



Highway Safety Improvement Program
Data Driven Decisions

Washington
Highway Safety Improvement Program
2014 Annual Report

Prepared by: WA

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

The Washington state HSIP program funds both local safety (70%) and state highway safety (30%) programs. The program continues to be successful (25.86 B/C for projects closed in 2010). Projects going forward using HSIP funds target the top two (both priority one) infrastructure focus areas identified in the SHSP (Run-Off-the-Road and Intersections).

The HSIP program has had a major benefit and effect on road safety in Washington state. While state highways have allocated state funds to support safety efforts, in addition to HSIP funds, the majority of local road safety efforts are funded by the HSIP program. With 70% of fatal and serious injury crashes in the priority one focus areas, this is a desperately needed program for the state to have any possibility of achieving its Target Zero vision by 2030.

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.

The state uses a data-driven process to determine HSIP funding levels for state vs local roads. Our current SHSP (www.targetzero.com) has specific priority levels for types/causes/categories of fatal & serious injury crashes (some based on crash type, others based on driver behaviors, others based on user type). The top 2 infrastructure related priorities are Run-Off-the-Road crashes (priority 1) and Intersection crashes (priority 1). Evaluating crashes statewide for a 5 year period, we identify how many fatal & serious injury run-off-road crashes and how many fatal & serious injury intersection-related crashes occurred. That data is evaluated to see how many were on local agency responsibility roads compared to state responsibility roads. The HSIP funding is split by percentage based on that data.

Currently, that means that local agencies receive 70% of HSIP funds and the state receives 30% of HSIP funds.

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

- Design
- Planning
- Maintenance
- Operations
- Governors Highway Safety Office
- Other: Other-Risk
- Other: Other-Program Management
- Other: Other-Local Programs

Briefly describe coordination with internal partners.

Oversight for the 70% of the HSIP funds that are directed to local agencies is assigned to the Local Programs division for management (to identify local agency priorities, distribution of funds to counties & cities, individual project selection, federal oversight, project delivery, etc.).

Oversight for the 30% of the HSIP funds that are directed to the state is managed by our Highway Safety Executive Committee (HSEC). We do not have a specific highway safety office within the DOT. Instead, safety is part of everyone's responsibility. As such, safety oversight by HSEC provides an opportunity for major affected programs to provide input on safety issues. The HSEC is comprised of program directors from Design, Planning, Operations, Local Programs, Risk, and Program Management.

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

- Metropolitan Planning Organizations
- Governors Highway Safety Office

Local Government Association Other: Other-Panel of local agencies

The Local Programs division oversees the planning of HSIP funds for local agencies. In developing program methodology, local agency representatives and representatives of local agency associations are included in the decision-making process for agreement with the criteria in evaluating the projects for the programs. Those local agency representatives are identified with assistance from local government associations (city & county) to reflect a cross-section of those agencies.

For the City Safety program, representation includes FHWA, AWC (Association of Washington Cities), and city representatives from eastern and western Washington and from large, medium, and small cities.

For the County Safety program, representation includes FHWA, WSACE (Washington State Association of County Engineers), CRAB (County Road Administration Board), and county representatives from eastern and western Washington and from large and small counties.

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

Program Methodology

Select the programs that are administered under the HSIP.

- | | | |
|---|---|--|
| <input type="checkbox"/> Median Barrier | <input type="checkbox"/> Intersection | <input checked="" type="checkbox"/> Safe Corridor |
| <input type="checkbox"/> Horizontal Curve | <input type="checkbox"/> Bicycle Safety | <input type="checkbox"/> Rural State Highways |
| <input type="checkbox"/> Skid Hazard | <input type="checkbox"/> Crash Data | <input type="checkbox"/> Red Light Running Prevention |
| <input type="checkbox"/> Roadway Departure | <input type="checkbox"/> Low-Cost Spot Improvements | <input type="checkbox"/> Sign Replacement And Improvement |
| <input type="checkbox"/> Local Safety | <input type="checkbox"/> Pedestrian Safety | <input type="checkbox"/> Right Angle Crash |
| <input type="checkbox"/> Left Turn Crash | <input type="checkbox"/> Shoulder Improvement | <input type="checkbox"/> Segments |
| <input checked="" type="checkbox"/> Other: Other-State - Collision Analysis Corridors | <input checked="" type="checkbox"/> Other: Other-State - Collision Analysis Locations | <input checked="" type="checkbox"/> Other: Other-State - Intersection Analysis Locations |
| <input checked="" type="checkbox"/> Other: Other-Local - City Safety Program | <input checked="" type="checkbox"/> Other: Other-Local - County Safety Program | |

The state HSIP program focuses on Collision Analysis Corridors (CACs), which are generally focused on Roadway Departure safety. The program also focuses on Collision Analysis Locations (CALs) and Intersection Analysis Locations (IALs) which are both generally related to Intersection safety.

The local HSIP program focuses on a County Safety Program - primarily Roadway Departure with some Intersection focus, and a City Safety Program - primarily an Intersection focus. It also funds the Corridor Safety Program on city & county roadways.

Program: Safe Corridor

Date of Program Methodology: 1/1/2004

What data types were used in the program methodology?

Crashes

- All crashes
- Fatal crashes only
- Fatal and serious injury crashes only
- Other

Exposure

- Traffic
- Volume
- Population
- Lane miles
- Other

Roadway

- Median width
- Horizontal curvature
- Functional classification
- Roadside features
- 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-Agreement between program managers at WSDOT and the Governor's Highway Safety Office, based on data & local leadership

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 Available funding 3 Incremental B/C Ranking based on net benefit Other Fatal & serious injury crash history 1 Local leadership & interest 2

Program: Other-State - Collision Analysis Corridors

Date of Program Methodology: 1/1/2012

What data types were used in the program methodology?

Crashes

- All crashes
- Fatal crashes only
- Fatal and serious injury crashes only
- Other-Fatal, serious, and evident injury crashes only

Exposure

- Traffic
- Volume
- Population
- Lane miles
- Other

Roadway

- Median width
- Horizontal curvature
- Functional classification
- Roadside features
- 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 1
- Available funding 2
- Incremental B/C
- Ranking based on net benefit

Other

Program: Other-State - Collision Analysis Locations

Date of Program Methodology: 1/1/2012

What data types were used in the program methodology?

Crashes

 All crashes Fatal crashes only Fatal and serious injury
crashes only Other-Fatal, serious, and
evident injury crashes only

Exposure

 Traffic Volume Population Lane miles Other

Roadway

 Median width Horizontal curvature Functional classification Roadside features 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 1
- Available funding 2

- Incremental B/C
- Ranking based on net benefit
- Other

Program: Other-State - Intersection Analysis Locations

Date of Program Methodology: 1/1/2012

What data types were used in the program methodology?

Crashes

- All crashes
- Fatal crashes only
- Fatal and serious injury crashes only
- Other-Fatal, serious, and evident injury crashes only

Exposure

- Traffic
- Volume
- Population
- Lane miles
- Other

Roadway

- Median width
- Horizontal curvature
- Functional classification
- Roadside features
- 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 1
- Available funding 2
- Incremental B/C
- Ranking based on net benefit
- Other

Program: Other-Local - City Safety Program

Date of Program Methodology: 1/1/2011

What data types were used in the program methodology?

<i>Crashes</i>	<i>Exposure</i>	<i>Roadway</i>
<input type="checkbox"/> All crashes	<input type="checkbox"/> Traffic	<input type="checkbox"/> Median width
<input type="checkbox"/> Fatal crashes only	<input type="checkbox"/> Volume	<input type="checkbox"/> Horizontal curvature
<input checked="" type="checkbox"/> Fatal and serious injury crashes only	<input type="checkbox"/> Population	<input type="checkbox"/> Functional classification
<input type="checkbox"/> Other	<input type="checkbox"/> Lane miles	<input type="checkbox"/> Roadside features
	<input type="checkbox"/> Other	<input type="checkbox"/> 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

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

Program: Other-Local - County Safety Program**Date of Program Methodology:** 1/1/2014**What data types were used in the program methodology?***Crashes* All crashes Fatal crashes only Fatal and serious injury
crashes only Other*Exposure* Traffic Volume Population Lane miles Other*Roadway* Median width Horizontal curvature Functional classification Roadside features 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-Allocation of funds to each county based on rate of fatal & serious injury crashes per mile

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

Available funding 1

Incremental B/C

Ranking based on net benefit

Other

Completion of Local Road Safety Plan 1

All state programs make use of Safety Analyst for identification of locations to consider for improvement.

City Safety Program includes elements of both high-cost spot improvements and low-cost systemic safety improvements.

County Safety Program is focused on low-cost systemic safety improvements. Counties are now required to submit a local road safety plan to be eligible to apply for funds. Allocation of funds is based on available funding with counties being required to meet certain criteria for approval for project award.

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

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

- | | |
|---|---|
| <input checked="" type="checkbox"/> Cable Median Barriers | <input checked="" type="checkbox"/> Rumble Strips |
| <input type="checkbox"/> Traffic Control Device Rehabilitation | <input type="checkbox"/> Pavement/Shoulder Widening |
| <input checked="" type="checkbox"/> Install/Improve Signing | <input checked="" type="checkbox"/> Install/Improve Pavement Marking and/or Delineation |
| <input checked="" type="checkbox"/> Upgrade Guard Rails | <input checked="" type="checkbox"/> Clear Zone Improvements |
| <input type="checkbox"/> Safety Edge | <input type="checkbox"/> Install/Improve Lighting |
| <input type="checkbox"/> Add/Upgrade/Modify/Remove Traffic Signal | <input type="checkbox"/> Other |

50% is an estimate. The majority of county projects have been systemic. A dedicated portion of city projects are systemic, and some of the "high-cost" projects also implement systemic improvements. And a portion of state funds have also been used for systemic safety.

What process is used to identify potential countermeasures?

- Engineering Study
- Road Safety Assessment
- Other:

The majority of projects selected use engineering studies. A few projects use a road safety assessment process.

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.

While the County Safety Program has used a systemic safety approach in the past, the current requirement to develop a local road safety plan as part of the application process for HSIP funds is new.

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)	74262986	46 %	58432514	51 %
HRRRP (SAFETEA-LU)				
HRRR Special Rule				
Penalty Transfer - Section 154				
Penalty Transfer - Section 164	2617742	2 %	2617742	2 %
Incentive Grants - Section 163				
Incentive Grants (Section 406)				
Other Federal-aid Funds (i.e. STP, NHPP)	50290533	31 %	23434148	21 %
State and Local Funds	17007968	10 %	16608683	15 %

Other MAP-21 Behavioral	10573325	7 %	4989556	4 %
Other Section 402: State and Community Highway Safety	6080397	4 %	5993854	5 %
Other Section 405: Occupant Protection Incentive Grants	320253	0 %	320253	0 %
Other Section 408: State Traffic Safety Information System Improvement	457251	0 %	457251	0 %
Other Section 410: Alcohol Impaired Driving Countermeasures Incentive	393248	0 %	393248	0 %
Other Section 2010: Incentive Grant to Increase Motorcycle Safety	202165	0 %	202165	0 %
Other Section 2011: Child Safety & Child Booster Seats Incentive Grant	160954	0 %	160954	0 %
Totals	162366822	100%	113610368	100%

HSIP, Other Federal Funds (primarily STP Safety funds), and State and Local funds represent Calendar Year 2013. Programmed and obligated funds are both based on projects in the 2013 STIP (see additional details below). Note that most projects include some safety elements and countermeasures, in larger or smaller shares of other projects using federal funds. These projects are not captured here, in part because it would be very difficult to break out the safety funding versus non-safety funding within those projects. However, additional information and projects are available if requested. It should be noted that the local funds included in the table are what was "committed" to the projects as part of a match, but are not officially "obligated" as they are not federal funds.

Local Agency Projects: Programmed values are from the 2013 STIP. Obligated values are from SPORT (internal program) for projects in the 2013 STIP.

State Projects: Programmed values are from the 2013 STIP for federal funds and from the state I2 (Safety) program for state & local & 164 funds. Obligated values are from the state I2 (Safety) program for expenditures in 2013.

Behavioral Projects: Behavioral funds are administered by the Washington Traffic Safety Commission (WTSC). These figures represent federal fiscal year 2014, including carry forward funds for some categories. Programmed reflects funds that have been transferred from NHTSA to the WTSC. Obligated reflects funds that have been allocated to specific projects.

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

\$82,374,758.00

How much funding is obligated to local safety projects?

\$60,783,304.00

Note that the local funding shown in answer to this question does not include any of the behavioral funds/programs shown in Question 17. Only the split for infrastructure-related projects is shown.

Also note that for HSIP funds, the funding is split 70% programmed/obligated for local safety projects, 30% programmed/obligated for state safety projects.

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

\$18,187,593.00

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

\$12,517,281.00

Note that none of the HSIP funds are directed to non-infrastructure projects. These funds represent only the behavioral funds shown in Question 17.

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 biggest impediment to obligating HSIP funds has been getting realistic schedules for local agency projects. For future project awards, several additional scheduling milestones have been included on application forms, to help local agencies think through all of the parts of the project life. With MAP-21 requirements, projects will also be held to a strict project delivery schedule or will have funds rescinded.

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

None

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
City of Bellingham - Ohio/King St. Intersection Safety	Intersection traffic control Intersection traffic control - other	3 Number s	31500 0	0	HSIP (Section 148)	Urban Minor Arterial	0	0	City of Municipal Highway Agency	Intersections	1.9 Restrict or eliminate turning maneuvers at intersections.
Franklin County - Countywide Safety Improvements	Roadside Barrier-metal	65 Miles	49820 6	0	HSIP (Section 148)		0	0	County Highway Agency	Roadway Departure	2.2 Install/maintain roadside safety hardware such as guardrail.
WSDOT - US 2/SR 20 Corridor Safety	Intersection geometry Intersection geometrics - modify intersection	1 Number s	46785 8	0	HSIP (Section 148)		0	0	State Highway Agency	Intersections	

	corner radius										
Lincoln County - Countywide Low Cost Safety	Roadway signs and traffic control Roadway signs (including post) - new or updated	81 Miles	481227	0	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	1.1 Improve roadway signing and shoulder delineation, especially in curves.
City of Mount Vernon - College/Urban Signal	Intersection traffic control Intersection traffic control - other	1 Numbers	840300	0	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	City of Municipal Highway Agency	Intersections	
Pend Oreille County - Deer Valley Road HES	Roadway signs and traffic control Roadway signs (including post) - new or updated	13 Miles	31320	0	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	1.1 Improve roadway signing and shoulder delineation, especially in curves.

City of Seattle - SR 99 @ N. 90th Street	Intersection traffic control Modify traffic signal timing - left-turn phasing (permissive to protected-only)	1 Number s	14642 7	0	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	City of Municipal Highway Agency	Intersectio ns	1.5 Convert permitted left turns to protected left turns at signals.
City of Seattle - 15th Avenue SW @ Roxbury	Intersection traffic control Modify traffic signal timing - left-turn phasing (permissive to protected-only)	1 Number s	15279 0	0	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	City of Municipal Highway Agency	Intersectio ns	1.5 Convert permitted left turns to protected left turns at signals.
City of Seattle - Harvard & Pike Signal	Intersection traffic control Intersection traffic control - other	1 Number s	78696	0	HSIP (Section 148)	Urban Minor Arterial	0	0	City of Municipal Highway Agency	Intersectio ns	

City of Seattle - Rainier Ave. South-Corridor Safety	Intersection traffic control Systemic improvements - signal-controlled	1 Numbers	125800	0	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	City of Municipal Highway Agency	Intersections	4.3 Extend crossing times and implement pedestrian lead intervals.
City of Spokane - Wellesley & Belt Signal	Intersection traffic control Intersection traffic control - other	1 Numbers	345000	0	HSIP (Section 148)	Urban Minor Arterial	0	0	City of Municipal Highway Agency	Intersections	1.5 Convert permitted left turns to protected left turns at signals.
Spokane County - Argonne Rd. @ Maringo Dr.	Intersection geometry Auxiliary lanes - add left-turn lane	1 Numbers	140549	0	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	County Highway Agency	Intersections	1.3 Provide/improve left- and right-turn channelization.
City of Tacoma - So. 78th St/Tac Mall Blvd HES	Intersection traffic control Intersection traffic control - other	1 Numbers	157500	0	HSIP (Section 148)	Urban Major Collector	0	0	City of Municipal Highway Agency	Intersections	

City of Vancouver - NE 49th/122nd Intersection	Intersection traffic control Intersection traffic control - other	1 Number s	22500 0	0	HSIP (Section 148)	Urban Major Collector	0	0	City of Municipal Highway Agency	Intersectio ns	1.3 Provide/impro ve left- and right-turn channelization.
City of Vancouver - Evergreen Blvd: Blandford-Andresen	Shoulder treatments Widen shoulder - paved or other	1 Number s	34200 0	0	HSIP (Section 148)	Urban Minor Arterial	0	0	City of Municipal Highway Agency	Roadway Departure	1.2 Improve roadway geometry.
City of Vancouver - Mill Plain Blvd Street Lighting	Lighting Continuous roadway lighting	1 Number s	10000 0	0	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	City of Municipal Highway Agency	Roadway Departure	1.5 Install/increase illumination at locations with night time crashes.
City of Vancouver - Fourth Plain: Ft. Vancouver to Falk	Pedestrians and bicyclists Medians and pedestrian refuge areas	1 Number s	52500 0	0	HSIP (Section 148)	Urban Principal Arterial - Other	0	0	City of Municipal Highway Agency	Pedestrians	4.1 Improve safety at pedestrian crossings by installing refuge islands.
Walla Walla County - Five	Shoulder treatments	2 Miles	72452	0	HSIP (Section	Rural Major	0	0	County Highway	Roadway	1.2 Improve roadway

Mile Road MP 0.0 to MP 2.0	Widen shoulder - paved or other		1		148)	Collector			Agency	Departure	geometry.
Yakima County - High Risk Rural Corridors	Roadside Roadside grading	2 Miles	46496 3	0	HSIP (Section 148)	Rural Major Collector	0	0	County Highway Agency	Roadway Departure	2.3 Design safer slopes and ditches to prevent rollovers.

The report template does not allow for any descriptors with the "numbers" outputs. So we are unable to help differentiate between intersections, corridors, lanes, curves, etc., using the table provided.

Progress in Achieving Safety Performance Targets

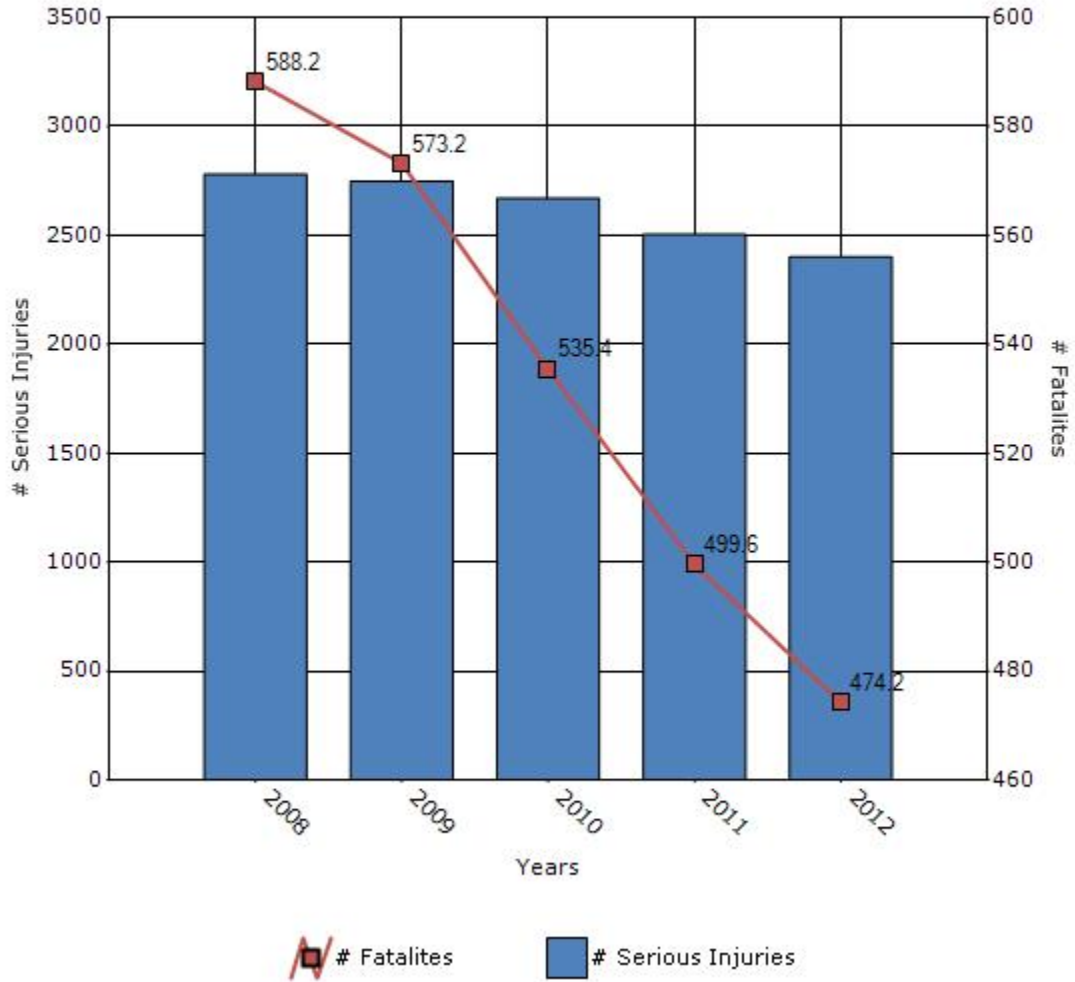
Overview of General Safety Trends

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

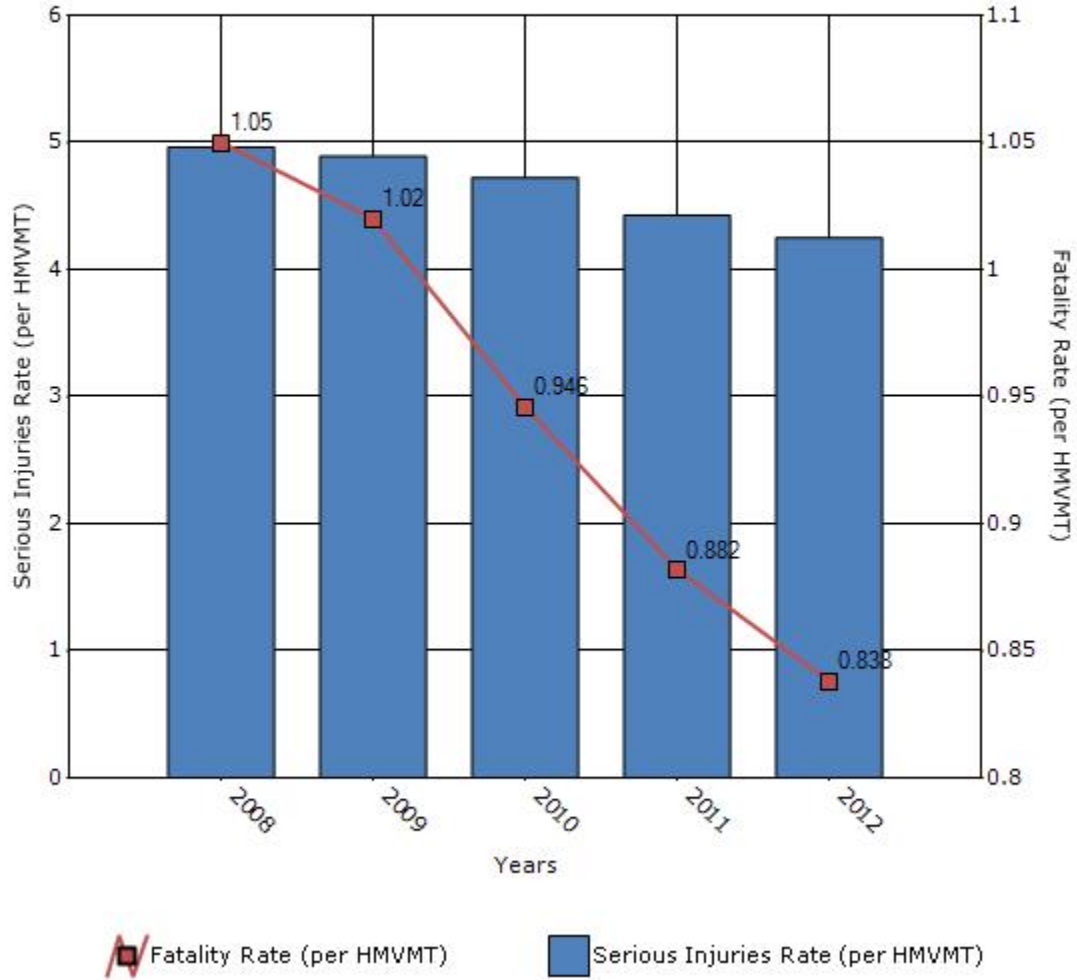
Performance Measures*	2008	2009	2010	2011	2012
Number of fatalities	588.2	573.2	535.4	499.6	474.2
Number of serious injuries	2779.2	2747.6	2670	2504	2400.4
Fatality rate (per HMVMT)	1.05	1.02	0.946	0.882	0.838
Serious injury rate (per HMVMT)	4.962	4.89	4.724	4.426	4.25

*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



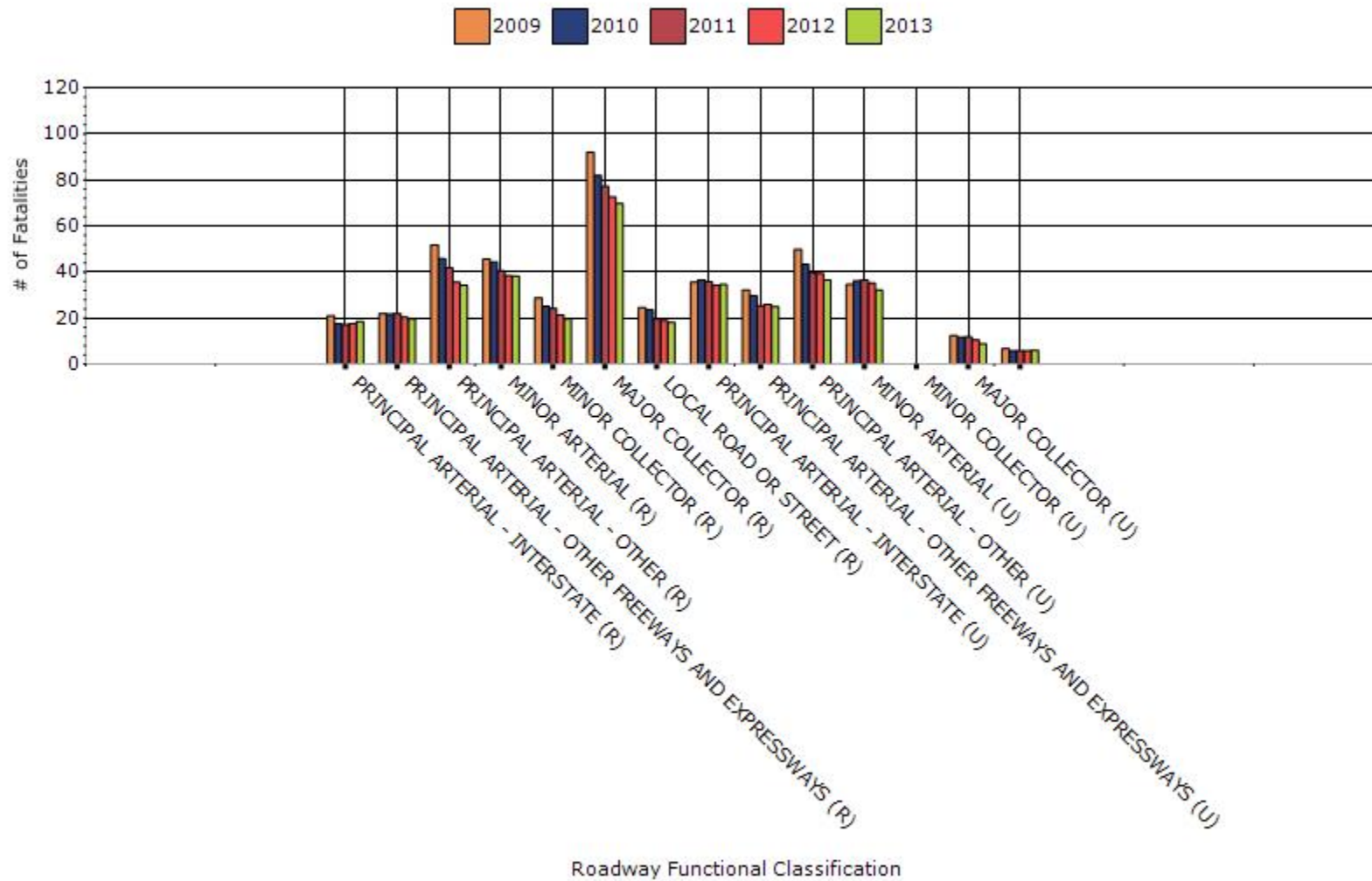
To the maximum extent possible, present performance measure* data by functional classification and ownership.

Year - 2013

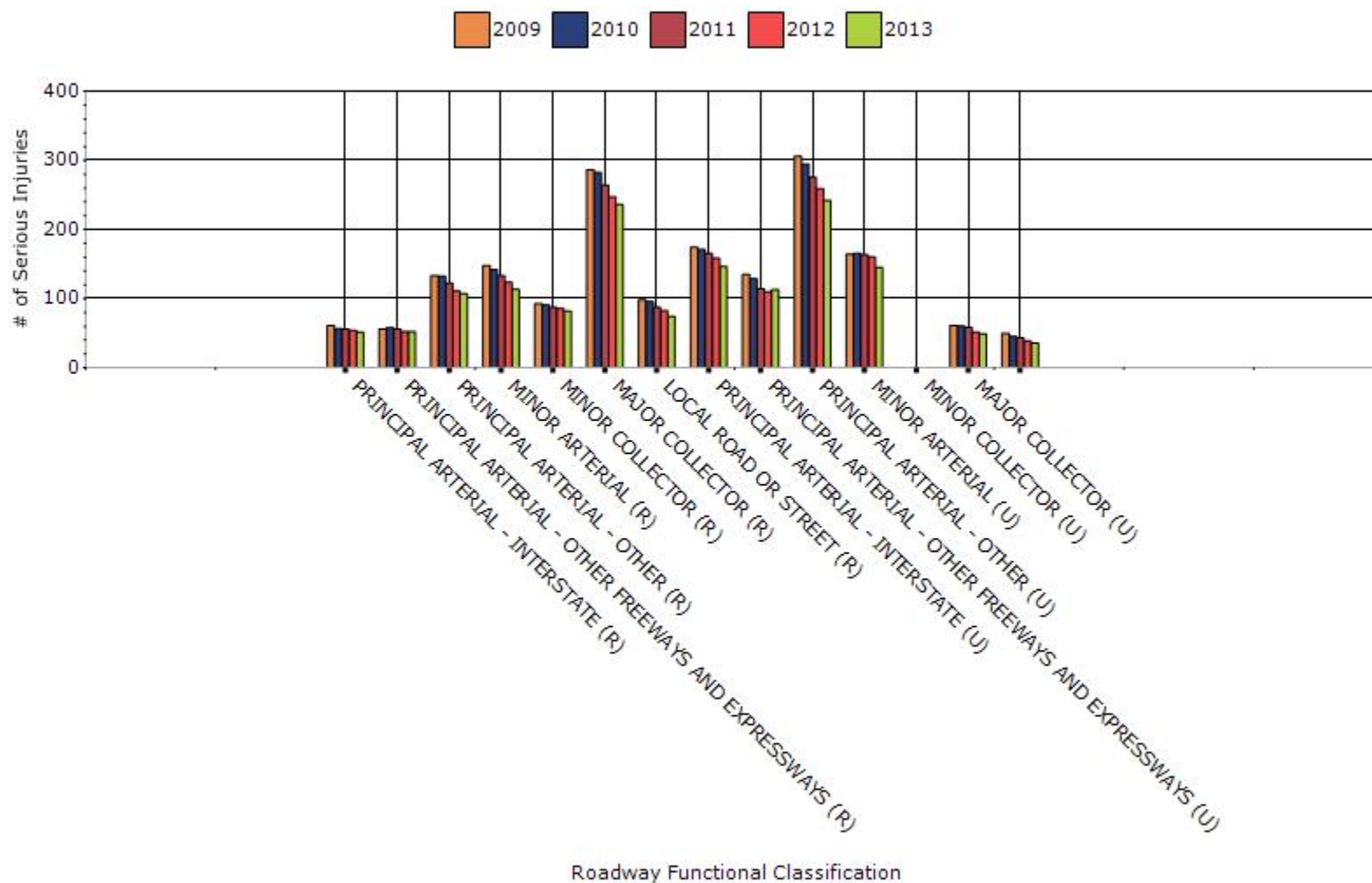
Function Classification	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
RURAL PRINCIPAL ARTERIAL - INTERSTATE	18.6	51.8	0.41	1.15
RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	19.6	52.2	0.94	2.37
RURAL PRINCIPAL ARTERIAL - OTHER	34.2	107	1.38	4.25
RURAL MINOR ARTERIAL	38.2	113.4	1.83	5.42
RURAL MINOR COLLECTOR	19.6	82.2	1.74	7.3
RURAL MAJOR COLLECTOR	69.8	236.2	1.84	6.2
RURAL LOCAL ROAD OR STREET	18.2	74.6	1.57	6.38
URBAN PRINCIPAL	34.6	146.8	0.32	1.34

ARTERIAL - INTERSTATE				
URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS	25	112.8	0.47	2.14
URBAN PRINCIPAL ARTERIAL - OTHER	36.6	242	0.41	2.74
URBAN MINOR ARTERIAL	32.2	145	0.43	1.93
URBAN MINOR COLLECTOR	0	0	0	0
URBAN MAJOR COLLECTOR	8.8	49.2	0.28	1.57
URBAN LOCAL ROAD OR STREET	6	35.6	0.14	0.81

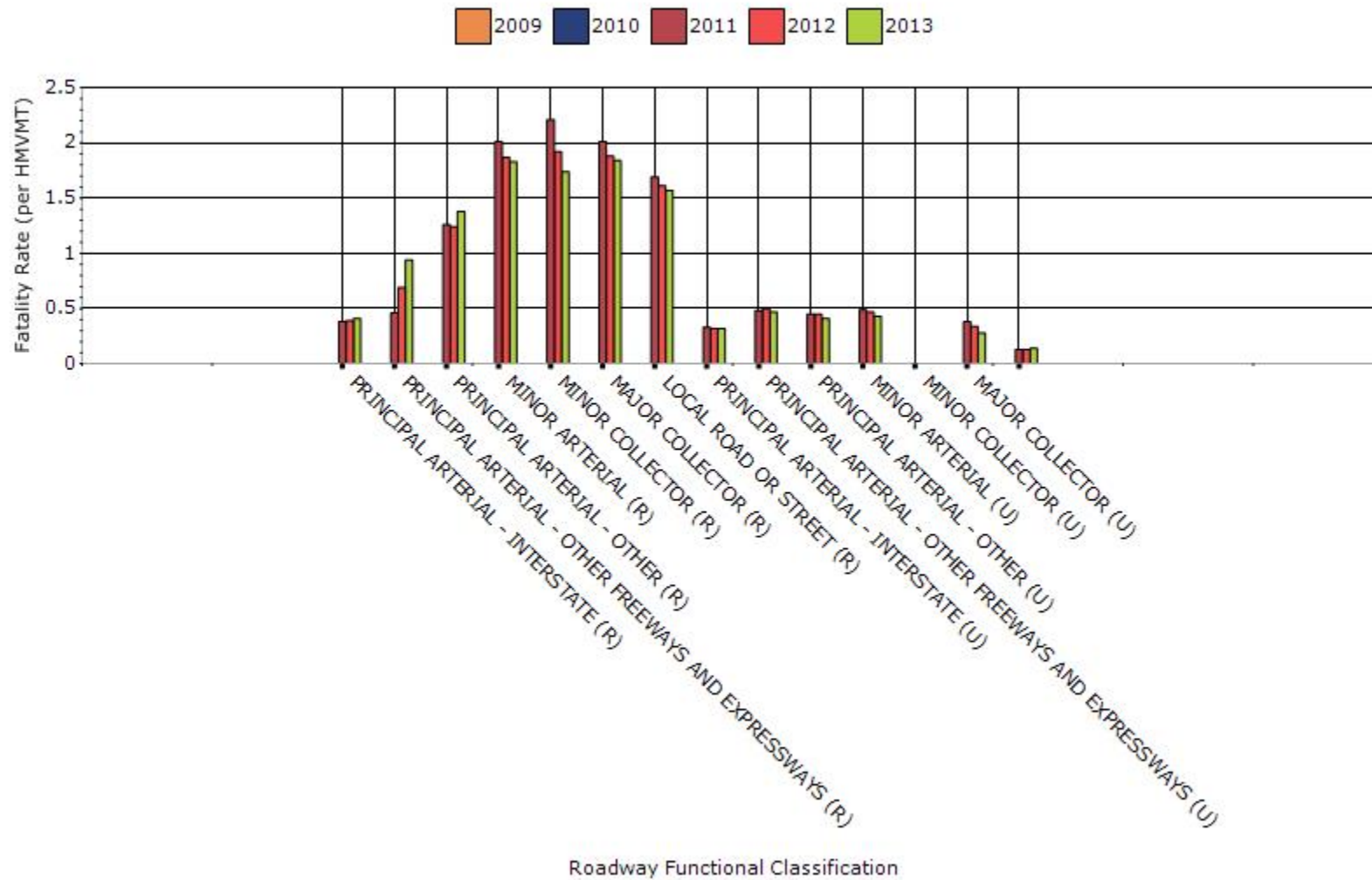
Fatalities by Roadway Functional Classification



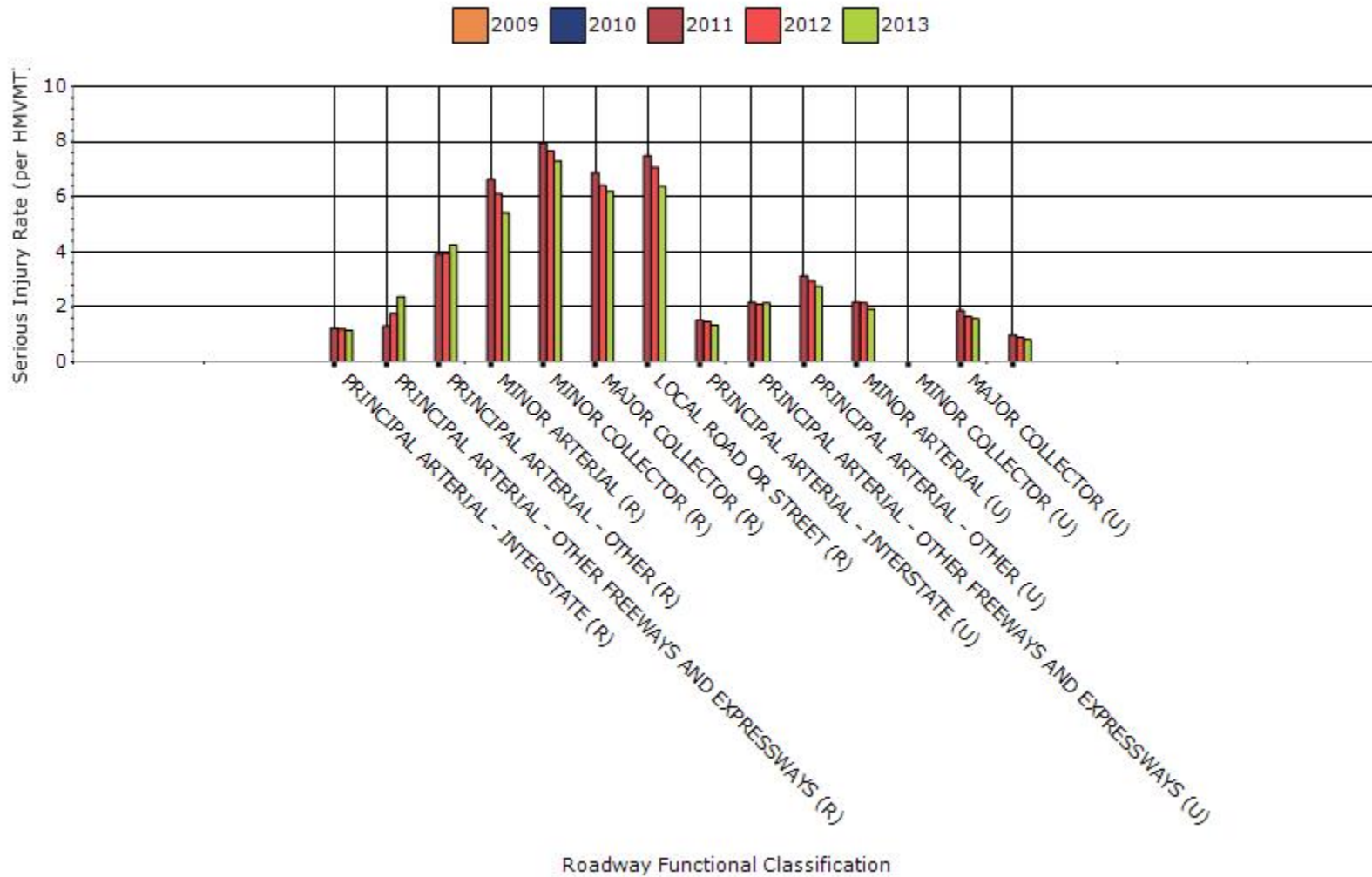
Serious Injuries by Roadway Functional Classification



Fatality Rate by Roadway Functional Classification



Serious Injury Rate by Roadway Functional Classification

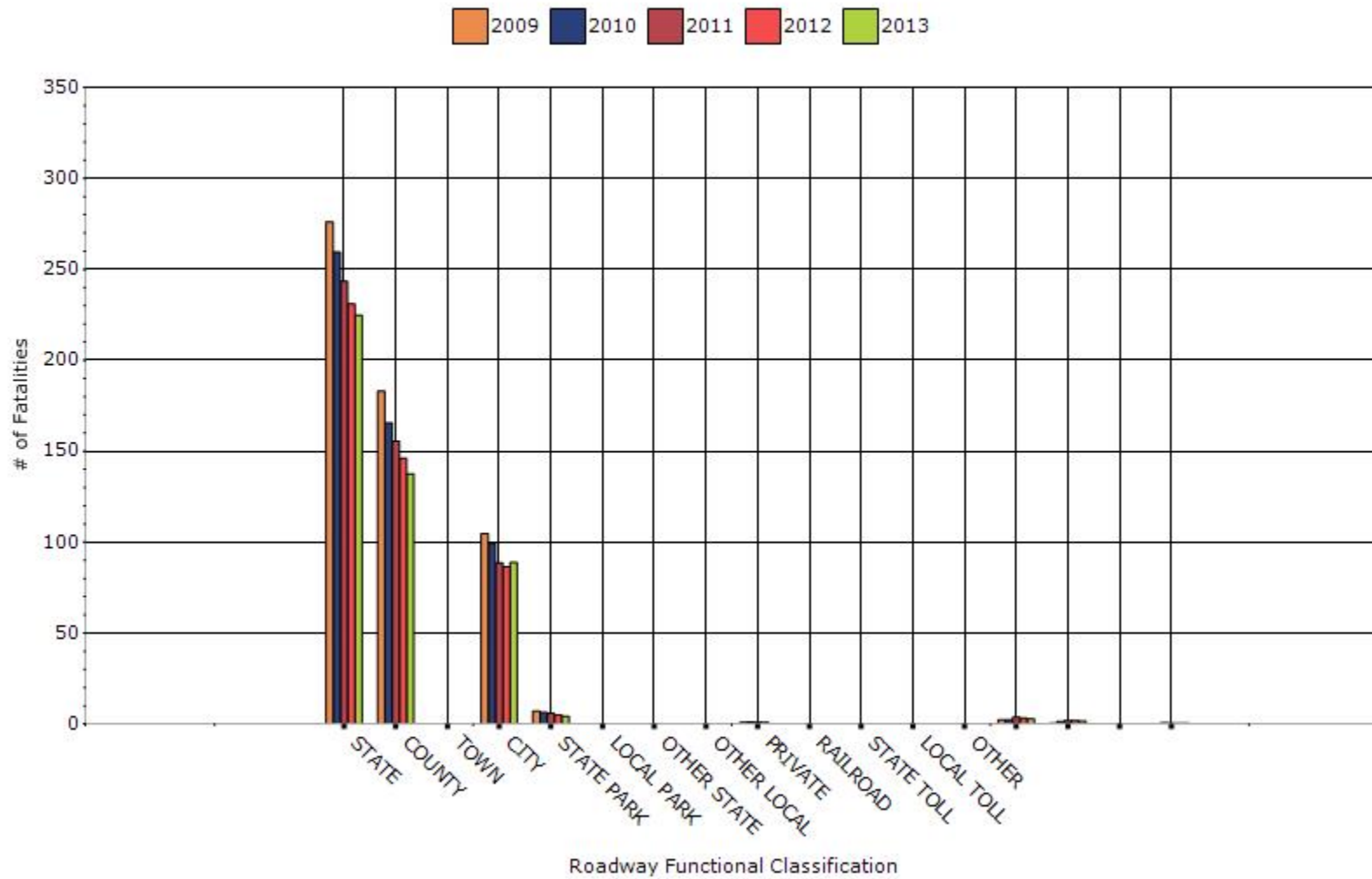


Year - 2013

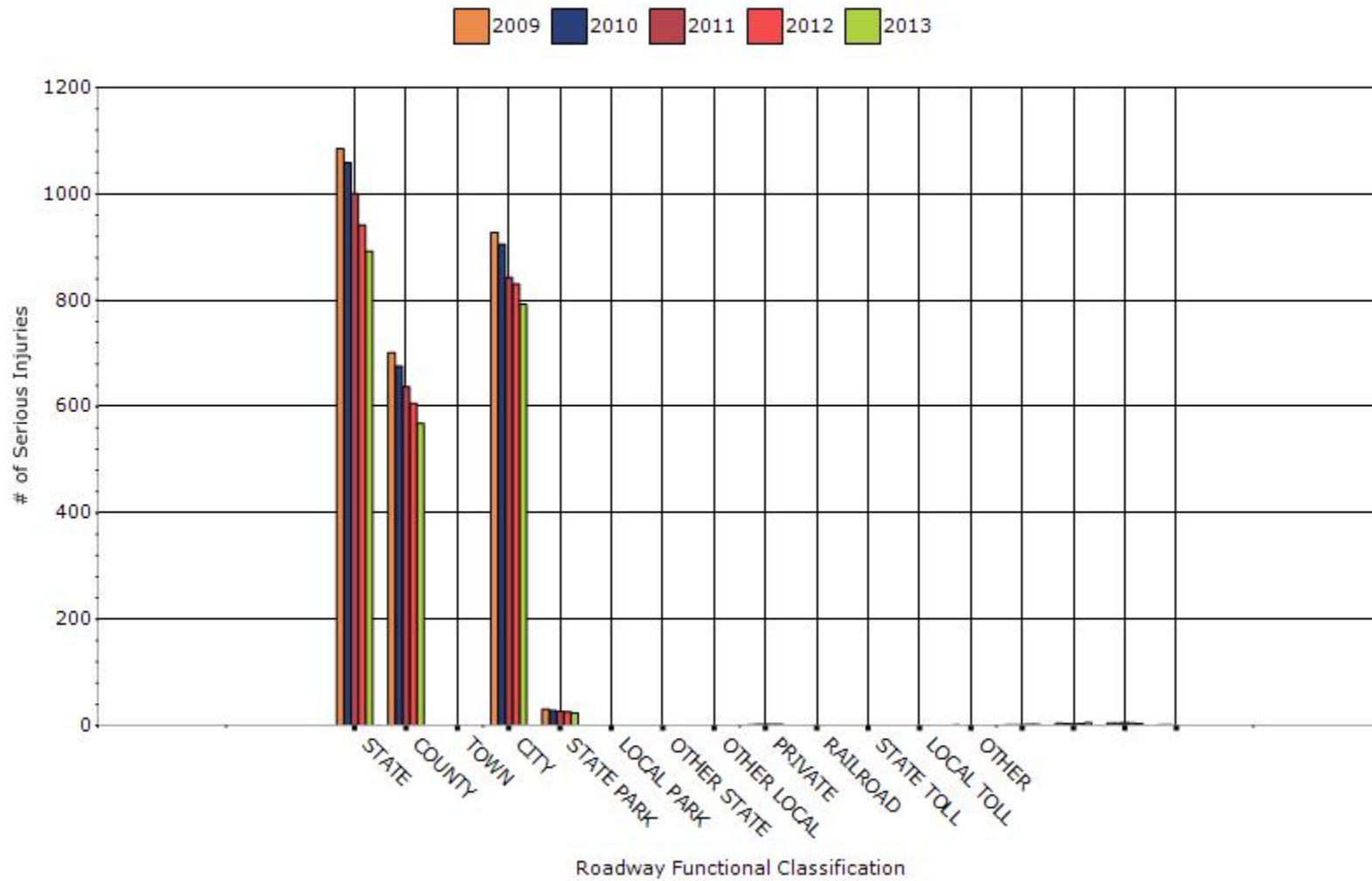
Roadway Ownership	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)
STATE HIGHWAY AGENCY	224.8	892	0.71	2.83
COUNTY HIGHWAY AGENCY	137.6	568.6	1.48	6.13
TOWN OR TOWNSHIP HIGHWAY AGENCY	0	0	0	0
CITY OF MUNICIPAL HIGHWAY AGENCY	88.8	792.4	0.58	5.19
STATE PARK, FOREST, OR RESERVATION AGENCY	4.2	23.8	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)	0.2	2.2	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	0.6	0	0
INDIAN TRIBE NATION	2.8	2.2	0	0

OTHER	1.6	5	0	0
FEDERAL	0.2	3.4	0	0
NATIONAL PARK	0.4	0.2	0	0

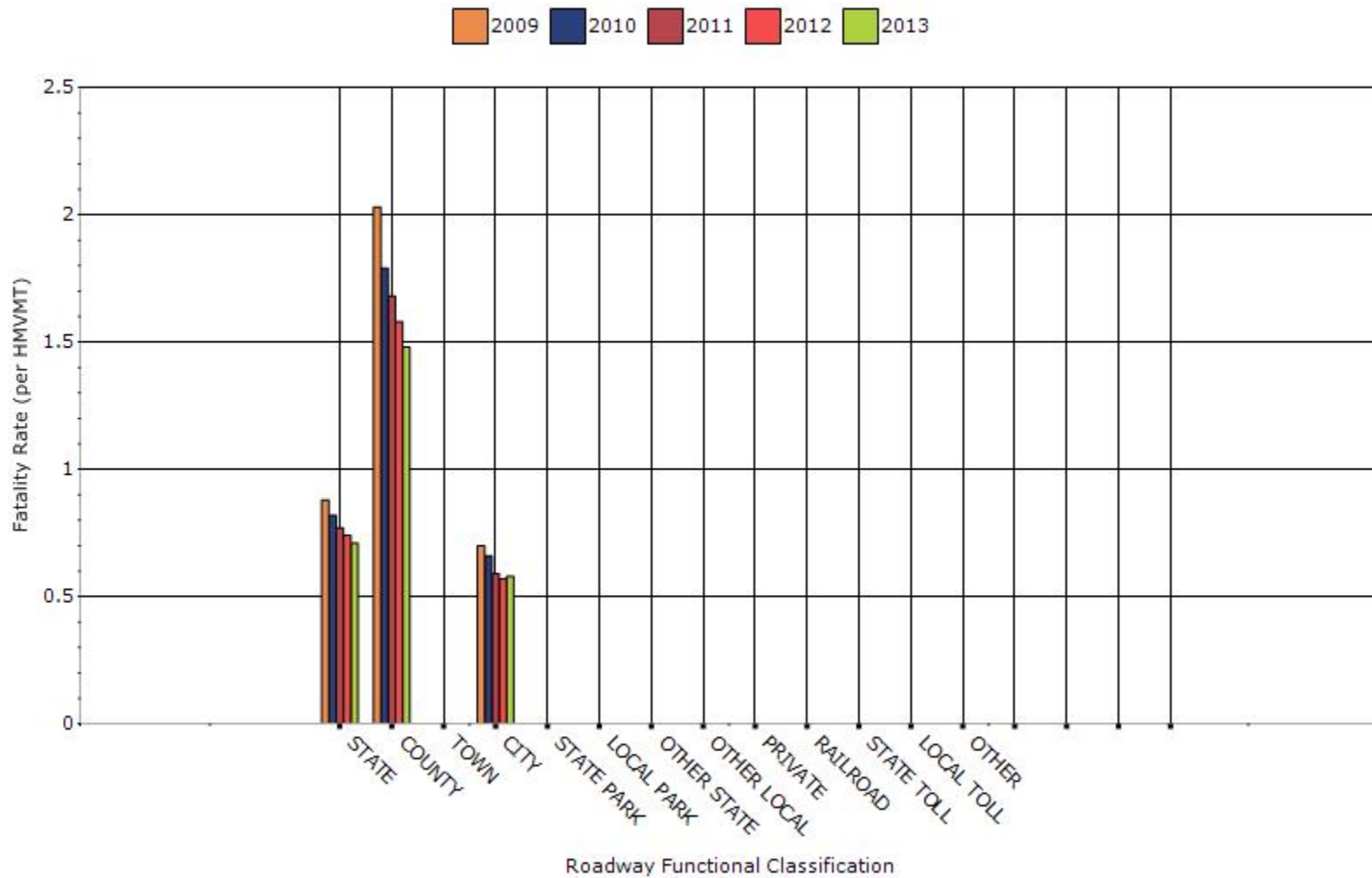
Number of Fatalities by Roadway Ownership



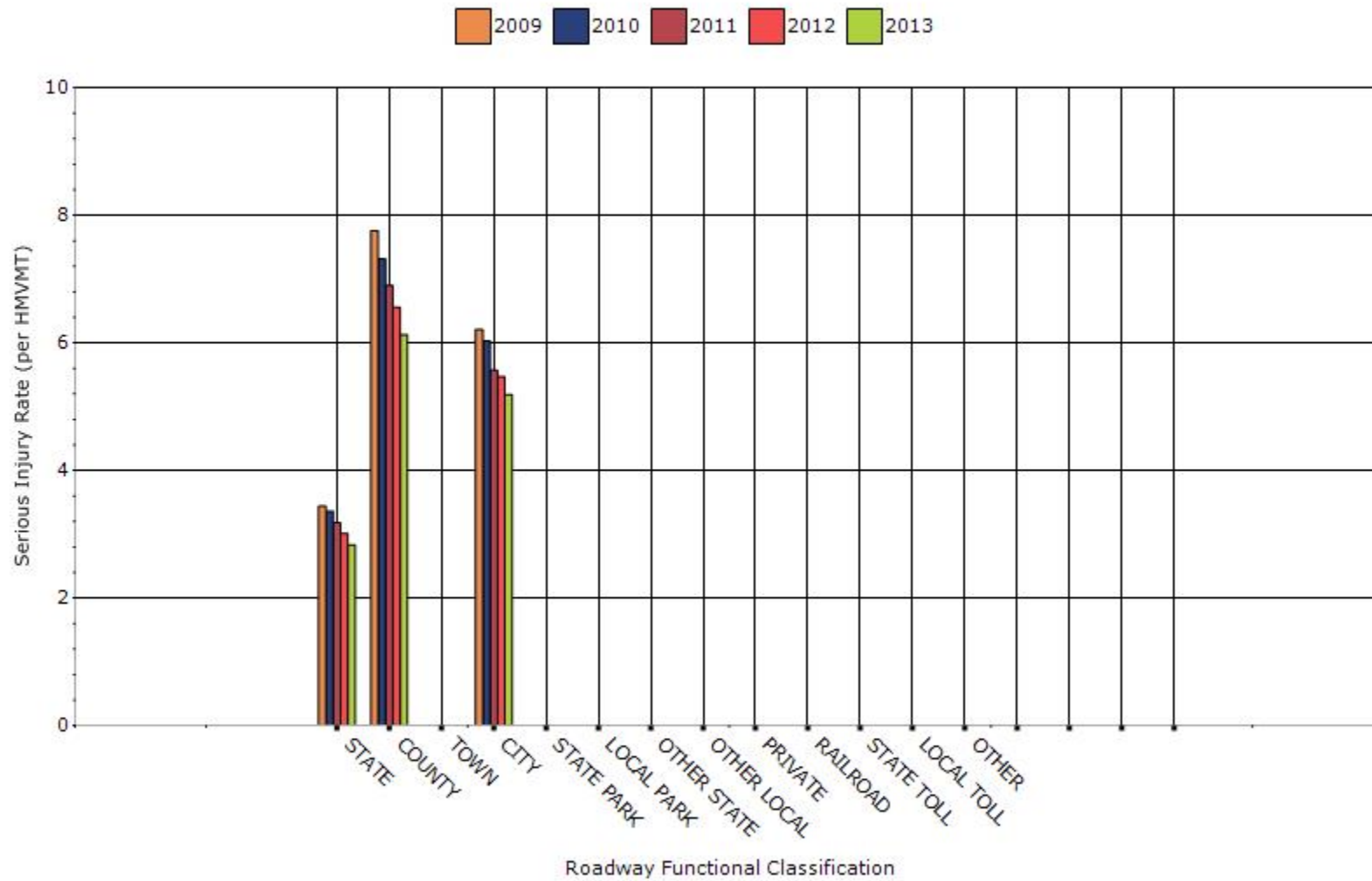
Number of Serious Injuries by Roadway Ownership



Fatality Rate by Roadway Ownership



Serious Injury Rate by Roadway Ownership



The functional classification data ONLY includes state and county road data. Our state database does not include federal functional classification for crashes on city streets or miscellaneous roadways. So the rural information should be accurate. The urban information would change significantly with this missing data. This also means that the rate per facility type (especially for urban crashes) is not accurate either.

The jurisdiction type data does not split out the miscellaneous roadways into sub-categories for VMT. So the rates are only shown for state, county, and city roads.

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

While the most recent update to the state Strategic Highway Safety Plan: Target Zero (updated in 2013) showed significant progress and downward trends for both fatalities and serious injuries, the most recent 2-3 years have showed a flattening of the curve. This might be counted as success, considering the majority of states showed an increase during these same years. However, continued progress will need to be made to achieve our goal of Target Zero.

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	2009	2010	2011	2012	2013
Performance Measures					
Fatality rate (per capita)	0.684	0.614	0.628	0.614	0.46
Serious injury rate (per capita)	1.662	1.646	1.592	1.578	1.242
Fatality and serious injury rate (per capita)	2.344	2.258	2.218	2.19	1.7

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

FHWA shared the following information on population (# people 65+ per 1000 state population):
2005 = 111, 2006 = 115, 2007 = 117, 2008 = 120, 2009 = 120, 2010 = 123, 2011 = 126, 2012 = 132

Calculate rate to 0.01, round final result to 0.1. Rate calculation example:

$$2012 \text{ F+SI Rate} = [(2012 \text{ F+SI} / \text{Pop}) + (2011 \text{ F+SI} / \text{Pop}) + (2010 \text{ F+SI} / \text{Pop}) + (2009 \text{ F+SI} / \text{Pop}) + (2008 \text{ F+SI} / \text{Pop})] / 5$$

FARS (for fatalities) and WSDOT state collision repository (for serious injuries) shows older road users (65+) in crashes as:

2005 = 104 fatalities, 213 serious injuries

2006 = 69 fatalities, 195 serious injuries

2007 = 74 fatalities, 174 serious injuries

2008 = 92 fatalities, 202 serious injuries

2009 = 57 fatalities, 182 serious injuries

2010 = 73 fatalities, 226 serious injuries

2011 = 85 fatalities, 180 serious injuries

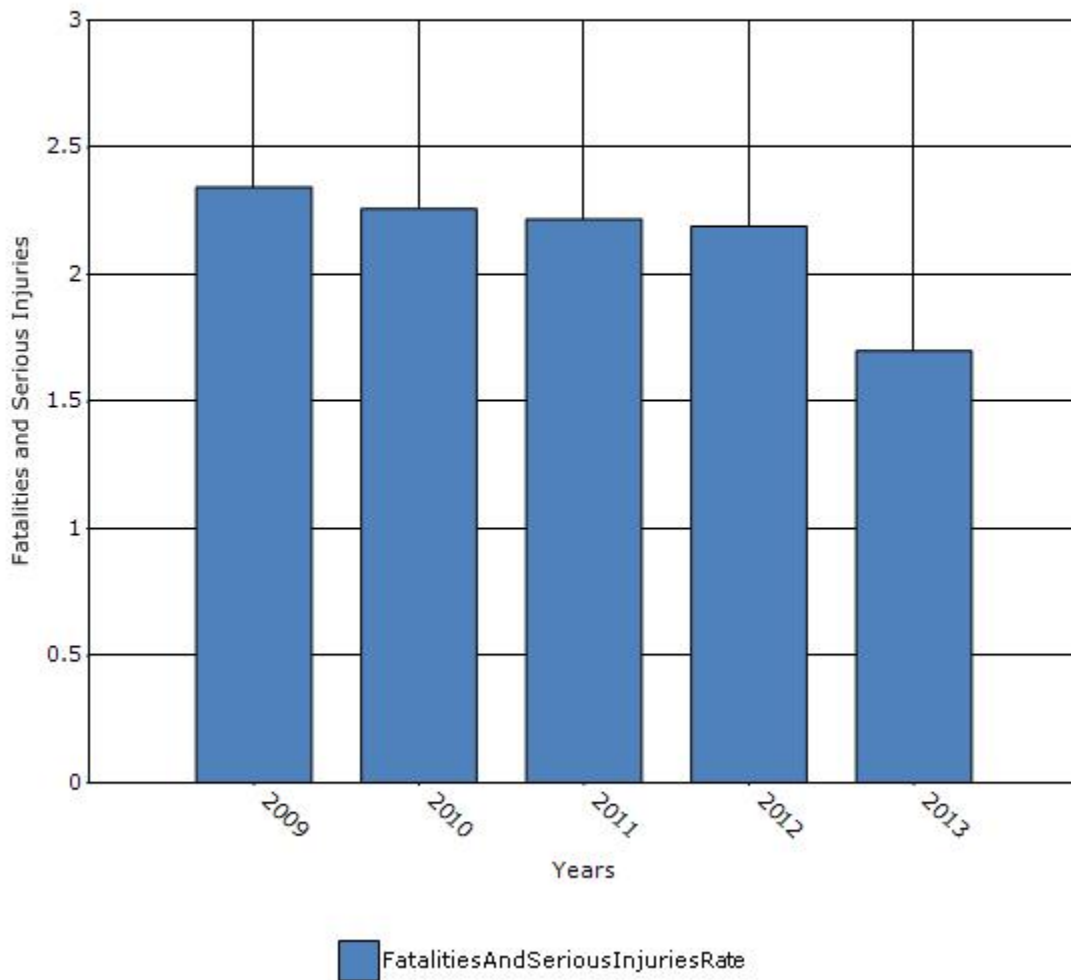
2012 = 74 fatalities, 187 serious injuries

The rates in the table above are calculated simply as # / Pop = Rate.

2006-2010 Combined Rate (see equation above) = 2.26 or 2.3

2008-2012 Combined Rate (see equation above) = 2.19 or 2.2

Rate of Fatalities and Serious injuries for the Last Five Years



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:

B/C ratio calculated using projects completed in 2010. Before data is from 2007-2009. After data is from 2011-2013.

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:

Focus is already on fatal & serious injury crashes, and includes local roads.

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

The only change is that counties are being required to submit a basic local road safety plan to be eligible to receive HSIP funds. The county safety focus was already on low-cost, widespread improvements. This change shifts that focus slightly into a more specific systemic safety approach.

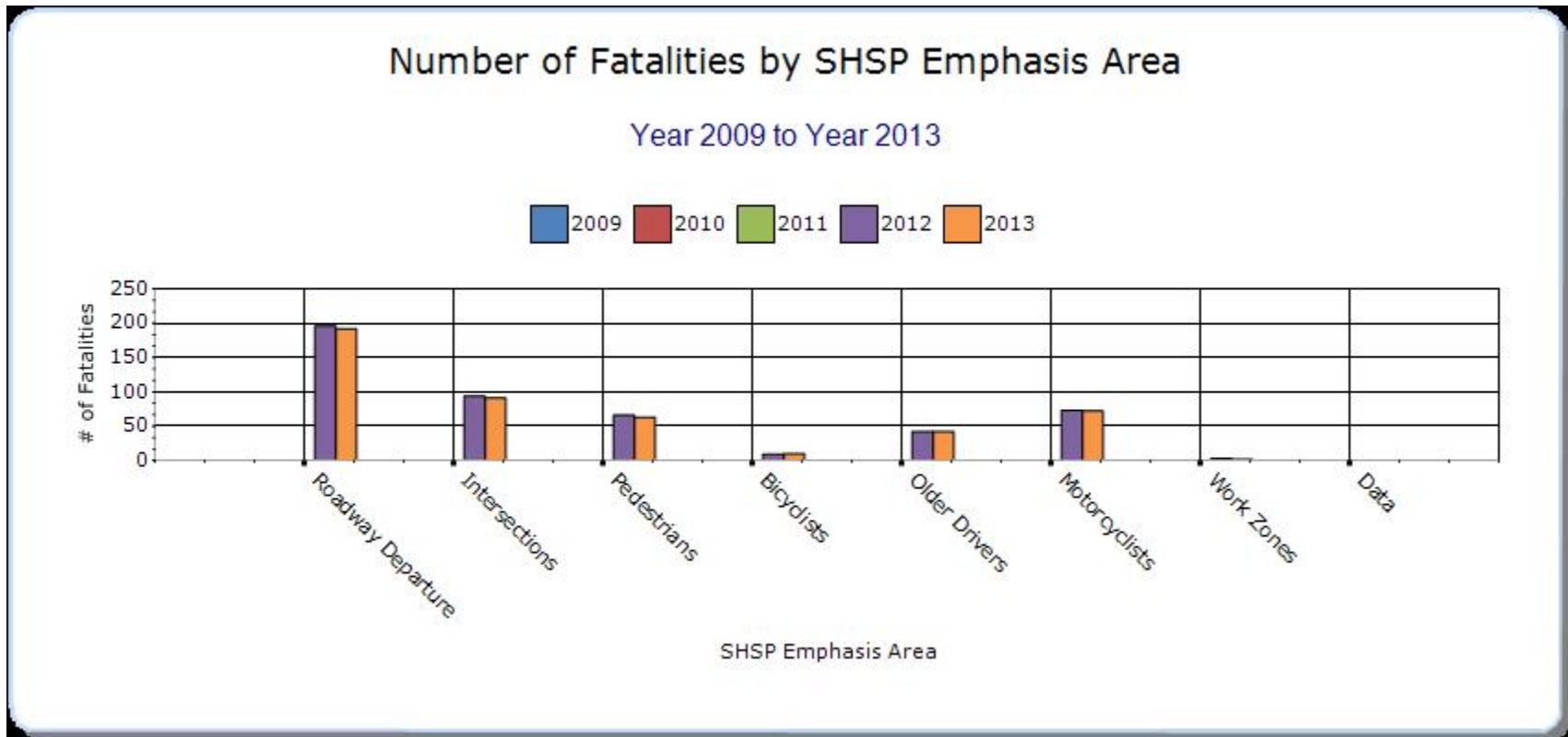
SHSP Emphasis Areas

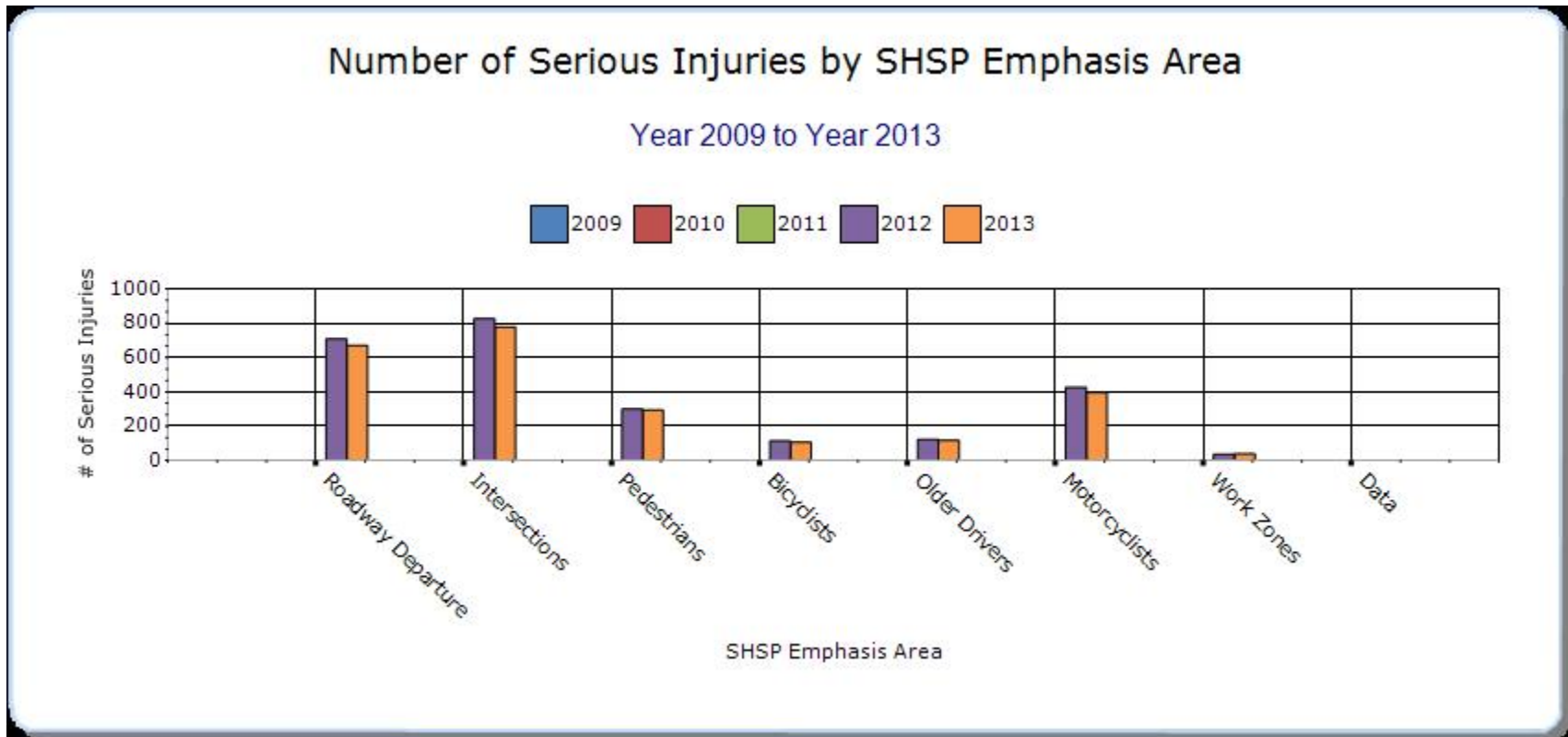
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

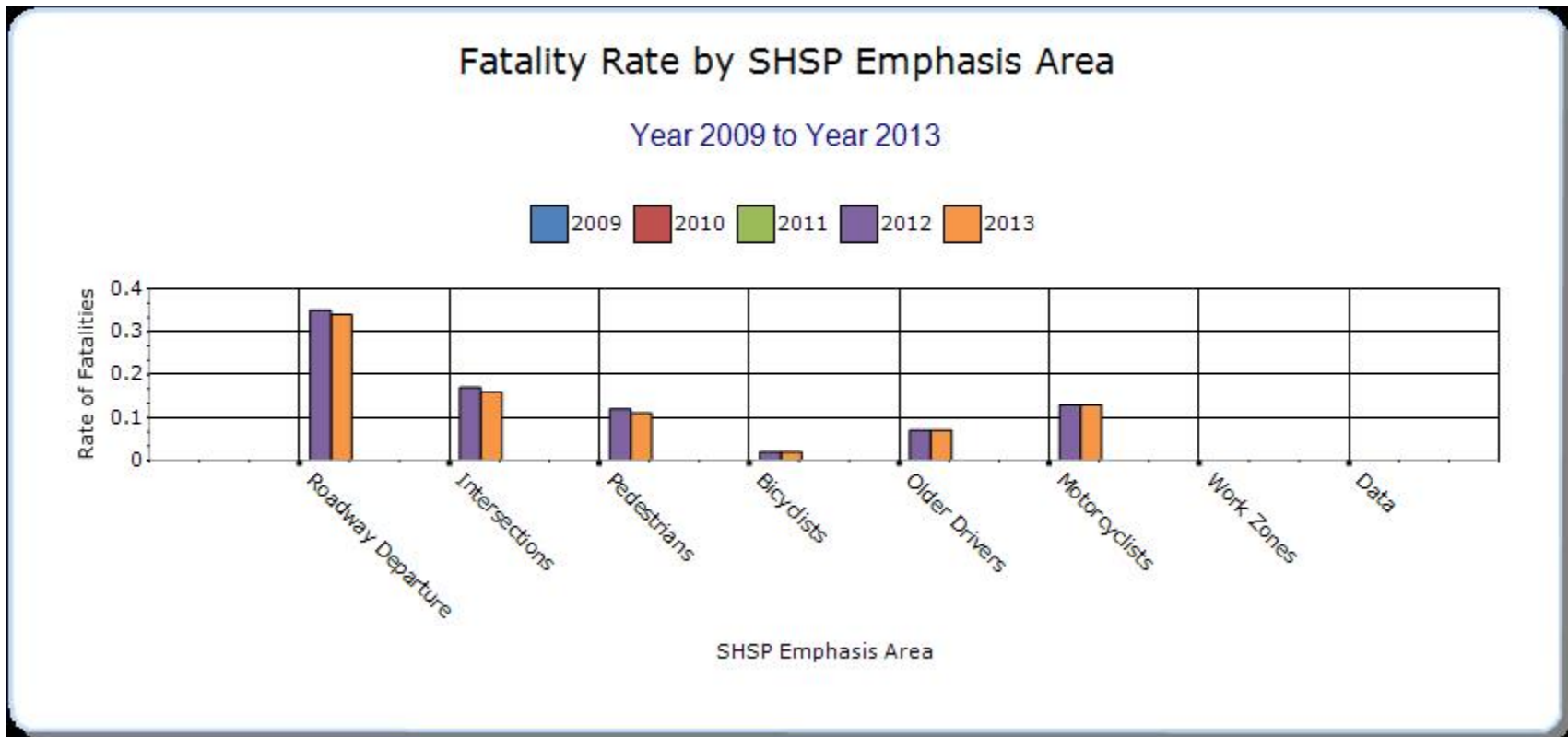
Year - 2013

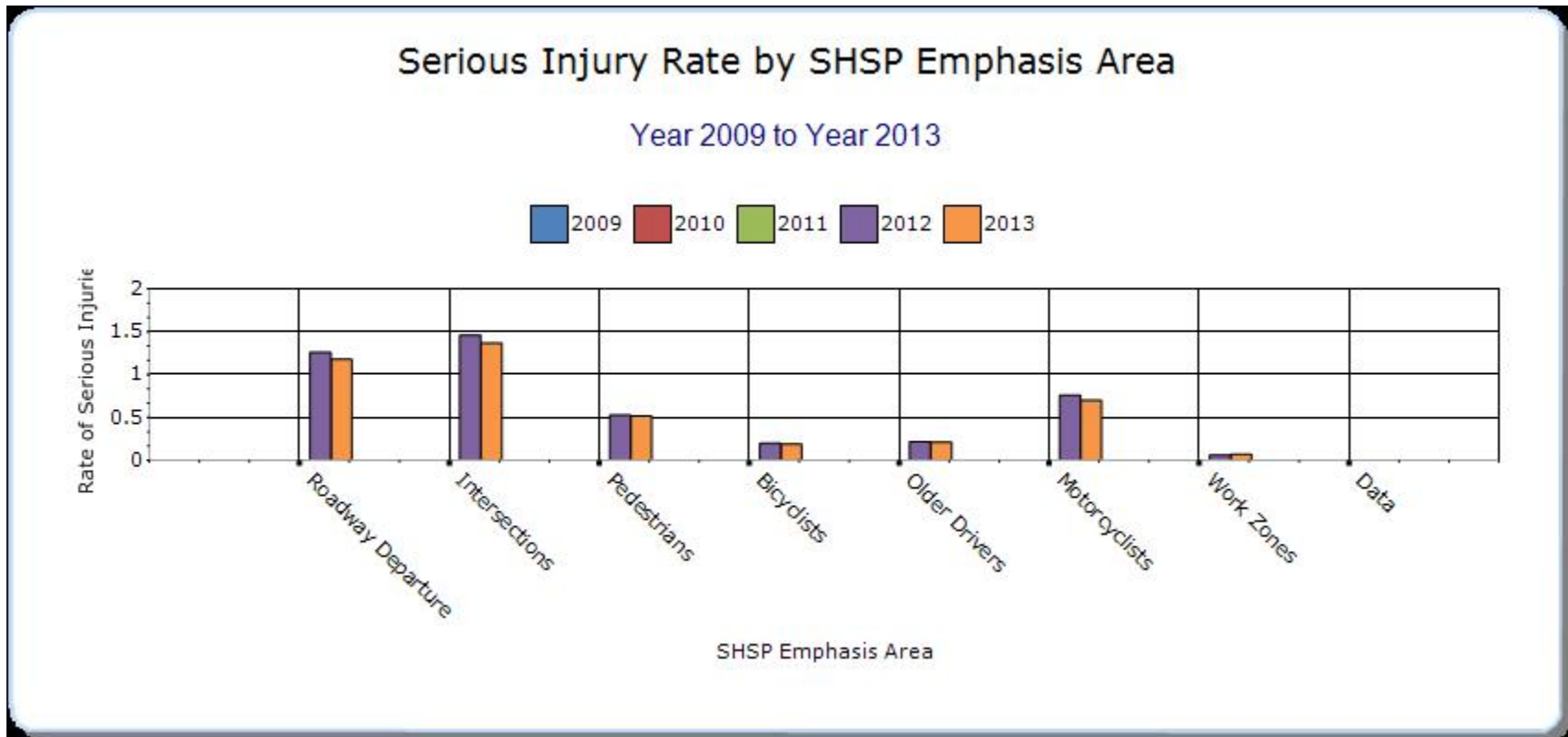
HSIP-related SHSP Emphasis Areas	Target Crash Type	Number of fatalities	Number of serious injuries	Fatality rate (per HMVMT)	Serious injury rate (per HMVMT)	Other-1	Other-2	Other-3
Roadway Departure	Run-off-road	192	670	0.34	1.18	0	0	0
Intersections	All	91	779	0.16	1.37	0	0	0
Pedestrians	Vehicle/pedestrian	63	293	0.11	0.52	0	0	0
Bicyclists	Vehicle/bicycle	10	106	0.02	0.19	0	0	0
Older Drivers	All	42	118	0.07	0.21	0	0	0
Motorcyclists	All	72	396	0.13	0.7	0	0	0
Work Zones	All	2	38	0	0.07	0	0	0
Data		0	0	0	0	0	0	0
Impaired Driver Involved	All	218	486	0.38	0.86	0	0	0
Speeding Involved	Speed-related	180	647	0.32	1.14	0	0	0
Young Driver (16-25) Involved	All	153	833	0.27	1.46	0	0	0

Distracted Driver Involved	All	132	315	0.23	0.55	0	0	0
Unrestrained Vehicle Occupants	All	108	238	0.19	0.42	0	0	0
Unlicensed Driver Involved	All	81	0	0.14	0	0	0	0
Opposite Direction	Head on	74	223	0.13	0.39	0	0	0
EMS and Trauma Care Systems		0	0	0	0	0	0	0
Heavy Truck Involved	Truck-related	35	80	0.06	0.14	0	0	0
Drowsy Driver Involved	All	14	81	0.02	0.14	0	0	0
Wildlife	Vehicle/animal	3	22	0	0.04	0	0	0
School Bus Involved	All	1	5	0	0.01	0	0	0
Vehicle-Train	Vehicle/Train	1	1	0	0	0	0	0









All priority areas in the latest version of the SHSP are listed.

Year-by-year data is tracked starting with 2008. Therefore, 5-year rolling average data is only available starting with 2012.

Note that Roadway Departure focus area is Run-Off-the-Road, Older Driver data includes drivers 75+ in the state emphasis area (and in this table), and Opposite Direction includes both head on and other opposite direction crash types.

Serious injury data is not available for Unlicensed Drivers.

Traffic Data Systems and EMS & Trauma Care Systems focus areas do not have specific crash data associated with them.

SHSP Focus Area Priorities:

Priority 1: Impaired Driver Involved, Run-Off-the-Road, Speeding Involved, Young Driver (16-25) Involved, Distracted Driver Involved, Intersection Related, and Traffic Data Systems

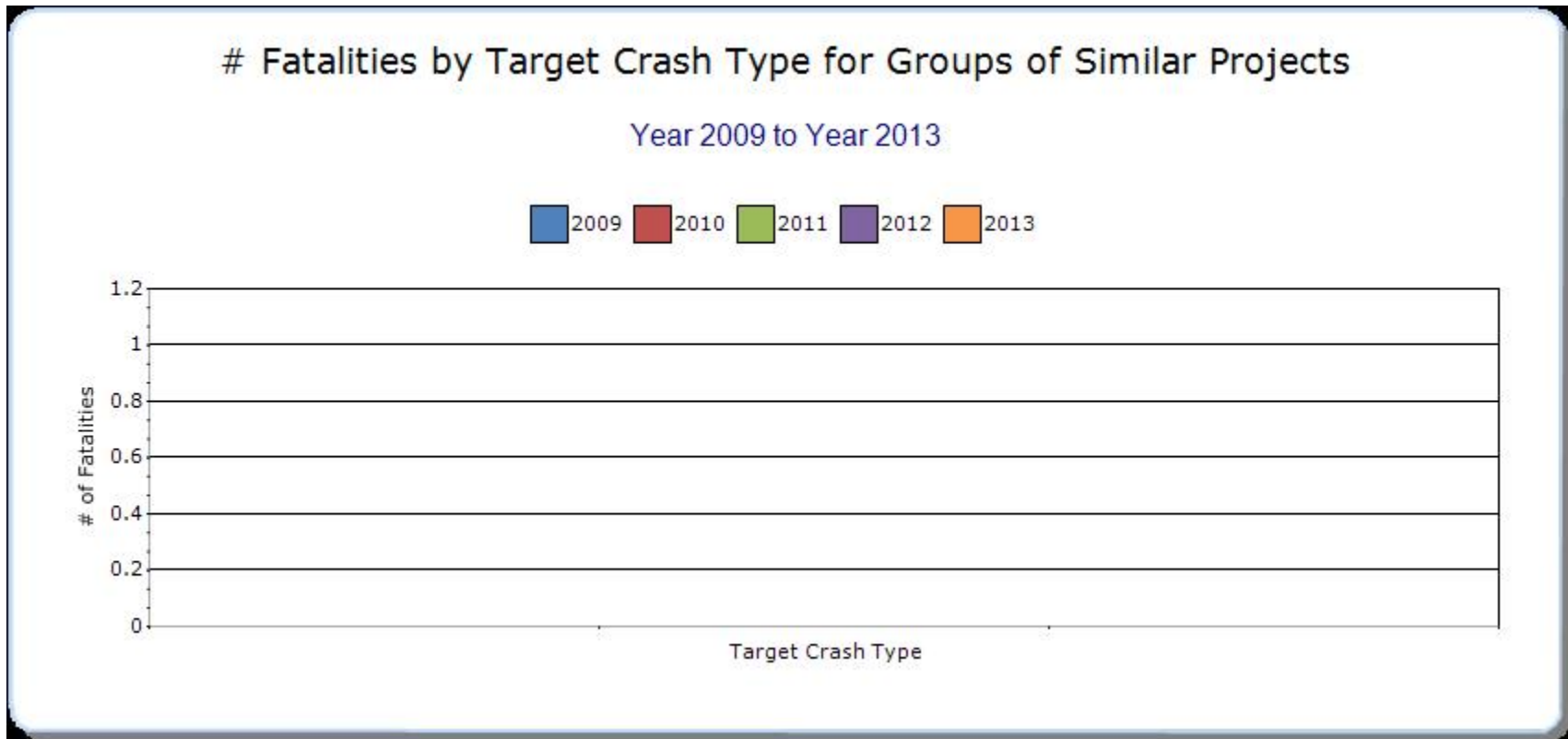
Priority 2: Unrestrained Vehicle Occupants, Unlicensed Driver Involved, Opposite Direction, Motorcyclists, Pedestrians, and EMS & Trauma Care Systems

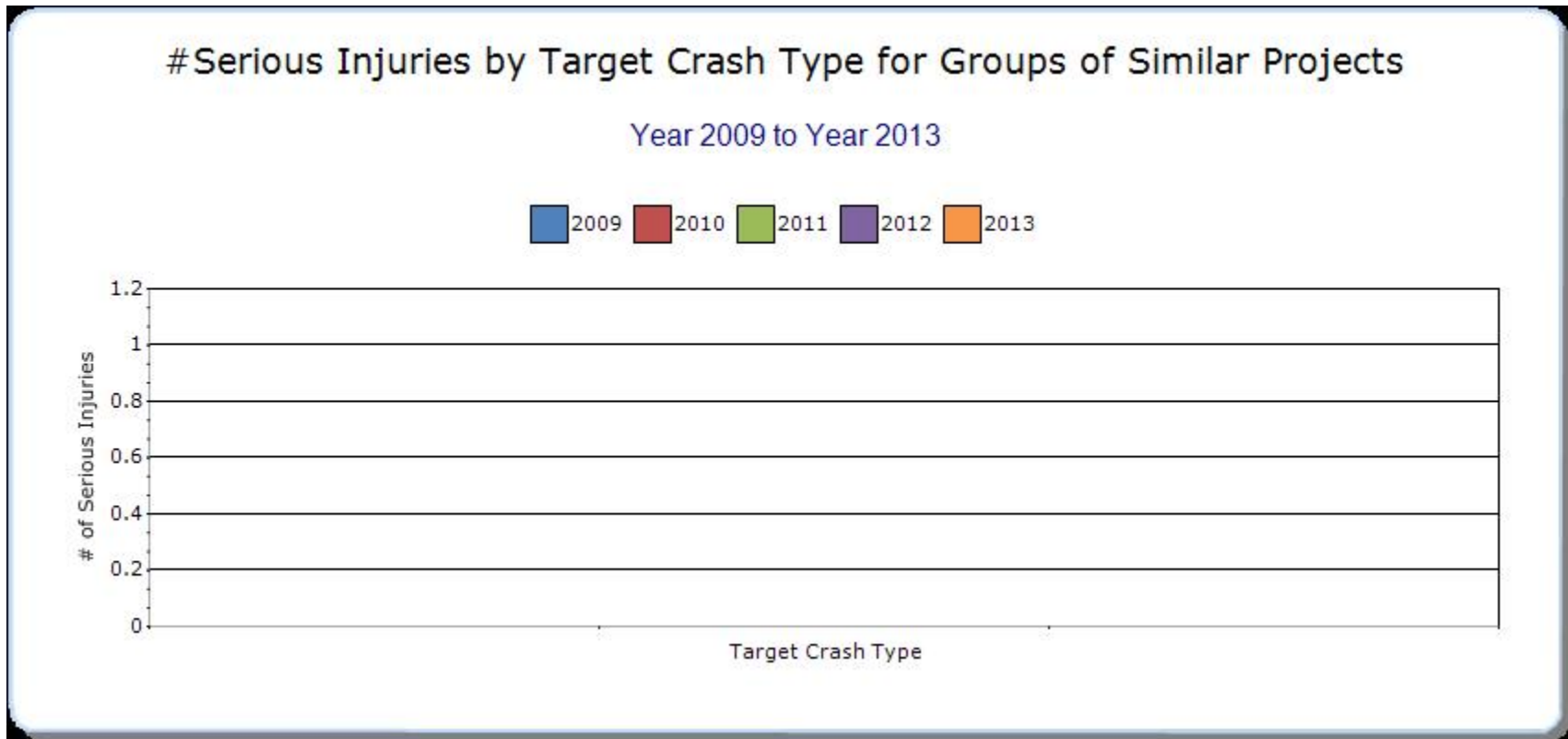
Priority 3: Older Driver (75+) Involved, Heavy Truck Involved, Drowsy Driver Involved, Bicyclists, Work Zone, Wildlife, School Bus Involved, Vehicle-Train

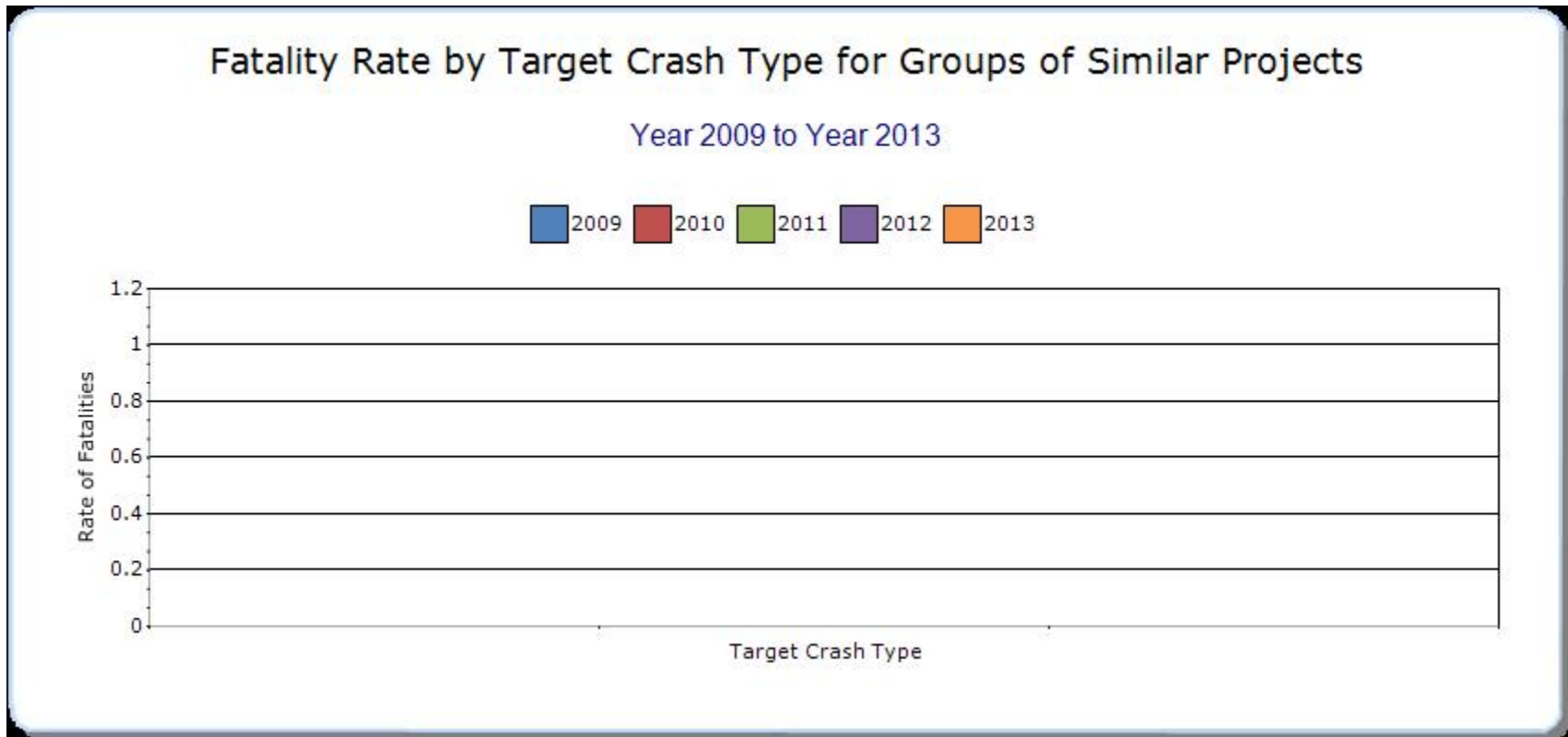
Groups of similar project types

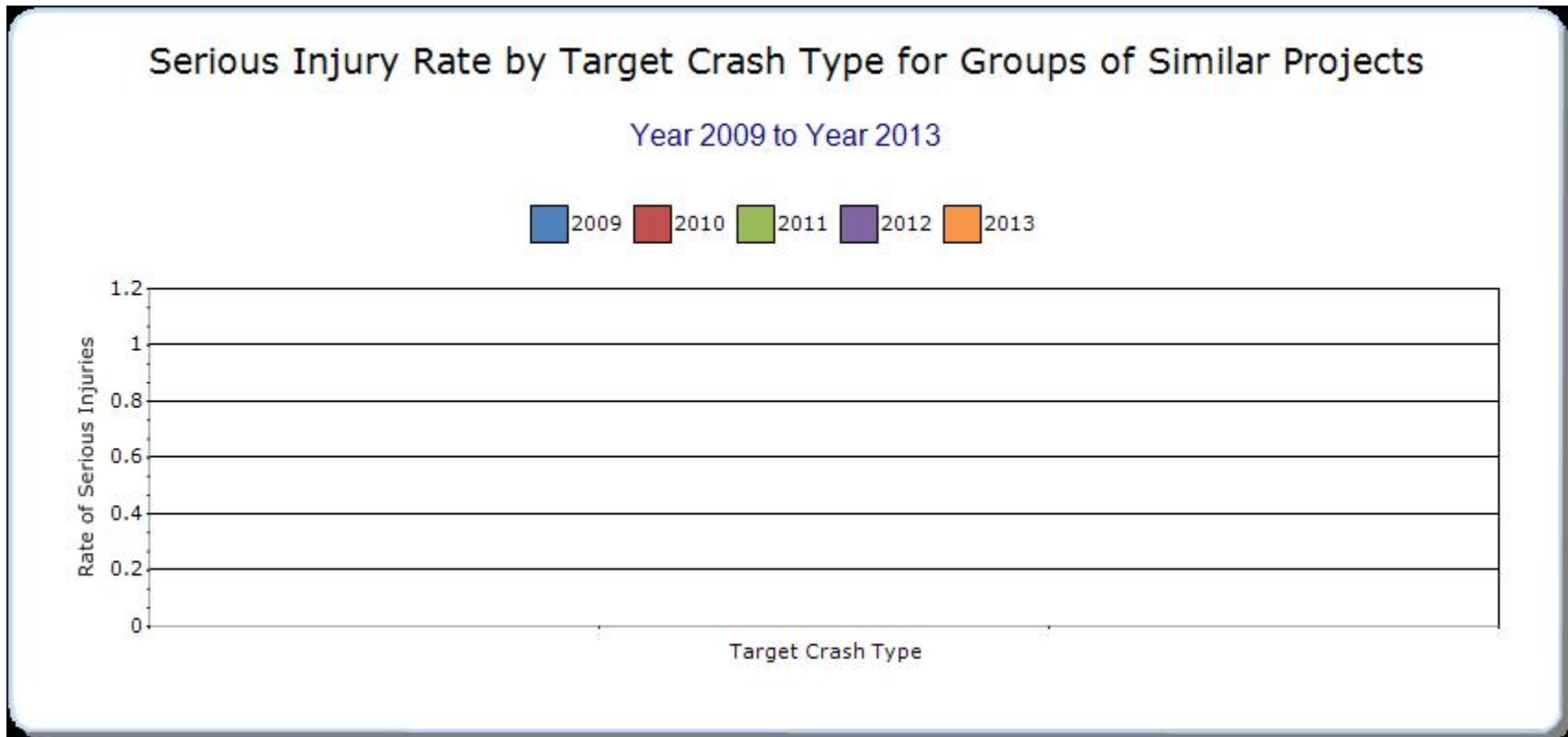
Present the overall effectiveness of groups of similar types of projects.

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





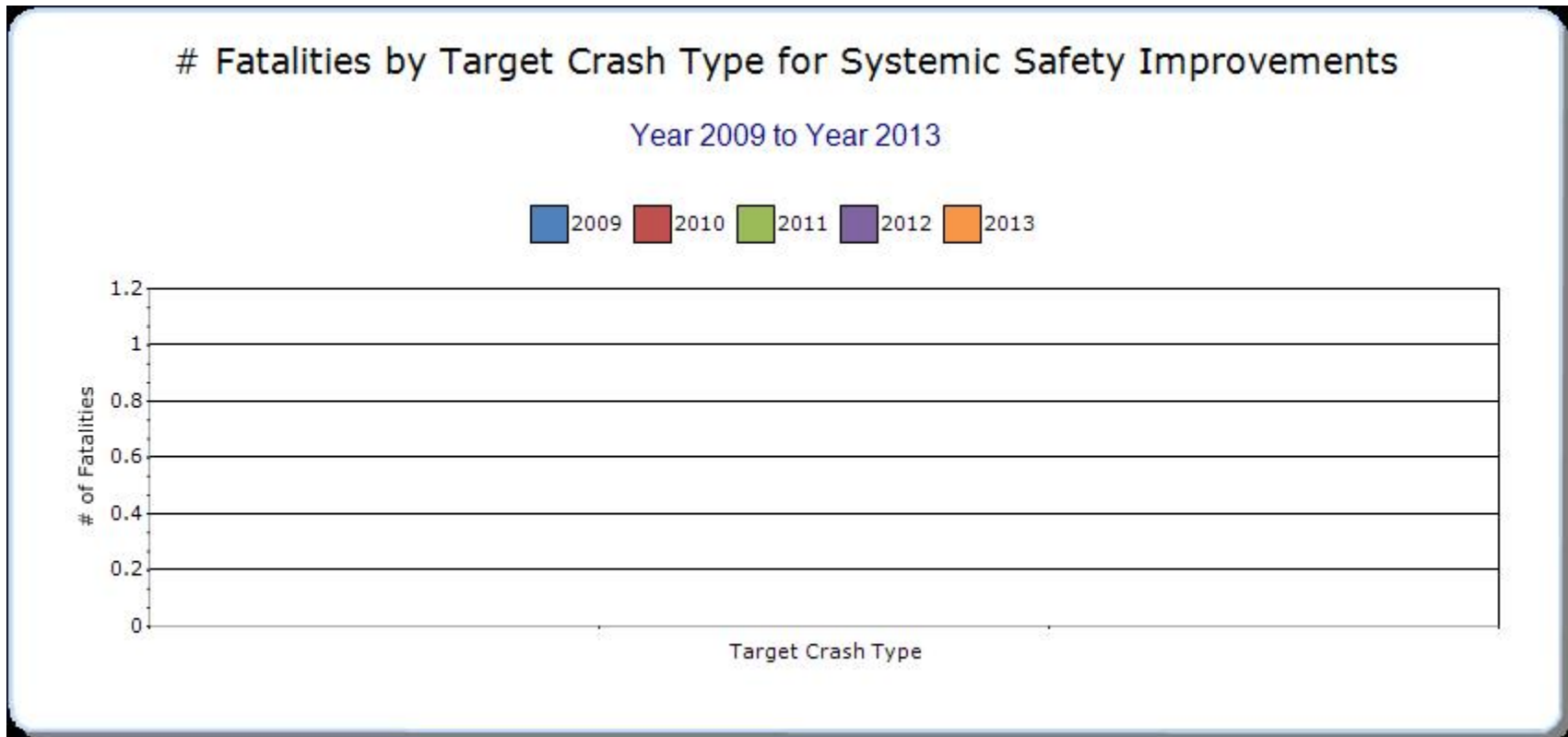


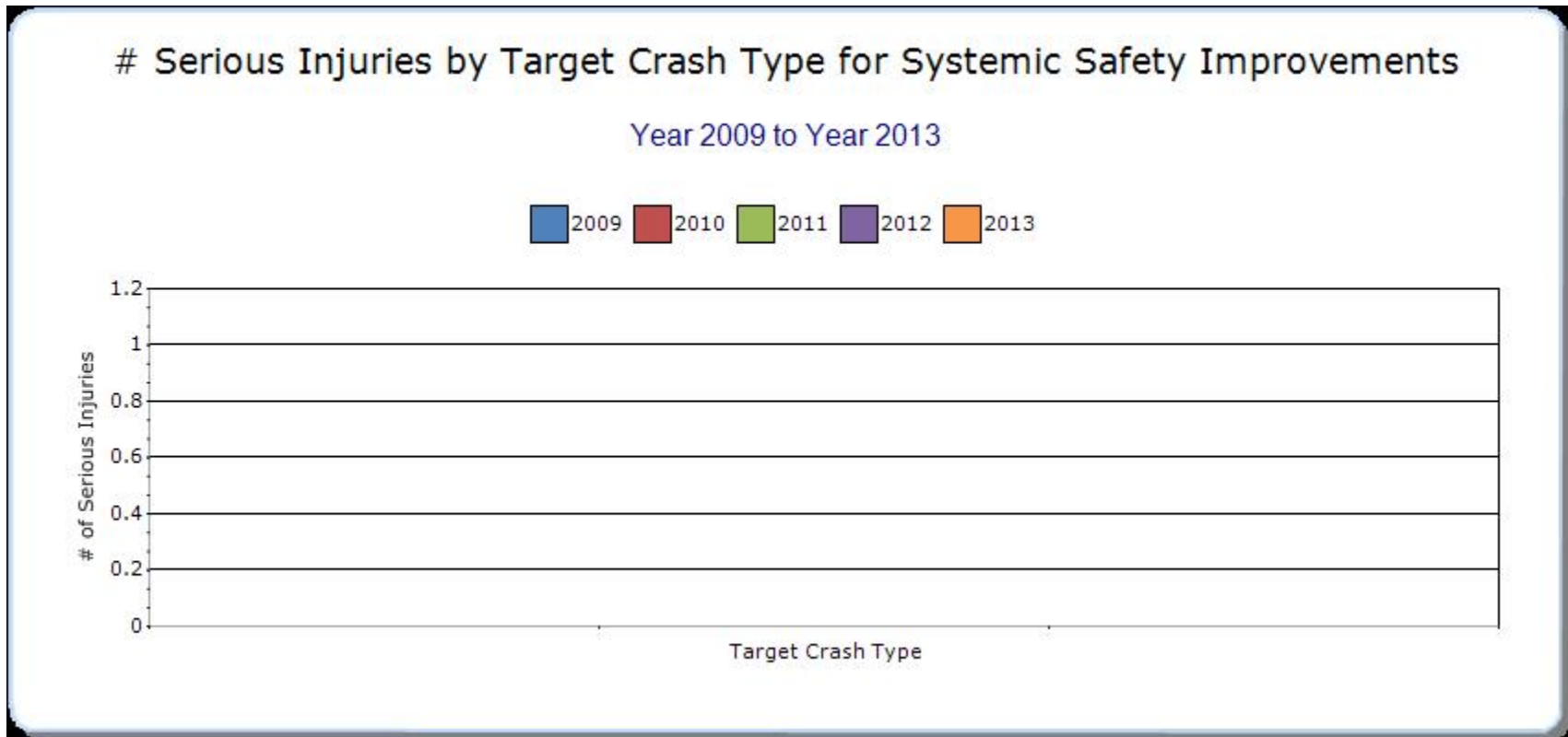


Systemic Treatments

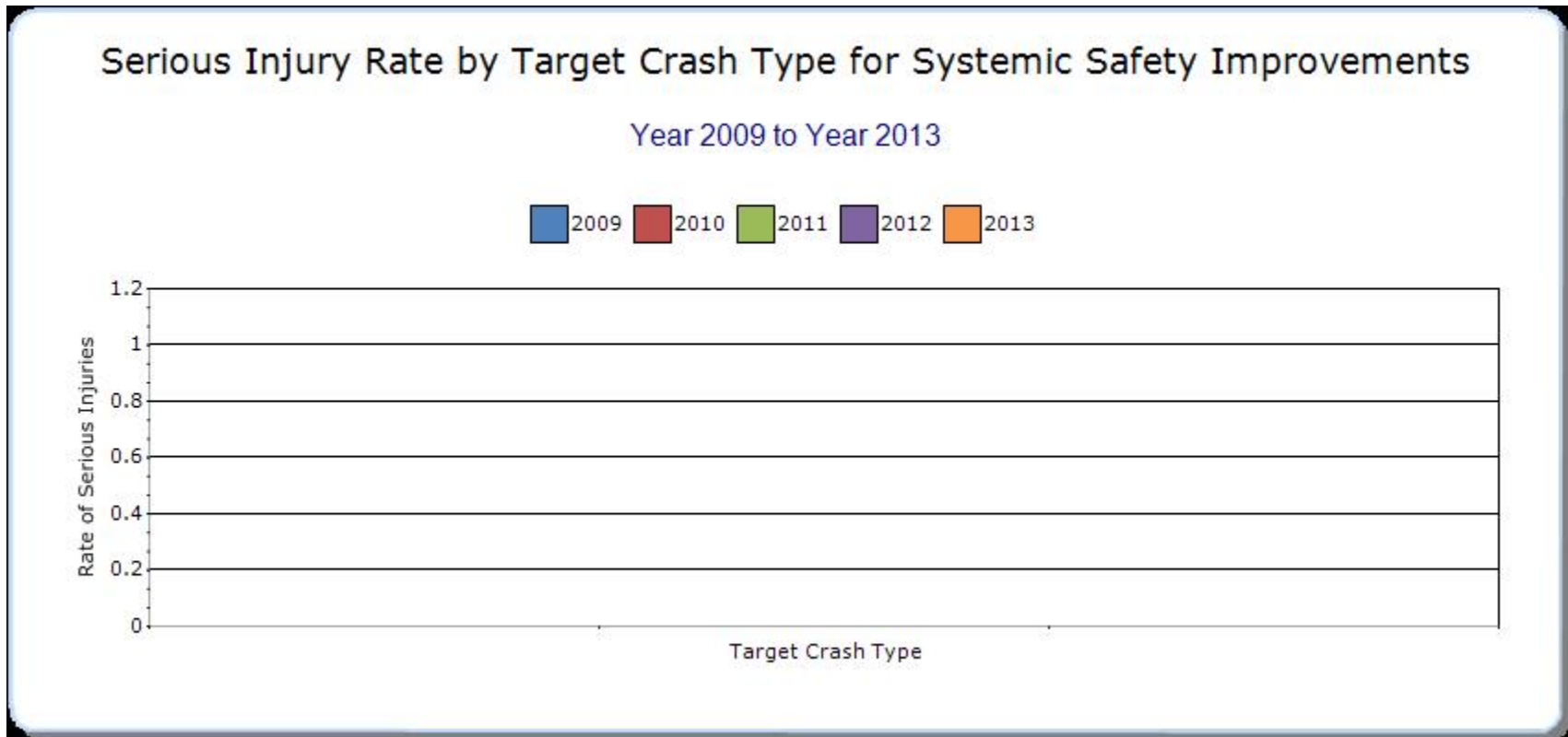
Present the overall effectiveness of systemic treatments.

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









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

As stated in the executive summary, the HSIP program has had a major benefit and effect on road safety in Washington state. While state highways have allocated state funds to support safety efforts, in addition to HSIP funds, the majority of local road safety efforts are funded solely by the HSIP program. With 70% of fatal and serious injury crashes in the priority one focus areas, this is a desperately needed program for the state to make continued progress toward achieving its Target Zero vision by 2030.

The HSIP program has provided a matching effort corresponding to the behavioral programs run through NHTSA to help Washington State make progress toward our vision of Target Zero (zero deaths and serious injuries by 2030). Funds from this program directly target various emphasis areas within the SHSP. And again, this program is the primary way that local agencies make progress toward implementing infrastructure safety improvements on their road networks.

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)
N/A														

Overall results compiled to answer the previous question on B/C for the HSIP program.

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.