SCDOT's HSIP has a primary focus on state-maintained roads since nearly 96 percent of fatal crashes and the vast majority of severe crashes occur on the state system. This report covers funding obligations for the period from October 1, 2012 to July 31, 2013.

Please note that several sections for programs administered under the HSIP were not included in this 2012 report due to the lack of detailed definitions and identification methodologies. We will continue to work with FHWA in expanding future reports as issues with the on-line reporting tool are clarified and resolved.

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.

In South Carolina, the vast majority (~96%) of fatal crashes occur on state-maintained roadways. Due this statistic, our primary focus for safety has been on state-maintained roadways. However, we have recently planned for some intersection improvement projects where a local road intersects with a state-owned road. Additionally, as our crash data is improving in accessibility and completeness, we will incorporate local roads into our safety funding if a viable need is observed.

It is also worth noting that South Carolina maintains the fifth largest highway system in the nation at over 41,000 center-line miles of roadway, despite a land area of roughly 30,000 square miles. Furthermore, 19% of all public roads in the nation are state maintained while South Carolina's public roads encompass 63% of its total roadway miles.

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

☒ Design

☒ Planning

☒ Maintenance

☒ Operations

☐ Governors Highway Safety Office

☐ Other:

Briefly describe coordination with internal partners.

Several partners within SCDOT and consultants are involved thoughout the process of HSIP planning. Many of our safety improvements are designed by our Safety Project group within Traffic Engineering and they are involved with project design or oversight on all projects to ensure proper designs. Our Planning office is consulted during the selection process to determine if any qualifying projects have been identified for improvements through other funding sources such as the Metropolitan Planning Organizations (MPOs) or Council of Governments (COGs). Our Maintenance office is also contacted to ensure that there are no conflicting maintenance activities such as resurfacing or pavement marking contracts that involve overlapping work. Operations are monitored through other Traffic Engineering offices or consultants to ensure that all projects include consideration of proper traffic operations by conducting traffic volume counts, Syncho analysis, signal operations, etc.

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 changes have been made since the last reporting period

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

Highway Safety Improvement Program Process

Every state is required by the federal government to administer a Highway Safety Improvement Program (HSIP). Part 924 of Title 23 of the Code of Federal Regulations (CFR) states, in part:

924.5 Policy. *"Each state shall develop and implement, on a continuing basis, a highway safety improvement program which has the overall objective of reducing the number and severity of accidents and decreasing the potential for accidents on all highways."*

924.7 Program Structure. *"The highway safety improvement program in each state shall consist of components for planning, implementation, and evaluation of safety programs and projects."*

The purpose of the South Carolina HSIP is to establish guidelines for the effective use of available funds, to reduce the number and severity of crashes and to decrease the potential for crashes on highways in the state.

The program consists of the following three components: planning, implementation, and evaluation.

1. PLANNING

a. Data Management

In order to locate hazardous locations the following information is essential:

- Crash data – Crash reports are provided by ***DPS***.
- Traffic data – Traffic volumes are provided by the ***Traffic Engineering***.
- Roadway Data – Road characteristics are provided by the ***Traffic Engineering***.

b. Identify Hazardous Locations

Using the information listed above, potential locations are identified by:

- Recommendations from SCDOT and FHWA personnel.
- Requests from governmental units other than SCDOT and FHWA.
- Requests from citizens.
- Ongoing research of all fatal crash reports received from DPS.
- Ongoing research of the HSIP database.

The HSIP database has been established to identify, prioritize, and provide guidance for selecting potential projects. The information gathered for a location is analyzed using the following methods:

- Crash Rate – Equates frequency of crashes to traffic volumes (and length of roadway if section). A typical crash rate would be expressed in # of crashes per million vehicles entering (if intersection) or per one hundred million vehicle miles of travel (if section).

Severity Rate – A weighted calculation for determining the severity of the crashes. It is based on the EPDO (Equivalent Property Damage Only) method from studies performed by the

National Safety Council and the Traffic Institute at Northwestern University. The severity indices used are listed below: (from the Traffic Institute at Northwestern University)

Fatality = 12

Injury = 3

Property Damage Only = 1

- Rate Quality

This method entails the calculation of the crash rate at each location and a statistical test to determine if that rate is significantly higher than crash rates for other locations with similar characteristics.

The critical rate is compared to the actual crash rate for each location. If the actual crash rate exceeds the critical rate, then the location may be considered for improvement.

- Number-Rate

Combines crash frequency and crash rate methods by first ranking by the number of crashes. Establishes a frequency threshold and then re-ranks the locations. Based on a crash rate threshold, locations with lower crash rates are eliminated.

c. Conduct Engineering Studies

Once a potential project location has been identified, the following steps are taken to determine if geometric improvements can be implemented that will reduce the volume and severity of the crashes reported at the location.

- Analyze Project Location

Crash reports are obtained and analyzed for locations selected for detailed review. Results from analyses along with engineering judgment are used to determine if further investigation is needed along with site review.

- Develop Candidate Countermeasures and Project Proposals

Site reviews are conducted to determine characteristics of locations relative to types of crashes occurring. Improvements are recommended to address patterns in crashes.

- Establish Project Priorities

Estimate costs for recommended improvements at each site along with expected reduction in crashes for these improvements. Summarize estimated costs and benefits for improvements and determine the most cost effective improvement alternative for a location using the ***Net Benefit Method*** along with engineering judgment.

The ***net benefit method*** compares the estimated annual costs of implementing the selected countermeasure to the expected annual benefits. The expected annual benefit is calculated using the most current "***comprehensive costs***" of motor vehicle traffic crashes and the estimated crash reduction percentage expected as a result of implementing the selected countermeasure.

Comprehensive costs are a measure of motor vehicle accident costs that include the effects of injury on people's entire lives. This is the most useful measure of accident cost since it includes all cost components and places a dollar value on each one. Comprehensive life values are estimated by examining risk reduction costs from which the market value of safety is inferred. The 11 components of the comprehensive cost are: property damage, lost earnings, lost household production, medical costs, emergency services, travel delay, vocational rehabilitation, workplace costs, administrative, legal, pain, and lost quality of life.

2. IMPLEMENTATION

Given that the overall charge of the HSIP program is to reduce the number and severity of crashes, it is imperative that the implementation phase be carried out in a timely manner. Once the project has been approved for funding, it is necessary to design and schedule the project to implement the improvements. All HSIP Projects are managed by one of the following offices:

- Preconstruction
- Traffic Engineering
- Consultant

Given the appropriate conditions, *a Participation Agreement* may be arranged with other governmental entities. A participation agreement is a contractual partnership between the SCDOT and one or more other governmental entities where funding is combined to complete a project. The agreement includes the specifying of the roles, responsibilities, and financial obligations of each participant.

3. EVALUATION

To Determine the Effect of Highway Safety Improvements

Before and After Studies are conducted on all HSIP projects to evaluate the effectiveness of the overall program by observed changes in crash number, rate and severity resulting from program implementation. The HSIP office conducts studies three years after final inspection of a project. The studies include:

- Photographs of existing conditions at the site prior to improvements.
- After a period of no less than 3 years after the completion of the project, crash data and the most recent traffic volumes are collected for the location.
- The data collected *before* implementing safety improvements is then compared with the data collected *after* the improvements have been completed.
- The information described above is used to calculate the resulting crash rate reduction factor for the improved site. The total cost of the project along with the reduction factor is used to conduct a *Benefit Cost Analysis* to determine the overall effectiveness of the project.
- Photographs of the improved conditions are recorded along with all *Benefit Cost Analysis.* This information is used to help with the selection of future projects.

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-Safety Program		

Program: **Other-Safety Program**

Date of Program Methodology: **1/1/2013**

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

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	3
☒ Available funding	2
☐ Incremental B/C	
☒ Ranking based on net benefit	3

☒Cost Effectiveness 1

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

30

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-Nothing has changed since the last reporting period

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

Projects selected for the HSIP have historically been based on one of the following analysis methods:

1. Crash Rate Method
2. Rate Quality Control Method
3. Crash Severity Method
4. Number Rate Method

In addition to these methods, the Highway Safety Manual provides additional statistical methods and safety performance functions that are also being incorporated in the selection process.

All of the HSIP projects are selected under the guise of the SCDOT Strategic Highway Safety Plan (SHSP) where “Safety” is identified as a top priority for the agency. The Plan describes one of

the goals of SCDOT as “reducing traffic fatalities by twenty-five people per year, and reduce traffic crashes by 3 percent each year”.

HSIP projects are developed in collaboration with the following emphasis areas identified in the SHSP which are:

Serious Crash Types: Focus on Prevention of Run-off-Road Crashes, Injuries, and Fatalities

High Risk Drivers: Focus on Prevention of Aggressive Driving Crashes, Injuries and Fatalities

Special Vehicles: Focus on Commercial Vehicle Safety/Sharing the Road with Large Trucks

Vulnerable Roadway Users: Focus on Improving Safety of Pedestrians, Bicyclists, and Motorcyclists

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)	47000000	85 %	32553445	79 %
HRRRP (SAFETEA-LU)	1302093	2 %	1302093	3 %
HRRR Special Rule	0	0 %	0	0 %
Penalty Transfer - Section 154				
Penalty Transfer – Section 164				
Incentive Grants - Section 163	1423928	3 %	1423928	3 %
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)	2446519	4 %	2446519	6 %
State and Local Funds	3317449	6 %	3317449	8 %
Totals	55489989	100%	41043434	100%

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

$0.00

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

$0.00

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?

$0.00

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

The obligations shown in the above chart covers a period from October 1, 2012 - July 31, 2013. SCDOT currently has advance construction funds on the books to be obligated in August and September on various safety projects to utilize remaining HSIP allocations.

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

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
2012-DISTRICT 3 Rumble Strips	Shoulder treatments Shoulder treatments - other	135.83 Miles	1367400.8	1367400.8	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
2013-DISTRICT 1 Rumble Strips	Shoulder treatments Shoulder treatments - other	77.36 Miles	5000	5000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
2013-DISTRICT 2 Rumble Strips	Shoulder treatments Shoulder treatments - other	150.76 Miles	5000	5000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
2013-DISTRICT 3 Rumble Strips	Shoulder treatments Shoulder treatments -	181.32 Miles	5000	5000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	

	other										
2013-DISTRICT 4 Rumble Strips	Shoulder treatments Shoulder treatments - other	206.64 Miles	5000	5000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
2013-DISTRICT 5 Rumble Strips	Shoulder treatments Shoulder treatments - other	177.74 Miles	5000	5000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
2013-DISTRICT 6 Rumble Strips	Shoulder treatments Shoulder treatments - other	130.14 Miles	5000	5000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
2013-DISTRICT 7 Rumble Strips	Shoulder treatments Shoulder treatments - other	188.51 Miles	5000	5000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
DISTRICT 4 LCSI Signal Upgrades	Intersection traffic control Intersection traffic	53 Numbers	618315.6	618315.6	HSIP	Varies Depending on Route	0	0	State Highway Agency	Improving the design and operation of highway	

	control - other									intersections	
DISTRICT 5 LCSI Signal Upgrades	Intersection traffic control Intersection traffic control - other	148 Numbers	690792	690792	HSIP	Varies Depending on Route	0	0	State Highway Agency	Improving the design and operation of highway intersections	
District 5 Pavement Markings	Shoulder treatments Shoulder treatments - other	84.35 Miles	0	185.94	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
DISTRICT 5, 6, 7 Profile Thermoplastic Pavement Markings	Shoulder treatments Shoulder treatments - other	76.69 Miles	1075065.46	1075065.46	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
DISTRICT 6 CHARLESTON COUNTY LCSI Signal Upgrades	Intersection traffic control Intersection traffic control - other	8 Numbers	50000	50000	HSIP	Varies Depending on Route	0	0	State Highway Agency	Improving the design and operation of highway intersections	

DISTRICT 6 LCSI Signal Upgrades	Intersection traffic control Intersection traffic control - other	221 Numbers	1362967.08	1362967.08	HSIP	Varies Depending on Route	0	0	State Highway Agency	Improving the design and operation of highway intersections	
DISTRICT 7 LCSI Signal Upgrades	Intersection traffic control Intersection traffic control - other	23 Numbers	412861.8	412861.8	HSIP	Varies Depending on Route	0	0	State Highway Agency	Improving the design and operation of highway intersections	
I-26 Exit 103 Left Turn Lanes	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	13445.52	14939.44	HSIP	Urban Principal Arterial - Interstate	18369	0	State Highway Agency	Improving the design and operation of highway intersections	
I-26 between MP 75.5-76.5 & MP 81.5-83.5	Roadway Roadway - other	3 Miles	477000	530000	HSIP	Rural Principal Arterial - Other	0	0	State Highway Agency	Minimizing the consequences of leaving the road	

I-26 FROM MP 168 TO 198.18	Roadside Removal of roadside objects (trees, poles, etc.)	30.18 Miles	54000	60000	HSIP	Rural Principal Arterial - Other	0	0	State Highway Agency	Minimizing the consequences of leaving the road	
I-85 MP 88.6 - MP 89.5	Roadway Superelevation / cross slope	0.9 Miles	2132038.26	2368931.41	HSIP	Urban Principal Arterial - Interstate	53800	0	State Highway Agency	Minimizing the consequences of leaving the road	
I-85 NB RAMP @ US 178	Intersection geometry Intersection geometry - other	1 Numbers	33797	37553	HSIP	Urban Principal Arterial - Interstate	28675	0	State Highway Agency	Improving the design and operation of highway intersections	
I-95 from Mp 50.5 to MP 53	Roadway Roadway - other	2.5 Miles	2235.53	2483.89	HSIP	Rural Principal Arterial - Other	37500	0	State Highway Agency	Minimizing the consequences of leaving the road	
INTERSECTION OF SC 24 WITH SC 187	Intersection geometry Intersection geometry -	1 Numbers	1182278	1313642	HSIP	Urban Principal Arterial -	13250	0	State Highway Agency	Improving the design and operation of	

	other					Other				highway intersections	
Low Cost Safety Improvements Statewide	Intersection traffic control Intersection traffic control - other	1999 Numbers	2117159.1	2117159.1	HSIP	Varies Depending on Route	0	0	State Highway Agency	Improving the design and operation of highway intersections	
Resurfacing Throughout Berkeley County (S-16)	Shoulder treatments Shoulder treatments - other	4 Miles	450000	2537092.4	HSIP	Rural Minor Arterial	0	0	State Highway Agency	Keeping vehicles in the roadway	
S-104 CHALK BED ROAD FROM S-69 ERGLE STREET TO US 1	Roadside Roadside grading	0.5 Miles	65700	114742.49	HSIP	Rural Minor Collector	2100	0	State Highway Agency	Minimizing the consequences of leaving the road	
S-1041	Roadway Roadway - other	1.25 Miles	964299.93	1121444.36	HSIP	Rural Major Collector	3400	0	State Highway Agency	Minimizing the consequences of leaving the road	

S-1203	Roadway Roadway - other	0.5 Miles	271517.13	301685.7	HSIP	Urban Local Road or Street	4400	0	State Highway Agency	Minimizing the consequences of leaving the road	
S-1258 with S-535	Intersection geometry Intersection geometry - other	1 Numbers	25544	28382	HSIP	Urban Major Collector	14425	0	State Highway Agency	Improving the design and operation of highway intersections	
S-15 with S-264	Intersection traffic control Intersection traffic control - other	1 Numbers	477166	530184	HSIP	Urban Minor Arterial	10100	0	State Highway Agency	Improving the design and operation of highway intersections	
S-15 with S-556	Intersection traffic control Intersection traffic control - other	1 Numbers	54787	60874	HSIP	Urban Minor Arterial	11900	0	State Highway Agency	Improving the design and operation of highway intersections	

S-166 (Brushy Creek) with S-347 (Hudson Rd)	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	193500	215000	HSIP	Urban Minor Arterial	15150	0	State Highway Agency	Improving the design and operation of highway intersections	
S-166 (W. Lee Rd) with S-167 (Waddell Rd)	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	95692	106324	HSIP	Urban Major Collector	6700	0	State Highway Agency	Improving the design and operation of highway intersections	
S-1912 (WHITE HORSE ROAD EXT.) @S-50	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	61020	67800	HSIP	Urban Major Collector	9500	0	State Highway Agency	Improving the design and operation of highway intersections	
S-22 @ S-58	Intersection geometry Intersection geometry - other	1 Numbers	180000	200000	HSIP	Rural Minor Arterial	12350	0	State Highway Agency	Improving the design and operation of highway intersection	

										s	
S-24 FROM S-13 TO US 52	Roadway Roadway - other	2.25 Miles	459489.66	510544.07	HRRR	Rural Major Collector	600	0	State Highway Agency	Minimizing the consequences of leaving the road	
S-26 @ S-358	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	0	8763	HSIP	Urban Minor Arterial	10700	0	State Highway Agency	Improving the design and operation of highway intersections	
S-28 (Camp) with S-95	Intersection traffic control Intersection traffic control - other	1 Numbers	37910.13	42122.37	HSIP	Urban Major Collector	14350	0	State Highway Agency	Improving the design and operation of highway intersections	
S-28 @ S-53	Intersection geometry Intersection geometry - other	1 Numbers	25000	25000	HSIP	Urban Major Collector	9850	0	State Highway Agency	Improving the design and operation of highway intersection	

										s	
S-30 (Mineral Springs Rd) with S-106	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	22500	25000	HSIP	Urban Minor Arterial	10200	0	State Highway Agency	Improving the design and operation of highway intersections	
S-313 FROM MP 2.5 TO 3.1	Roadway Roadway - other	0.6 Miles	460074.65	511194.07	HSIP	Urban Minor Arterial	4800	0	State Highway Agency	Minimizing the consequences of leaving the road	
S-34 @ S-1910 & S-1848	Intersection traffic control Intersection traffic control - other	1 Numbers	669302.61	743669.56	HSIP	Urban Minor Arterial	5613	0	State Highway Agency	Improving the design and operation of highway intersections	
S-347 FROM MP 0.3 TO MP 1.0	Roadway Roadway - other	0.7 Miles	291882.55	401065.48	HSIP	Urban Major Collector	14400	0	State Highway Agency	Minimizing the consequences of leaving the road	

S-354 FROM SC34/151 TO S-49	Roadway Roadway - other	5.81 Miles	753169.97	836855.51	HRRR	Rural Major Collector	2400	0	State Highway Agency	Minimizing the consequences of leaving the road	
S-36 CAMP CREEK ROAD @ S-246/S-51	Intersection geometry Intersection geometry - other	1 Numbers	707760.23	786400.25	HSIP	Rural Major Collector	2700	0	State Highway Agency	Improving the design and operation of highway intersections	
S-362 FROM .47 MILES EAST OF S-39 TO .67 MILES EAST OF S-39	Roadway Roadway - other	0.2 Miles	42605.08	47338.98	HRRR	Rural Major Collector	3000	0	State Highway Agency	Minimizing the consequences of leaving the road	
S-40 (Joe Frazier) with S-263	Intersection geometry Intersection geometry - other	1 Numbers	10394.79	10394.79	HSIP	Rural Minor Collector	4780	0	State Highway Agency	Improving the design and operation of highway intersections	
S-42 with S-64	Intersection geometry Intersection	1 Numbe	27319.62	30355.11	HSIP	Urban Major	5998	0	State Highway	Improving the design and	

	geometry - other	rs				Collector			Agency	operation of highway intersections	
S-45 with S-901	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	231923.07	447132.31	HSIP	Urban Minor Arterial	11000	0	State Highway Agency	Improving the design and operation of highway intersections	
S-49 (Atlas Rd) with S-50 (Greenlawn Dr)	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	78923.07	87692.31	HSIP	Urban Minor Arterial	10900	0	State Highway Agency	Improving the design and operation of highway intersections	
S-51 (Rifle Range) with S-504 (Hamlin)	Intersection geometry Intersection geometry - other	1 Numbers	237855.5	264283.89	HSIP	Rural Major Collector	10600	0	State Highway Agency	Improving the design and operation of highway intersections	
S-529 AND S-	Intersection geometry	1 Numbe	15962	17735.56	HSIP	Rural Principal	1472	0	State Highway	Improving the design	

1216	Auxiliary lanes - add left-turn lane	rs				Arterial - Other	5		Agency	and operation of highway intersection s	
S-55	Roadway Roadway - other	0.86 Miles	26128.95	74935.35	HRRR	Rural Major Collector	600	0	State Highway Agency	Minimizing the consequenc es of leaving the road	
S-674 (Piney Grove Rd) with S-1280 (Piney Woods Rd)	Intersection geometry Intersection geometry - other	1 Numbe rs	330923.0 8	367692.3 1	HSIP	Urban Minor Arterial	8475	0	State Highway Agency	Improving the design and operation of highway intersection s	
S-76 (Old Marion) with S-282 (E. Jackson)	Intersection geometry Intersection geometrics - modify skew angle	1 Numbe rs	505496	561662	HSIP	Urban Major Collector	5157	0	State Highway Agency	Improving the design and operation of highway intersection s	
S-77 (Two Notch Rd) with S-278	Intersection traffic control	1 Numbe	780923.0 7	867692.3 1	HSIP	Rural Minor Arterial	7300	0	State Highway	Improving the design and	

(Calks Ferry Rd)	Intersection traffic control - other	rs							Agency	operation of highway intersection s	
S-77 (Two Notch) with S-60 (Wire Road)	Intersection geometry Intersection geometrics - modify skew angle	1 Numbe rs	1032009	1146676	HSIP	Rural Major Collector	4200	0	State Highway Agency	Improving the design and operation of highway intersection s	
S-81 FROM US 76 TO S-481 (BETH EDEN ROAD)	Roadway signs and traffic control Roadway signs and traffic control - other	3.5 Miles	20700	23000	HRRR	Rural Local Road or Street	200	0	State Highway Agency	Minimizing the consequenc es of leaving the road	
S-83 (Hard Scrabble Rd) with S-1050 (Lee Rd)	Intersection geometry Auxiliary lanes - add right-turn lane	1 Numbe rs	141923.0 7	157692.3 1	HSIP	Urban Minor Arterial	2730 0	0	State Highway Agency	Improving the design and operation of highway intersection s	

S-86 @ S-164 & S-729	Intersection geometry Intersection geometry - other	1 Numbers	15155.2	16839.12	HSIP	Rural Major Collector	2375	0	State Highway Agency	Improving the design and operation of highway intersections	
S-87 MORMON CHURCH ROAD @ S-488	Intersection geometry Intersection geometry - other	1 Numbers	22500	25000	HSIP	Rural Minor Collector	6825	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 101 @ S-135	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	180000	200000	HSIP	Rural Major Collector	7200	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 11 with S-135 (Critter Rd)	Intersection traffic control Intersection traffic control -	1 Numbers	65282.76	72536.41	HSIP	Rural Minor Arterial	8000	0	State Highway Agency	Improving the design and operation of highway intersection	

	other									s	
SC 116 (Laurel Bay) with S-390	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	16740.5	18600.56	HSIP	Rural Major Collector	7860	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 116 (Laurel Bay) with S-86	Intersection geometry Intersection geometrics - realignment to increase cross street offset	1 Numbers	0.09	0.1	HSIP	Rural Major Collector	7230	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 118 (Robert M Bell Pkwy) with S-895 (Gregg Hwy)	Intersection traffic control Intersection traffic control - other	1 Numbers	492923.07	547692.31	HSIP	Urban Minor Arterial	11100	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 120 (Pinewood Rd) with S-251 (Starks	Intersection geometry Auxiliary lanes - add	1 Numbers	366923.07	407692.31	HSIP	Rural Minor Arterial	3935	0	State Highway Agency	Improving the design and operation of	

Ferry Rd)	left-turn lane									highway intersections	
SC 120 @ S-528	Intersection geometry Intersection geometry - other	1 Numbers	45000	50000	HSIP	Rural Minor Arterial	9900	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 146 @ SC 417	Intersection geometry Intersection geometry - other	1 Numbers	180000	200000	HSIP	Rural Minor Arterial	3525	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 146 @ SC 417	Intersection geometry Intersection geometry - other	1 Numbers	180000	200000	HSIP	Rural Minor Arterial	19500	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 151 BUSINESS @	Intersection geometry Intersection	1 Numbe	25000	25000	HSIP	Rural Minor Arterial	14500	0	State Highway	Improving the design and	

S-102	geometry - other	rs							Agency	operation of highway intersections	
SC 19 @ S-503	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	44497.58	49441.76	HSIP	Rural Principal Arterial - Other	11590	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 24 (WEST OAK HIGHWAY) @ SC 59	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	91992.75	102214.17	HSIP	Rural Minor Arterial	8200	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 252 @S-203	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	22500	25000	HSIP	Rural Major Collector	4300	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 290 LOCUST HILL	Intersection geometry	1 Numbe	67500	75000	HSIP	Rural Minor	1890	0	State Highway	Improving the design	

ROAD @ S-171	Intersection geometrics - modify skew angle	rs				Arterial	0		Agency	and operation of highway intersection s	
SC 291 with S-27 & S-7	Intersection geometry Intersection geometrics - modify skew angle	2 Numbe rs	45000	50000	HSIP	Urban Minor Arterial	2640 0	0	State Highway Agency	Improving the design and operation of highway intersection s	
SC 292 AND S-52	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbe rs	192437.4	433847.6 5	HSIP	Rural Minor Arterial	9490	0	State Highway Agency	Improving the design and operation of highway intersection s	
SC 302 (Edmond Hwy) with S-625 (Old Charleston Rd)	Intersection traffic control Intersection traffic control - other	1 Numbe rs	599888.8 2	666543.1 3	HSIP	Rural Minor Arterial	1165 0	0	State Highway Agency	Improving the design and operation of highway intersection s	

SC 38 @ S-329	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	25000	25000	HSIP	Rural Minor Arterial	6000	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 402 with SC 125	Roadway Rumble strips - edge or shoulder	1 Numbers	513568.43	570631.58	HSIP	Rural Major Collector	2525	0	State Highway Agency	Minimizing the consequences of leaving the road	
SC 51 @ S-551	Intersection geometry Intersection geometry - other	1 Numbers	12741.25	14156.94	HSIP	Rural Minor Arterial	9250	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 55 with S-114 (Kingsbury Rd)	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	0	47.77	HSIP	Rural Major Collector	6212	0	State Highway Agency	Improving the design and operation of highway intersections	

SC 6 with S-73	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	68253.12	68253.12	HSIP	Rural Major Collector	9000	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 6 with SC 302	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	2278.93	2532.15	HSIP	Rural Minor Arterial	13550	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 6 with SC 302 and S-279	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	6110.42	6789.36	HSIP	Rural Minor Arterial	11500	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 763 @_S-507	Intersection geometry Intersection geometry - other	1 Numbers	67500	60000	HSIP	Rural Minor Arterial	6850	0	State Highway Agency	Improving the design and operation of highway intersection	

										s	
SC 8 (Pelzer Hwy) with S-485 (St. Paul Road)	Intersection geometry Intersection geometry - other	1 Numbers	166708.76	193043.68	HSIP	Rural Minor Arterial	9400	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 81 with S-1084	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	891546.86	990607.61	HSIP	Rural Major Collector	3190	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 9 Bus. With S-66	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	219.68	244.09	HSIP	Rural Major Collector	7625	0	State Highway Agency	Improving the design and operation of highway intersections	
SC 90 with US 501	Intersection traffic control Intersection traffic	1 Numbers	27000	30000	HSIP	Urban Minor Arterial	24650	0	State Highway Agency	Improving the design and operation of highway	

	control - other									intersections	
STATEWIDE 2009 Rumble Strips	Shoulder treatments Shoulder treatments - other	1194 Miles	1714697.99	1714697.99	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
Thermoplastic Pavement Markings in Districts 1,3,4 (4751.042317)	Shoulder treatments Shoulder treatments - other	119.45 Miles	2430604.16	2430604.16	HSIP	Varies Depending on Route	0	0	State Highway Agency	Keeping vehicles in the roadway	
US 1 (Meeting Street) @ S-370 (9th Street)	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	58226.04	65834.28	HSIP	Urban Minor Arterial	19550	0	State Highway Agency	Improving the design and operation of highway intersections	
US 123 FROM S-271 TO SC 8	Roadway Rumble strips - edge or shoulder	1 Numbers	703592.95	703592.95	HSIP	Rural Principal Arterial - Other	0	0	State Highway Agency	Minimizing the consequences of leaving the road	

US 17 with SC 162	Intersection geometry Intersection geometry - other	1 Numbers	734025.24	815583.61	HSIP	Rural Principal Arterial - Other	27350	0	State Highway Agency	Improving the design and operation of highway intersections	
US 17, S-20 AND S-1024	Intersection geometry Intersection geometry - other	1 Numbers	9531.87	10590.97	HSIP	Urban Principal Arterial - Other	10800	0	State Highway Agency	Improving the design and operation of highway intersections	
US 178 MOOREFIELD MEMORIAL HWY @ S-64 & S-326	Intersection geometry Intersection geometry - other	1 Numbers	22500	25000	HSIP	Rural Minor Arterial	7695	0	State Highway Agency	Improving the design and operation of highway intersections	
US 21 ALONG PRINCETON RD AND SPRINGSTEEN ROAD	Intersection geometry Auxiliary lanes - add right-turn lane	1 Numbers	180000	280070	HSIP	Rural Principal Arterial - Other	19250	0	State Highway Agency	Improving the design and operation of highway intersection	

										s	
US 301 (Alex Harvin Hwy) @ S-63 (Raccoon Road)	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	3129.43	3477.14	HSIP	Rural Major Collector	7000	0	State Highway Agency	Improving the design and operation of highway intersections	
US 321 @ S-663	Intersection geometry Auxiliary lanes - modify left-turn lane offset	1 Numbers	655187.36	727985.95	HSIP	Rural Principal Arterial - Other	20400	0	State Highway Agency	Improving the design and operation of highway intersections	
US 401 with S-19	Intersection geometry Intersection geometry - other	1 Numbers	124497.91	124497.91	HSIP	Rural Minor Arterial	5100	0	State Highway Agency	Improving the design and operation of highway intersections	
US 52 @ S-1343	Intersection geometry Intersection geometry -	1 Numbers	180000	200000	HSIP	Urban Principal Arterial - Other	43770	0	State Highway Agency	Improving the design and operation of highway	

	other									intersections	
US 52 @ S-37	Intersection traffic control Intersection traffic control - other	1 Numbers	31813.48	35348.31	HSIP	Urban Principal Arterial - Other	54900	0	State Highway Agency	Improving the design and operation of highway intersections	
US 52 with S-50	Intersection geometry Intersection geometrics - realignment to increase cross street offset	1 Numbers	8516.57	9462.85	HSIP	Rural Principal Arterial - Other	20442	0	State Highway Agency	Improving the design and operation of highway intersections	
US 76 Bus (Broad St) with US 521 (Camden Hwy)	Intersection traffic control Intersection traffic control - other	1 Numbers	411923.07	457692.31	HSIP	Urban Minor Arterial	35500	0	State Highway Agency	Improving the design and operation of highway intersections	
US 78 with S-27	Intersection geometry Intersection	1 Numbe	675000	750000	HSIP	Rural Principal Arterial -	10250	0	State Highway	Improving the design and	

	geometry - other	rs				Other			Agency	operation of highway intersections	
US21/176/321 SPLIT NEAR_DIXIANA	Intersection geometry Intersection geometrics - modify skew angle	1 Numbers	46924.19	57592.48	HSIP	Rural Principal Arterial - Other	24250	0	State Highway Agency	Improving the design and operation of highway intersections	

Progress in Achieving Safety Performance Targets

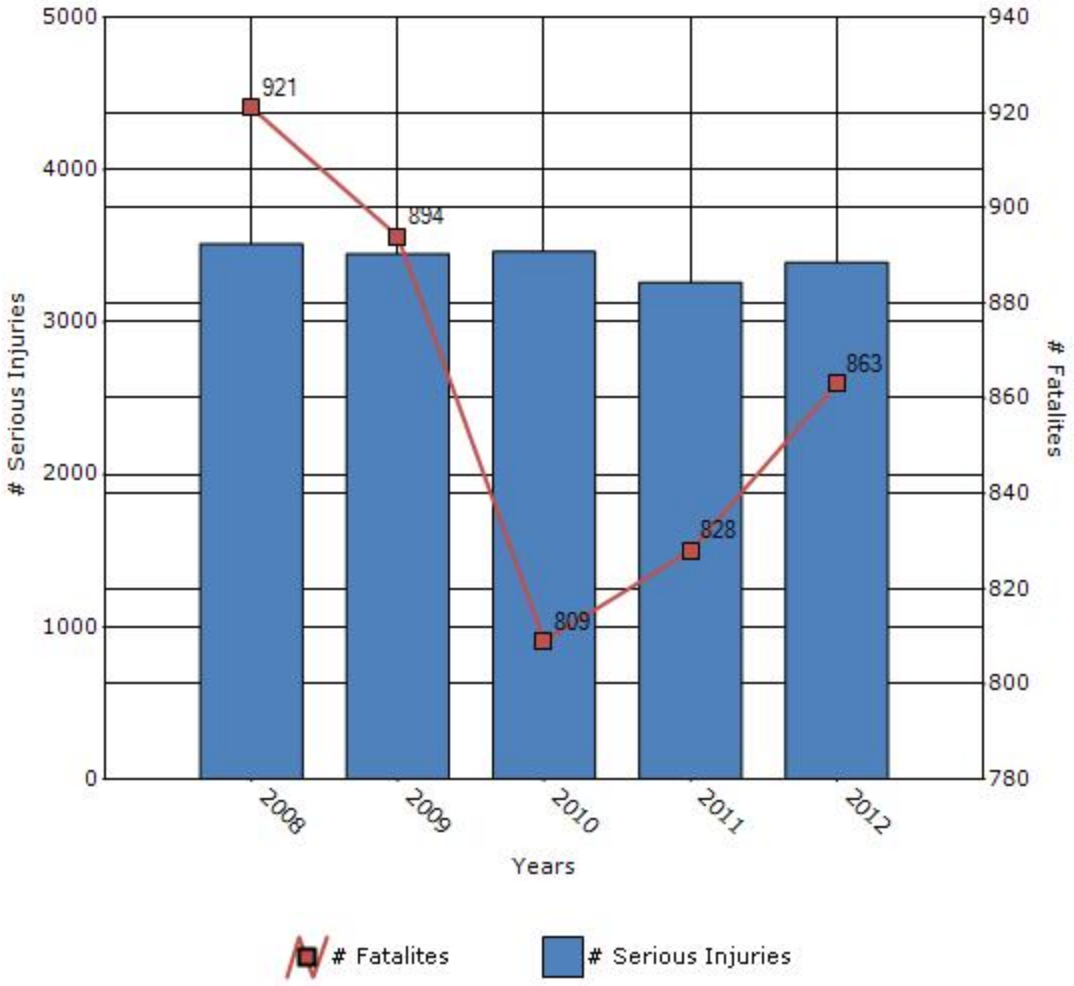
Overview of General Safety Trends

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

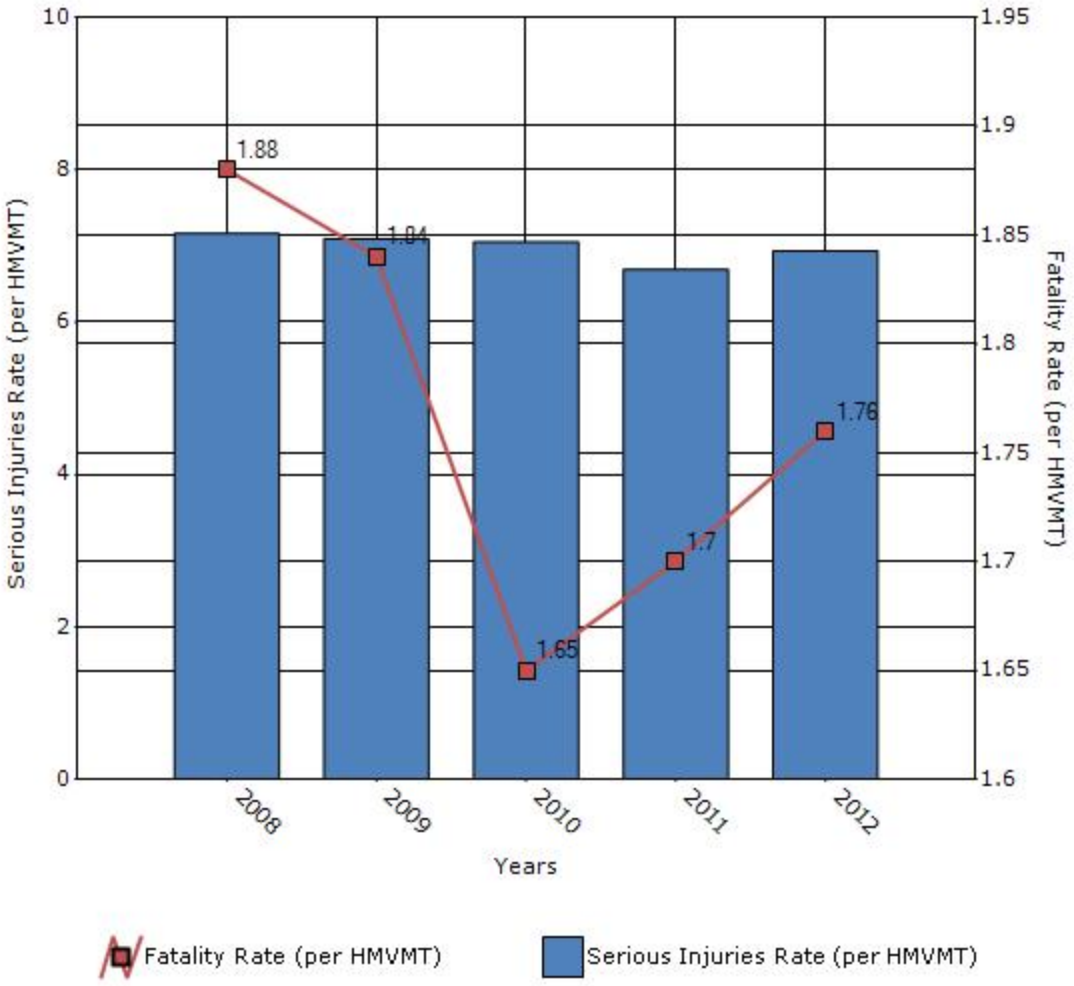
Performance Measures*	2008	2009	2010	2011	2012
Number of fatalities	921	894	809	828	863
Number of serious injuries	3513	3448	3462	3260	3390
Fatality rate (per HMVMT)	1.88	1.84	1.65	1.7	1.76
Serious injury rate (per HMVMT)	7.16	7.09	7.05	6.69	6.93

*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

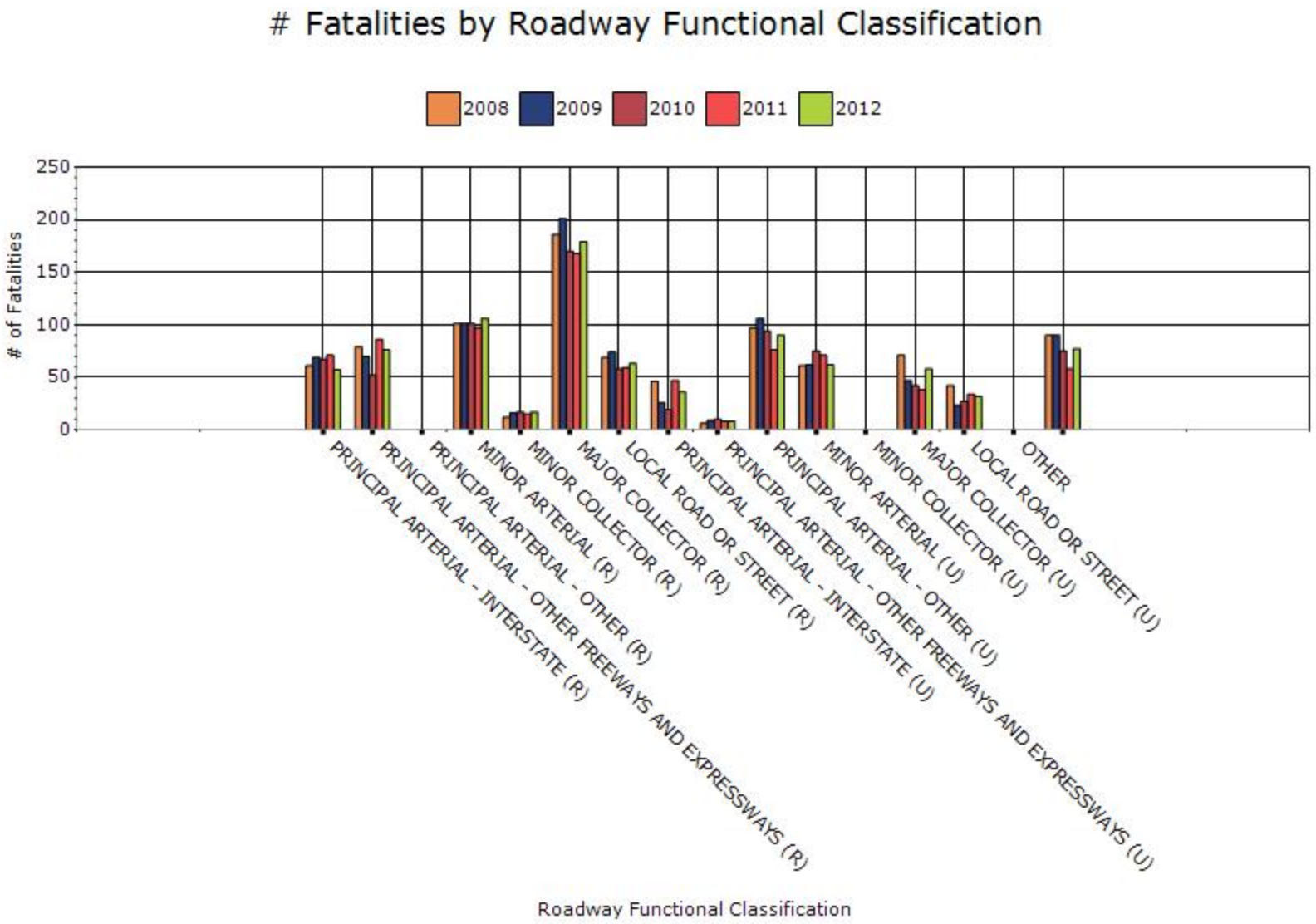


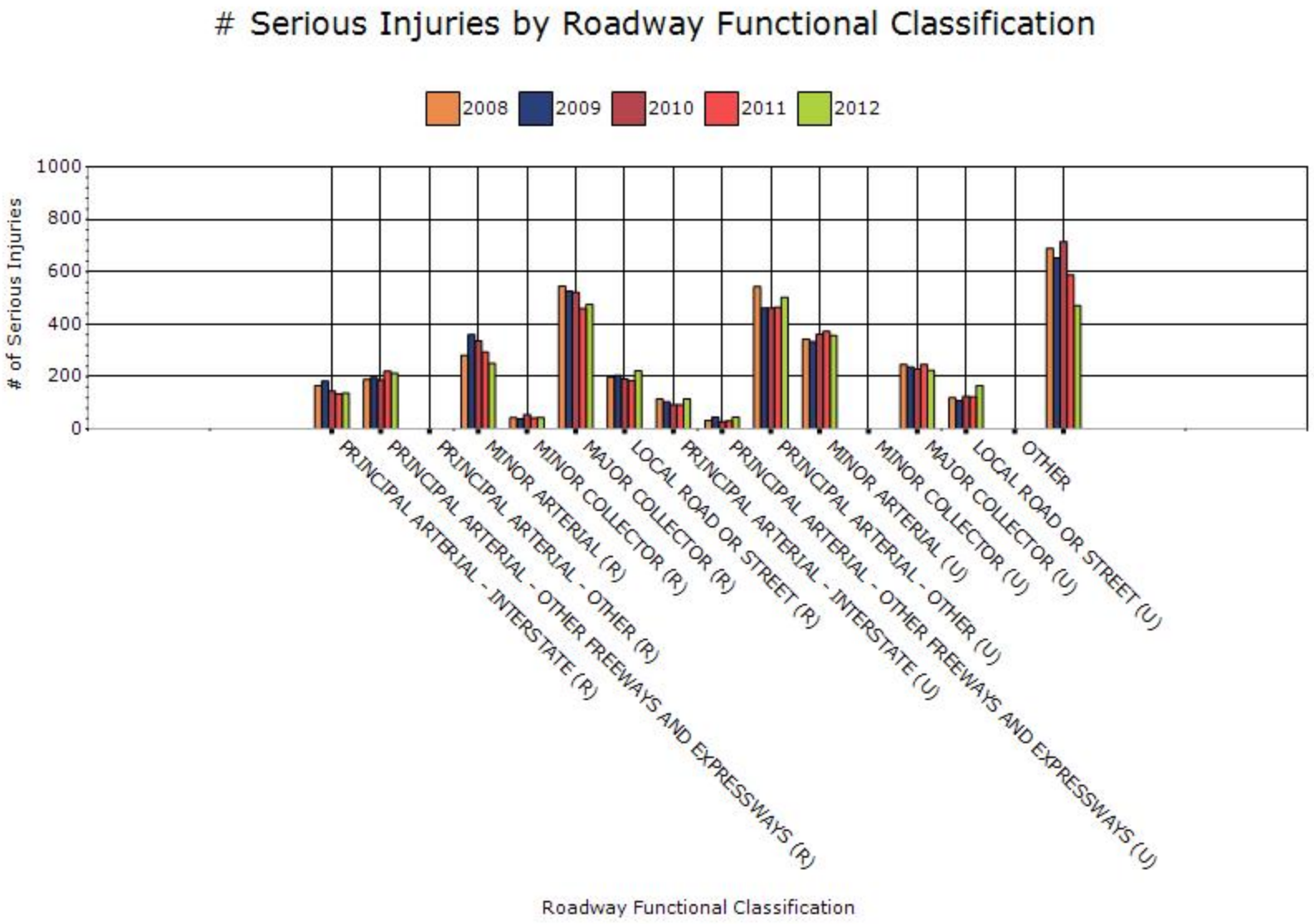
To the maximum extent possible, present performance measure* data by functional classification and ownership.

Year - 2012

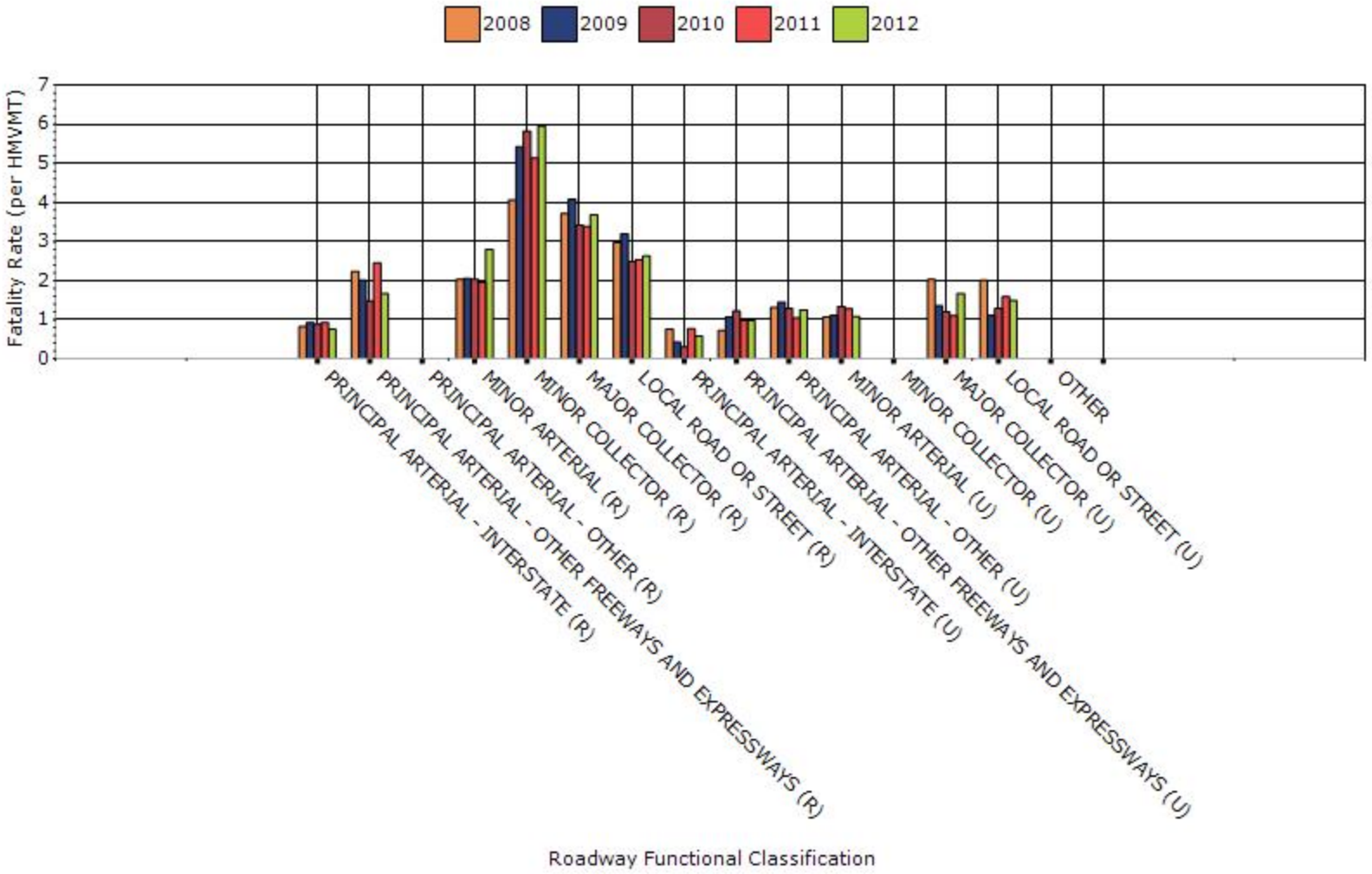
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	57	137	0.76	1.83
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	76	213	1.67	4.67
RURAL PRINCIPAL ARTERIAL - OTHER	0	0	0	0
RURAL MINOR ARTERIAL	106	250	2.8	6.6
RURAL MINOR COLLECTOR	17	44	5.95	15.41
RURAL MAJOR COLLECTOR	179	475	3.68	9.75
RURAL LOCAL ROAD OR STREET	63	222	2.63	9.25
URBAN PRINCIPAL	36	115	0.58	1.86

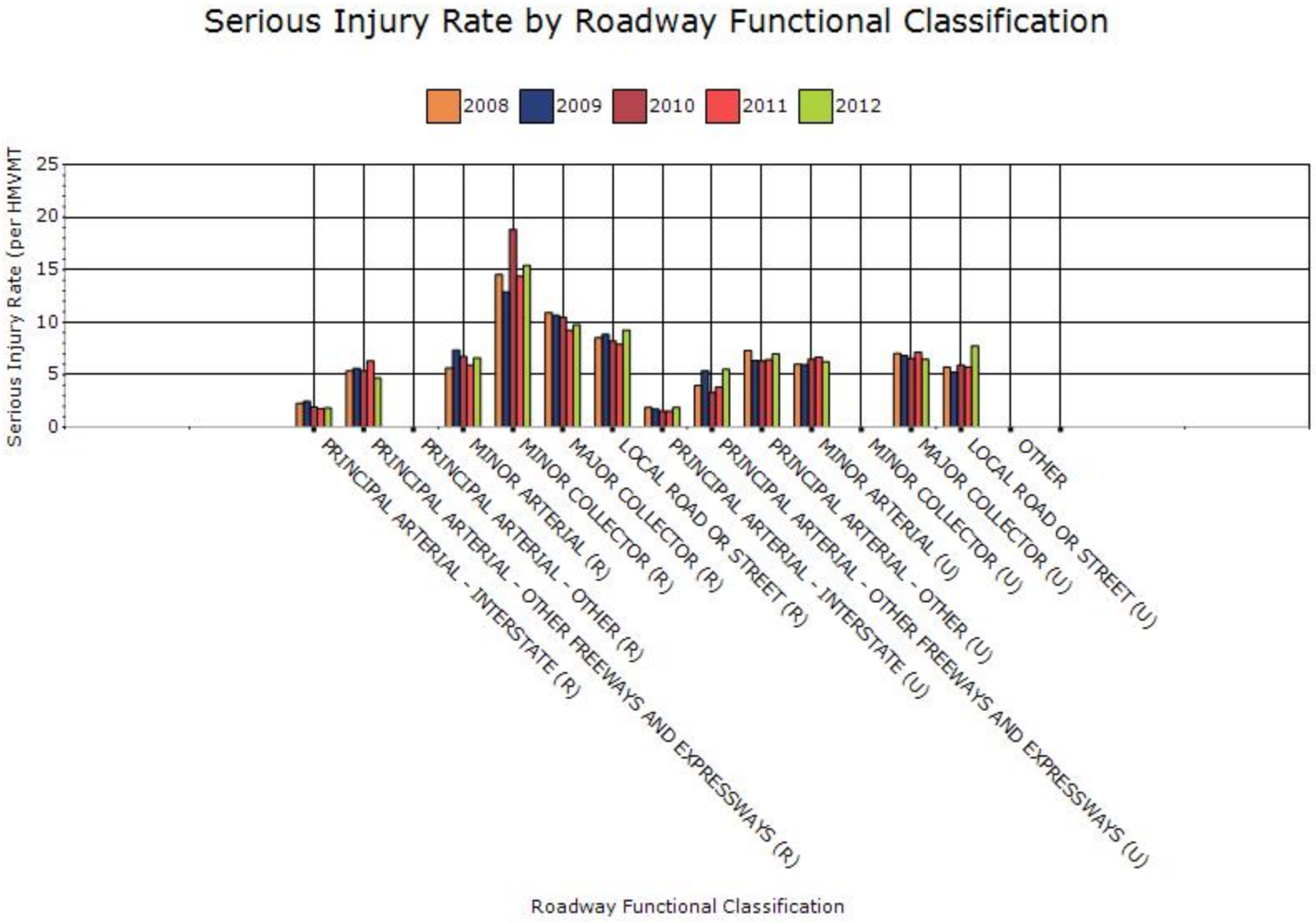
ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	8	45	0.98	5.5
URBAN PRINCIPAL ARTERIAL - OTHER	90	502	1.25	6.97
URBAN MINOR ARTERIAL	62	357	1.08	6.24
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	58	224	1.67	6.46
URBAN LOCAL ROAD OR STREET	32	166	1.49	7.74
OTHER	0	0	0	0
UNKNOWN	77	471	0	0
UNKNOWN	77	471	0	0


Fatalities by Roadway Functional Classification
2008
2009
2010
2011
2012
# of Fatalities
250
200
150
100
50
0
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)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification


Serious Injuries by Roadway Functional Classification
2008
2009
2010
2011
2012
# of Serious Injuries
1000
800
600
400
200
0
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)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification

Fatality Rate by Roadway Functional Classification

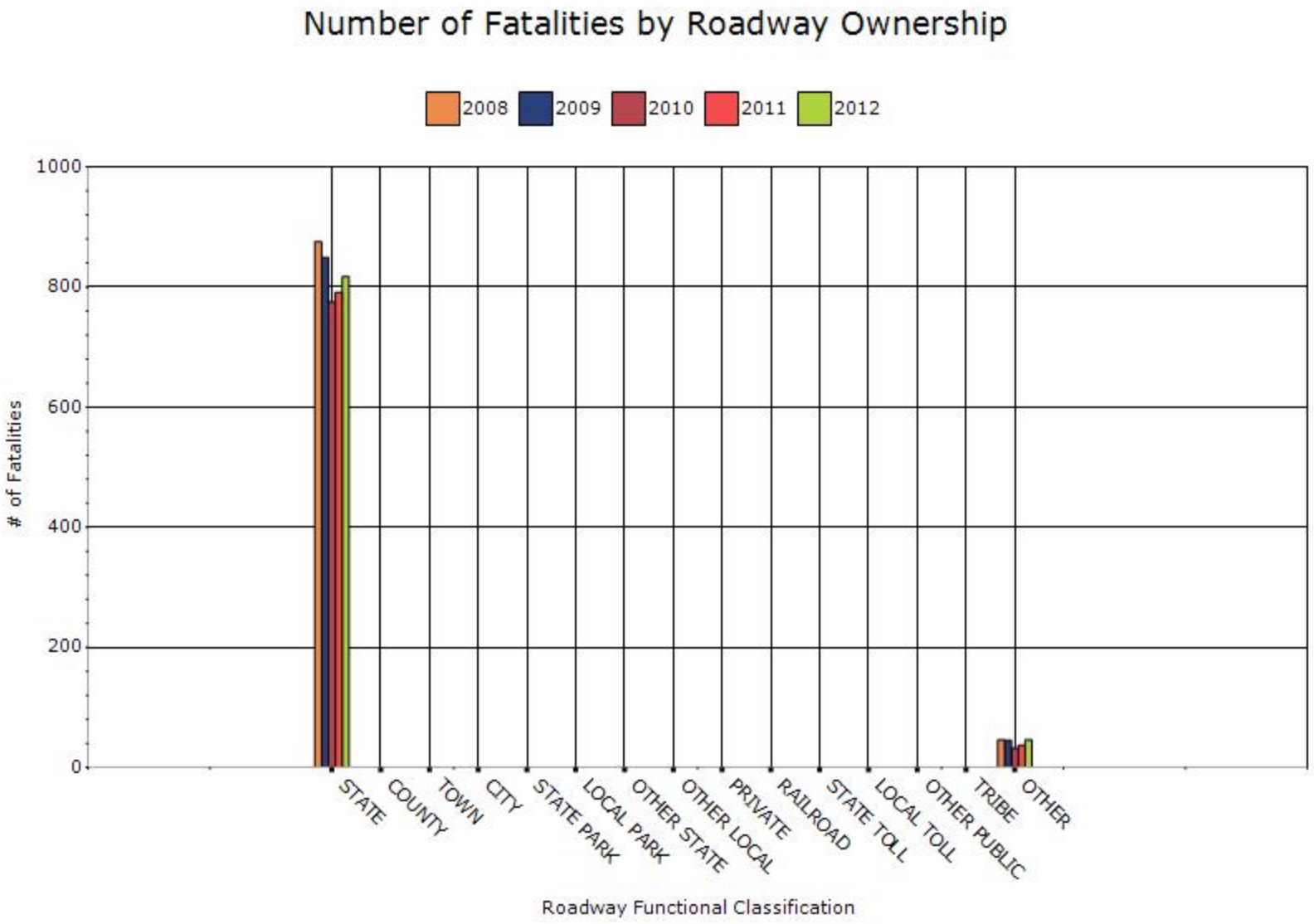


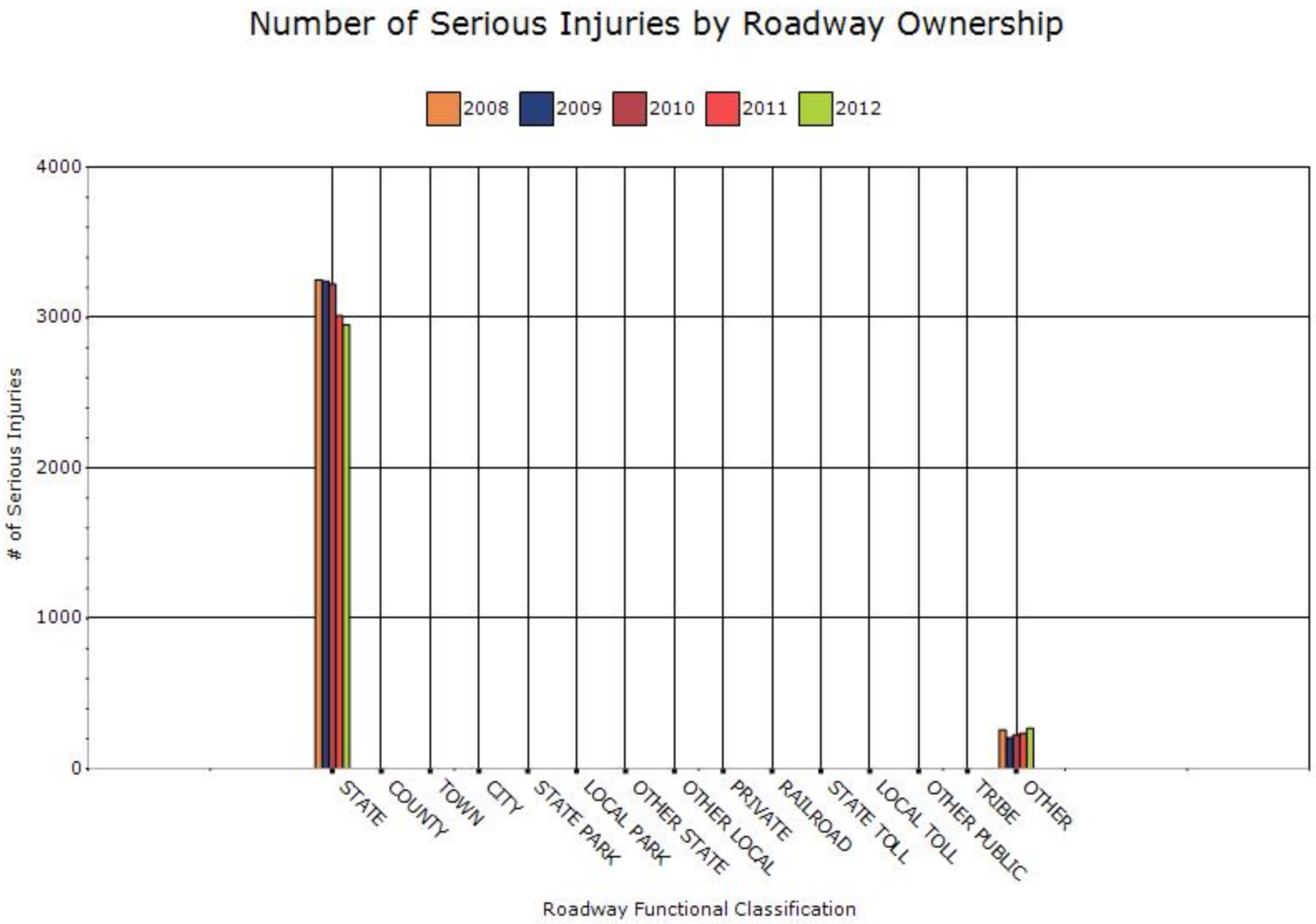

Serious Injury Rate by Roadway Functional Classification
2008
2009
2010
2011
2012
Serious Injury Rate (per HMVMT
25
20
15
10
5
0
PRINCIPAL ARTERIAL - INTERSTATE (R)
PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS (R)
PRINCIPAL ARTERIAL - OTHER (R)
MINOR ARTERIAL (R)
MINOR COLLECTOR (R)
MAJOR COLLECTOR (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)
LOCAL ROAD OR STREET (U)
OTHER
Roadway Functional Classification

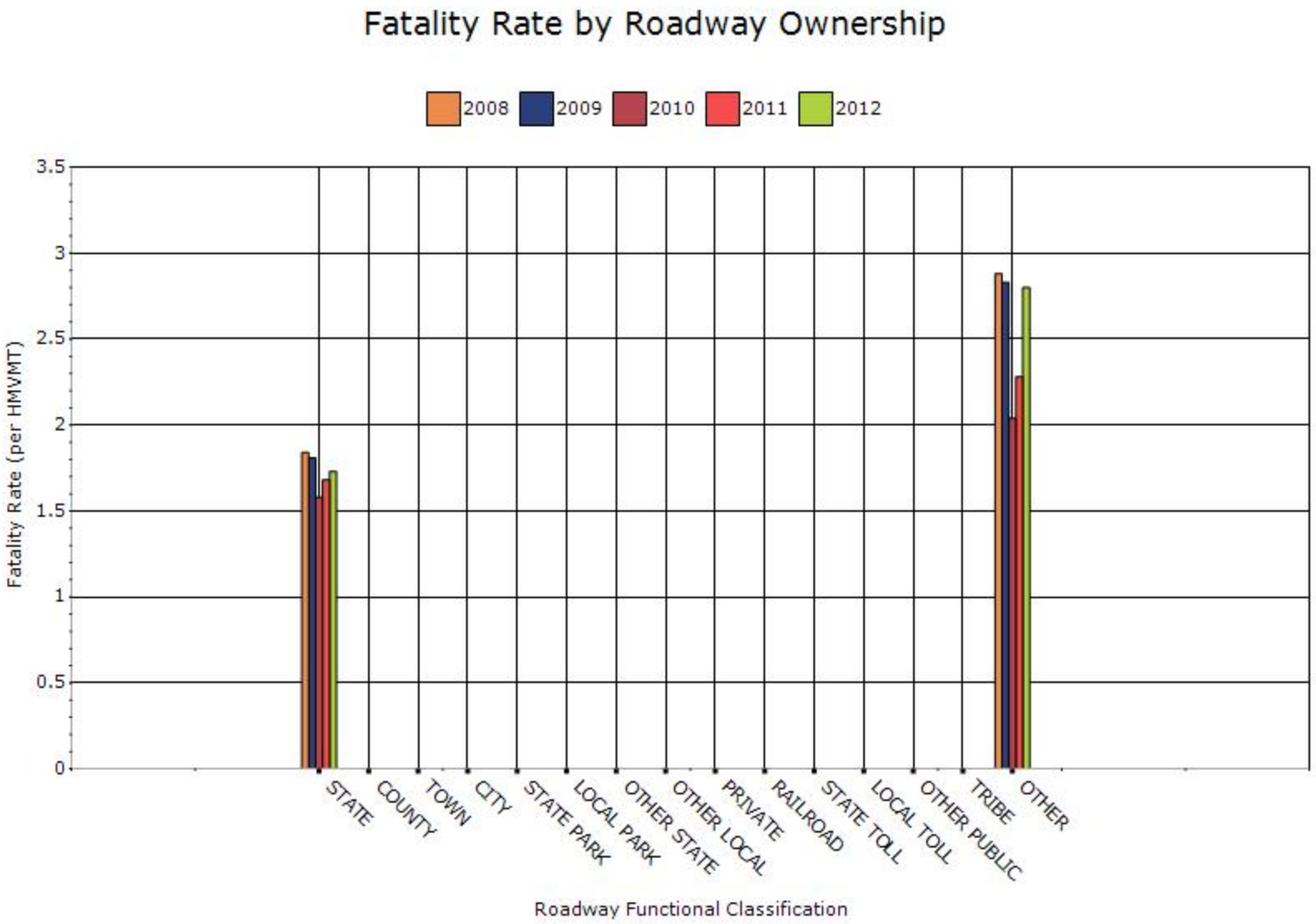
Year - 2012

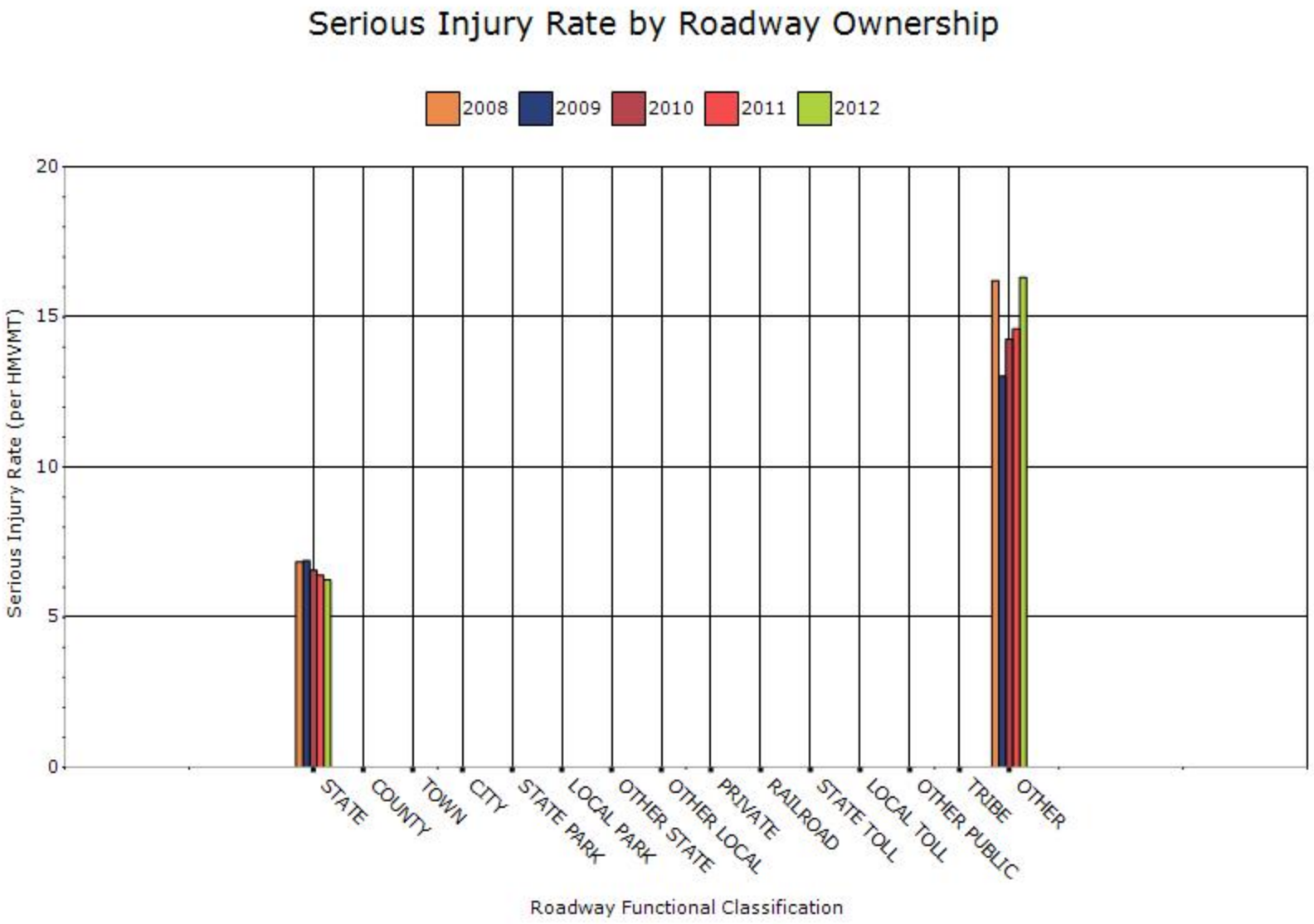
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	817	2953	1.73	6.25
COUNTY HIGHWAY AGENCY	0	0	0	0
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	0	0	0	0
STATE PARK, FOREST, OR RESERVATION 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
INDIAN TRIBE NATION	0	0	0	0
OTHER	46	268	2.8	16.32
OTHER	46	268	2.8	16.32


Number of Fatalities by Roadway Ownership
2008
2009
2010
2011
2012
1000
800
600
400
200
0
# of Fatalities
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


Number of Serious Injuries by Roadway Ownership
2008
2009
2010
2011
2012
4000
3000
2000
1000
0
# of Serious Injuries
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


Fatality Rate by Roadway Ownership
2008
2009
2010
2011
2012
Fatality Rate (per HMVMT)
3.5
3
2.5
2
1.5
1
0.5
0
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification


Serious Injury Rate by Roadway Ownership
2008
2009
2010
2011
2012
Serious Injury Rate (per HMVMT)
20
15
10
5
0
STATE
COUNTY
TOWN
CITY
STATE PARK
LOCAL PARK
OTHER STATE
OTHER LOCAL
PRIVATE
RAILROAD
STATE TOLL
LOCAL TOLL
OTHER PUBLIC
TRIBE
OTHER
Roadway Functional Classification

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

From the previous performance measure charts involving functional class, a few categories did not apply to the data gathered in South Carolina. For instance, some functional classes are not segregated as thoroughly as the chart indicates. The chart has two breakdowns for *rural principal arterial, non-interstate* while South Carolina only has one. Similarly, South Carolina uses *urban collector* as a category while the chart breaks it down into *urban minor collector* and *urban major collector*. For the purpose of this report, all *urban collector* routes were designated as *urban major collector*. South Carolina also had some data that did not specify the functional class. These data were listed in a new category labeled "*unknown*" because these values could be in any of the other categories.

The performance measures regarding roadway ownership also did not line up well with South Carolina data. The only reliable way South Carolina could separate the data into roadway ownership was *state-owned* and *non-state-owned*, as can be seen in the previous charts.

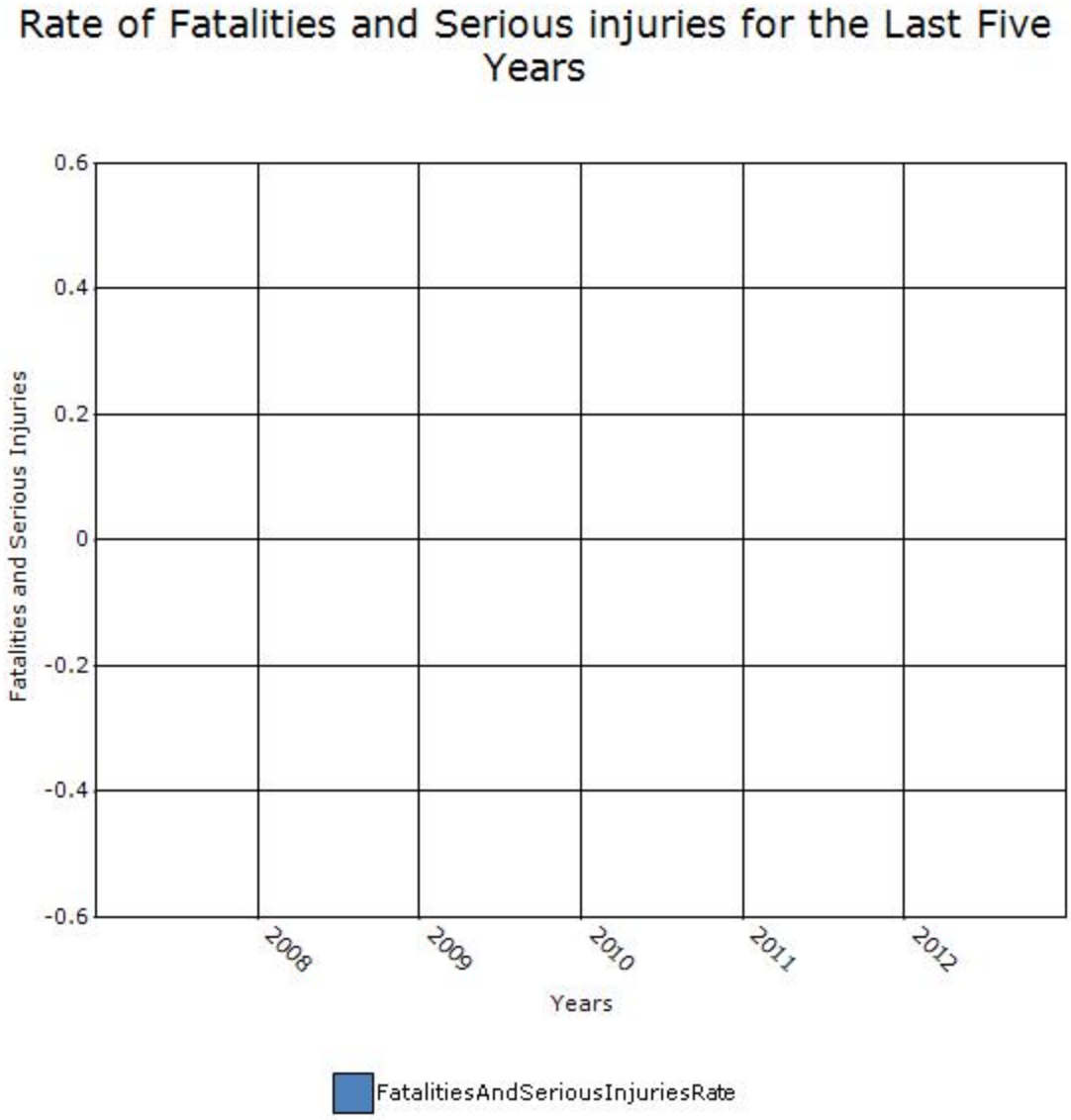
Application of Special Rules

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

Older Driver Performance Measures	**2008**	**2009**	**2010**	**2011**	**2012**
Fatality rate (per capita)	0	0	0	0	0
Serious injury rate (per capita)	0	0	0	0	0
Fatality and serious injury rate (per capita)	0	0	0	0	0

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

Statistics on the rate of traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 are not included in this report. Data related to this category could not be confirmed for accuracy at this time, therefore SCDOT is working to verify the correct numbers before reporting the data as a performance measure.



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.

SCDOT did not make any significant program changes since the last reporting period.

SHSP Emphasis Areas

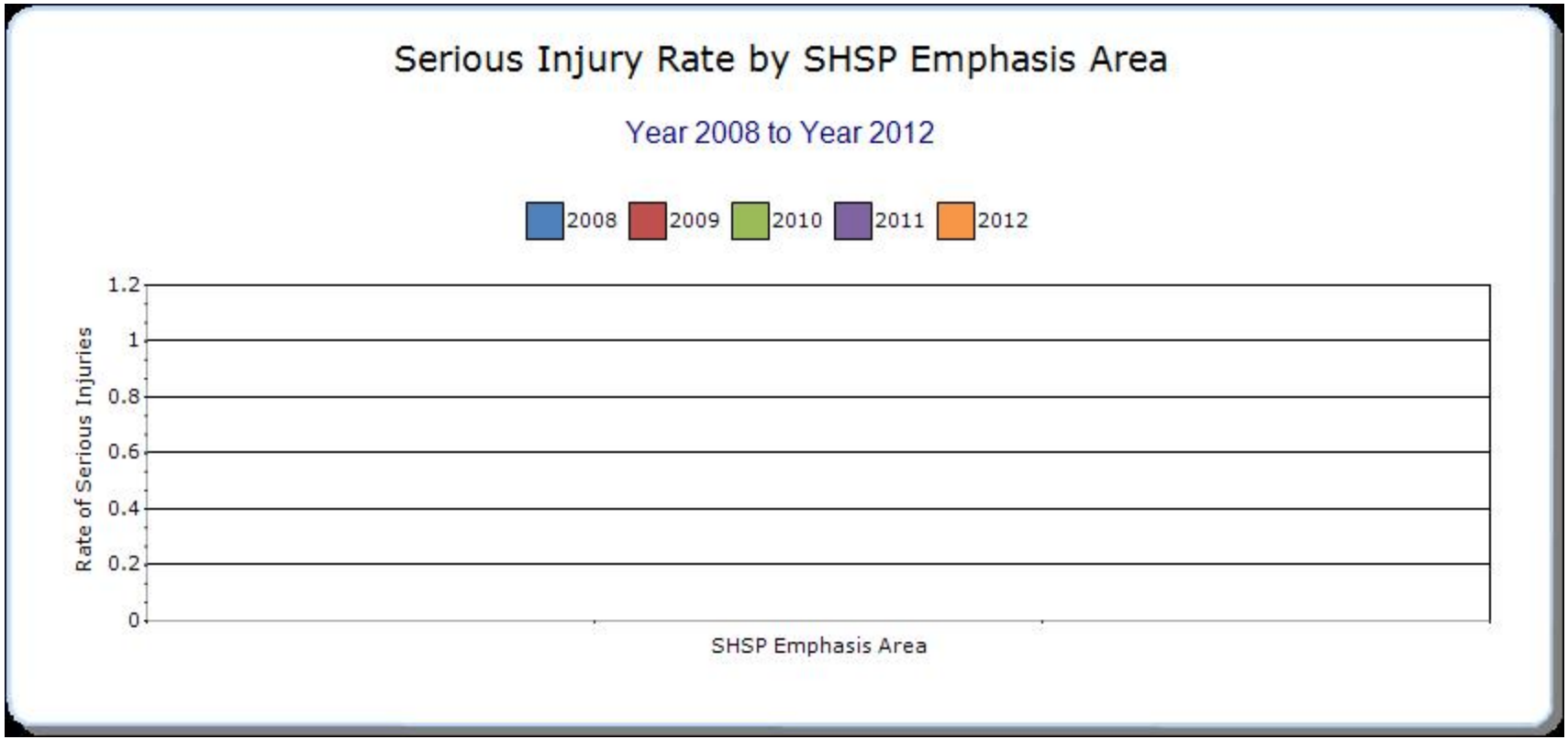
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

Year - 2012

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


Number of Serious Injuries by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
# of Serious Injuries
SHSP Emphasis Area


Fatality Rate by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Fatalities
SHSP Emphasis Area

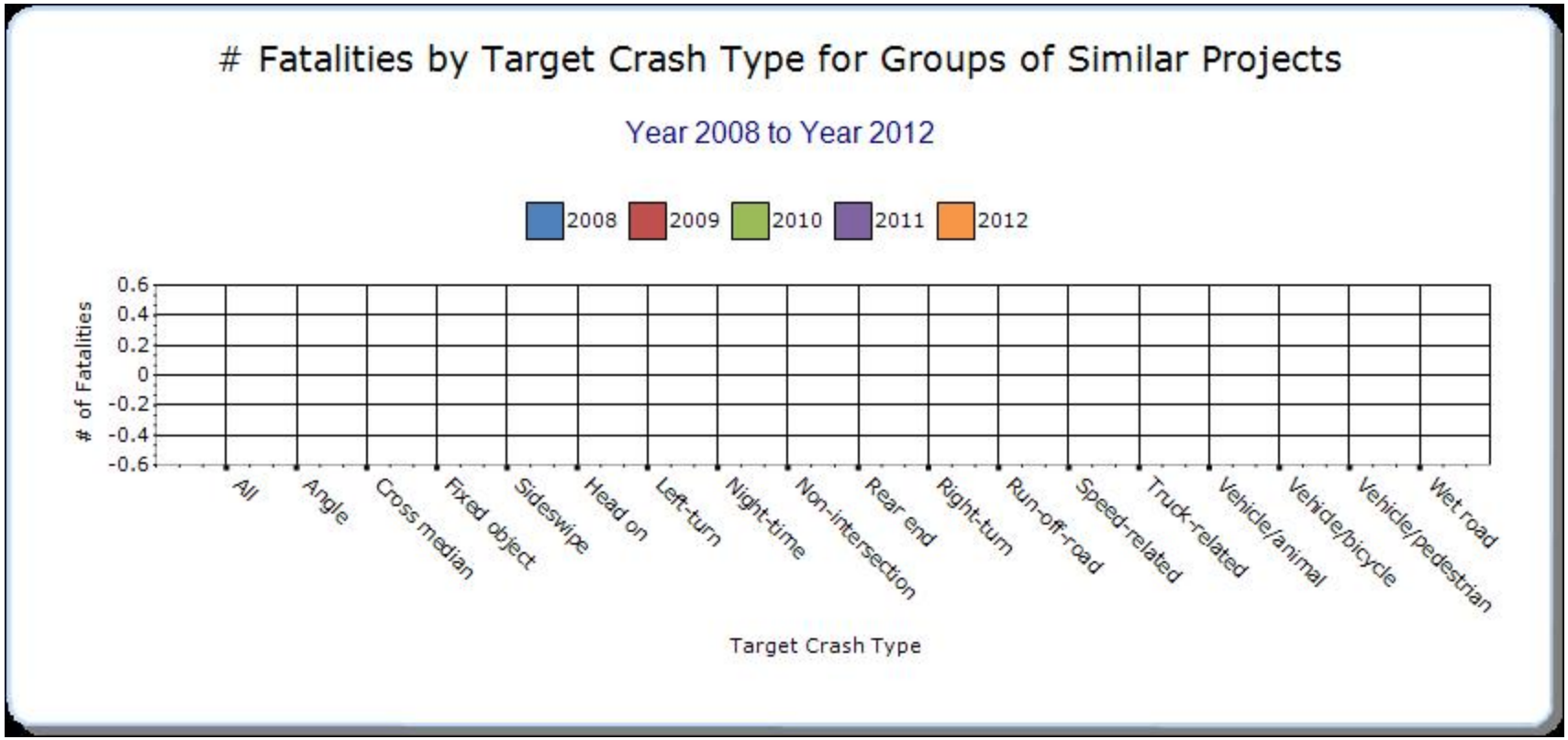

Serious Injury Rate by SHSP Emphasis Area
Year 2008 to Year 2012
2008
2009
2010
2011
2012
1.2
1
0.8
0.6
0.4
0.2
0
Rate of Serious Injuries
SHSP Emphasis Area

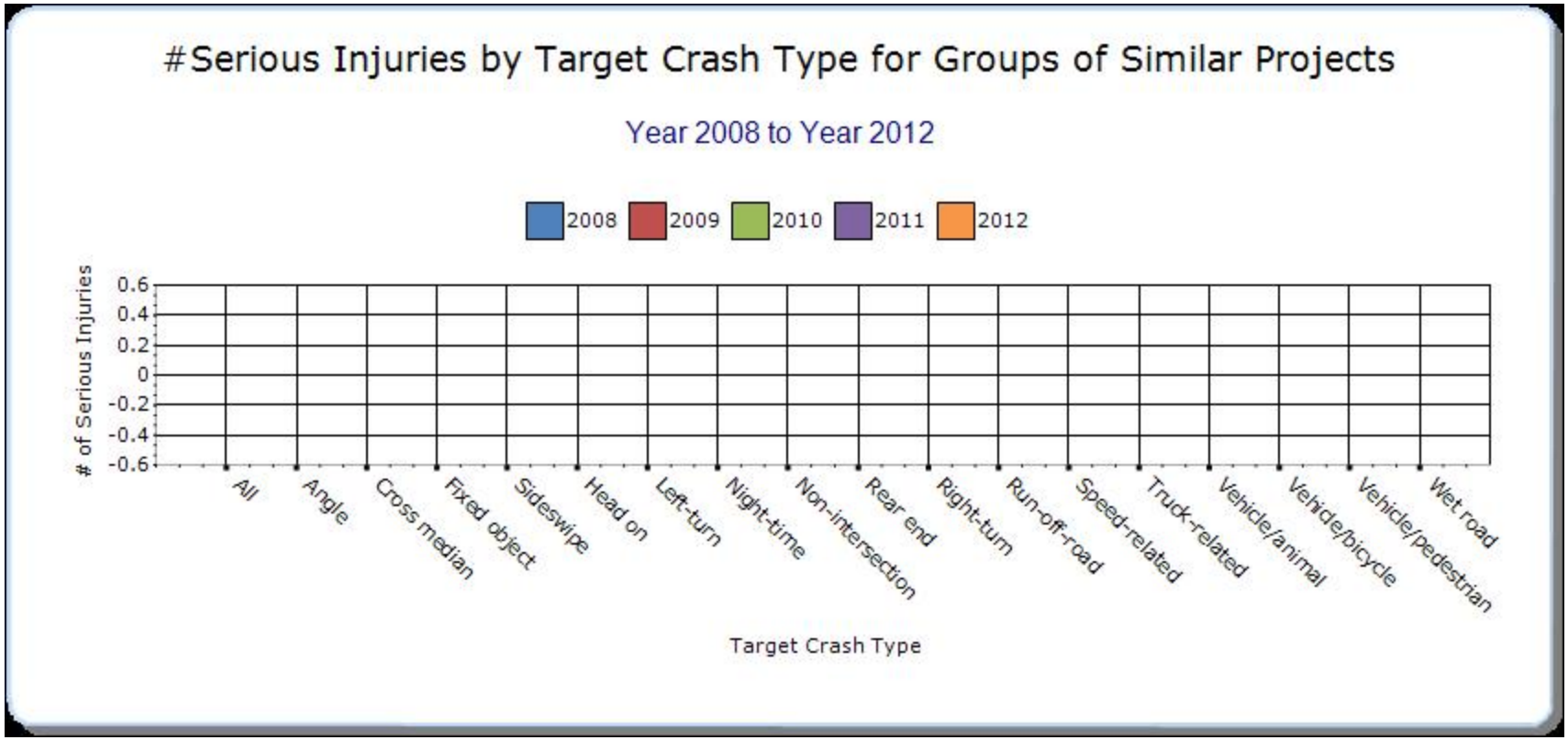
Groups of similar project types

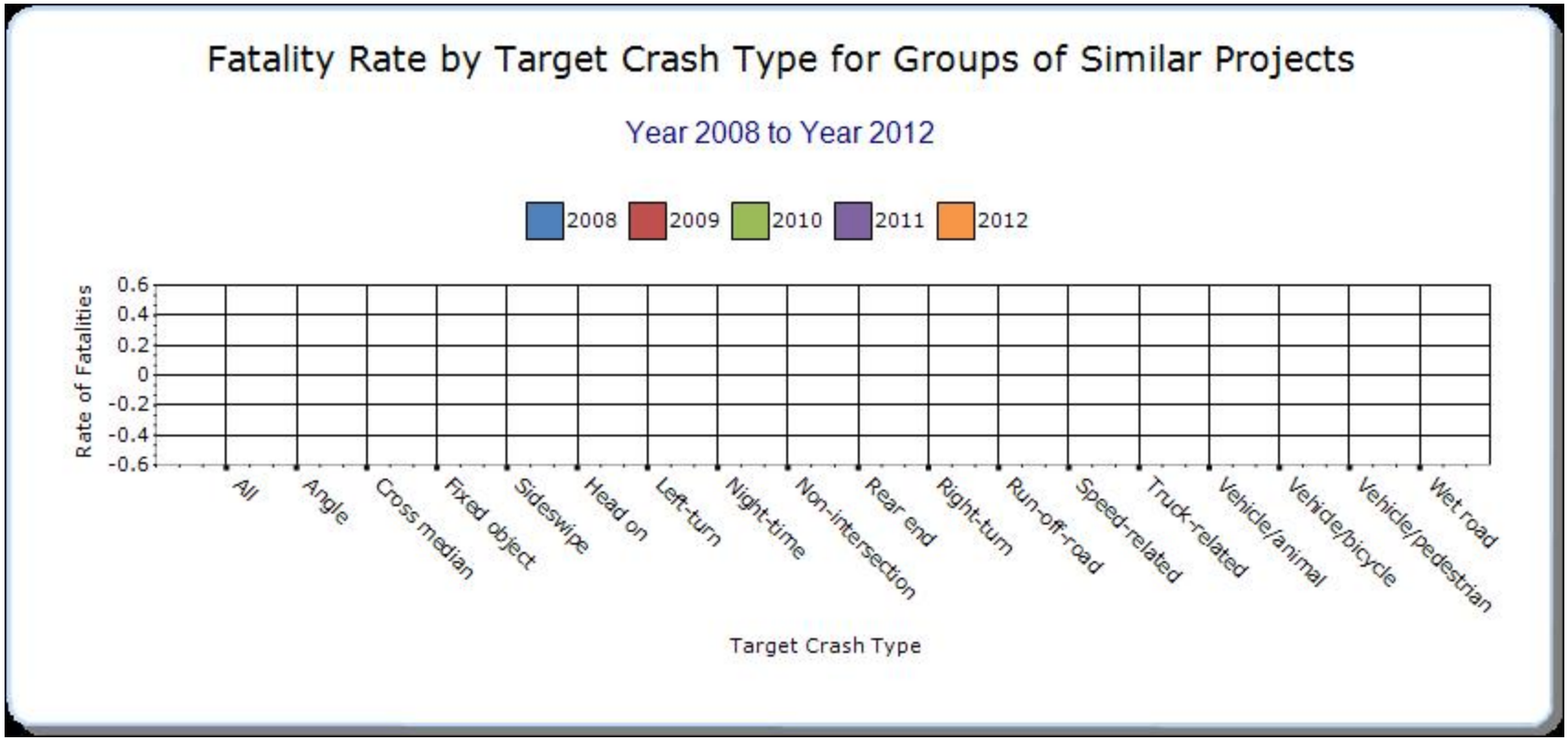
Present the overall effectiveness of groups of similar types of projects.

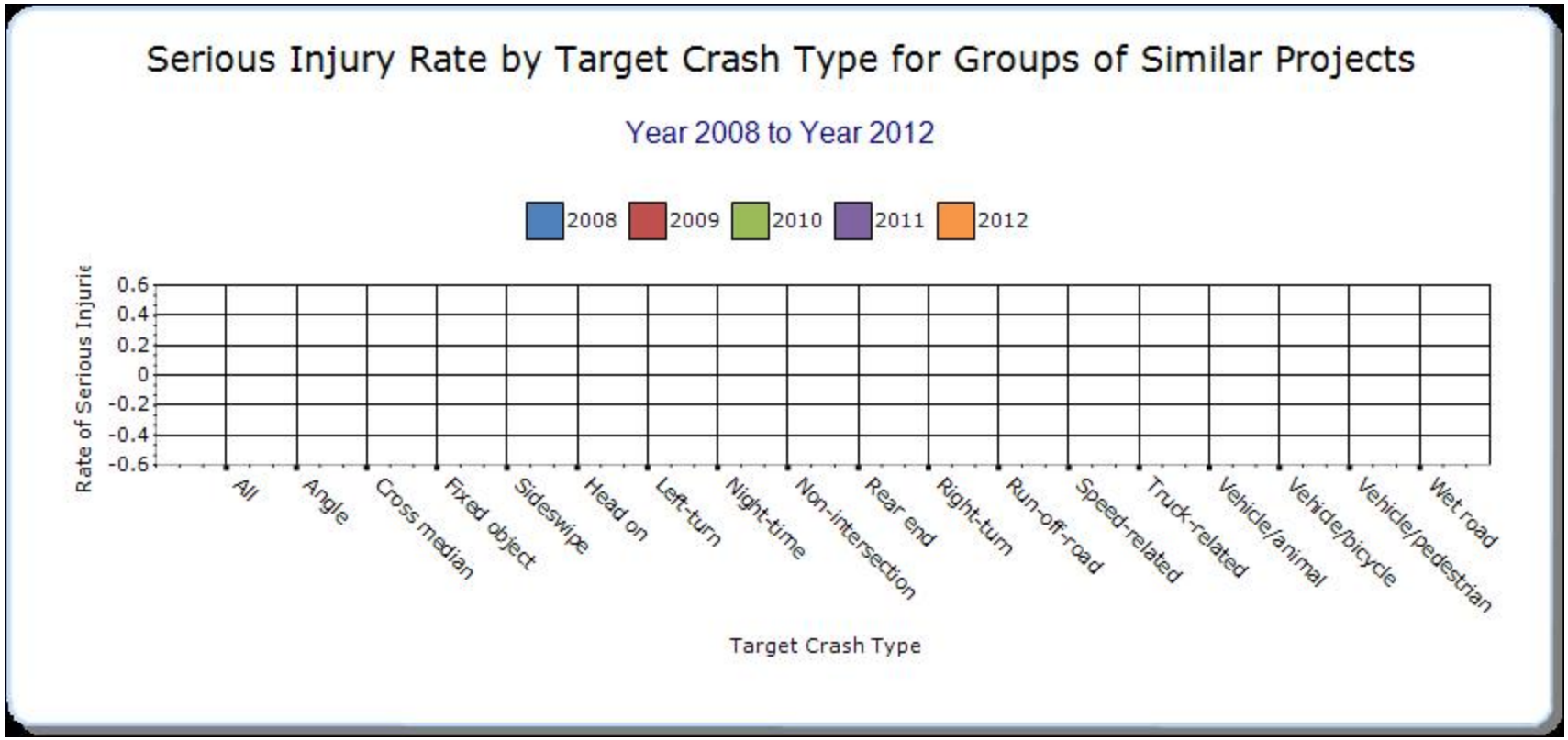
Year - 2012

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


Fatalities by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# 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 2008 to Year 2012
2008
2009
2010
2011
2012
# 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 2008 to Year 2012
2008
2009
2010
2011
2012
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

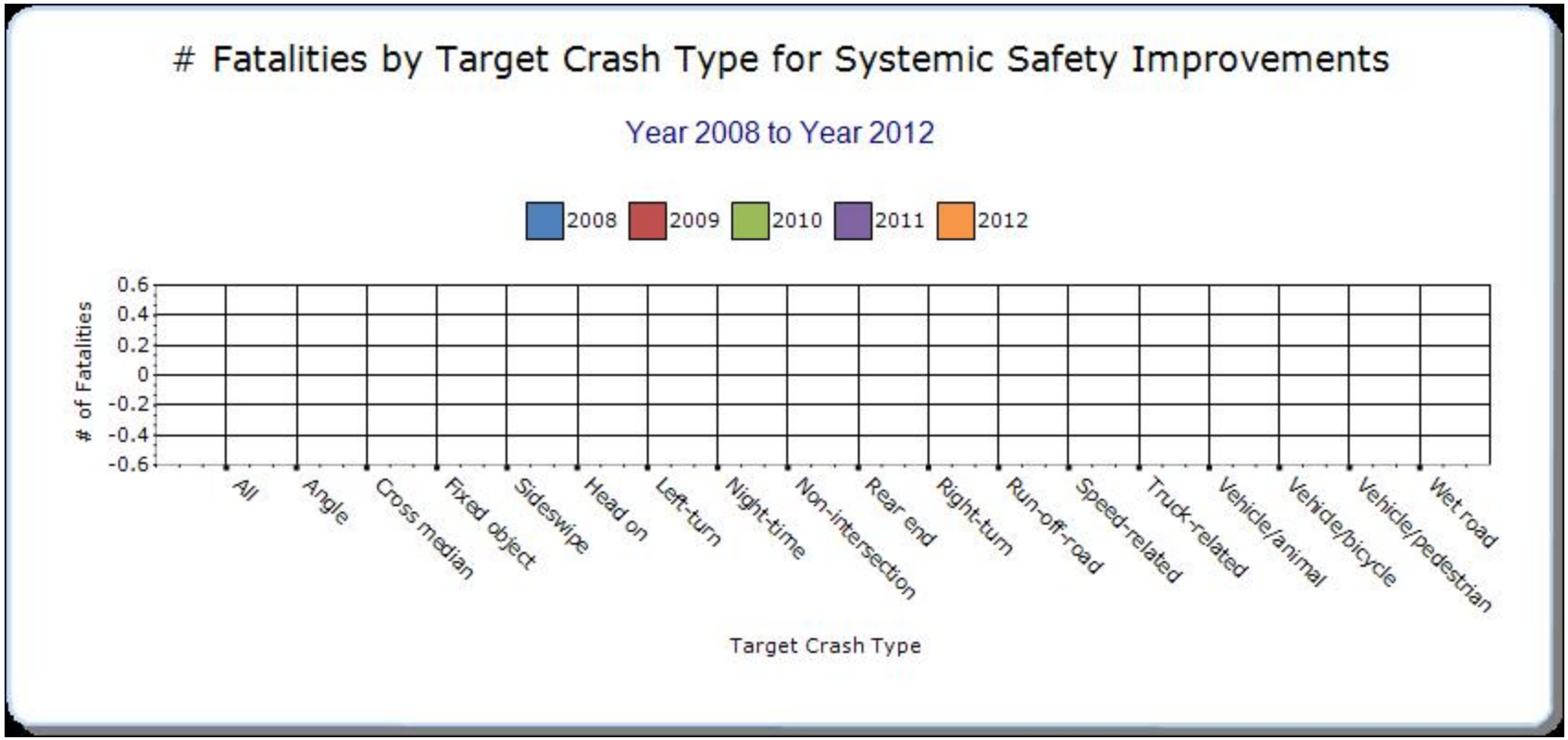

Serious Injury Rate by Target Crash Type for Groups of Similar Projects
Year 2008 to Year 2012
2008
2009
2010
2011
2012
Rate of Serious Injurie
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
All
Angle
Cross median
Fixed object
Sideswipe
Head on
Left-turn
Night-time
Non-intersection
Rear end
Right-turn
Run-off-road
Speed-related
Truck-related
Vehicle/animal
Vehicle/bicycle
Vehicle/pedestrian
Wet road
Target Crash Type

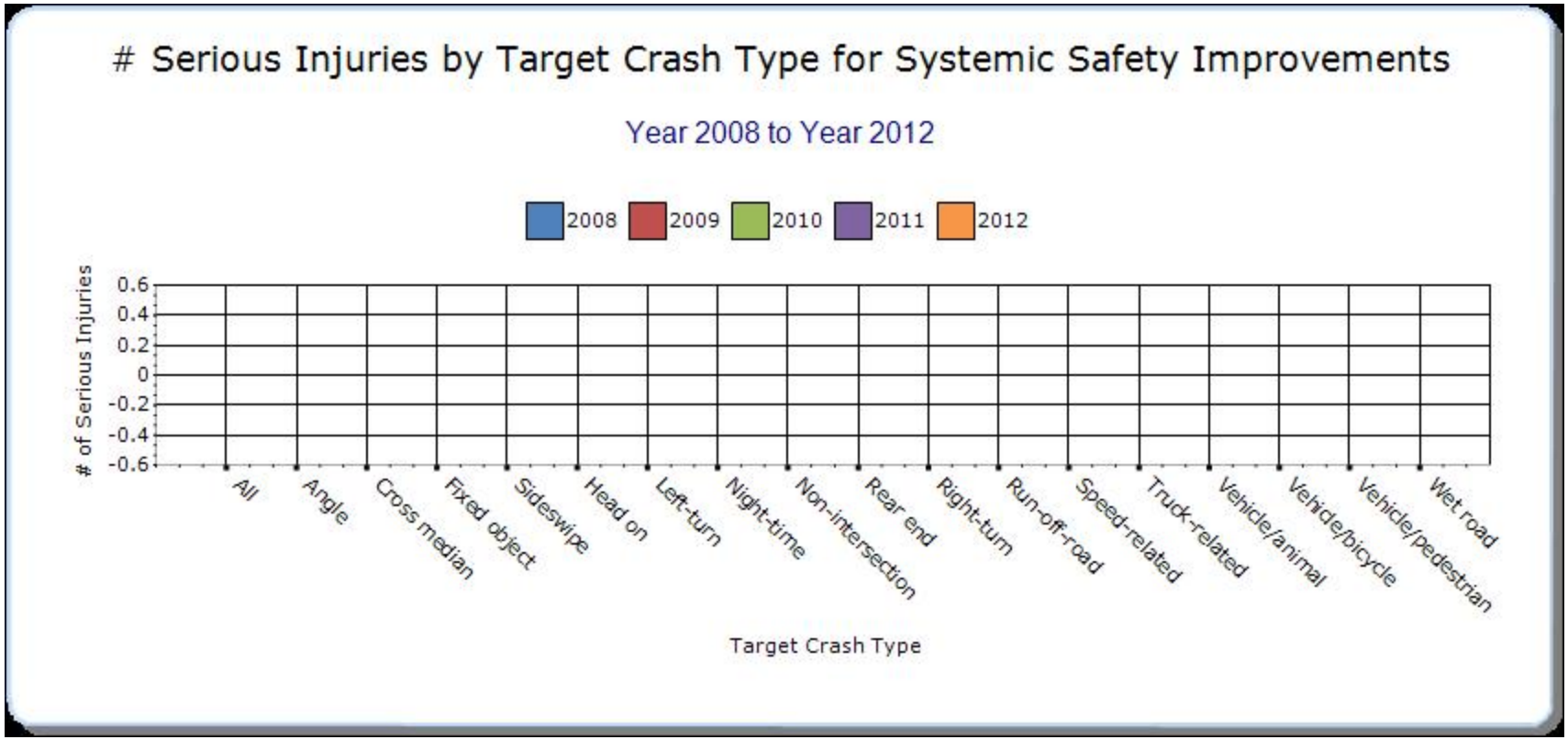
Systemic Treatments

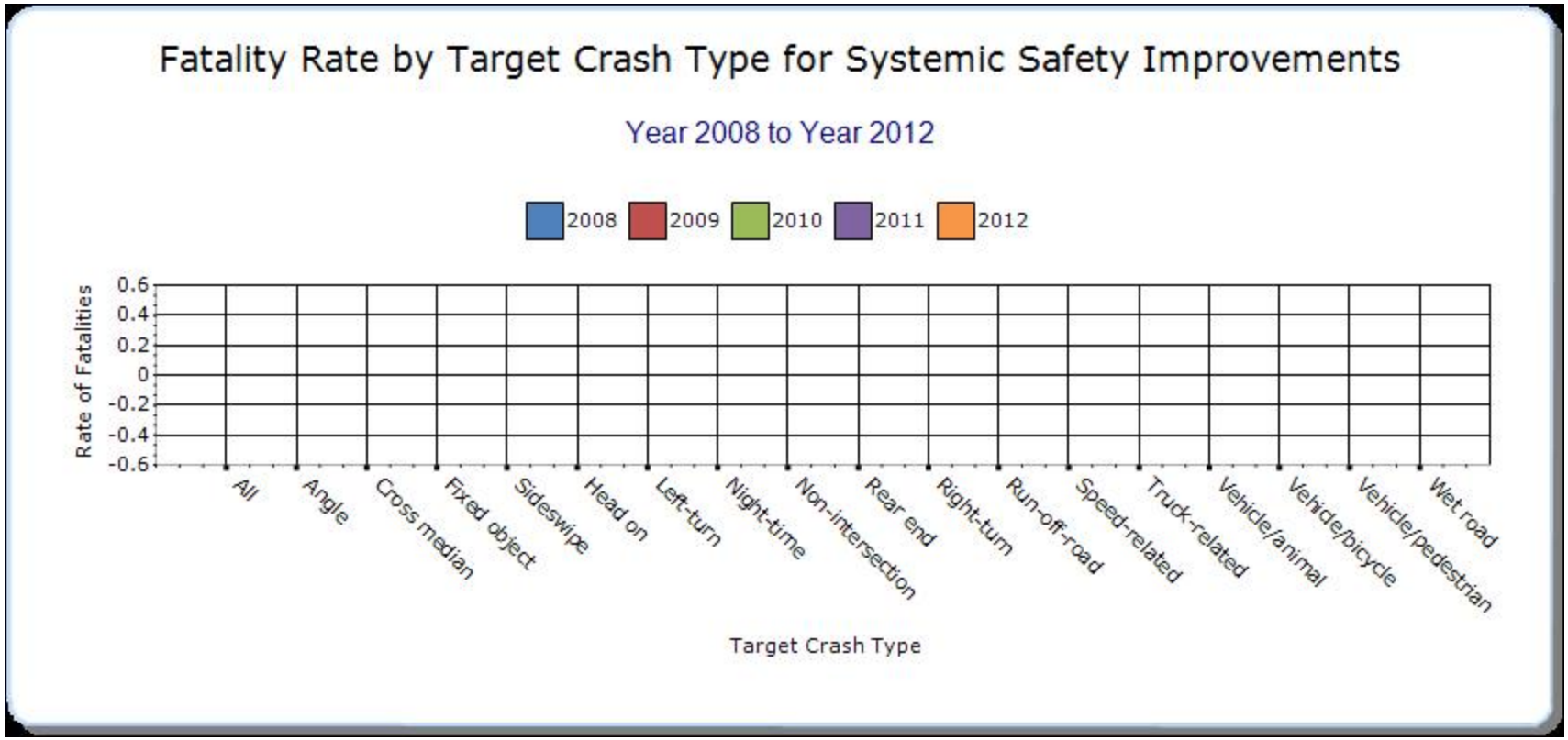
Present the overall effectiveness of systemic treatments..

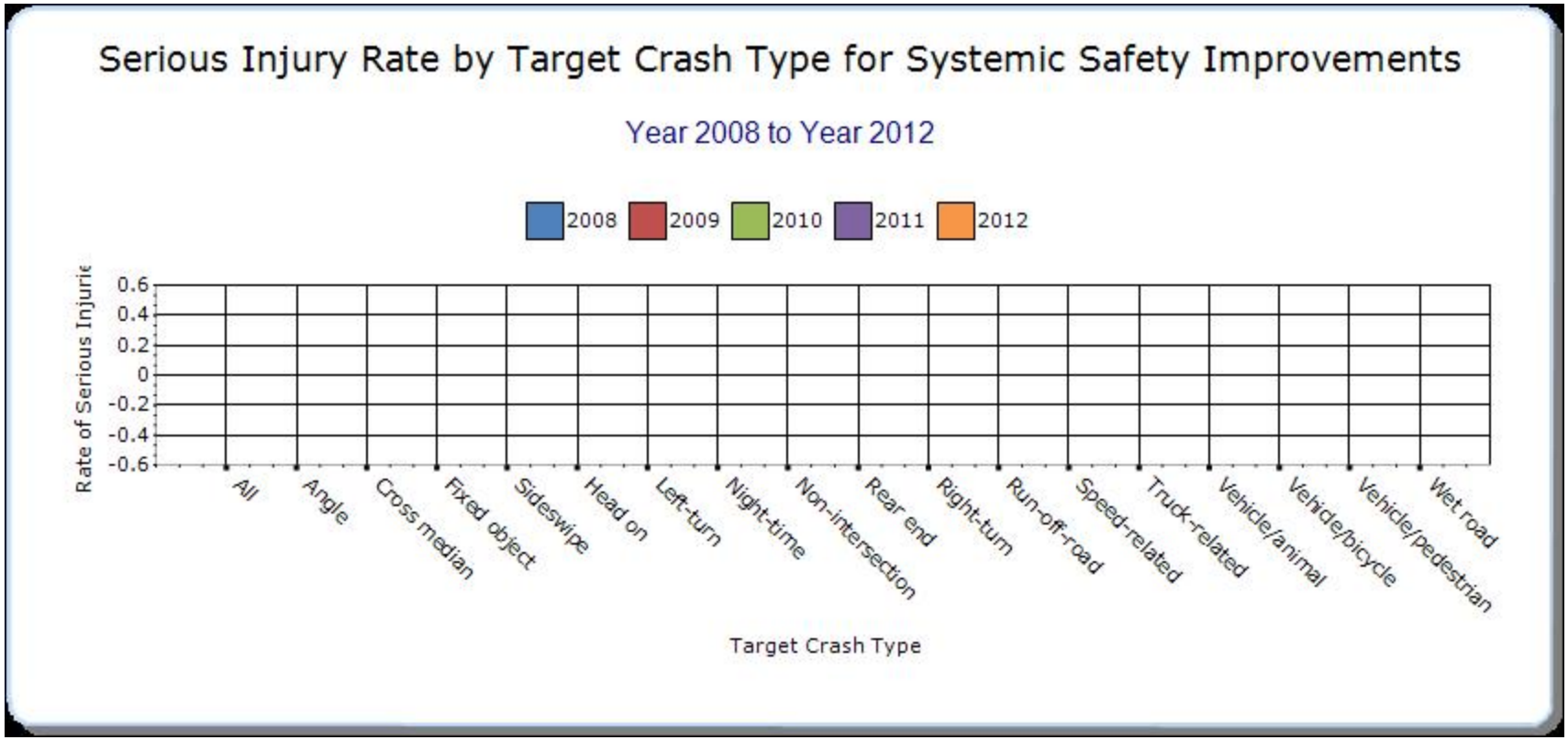
Year - 2012

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 2008 to Year 2012
2008
2009
2010
2011
2012
# 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 Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
# 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 Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
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 Systemic Safety Improvements
Year 2008 to Year 2012
2008
2009
2010
2011
2012
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

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

SCDOT completed 37 before and after studies on projects funded through the HSIP since the submission of last year's report. The average benefit/cost ratio of these projects is 16.66. The average crash rate reduction for the 37 projects was 47.7%.

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)
SC 90 [US 501 to S-20 (Sea Mountain Hwy)]	Rural Minor Arterial	Roadway delineation	Improve retroreflectivity	0	0	0	0	0	0	0	0	0	0	173.76
US 76 (Broad River Road) @ S-58 (Koon Road) & S-957 (Farming Creek Road)	Urban Minor Arterial	Intersection geometry	Intersection geometrics - modify skew angle	0	0	0	0	0	0	0	0	0	0	5.53
S-14 (Rev J W Carter Road)/ S-25 (Moses Dingle Road)/ S-62 (Loss Brook Road)/ S-127 (Bill Davis Road) @ S-64 (M W	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	0.75

Rickenbaker Road)														
S-47 (Brodie Road) @ S-77 (Two Notch Road)	Rural Major Collector	Intersection geometry	Intersection geometrics - modify skew angle	0	0	0	0	0	0	0	0	0	0	106.54
US 25 @ US 178 (Moorefield Street) & SC 185	Rural Principal Arterial - Other	Intersection geometry	Intersection geometry - other	0	0	0	0	0	0	0	0	0	0	2.66
US 1 (Meeting Street) @ S-370 (9th Street)	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	7.74
US 501 @ SC 41 Alternate	Rural Principal Arterial - Other	Interchange design	Convert at-grade intersection to interchange	0	0	0	0	0	0	0	0	0	0	7.37
US 301 (Alex Harvin Hwy) @ S-63 (Raccoon Road)	Urban Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	1.87
US 1 (Two Notch Road) @	Urban Principal	Intersection	Auxiliary lanes - add left-turn	0	0	0	0	0	0	0	0	0	0	-0.36

S-424 (Rabon Road)	Arterial - Other	geometry	lane											
SC 12 (Percival Road) @ S-63 (Alpine Road)	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	3.83
US 221 (Hampton Street/ Rutherfordton Hwy) @ US 221 Connector (Pickens Street) & S-146 (Oconee Street)	Rural Minor Arterial	Intersection geometry	Intersection geometrics - realignment to align offset cross streets	0	0	0	0	0	0	0	0	0	0	16.09
SC 914 (Memorial Park Road/ Grace Avenue) @ S-50 (Grace Avenue) & S-222 (Small Street)	Urban Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	3.13
US 321 (Savannah Hwy) @ SC 3 (Whetstone	Rural Principal Arterial -	Alignment	Horizontal curve realignment	0	0	0	0	0	0	0	0	0	0	10.07

Road)	Other													
US 221 (S Church Street Ext) @ S-540 (Airport Road)	Urban Principal Arterial - Other	Intersection geometry	Intersection geometrics - realignment to align offset cross streets	0	0	0	0	0	0	0	0	0	0	4.97
S-20 (Broad River Boulevard) @ S-40 (Joe Frazier Road)	Urban Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	5.85
SC 6 (Ranger Drive) @ SC 311 (Hwy 311) & S-135 (Mudville Road)	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	0.37
I-26 @ S-757 (Harbison Boulevard)	Urban Principal Arterial - Interstate	Intersection geometry	Intersection geometrics - re-assign existing lane use	0	0	0	0	0	0	0	0	0	0	4.15
SC 64 (Charleston Hwy) @ S-41	Rural Minor Arterial	Intersection geometry	Intersection geometrics - modify skew	0	0	0	0	0	0	0	0	0	0	63.7

(Ritter Road)			angle											
US 15 (N Marquis Hwy) @ S-10 (E Home Avenue)	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	1.33
S-9 (Cypress Gardens Road) @ S-791 (Old Hwy 52)	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	0.48
US 17 Alternate @ SC 61 (Hwy 61) [West Intersection]	Rural Minor Arterial	Intersection geometry	Intersection geometry - other	0	0	0	0	0	0	0	0	0	0	-0.23
US 21 (Wilson Boulevard) [Near S-83 Hard Scrabble Road)]	Urban Minor Arterial	Roadside	Barrier- metal	0	0	0	0	0	0	0	0	0	0	0.59
US 701 (Broad Street) @ SC 410	Rural Minor Arterial	Intersection geometry	Intersection geometry - other	0	0	0	0	0	0	0	0	0	0	0.34
US 15 (Jeffries Hwy) @ SC 61	Rural Major	Intersection geometry	Intersection geometry -	0	0	0	0	0	0	0	0	0	0	4.27

(Augusta Hwy)	Collector		other											
SC 295 (Southport Road) @ Dogwood Club Road	Urban Principal Arterial - Other	Intersection geometry	Intersection geometry - other	0	0	0	0	0	0	0	0	0	0	44.8
S-146 (MP 2.9 to 3.2) (Gray Mare Hollow Road)	Rural Major Collector	Alignment	Horizontal curve realignment	0	0	0	0	0	0	0	0	0	0	41.08
US 17 Alternate @ SC 61 (Beech Hill Road) [East Intersection]	Rural Minor Arterial	Intersection geometry	Intersection geometry - other	0	0	0	0	0	0	0	0	0	0	9.85
SC 421 (Augusta Road) @ SC 191 (Main Street) & S-81 (Howlandville Road)	Urban Minor Arterial	Intersection geometry	Intersection geometrics - re-assign existing lane use	0	0	0	0	0	0	0	0	0	0	5.76
SC 9 Business @ SC 410 & SC 917	Rural Major Collector	Intersection geometry	Intersection geometrics - realignment to align offset	0	0	0	0	0	0	0	0	0	0	0.79

			cross streets											
S-111 (Ott Road) @ Adger Road	Urban Principal Arterial - Other	Intersection geometry	Intersection geometrics - realignment to align offset cross streets	0	0	0	0	0	0	0	0	0	0	3.09
S-15 (George Rogers Boulevard) @ S-727 (Shop Road)	Urban Minor Arterial	Intersection geometry	Intersection geometry - other	0	0	0	0	0	0	0	0	0	0	31.5
S-424 (Rabon Road) @ S-1293 (Flora Road)	Urban Collector	Intersection geometry	Intersection geometrics - modify skew angle	0	0	0	0	0	0	0	0	0	0	3.96
SC 14 @ S-23 (Metric Road)	Rural Major Collector	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	1.18
SC 6 (Hwy 6/ W Main Street) @ S-315 (Old Whitesville Road) & S-16 (Cooper Store Road)	Rural Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	41.39

US 76/301 (Palmetto Street) @ S-354 (Dargan Street)	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	1.57
S-29 (N Cashua Drive) @ S-63 (Mechanicsville Road) & S-342 (N Douglas Street)	Urban Minor Arterial	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	2.15
SC 14 (SE Main Street) @ S-660 (Richardson Street/ W Fernwood Road)	Urban Principal Arterial - Other	Intersection geometry	Auxiliary lanes - add left-turn lane	0	0	0	0	0	0	0	0	0	0	4.37

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.