Iowa
Highway Safety Improvement Program
2015 Annual Report

Prepared by: IA
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.”
Table of Contents

Disclaimer...................................................................................................................................................... ii
Executive Summary....................................................................................................................................... 1
Introduction .................................................................................................................................................. 2
Program Structure ........................................................................................................................................ 2
  Program Administration ........................................................................................................................... 2
  Program Methodology .............................................................................................................................. 4
Progress in Implementing Projects ............................................................................................................. 10
  Funds Programmed ............................................................................................................................. 10
  General Listing of Projects .................................................................................................................. 13
Progress in Achieving Safety Performance Targets .................................................................................... 23
  Overview of General Safety Trends ........................................................................................................ 23
  Application of Special Rules .................................................................................................................... 37
Assessment of the Effectiveness of the Improvements (Program Evaluation) .......................................... 39
  SHSP Emphasis Areas .............................................................................................................................. 40
  Groups of similar project types ............................................................................................................... 45
  Systemic Treatments ............................................................................................................................... 50
  Project Evaluation ................................................................................................................................... 56
Glossary....................................................................................................................................................... 58
Executive Summary

This is the first year that a previously initiated local safety program has yielded project obligations. In addition, the state continues to fund the placement of median cable barriers as a systemic safety measure on interstate highways. Finally, it should be noted that Iowa is interested in modifying how HSIP funds are sub-allocated within the state, and how projects are selected. This is evidenced by the fact that a multi-state peer review was held in early 2015 to evaluate Iowa’s current HSIP structure and to present possible modifications to Iowa DOT management. The goal is to have a new structure established in time for FY 2018 project selections that considers a higher distribution of funds to local roads above the $2 million per year currently spent as well as a formula for distribution of funds to DOT districts.

This is a test.
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.

Iowa's HSIP addresses local roads in two ways: through Local Road Safety Plans and through the HSIP-Secondary program.

Approximately $600,000 of HSIP funds were utilized this year to develop local road safety plans for 12 counties spread throughout Iowa. These plans are being developed to address local safety issues within specific counties, and they address driver-related crashes and countermeasures in addition to traditional engineering countermeasures. From an engineering standpoint, the plans are intended to be proactive rather than reactive. Roadway intersections, curves, and segments are being evaluated for risk
factors, and the plans will provide recommendations for systemic, low-cost safety treatments totaling at least $1 million per county. Ultimately, we hope to develop plans for all 99 counties in Iowa.

The HSIP-Secondary program was established in 2013 as a $2 million yearly set-aside out of Iowa's HSIP to address safety issues on the secondary (county-owned) roadway system. This program is focused on providing funding for projects that incorporate systemic, low-cost safety improvements, typically costing less than $10,000 per mile. Typical countermeasures include rumble strips, grooved-in pavement markings, improved signage, and guardrail updates. As word has gotten out about this new program, projects have been developed and completed at an increasing rate.

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

- [ ] Design
- [ ] Planning
- [ ] Maintenance
- [ ] Operations
- [ ] Governors Highway Safety Office
- [x] Other: Other-Districts

**Briefly describe coordination with internal partners.**

Iowa DOT districts are typically charged with developing and overseeing HSIP projects, so they are consulted early in the HSIP planning process. HSIP projects are chosen that align with SHSP emphasis areas, typically intersections and lane departures. However, a large majority of funding goes toward addressing lane departure crashes through shoulder improvements, most commonly shoulder paving. The districts provide input on which projects align with their goals, staffing, and other planned project timelines. In recent years, shoulder paving projects have been selected in order to complete specific highway corridors. However, this practice may be nearing an end as administration of the HSIP program shifts to be more data driven.

**Identify which external partners are involved with Highway Safety Improvement Program planning.**
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-None.

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.

- ☐ 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
### 2015 Iowa

**Highway Safety Improvement Program**

- **Local Safety**
- **Pedestrian Safety**
- **Right Angle Crash**
- **Left Turn Crash**
- **Shoulder Improvement**
- **Segments**
- **Other:**

---

**Program:**

- Local Safety

**Date of Program Methodology:**

- 2/26/2013

---

**What data types were used in the program methodology?**

<table>
<thead>
<tr>
<th>Crashes</th>
<th>Exposure</th>
<th>Roadway</th>
</tr>
</thead>
<tbody>
<tr>
<td>All crashes</td>
<td>Traffic</td>
<td>Median width</td>
</tr>
<tr>
<td>Fatal crashes only</td>
<td>Volume</td>
<td>Horizontal curvature</td>
</tr>
<tr>
<td>Fatal and serious injury</td>
<td>Population</td>
<td>Functional classification</td>
</tr>
<tr>
<td>crashes only</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>Lane miles</td>
<td>Roadside features</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>Other</td>
</tr>
</tbody>
</table>

---

**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
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

If no, describe the methodology used to identify local road projects as part of this program.

County engineers identify projects for potential funding based on their knowledge of their system's performance.

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

What proportion of highway safety improvement program funds address systemic improvements?
74

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

☒ Cable Median Barriers
☐ Traffic Control Device Rehabilitation
☐ Install/Improve Signing
☒ Upgrade Guard Rails
☐ Safety Edge

☒ Rumble Strips
☐ Pavement/Shoulder Widening
☒ Install/Improve Pavement Marking and/or Delineation
☐ Clear Zone Improvements
☒ Install/Improve Lighting
Add/Upgrade/Modify/Remove Traffic Signal

What process is used to identify potential countermeasures?

- Engineering Study
- Road Safety Assessment
- Other: Other-SHSP

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-None

Describe any other aspects of the Highway Safety Improvement Program methodology on which you would like to elaborate.
None.
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.

<table>
<thead>
<tr>
<th>Funding Category</th>
<th>Programmed*</th>
<th>Obligated</th>
</tr>
</thead>
<tbody>
<tr>
<td>HSIP (Section 148)</td>
<td>35157900</td>
<td>25573863</td>
</tr>
<tr>
<td>HRRRP (SAFETEA-LU)</td>
<td>1500000</td>
<td>3660600</td>
</tr>
<tr>
<td>HRRR Special Rule</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penalty Transfer - Section 154</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penalty Transfer – Section 164</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incentive Grants - Section 163</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Incentive Grants (Section 406)</td>
<td>0</td>
<td>211022</td>
</tr>
<tr>
<td>Other Federal-aid Funds (i.e. STP, NHPP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>State and Local Funds</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
How much funding is programmed to local (non-state owned and maintained) safety projects?
$5,349,900.00

How much funding is obligated to local safety projects?
$5,641,986.00

How much funding is programmed to non-infrastructure safety projects?
$540,000.00

How much funding is obligated to non-infrastructure safety projects?
$750,937.00

How much funding was transferred in to the HSIP from other core program areas during the reporting period?
0 %
How much funding was transferred out of the HSIP to other core program areas during the reporting period?

0 %

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

Impediments to fully obligating programmed HSIP funds include proper estimating and long development timelines. Initial cost estimates tend to be high in order to account for project uncertainties and to avoid having to ask for more money at a later time. Project development timelines can be affected by multiple external forces including coordination, clearances, and unforeseen circumstances. Our goal is to work with project sponsors to improve the accuracy of cost estimates and to minimize time delays in order to obligate HSIP funds to the fullest extent.

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.

<table>
<thead>
<tr>
<th>Project</th>
<th>Improvement Category</th>
<th>Output</th>
<th>HSIP Cost</th>
<th>Total Cost</th>
<th>Funding Category</th>
<th>Functional Classification</th>
<th>AADT</th>
<th>Speed</th>
<th>Roadway Ownership</th>
<th>Relationship to SHSP</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRRR-C054(90)--5R-54</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>5.3 Miles</td>
<td>654000</td>
<td>78492</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>800</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HRRR-C070(60)--5R-70</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>1 Miles</td>
<td>500000</td>
<td>703236</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Minor Collector</td>
<td>1860</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HRRR-C078(168)--5R-78</td>
<td>Intersection geometry Auxiliary lanes - add left-turn lane</td>
<td>1 Number</td>
<td>500000</td>
<td>1268183</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Minor Arterial</td>
<td>970</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Intersection</td>
</tr>
<tr>
<td>HSIP-S-C001(86)</td>
<td>Roadway Rumble strips</td>
<td>6.4 Miles</td>
<td>50000</td>
<td>59000</td>
<td>HRRRP (SAFETEA)</td>
<td>Rural Major Collector</td>
<td>1380</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>Project Code</td>
<td>Description</td>
<td>Miles</td>
<td>Cost</td>
<td>Program</td>
<td>Type</td>
<td>Lane</td>
<td>County Highway Agency</td>
<td>Agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>------------------------------</td>
<td>--------</td>
<td>---------</td>
<td>------------------</td>
<td>-----------------------------</td>
<td>------</td>
<td>-----------------------</td>
<td>------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIP-S-C010(94)-6C-10</td>
<td>Roadway delineation</td>
<td>41.3</td>
<td>325984.5</td>
<td>HSIP (Section 148)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roadway delineation - other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Improved delineation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIP-S-C024(111)-6C-24</td>
<td>Roadway delineation</td>
<td>4.9</td>
<td>46800</td>
<td>State and Local Funds</td>
<td>Rural Major Collector</td>
<td>510</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roadway delineation - other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Improved delineation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIP-S-C025(97)-6C-25</td>
<td>Roadway delineation</td>
<td>57.1</td>
<td>368199</td>
<td>HSIP (Section 148)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roadway delineation - other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Improved delineation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIP-S-C044(78)-6C-44</td>
<td>Roadway delineation</td>
<td>30</td>
<td>200700</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roadway delineation - other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Improved delineation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIP-S-C045(73)-6C-45</td>
<td>Lighting Intersection lighting</td>
<td>2</td>
<td>36842</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>700</td>
<td>County Highway Agency</td>
<td>Intersection lighting</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>40936</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Code</td>
<td>Type of Improvement</td>
<td>Count/Length</td>
<td>Number</td>
<td>Item Code</td>
<td>Roadway Feature</td>
<td>Material</td>
<td>Maintenance/Mile</td>
<td>Funding Source</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------------</td>
<td>--------------</td>
<td>--------</td>
<td>-----------</td>
<td>----------------</td>
<td>----------</td>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>HSIP-S-C045(74)-6C-45</td>
<td>Roadside Barrier-metals</td>
<td>2 Numbers</td>
<td>27000</td>
<td>47166</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>200</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C050(107)-6C-50</td>
<td>Roadway delineation</td>
<td>36.5 Miles</td>
<td>231347</td>
<td>257052</td>
<td>HSIP (Section 148)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C053(77)-6C-53</td>
<td>Shoulder treatments</td>
<td>5 Miles</td>
<td>261917</td>
<td>2411809</td>
<td>State and Local Funds</td>
<td>Rural Major Collector</td>
<td>700</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C061(100)-6C-61</td>
<td>Roadway delineation</td>
<td>49.8 Miles</td>
<td>297065</td>
<td>330072</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C063(117)-6C-63</td>
<td>Roadside Barrier end treatments</td>
<td>13 Numbers</td>
<td>246465</td>
<td>277000</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>Project</td>
<td>Description</td>
<td>Length</td>
<td>Start</td>
<td>End</td>
<td>Program</td>
<td>Agency</td>
<td>Departure</td>
<td>Improvement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------------------------------------</td>
<td>--------</td>
<td>-------</td>
<td>-------</td>
<td>---------</td>
<td>------------</td>
<td>-----------</td>
<td>---------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIP-S-C069(52)-6C-69</td>
<td>Roadway delineation Roadway delineation - other</td>
<td>30 Miles</td>
<td>216577</td>
<td>240641</td>
<td>HSIP (Section 148)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C085(124)--6C-85</td>
<td>Roadway delineation Roadway delineation - other</td>
<td>57 Miles</td>
<td>176700</td>
<td>196333</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C093(75)-6C-93</td>
<td>Roadway delineation Roadway delineation - other</td>
<td>44 Miles</td>
<td>247887</td>
<td>275430</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C095(62)-6C-95</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>0.6 Miles</td>
<td>343345</td>
<td>381494</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIP-S-C096(127)--6C-96</td>
<td>Lighting Intersection lighting</td>
<td>2 Number s</td>
<td>48902</td>
<td>54335</td>
<td>HRRRP (SAFETEA-LU)</td>
<td>Rural Major Collector</td>
<td>0</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Intersection s</td>
</tr>
<tr>
<td>HSIPX-014-</td>
<td>Shoulder treatments</td>
<td>8.3</td>
<td>126414</td>
<td>141300</td>
<td>HSIP (Section</td>
<td>Rural Principal</td>
<td>2100</td>
<td>55</td>
<td>State Highway</td>
<td>Lane</td>
</tr>
<tr>
<td>Project Code</td>
<td>Description</td>
<td>Miles</td>
<td>Number(s)</td>
<td>HSIP (Section)</td>
<td>Departure</td>
<td>Agency</td>
<td>Departure Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
<td>-------</td>
<td>-----------</td>
<td>----------------</td>
<td>-----------</td>
<td>--------</td>
<td>----------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4(64)--3L-50</td>
<td>Widen shoulder - paved or other</td>
<td>0</td>
<td>0</td>
<td>148</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIPX-018-2(113)--3L-21</td>
<td>Intersection geometry Auxiliary lanes - modify left turn lane offset</td>
<td>1</td>
<td>651667</td>
<td>724074</td>
<td>HSIP (Section 148)</td>
<td>2400</td>
<td>55</td>
<td>State Highway Agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIPX-030-2(157)--3L-24</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>7.9</td>
<td>153238</td>
<td>172837</td>
<td>HSIP (Section 148)</td>
<td>3780</td>
<td>55</td>
<td>State Highway Agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIPX-030-2(158)--3L-24</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>25.3</td>
<td>302507</td>
<td>336119</td>
<td>HSIP (Section 148)</td>
<td>3650</td>
<td>55</td>
<td>State Highway Agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIPX-030-2(159)--</td>
<td>Shoulder treatments Widen shoulder -</td>
<td>8.7</td>
<td>183690</td>
<td>204100</td>
<td>HSIP (Section 148)</td>
<td>5400</td>
<td>55</td>
<td>State Highway Agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project</td>
<td>Type</td>
<td>Description</td>
<td>Length</td>
<td>Costs</td>
<td>Fund Source</td>
<td>Other Description</td>
<td>Cost</td>
<td>ID</td>
<td>Sponsor</td>
<td>Application</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>-------------</td>
<td>--------</td>
<td>-------</td>
<td>-------------</td>
<td>-------------------</td>
<td>------</td>
<td>----</td>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>3L-14</td>
<td></td>
<td>paved or other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HSIPX-034-6(90)--3L-68</td>
<td>Roadway Rumble strips - center</td>
<td>8.8 Miles</td>
<td>180000</td>
<td>1008366</td>
<td>State and Local Funds</td>
<td>Rural Principal Arterial - Other Freeways and Expressways</td>
<td>3910</td>
<td>55</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIPX-060-1(63)--3L-75</td>
<td>Intersection traffic control Pavement markings - add lane use symbols</td>
<td>8 Number s</td>
<td>133972</td>
<td>148858</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Other Freeways and Expressways</td>
<td>3380</td>
<td>65</td>
<td>State Highway Agency</td>
<td>Intersection s</td>
</tr>
<tr>
<td>HSIPX-071-4(50)--3L-05</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>5.6 Miles</td>
<td>702375</td>
<td>3963079</td>
<td>Other Federal-aid Funds (i.e. STP, NHPP)</td>
<td>Rural Principal Arterial - Other</td>
<td>2720</td>
<td>55</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIPX-071-4(51)--3L-</td>
<td>Shoulder treatments Widen</td>
<td>10.4 Miles</td>
<td>1044219</td>
<td>5947640</td>
<td>Other Federal-aid</td>
<td>Rural Principal Arterial -</td>
<td>2710</td>
<td>55</td>
<td>State Highway</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIPX-071-7(55)--3L-11</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>9.5 Miles</td>
<td>1225643</td>
<td>1361825</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Other</td>
<td>3280</td>
<td>55</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>------------------</td>
<td>--------------------------------</td>
<td>-------</td>
<td>----</td>
<td>----------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>HSIPX-071-9(77)--3L-30</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>4.9 Miles</td>
<td>843532</td>
<td>937258</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Other</td>
<td>2030</td>
<td>55</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIPX-086-1(17)--3L-30</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>7.7 Miles</td>
<td>1676492</td>
<td>1862769</td>
<td>HSIP (Section 148)</td>
<td>Rural Minor Arterial</td>
<td>4266</td>
<td>55</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>HSIPX-218-2(144)--3L-44</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>12.1 Miles</td>
<td>3635820</td>
<td>4044000</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Other</td>
<td>8800</td>
<td>65</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>Project Code</td>
<td>Description</td>
<td>Length</td>
<td>CoT</td>
<td>HSIP (Section 148)</td>
<td>Type Details</td>
<td>Miles</td>
<td>Budget</td>
<td>STP</td>
<td>STP Details</td>
<td>Agency</td>
</tr>
<tr>
<td>---------------</td>
<td>---------------------------------------------</td>
<td>--------</td>
<td>-----------</td>
<td>-------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>-------</td>
<td>----------</td>
<td>----------------------</td>
<td>------------------</td>
<td>--------</td>
</tr>
<tr>
<td>HSIPX-218-7(230)-3L-07</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>6.2</td>
<td>2360430</td>
<td>262900</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Other Freeways and Expressways</td>
<td>1940</td>
<td>65</td>
<td>State Highway Agency</td>
<td>Lane Departures</td>
</tr>
<tr>
<td>IHSIPX-029-2(85)32-08-65</td>
<td>Roadside Barrier - cable</td>
<td>8.9</td>
<td>959710</td>
<td>1066345</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Interstate</td>
<td>2350</td>
<td>70</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>IHSIPX-035-5(104)11-2-08-85</td>
<td>Roadside Barrier - cable</td>
<td>12.7</td>
<td>1615658</td>
<td>1795176</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Interstate</td>
<td>2740</td>
<td>70</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>IHSIPX-035-6(127)14-7-08-40</td>
<td>Roadside Barrier - cable</td>
<td>18</td>
<td>904455</td>
<td>1004950</td>
<td>HSIP (Section 148)</td>
<td>Rural Principal Arterial - Interstate</td>
<td>1500</td>
<td>70</td>
<td>State Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>STP-S-C001(83)-5E-01</td>
<td>Roadway Rumble strips - edge or shoulder</td>
<td>5.6</td>
<td>52340</td>
<td>2070493</td>
<td>Other Federal-aid Funds (i.e. STP, STP)</td>
<td>Rural Major Collector</td>
<td>470</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
</tr>
<tr>
<td>Project Number</td>
<td>Description</td>
<td>Length</td>
<td>Funding</td>
<td>Other Federal-aid Funds (i.e. STP, NHPP)</td>
<td>Major Collector</td>
<td>Federal Funds</td>
<td>County Highway Agency</td>
<td>Lane Departure</td>
<td>Shoulder treatments</td>
<td></td>
</tr>
<tr>
<td>----------------</td>
<td>--------------------------------------------------</td>
<td>--------</td>
<td>---------</td>
<td>----------------------------------------</td>
<td>-----------------</td>
<td>--------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>----------------------</td>
<td></td>
</tr>
<tr>
<td>STP-S-C047(52)-5E-47</td>
<td>Shoulder treatments Widen shoulder - paved or other</td>
<td>12.8 Miles</td>
<td>270000</td>
<td>3660537</td>
<td>Rural Major Collector</td>
<td>480</td>
<td>55</td>
<td>County Highway Agency</td>
<td>Shoulder treatments</td>
<td></td>
</tr>
<tr>
<td>HSIPX-0005(755)-3L-00</td>
<td>Non-infrastructure Transportation safety planning</td>
<td>12 Numbers</td>
<td>539915</td>
<td>599905</td>
<td>HSIP (Section 148)</td>
<td>0</td>
<td>0</td>
<td>Lane Departure</td>
<td>Local safety</td>
<td></td>
</tr>
<tr>
<td>SBIN(013)</td>
<td>Non-infrastructure Educational efforts</td>
<td>1 Numbers</td>
<td>4701</td>
<td>54392</td>
<td>Incentive Grants (Section 406)</td>
<td>0</td>
<td>0</td>
<td>Education</td>
<td>Deliver safety messages</td>
<td></td>
</tr>
<tr>
<td>SBIN(014)</td>
<td>Non-infrastructure Educational efforts</td>
<td>1 Numbers</td>
<td>27821</td>
<td>160826</td>
<td>Incentive Grants (Section 406)</td>
<td>0</td>
<td>0</td>
<td>Education</td>
<td>Deliver safety messages</td>
<td></td>
</tr>
<tr>
<td>SBIN(015)</td>
<td>Non-infrastructure Educational efforts</td>
<td>1 Numbers</td>
<td>175000</td>
<td>288392</td>
<td>Incentive Grants (Section 406)</td>
<td>0</td>
<td>0</td>
<td>Education</td>
<td>Deliver safety messages</td>
<td></td>
</tr>
<tr>
<td>BACS(004)</td>
<td>Non-infrastructure Educational efforts</td>
<td>1 Numbers</td>
<td>3500</td>
<td>244841</td>
<td>Incentive Grants (Section 406)</td>
<td>0</td>
<td>0</td>
<td>Education</td>
<td>Deliver safety messages</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>---------------------------------------</td>
<td>-----------</td>
<td>------</td>
<td>--------</td>
<td>-------------------------------</td>
<td>---</td>
<td>---</td>
<td>-----------</td>
<td>-------------------------</td>
<td></td>
</tr>
</tbody>
</table>

| BACS(004) | Non-infrastructure Educational efforts | 1 Numbers | 3500 | 244841 | Incentive Grants (Section 406) | 0 | 0 | Education | Deliver safety messages |
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.

<table>
<thead>
<tr>
<th>Performance Measures*</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fatalities</td>
<td>411.6</td>
<td>395.8</td>
<td>379.6</td>
<td>360.6</td>
<td>350.6</td>
</tr>
<tr>
<td>Number of serious injuries</td>
<td>1794.2</td>
<td>1716.6</td>
<td>1646</td>
<td>1586.8</td>
<td>1565.6</td>
</tr>
<tr>
<td>Fatality rate (per HMVMT)</td>
<td>1.31</td>
<td>1.26</td>
<td>1.21</td>
<td>1.15</td>
<td>1.11</td>
</tr>
<tr>
<td>Serious injury rate (per HMVMT)</td>
<td>5.71</td>
<td>5.48</td>
<td>5.25</td>
<td>5.04</td>
<td>4.94</td>
</tr>
</tbody>
</table>

*Performance measure data is presented using a five-year rolling average.
Number of Fatalities and Serious Injuries for the Last Five Years

![Graph showing the number of fatalities and serious injuries from 2010 to 2014. The number of fatalities decreases from 411.6 in 2010 to 350.6 in 2014, while the number of serious injuries also decreases from 395.8 in 2010 to 370.6 in 2014.]
Rate of Fatalities and Serious Injuries for the Last Five Years

![Graph showing the rate of fatalities and serious injuries per HMVMT from 2010 to 2014. The graph displays a decreasing trend in both categories over the years.]
To the maximum extent possible, present performance measure* data by functional classification and ownership.

### Year - 2014

<table>
<thead>
<tr>
<th>Function Classification</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RURAL PRINCIPAL ARTERIAL - INTERSTATE</td>
<td>23.8</td>
<td>71.2</td>
<td>0.46</td>
<td>1.37</td>
</tr>
<tr>
<td>RURAL PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RURAL PRINCIPAL ARTERIAL - OTHER</td>
<td>54.6</td>
<td>194.2</td>
<td>0.9</td>
<td>3.2</td>
</tr>
<tr>
<td>RURAL MINOR ARTERIAL</td>
<td>38.2</td>
<td>122.2</td>
<td>1.52</td>
<td>4.85</td>
</tr>
<tr>
<td>RURAL MINOR COLLECTOR</td>
<td>28.6</td>
<td>94.8</td>
<td>3.34</td>
<td>11.1</td>
</tr>
<tr>
<td>RURAL MAJOR COLLECTOR</td>
<td>64.8</td>
<td>230</td>
<td>2.03</td>
<td>7.22</td>
</tr>
<tr>
<td>RURAL LOCAL ROAD OR STREET</td>
<td>48.2</td>
<td>184.2</td>
<td>4.79</td>
<td>18.28</td>
</tr>
<tr>
<td>URBAN PRINCIPAL</td>
<td>10.6</td>
<td>45</td>
<td>0.41</td>
<td>1.73</td>
</tr>
<tr>
<td>ARTERIAL - INTERSTATE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXPRESSWAYS</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>URBAN PRINCIPAL ARTERIAL - OTHER</td>
<td>25.4</td>
<td>160</td>
<td>0.71</td>
<td>4.45</td>
</tr>
<tr>
<td>URBAN MINOR ARTERIAL</td>
<td>20.6</td>
<td>182.4</td>
<td>0.6</td>
<td>5.28</td>
</tr>
<tr>
<td>URBAN MINOR COLLECTOR</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>URBAN MAJOR COLLECTOR</td>
<td>13</td>
<td>89.8</td>
<td>1.02</td>
<td>7.02</td>
</tr>
<tr>
<td>URBAN LOCAL ROAD OR STREET</td>
<td>22.2</td>
<td>189.2</td>
<td>0.9</td>
<td>7.69</td>
</tr>
</tbody>
</table>
# Fatalities by Roadway Functional Classification

![Bar chart showing fatalities by roadway functional classification for 2010-2014 in Iowa.](chart)

- **2010**: 30
- **2011**: 40
- **2012**: 20
- **2013**: 10
- **2014**: 5

Roadway Functional Classification:
- Major Collector (U)
- Minor Collector (R)
- Principal Arterial (R)
- Minor Arterial (R)
- Principal Arterial - Other (U)
- Minor Arterial - Other (R)
- Local Road or Street (R)
- Principal Arterial - Interstate (R)
- Freeways and Expressways (U)

Sources: Highway Safety Improvement Program. Iowa Department of Transportation.
# Serious Injuries by Roadway Functional Classification

![Bar chart showing the number of serious injuries by roadway functional classification for different years. The x-axis represents the road types, and the y-axis represents the number of serious injuries. The chart displays data for 2010, 2011, 2012, 2013, and 2014.]
Fatality Rate by Roadway Functional Classification

Roadway Functional Classification

- Major Collector (U)
- Minor Collector (R)
- Principal Arterial (R)
- Local Road or Street (R)
- Principal Arterial - Other Freeways and Expressways (R)
- Principal Arterial - Other Freeways and Expressways (U)
- Principal Arterial - Interstate (R)
- Principal Arterial - Interstate (U)
- Minor Arterial (R)
- Minor Arterial (U)
- Principal Arterial - Other (R)
- Principal Arterial - Other (U)

Year:
- 2010
- 2011
- 2012
- 2013
- 2014
Serious Injury Rate by Roadway Functional Classification

- 2010
- 2011
- 2012
- 2013
- 2014

Roadway Functional Classification
### Year - 2014

<table>
<thead>
<tr>
<th>Roadway Ownership</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATE HIGHWAY AGENCY</td>
<td>151</td>
<td>561.4</td>
<td>284.02</td>
<td>1055.65</td>
</tr>
<tr>
<td>COUNTY HIGHWAY AGENCY</td>
<td>123.2</td>
<td>362.6</td>
<td>838.29</td>
<td>2467.5</td>
</tr>
<tr>
<td>TOWN OR TOWNSHIP HIGHWAY AGENCY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CITY OF MUNICIPAL HIGHWAY AGENCY</td>
<td>41</td>
<td>339.4</td>
<td>210.62</td>
<td>1743.53</td>
</tr>
<tr>
<td>STATE PARK, FOREST, OR RESERVATION AGENCY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LOCAL PARK, FOREST OR RESERVATION AGENCY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>OTHER STATE AGENCY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>OTHER LOCAL AGENCY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>PRIVATE (OTHER THAN RAILROAD)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>RAILROAD</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>STATE TOLL AUTHORITY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>LOCAL TOLL AUTHORITY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>OTHER PUBLIC INSTRUMENTALITY (E.G. AIRPORT, SCHOOL, UNIVERSITY)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Number of Fatalities by Roadway Ownership

- 2010
- 2011
- 2012
- 2013
- 2014

Roadway Functional Classification

- STATE
- COUNTY
- TOWN
- CITY
- STATE PARK
- OTHER STATE
- OTHER LOCAL
- PRIVATE
- RAILROAD
- STATE TOLL
- LOCAL TOLL
- OTHER

# of Fatalities

0  50  100  150  200  250
Number of Serious Injuries by Roadway Ownership

- **2010**
- **2011**
- **2012**
- **2013**
- **2014**

*Roadway Functional Classification*
Fatality Rate by Roadway Ownership

Roadway Functional Classification

Fatality Rate (per HMVMT)

- STATE
- COUNTY
- TOWN
- CITY
- STATE PARK
- OTHER STATE
- OTHER LOCAL
- PRIVATE
- RAILROAD
- STATE TOLL
- LOCAL TOLL
- OTHER

2010
2011
2012
2013
2014

(Chart showing fatality rates for different roadway ownership types over multiple years.)
Serious Injury Rate by Roadway Ownership

Roadway Functional Classification

- State
- County
- Town
- City
- State Park
- Other State
- Other Local
- Private
- Railroad
- State Toll
- Local Toll
- Other

Serious Injury Rate (per HMMVT)

- 2010
- 2011
- 2012
- 2013
- 2014
Describe any other aspects of the general highway safety trends on which you would like to elaborate.

It appears that Iowa’s HSIP investments are having a positive effect on the reduction of serious injuries and fatalities. However, it is noted that the fatality rate on locally owned roadways is significantly higher than for state-owned roadways. This is a disparity that we hope to address in future years through a possible increase in the percentage of funds that gets applied to the local system.

**Application of Special Rules**

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

<table>
<thead>
<tr>
<th>Older Driver Performance Measures</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatality rate (per capita)</td>
<td>0.59</td>
<td>0.55</td>
<td>0.53</td>
<td>0.51</td>
<td>0.49</td>
</tr>
<tr>
<td>Serious injury rate (per capita)</td>
<td>1.49</td>
<td>1.45</td>
<td>1.36</td>
<td>1.32</td>
<td>1.31</td>
</tr>
<tr>
<td>Fatality and serious injury rate (per capita)</td>
<td>2.07</td>
<td>2</td>
<td>1.89</td>
<td>1.83</td>
<td>1.8</td>
</tr>
</tbody>
</table>

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

The number of older person fatalities and serious injuries in Iowa was summed for each year from 2005 to 2013. For each year, this sum was divided by the number of older persons per 1000 population in the State of Iowa, as published by FHWA, to determine a yearly rate.
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: Crash data

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

- Shift Focus to Fatalities and Serious Injuries
- Include Local Roads in Highway Safety Improvement Program
- Organizational Changes
- None
- Other:

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

None.
SHSP Emphasis Areas
For each SHSP emphasis area that relates to the HSIP, present trends in emphasis area performance measures.

Year - 2014

<table>
<thead>
<tr>
<th>HSIP-related SHSP Emphasis Areas</th>
<th>Target Crash Type</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
<th>Other-1</th>
<th>Other-2</th>
<th>Other-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Departure</td>
<td>All</td>
<td>211.8</td>
<td>616</td>
<td>242.26</td>
<td>704.62</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Intersections</td>
<td>Intersections</td>
<td>71.6</td>
<td>410.2</td>
<td>81.92</td>
<td>469.22</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Number of Fatalities by SHSP Emphasis Area

Year 2010 to Year 2014

SHSP Emphasis Area

Lane Departure
Roadway Departure
Intersections

# of Fatalities

2010 2011 2012 2013 2014

0 50 100 150 200 250 300
Number of Serious Injuries by SHSP Emphasis Area

Year 2010 to Year 2014

SHSP Emphasis Area

<table>
<thead>
<tr>
<th>Year 2010</th>
<th>Year 2011</th>
<th>Year 2012</th>
<th>Year 2013</th>
<th>Year 2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lane Departure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roadway Departure</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intersections</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fatality Rate by SHSP Emphasis Area

Year 2010 to Year 2014

SHSP Emphasis Area

Rate of Fatalities
0 50 100 150 200 250 300 350
Lane Departure Roadway Departure Intersections

2010 2012 2013 2014
### Groups of similar project types
Present the overall effectiveness of groups of similar types of projects.

**Year - 2014**

<table>
<thead>
<tr>
<th>HSIP Sub-program Types</th>
<th>Target Crash Type</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
<th>Other-1</th>
<th>Other-2</th>
<th>Other-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Safety</td>
<td>All</td>
<td>164.2</td>
<td>702</td>
<td>480.64</td>
<td>2054.82</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
# Fatalities by Target Crash Type for Groups of Similar Projects

Year 2010 to Year 2014

Target Crash Type

- All
- Angle
- Cross-median
- Fixed object
- Side-swipe
- Head-on
- Left-turn
- Night-time
- Intersections
- Rear-end
- Right-turn
- Run-off-road
- Speed-related
- Truck-related
- Vehicle/animal
- Vehicle/e-bike
- Vehicle/pedestrian

# of Fatalities

- 2010
- 2011
- 2012
- 2013
- 2014
#Serious Injuries by Target Crash Type for Groups of Similar Projects

Year 2010 to Year 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target Crash Type</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1000</td>
</tr>
<tr>
<td>Angle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cross median</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sideswipe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Head on</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Left-turn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Right-turn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intersections</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-intersection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rear-end</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Speed-related</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Truck-related</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vehicle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Animal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bicycle</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wet road</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# of Serious Injuries
Fatality Rate by Target Crash Type for Groups of Similar Projects

Year 2010 to Year 2014

Target Crash Type

Rate of Fatalities

2010 2012 2012 2013 2014
Serious Injury Rate by Target Crash Type for Groups of Similar Projects

Year 2010 to Year 2014

- 2010
- 2011
- 2012
- 2013
- 2014

Target Crash Type

- All
- Angle
- Cross median
- Sideswipe
- Head on
- Left-turn
- Right-time
- Intersections
- Non-intersection
- Rear-end
- Right-turn
- Run-off-road
- Speed-related
- Trunk-related
- Vehicle/animal
- Vehicle/bicycle
- Vehicle/pedestrian

Rate of Serious Injuries

0 500 1000 1500 2000 2500
**Systemic Treatments**
*Present the overall effectiveness of systemic treatments.*

**Year - 2014**

<table>
<thead>
<tr>
<th>Systemic improvement</th>
<th>Target Crash Type</th>
<th>Number of fatalities</th>
<th>Number of serious injuries</th>
<th>Fatality rate (per HMVMT)</th>
<th>Serious injury rate (per HMVMT)</th>
<th>Other-1</th>
<th>Other-2</th>
<th>Other-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cable Median Barriers</td>
<td>Cross median</td>
<td>9.2</td>
<td>11.4</td>
<td>45.85</td>
<td>56.6</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
# Serious Injuries by Target Crash Type for Systemic Safety Improvements

Year 2010 to Year 2014

Target Crash Type
Fatality Rate by Target Crash Type for Systemic Safety Improvements

Year 2010 to Year 2014

Target Crash Type

Rate of Fatalities

- All
- Angle
- Cross median
- Fixed object
- Head on
- Left turn
- Night-time
- Intersections
- Rear end
- Right-turn
- Run-off-road
- Speed-related
- Truck-related
- Vehicle/animal
- Vehicle/bicycle
- Vehicle/pedestrian

2010
2012
2012
2013
2014
Serious Injury Rate by Target Crash Type for Systemic Safety Improvements

Year 2010 to Year 2014

Rate of Serious Injuries

Target Crash Type

- All
- Angle
- Cross-median
- Fixed object
- Head on
- Left-turn
- Night-time
- Intersections
- Non-intersection
- Rear-end
- Right-turn
- Run-off-road
- Speed-related
- Truck-related
- Vehicle/animal
- Vehicle/bicycle
- Vehicle/pedestrian

2010
2011
2012
2013
2014
Describe any other aspects of the overall Highway Safety Improvement Program effectiveness on which you would like to elaborate.

None.
## Project Evaluation

Provide project evaluation data for completed projects (optional).

<table>
<thead>
<tr>
<th>Location</th>
<th>Functional Class</th>
<th>Improvement Category</th>
<th>Improvement Type</th>
<th>Bef-Fatal</th>
<th>Bef-Serious Injury</th>
<th>Bef-All Injuries</th>
<th>Bef-PDO</th>
<th>Bef-Total</th>
<th>Aft-Fatal</th>
<th>Aft-Serious Injury</th>
<th>Aft-All Injuries</th>
<th>Aft-PDO</th>
<th>Aft-Total</th>
<th>Evaluation Results (Benefit/Cost Ratio)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Optional Attachments

<table>
<thead>
<tr>
<th>Sections</th>
<th>Files Attached</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.