

Oklahoma Highway Safety Improvement Program FFY 2005 – 2014

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Table of Contents

<u>Title Page</u>	<u>1</u>
<u>Table of Contents</u>	<u>2</u>
<u>A. Program Structure</u>	<u>3</u>
<u>1. Program Administration</u>	<u>3</u>
<u>2. Program Methodology</u>	<u>4</u>
<u>B. Progress in Implementing the HSIP Projects</u>	<u>8</u>
<u>1. HSIP Funds Available</u>	<u>8</u>
<u>2. General Listing of Projects</u>	<u>8</u>
<u>C. Assessment of the Effectiveness of the Improvements (Program Evaluation)</u>	<u>43</u>
<u>1. Graphs of General Highway Safety Trends</u>	<u>43</u>
<u>2. Description of Overall HSIP Effectiveness</u>	<u>46</u>
<u>D. High Risk Rural Roads Program (HRRRP)</u>	<u>48</u>
<u>E. Older Drivers and Pedestrians Special Rule</u>	<u>48</u>
<u>F. References</u>	<u>49</u>
<u>Appendix A: Initial Request with HSIP Project Categories</u>	<u>50</u>
<u>Appendix B: B/C Ratio and EUAC</u>	<u>57</u>
<u>Appendix C: Discount Rates</u>	<u>59</u>
<u>Appendix D: Oklahoma Highway Safety Office Crash Facts Book</u>	<u>62</u>
<u>Appendix E: Treatment of the Economic Value of a Statistical Life in Departmental Analyses – 2011 Interim Revision</u>	<u>63</u>
<u>Appendix F: MAPS-21 Interim HSIP Guidance</u>	<u>76</u>
<u>Appendix G1: High Risk Rural Roads Special Rule Calculations</u>	<u>78</u>
<u>Appendix G2: Older Drivers and Pedestrians Special Rule Calculations</u>	<u>79</u>

Program Structure

1. Program Administration

The following describes the practices for HSIP projects that are administered through the Traffic Engineering Division. The field Division Offices administered approximately half of HSIP projects. They selected these safety projects to address their need based on information about roadway, structures, maintenance status, pavement condition, and safety history.

a. How are HSIP funds administered in the state, i.e. centrally or via districts?

All of the HSIP funds are administered through ODOT's Central Office.

b. Describe any innovative practices used to implement the HSIP.

ODOT is currently in transition on the method in which sites are ranked for both segments and intersections. We are currently using Bayesian methods for segments and probability-weighted rates for intersections. ODOT recently contracted with Oklahoma University to integrate advanced Empirical Bayesian analytical capabilities into our existing collision database interface.

A safety performance function developed to model median crossover crashes on divided highways was used to help develop policy guidelines for median cable barrier installation. As a point of diminishing returns for median cable barrier had been reached, these guidelines will help direct funding to projects likely to provide greater benefits.

c. Describe how local roads are addressed as part of the HSIP.

The local roads are owned and operated by the local entity (county or city) and the data coverage represented in this report does not include county roads or city streets. Local roads are not identified as part of the HSIP.

Currently, ODOT's database does have city and county road collisions within it. However, these roads have two different coordinate systems than that of ODOT's system and are not capable of being related to each other at this time. Furthermore, the software is not capable of drawing comparisons across the three coordinate systems. Roadway data is not available for most local roads, making it impossible to use the same analytical

methods on these roads. Extension of the analytical methods to a limited set of local roads is under implementation.

Reporting methods for other local roads strictly require geocoded crash data. At present the majority of these crashes are geocoded and can be mapped but cannot be tied to roadway data. Complete geocoding of all crashes and integration with roadway data will require extensive resources and is not being actively pursued at this time since the resources to collect the relevant roadway data are not expected to be available in the foreseeable future. ODOT is presently exploring methods of selecting systemic safety mitigations on local roads.

d. Describe how highway safety improvement projects are selected for implementation.

Currently, HSIP funds are used by ODOT exclusively; i.e. there are no other entities that can apply and we have no competitive application process for these funds. Crash experience, as reflected by the annual Collision Data Digest (parallel to the former 5% report), is a factor in project selection but there is no single governing metric. Possible B/C ratios are typically not estimated but some of the lists are ranked by expected crashes or expected crashes per mile, which may be taken as roughly proportional to a first approximation of B/C ratio. Sites for systemic improvement are chosen based on roadway characteristics and sometimes on crash history; for certain improvements specialized reports using Bayesian analysis are available to help optimize benefits. There is no established method for ranking systemic improvements relative to hot spot projects.

2. Program Methodology

The following describes the practices for HSIP projects that are administered through the Traffic Engineering Division. The other HSIP projects (approx. half) that go through the other Divisions have their own practices.

The program was last updated approximately in 1998.

a. Data Used

Crash

Crash data used to evaluate HSIP projects has a span of 5 years before the exact Work Start Date and 5 years after the exact Completion Date. Fatality, incapacitating injury and non-incapacitating injury collisions (types K, A, B) are used. Other than

excluding possible injury and property damage only crashes (types C, O) all crash types are included.

Site ranking for project selection typically uses 5 calendar years of prior crash data, including fatalities, incapacitating injuries and non-incapacitating injuries (K, A, B). For many rankings, only certain crash types are considered, for instance only run-off-road or only non-intersection or only median-crossover.

Exposure

Estimated AADT is used in both crash rate analysis and Bayesian methods.

Population is not considered. For intersections, mainline AADT is used instead of total entering vehicles due to an almost complete lack of traffic data for minor approaches.

For purposes of comparison with other intersections only, crash counts are adjusted to reflect the lower bound of a one-tailed 99% confidence interval on the assumption that observed crashes are a sample from a Poisson distribution with a mean which is itself a sample from a uniform probability distribution over the interval $(0, \infty)$. This method produces an estimate significantly lower than the observed crash counts and is not an accurate estimate of future crashes; the estimates cannot be used for instance to predict B/C ratios but provides a reasonable ranking of intersections relative to each other (for network screening), effectively deflating the ranking of intersections with very low AADT and only a few crashes.

Roadway

Only data from Oklahoma Highways, U.S. Highways, and Interstates (non-turnpike) were used in the Collision Data Digest and HSIP reports. High-level roadway data (e.g. urban/rural, 2-lane/multi-lane, divided/undivided, shouldered/unshouldered, access control) are used to segregate many internal reports. Median width was also taken into account for ranking segments by potential for crossover collisions.

b. Project Identification Methodology

The Collision Data Digest is used as guidance by Field Divisions to identify projects for safety hot spots. In accordance with our SHSP, HSIP funds are also used for systemic improvements, including cable barrier, rumble strips, and upgrades to striping, including edgeline striping, and guardrail. Systemic improvements are identified on the basis of past experience, including that of other states; expected benefits and known maintenance issues are taken into account.

Data from the Crash Modification Factor Clearinghouse is often used to help evaluate potential systemic programs and sometimes other projects as well.

c. Summary of Targeted Programs being Implemented under the HSIP

SHSP targets currently being addressed with HSIP funds include median crossovers, lane departures, intersections, and rural highways.

Median crossover collisions have been addressed by systemic application of median cable barrier, which has been notably successful. Only a limited number of locations remain to be treated with median cable barrier.

Lane departures are being addressed by application of shoulder rumble strips (systemically for new construction as well as selected retrofits), as well as systemic upgrades to guard rail and striping, including 6" edgeline striping. Some shoulder cable barrier has also been placed and more is planned. Projects have been initiated to improve curve delineation, replace obsolete guardrail, and provide clear zone mitigation in selected high-crash corridors. A small number of high friction surface treatments have been placed and more are planned. One "3-D" crosswalk has been installed as a pilot and the results are under investigation. A systemic program to place centerline rumble strips is under development.

Intersection crashes are being addressed by a policy of systematically funding the highest ranked intersections recommended for traffic signals each year by the Field Divisions. Implementation has been partially completed of systemic sign, signal and marking improvements as recommended by the FHWA Intersection Safety Assistance Program. Intersection crashes are also being addressed by a project to retrofit some existing signals with retroreflective backplates, which are also being used on all new signal projects. A few "J-Turn" intersections are finished or under construction, and more are tentatively planned. Two high speed intersections are planned to be retrofitted with dynamic advance signal change warning signs as a pilot.

Rural highways have been given increased attention by separating rural 2-lanes into their own reports and are ranked by Highway Safety Manual methods using Safety Performance Functions. Rural 2-lane highways are targeted especially for shoulder rumble strips, curve delineation, and shoulder widening.

d. Extent to which System Wide Improvements are Implemented as Part of the HSIP

We currently have several ongoing system wide projects which include: Cable Barrier, Sub-Standard Guardrail Replacement, Clearzone Mitigation, Intersection Sign & Marking Improvement, Curve Delineation, Shoulder Rumble Strip, Retroreflective Backplate Replacement, Centerline Rumble Strip, High Friction Surface Treatment, and Striping, including edgeline striping. These are funded partly by HSIP funds and partly by other sources.

In 1998 in coordination with FHWA and ODOT, a Guardrail Improvement Safety Policy was developed and implemented to address substandard guardrail and end treatments. The policy not only outlines strategies for ODOT's maintenance forces but also for new construction projects. It was decided to fund guardrail projects each year and plan development would occur in ODOT's Traffic Engineering Division. These projects have created new guardrail and end treatments that are up to date with industry and highway standards and these projects are still ongoing today. It is expected the projects will continue until we are fully updated.

ODOT has provided upgraded striping, including edgeline striping and delineation through the use of HSIP and/or other funds. Paint is being replaced with multipolymer and thermoplastic, and striping, including edgeline striping, on controlled access highways is being widened from 4" to 6". In recent years, progress has been made to provide these improvements in a data-driven manner. In 2010, a decision matrix was finalized for the type and size of striping, including edgeline striping based on AADT and the type and condition of pavement. System-wide use of 6" edgeline and centerline stripe is under consideration.

In 2012 ODOT received a plan for systemic intersection improvements from FHWA consultants (then known as SAIC), to be implemented over approximately the next 5 years. The majority of about 250 intersections on the ODOT system have now been treated.

Median cable barrier, initially treated as a hot spot mitigation and later as a systemic treatment, is now mostly in the realm of policy, governed a set of guidelines.

Systemic improvements to curve delineation are under construction for more than 100 curve locations on rural highways. A second phase of this program will treat additional curves.

Retroreflective borders on signal backplates have been established as standard for new signals and over two hundred intersections are planned for the retrofit in 2016.

e. Extent to which Highway Safety Improvements Projects Align with the State’s SHSP

In accordance with our SHSP, ODOT is emphasizing rural locations and intersection improvements; we are implementing systemic improvements, especially to address roadway departure (i.e. cable barrier, curve delineation, guardrail, and rumble strips); we are now considering only injury/fatality crashes in prioritizing locations and Traffic Engineering use of HSIP funding is increasingly data-driven.

f. Project Prioritization Process

Prioritization is guided by the crash ranking demonstrated in the Collision Data Digest, with adjustments for field conditions, funding, and other circumstances.

B. Progress in Implementing the HSIP Projects

1. HSIP Funds Available¹ (Programmed)

HSIP Project Funding		
Reporting Period: FFY 2014		
Funding Category		Obligated
HSIP (SAFETEA-LU Sect. 148)		\$7,279,260
HSIP (MAP-21 Sect. 1112)		\$17,877,255
Hazard Elimination (Section 152)		-----
HRRRP		-----
Optional Safety		\$744,101
Other Federal Aid Funds (i.e. STP, ARRA)		-----
State and Local Funds		-----
Total		\$25,900,616

Table 1

1. “Available Funds” are those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) for the reporting period and can be expended on Highway Safety Improvement projects.

2. General Listing of Projects

The following 31 pages are a general list of all projects from FFY 2005-2014 that use(d) Federal safety funds. The projects were identified using fund codes for HSIP, Hazard Elimination, Optional Safety, HRRRP, and Rail-Highway Crossings, which included H020, H210, H240, H260, H280, Q210, Q280, L010, LY10, LY20, L05E, L05R, L01E, L21R,

L24R, L28R, LS30, LS2E, LS3E, LS4E, LS5E, MS30, and MS3E. Also included are all projects let by Traffic Engineering Division in FFY 2008-2014 and all traceable cable barrier projects.

When 5 years of "After" crash data are available for a project, a Benefit/Cost ratio is reported. B/C ratios are based on the Value of a Statistical Life and estimated maintenance cost at the time the B/C is first calculated.

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Proj. Date	Highway	Work Type	Division	City	FMVA Apts	Let Date	Award Date	Work Order Date	Work Start Date	Actual Comp Date	Control System	Start/Milepost	End/Milepost	Length	Description	Fund Code	Project Total	Federal Funds	Other Funds	Fed. Other Fy13	Fed. Other Fy12	Fed. Other Fy11	Fed. Other Fy10	Fed. Other Fy09	Study Period	Source	Units	Year	FMVA	EVMS	EAUC	Actual DMC	
36652	POTTAWATOMIE	STP-126 (71) RW	RW	SH-19	RIGHT OF WAY CLEARANCE	3	2005		5-19-05	5-1-05	7-20-05	8-30-05	10-7-05	2	7.25	10.35	3.25	SH-19/211 TABLE NORTH OF SHAWANEE AVENUE NORTH AT MILLER ROAD, CREEK BRIDGE (0.8) RW CLEARANCE FOR 10550 (4) 30X100	-400	\$77,668	\$77,668	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
300300	OSAGE	462M-2544 (09) 02709	CR	1334	RIGHT OF WAY	4	2005							7			1.00	4-605-09 US 77 AND 132 TO 149.146 & 149.44 TO 94.425 AND 137 SW 100. USE 30X100 SIGN (SEGMENT VALUE 33.6)	-400	\$1,000,000	\$1,000,000	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
39620	TULSA	STP-026 (65) UT	UT	SH-20	UTILITIES	6	2005							54	0.00	0.45	0.45	SH-20 FROM US 161R TULSA/CO. EAST FOR 1500' (PHASE 1) 4.25-3.008	-400	\$397,500	\$397,500	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
39630	TULSA	STP-126 (65) RW	RW	SH-20	RIGHT OF WAY CLEARANCE	6	2005		9-15-05	10-1-05	11-29-05	2-14-06		54	0.00	0.45	0.45	SH-20 FROM US 161R TULSA/CO. EAST FOR 1500' (PHASE 1) 4.25-3.008	-400	\$31,087	\$31,087	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
357505	MOCKLEAY	STP-148 (65) UT	UT	US-62	UTILITIES	3	2005							2	0.00	0.00	0.00	US 62 FROM 0.15 MI WEST OF THE CL. NORTH EAST THROUGH BINGHAM CUTOFF FOR 1.327(20) (H-3) SMC 3022	-400	\$1,225,000	\$1,225,000	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
36300	OSAGE	STP-136 (67) RW	RW	SH-74	RIGHT OF WAY	4	2005							55	7.05	9.15	1.50	SH-74 NORTH OF MEMPHIS NORTH APPROX. 1.5 MI. 1.669-1.696 (PHASE 1) S-7(1)-43 SMC 3022	-400	\$14,501,127	\$14,501,127	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
156413	MEMPHIS	STP-131 (67) RW	RW	US-64	RIGHT OF WAY	1	2005							12	11.30	13.10	1.60	US 64 FROM US 161R TULSA/CO. EAST APPROX. 1.5 MI. 1.669-1.696 (PHASE 1) S-7(1)-43 SMC 3022	-400	\$153,000	\$153,000	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
302305	OSAGE	STP-136 (65)	CR	SH-6	GRADE, DRAIN & SURFACE	5	2005		1-20-05	2-1-05	3-11-05	5-15-05	7-12-07	6	3.00	6.00	3.00	SH-6/14 DRAINAGE NORTH OF THE CL. NORTH APPROX. 3.00 MILES EAST OF SHAWANEE	-400	\$2,240,804	\$2,240,804	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
355004	OSAGE	STP-026 (47)	CR	SH-6	BRIDGE & APPROACHES	6	2005		3-3-05	3-1-05	4-15-05	11-6-05		7	0.55	0.72	0.17	SH-6 AT THE NORTH FORK OF THE RED RIVER. NEW APPROACH SPECIAL CONTRACTS 3-20-05. (SH-6) 4.107(0)	-400	\$4,363,049	\$4,363,049	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
355004	OSAGE	ACTIV-188A (03) CR	CR	US-69	GRADE, DRAIN & SURFACE	1	2005		9-16-05	9-6-05	10-22-05	7-22-09		2	0.66	2.43	1.57	US-69 FROM NORTH OF ARKANSAS BRIDGE (PHASE 1) 3.80-3.803(0)	-400	\$8,745,905	\$8,745,905	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
17272	WELFORD	STP-104 (72) RW	RW	US-59	RIGHT OF WAY CLEARANCE	2	2005		1-20-05	2-1-05	3-15-05	5-16-05		6	6.30	11.60	5.30	US-59 FROM 319 DIXON NORTH, R/W CLEARANCE FOR 1121(2) SMC 3022	-400	\$50,775	\$50,775	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
176017	OSAGE	STP-138A (78) RW	RW	US-59	RIGHT OF WAY CLEARANCE	1	2005		2-24-05	3-1-05	4-15-05	6-15-05		2	1.30	4.60	3.30	US-59 FROM 271M SOUTH OF 140 SOUTH 3.5 M RW CLEARANCE FOR 1121(2) DEL R 11.05. ADD TO 3022. (LATE 2011)	-400	\$4,658	\$4,658	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
346104	KANSAS	STP-180 (03) RR	RR	RR	CROSSING IMPR. & RESURFACING	3	2005										0.00	TRX-180/GAULT AT AMOS CONLEY RD. 100' W. 180' W. BRIDGE APPROX. 16200'A	-400	\$77,822	\$77,822	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
346104	KANSAS	STP-180 (04) MS	MS	MARKP	RESURFACE	7	2005		5-16-05	6-1-05	6-27-05	11-15-05		N/A				18' W. OF STATE HWY 160 FROM GUYAN NORTH 10 W TO CAUSE FOR CLEAR. 11/21/07 (LATE 2007)	-400	\$4,300,943	\$4,300,943	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
357512	POTTAWATOMIE	STP-158 (103) RW	RW	SH-39	RIGHT OF WAY	3	2005							12	2.00	6.50	4.50	SH-39 FROM 2500 N. STATE HWY 160 TO 2500 N. STATE HWY 160	-400	\$401,000	\$401,000	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
356000	POTTAWATOMIE	STP-158A (79) UT	UT	SH-6	UTILITIES	3	2005											SH-6/1400/2000 ST. 130M (L-3) TO 130M (L-3) NORTH FORK OF RED RIVER	-400	\$150,000	\$150,000	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
347505	WENDELL	STP-129 (65)	CR	US-20	PAINT	3	2005							2	8.60	8.88	0.10	US-20 FROM 2.5 MI WEST OF 1500' SOUTH AS PHASE 1 AND 2.5 MI SOUTH AS PHASE 2. (SH-3) 343 DEL R 103.00. ACT TO 05.30. (COST CHARGE) SMC 3022	-400	\$77,307	\$77,307	\$0							Project Not in Traffic Engineering Division	\$0	\$0					
39620	MEMPHIS	STP-027B (03) CC	CC	NA	SAFETY IMPROVEMENT	1	2005		1-20-05	2-1-05	3-9-05	4-4-05	3-20-06	N/A				715 PROJECT TO INTEGRATE DIVISION WITH 2013 AND 2010 PROJECTS	-400	\$37,371	\$10,116	\$0							Project Not in Traffic Engineering Division	\$0	\$0					

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Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Proj. Date	Highway	Work Type	Division	City	HSMA Act	Letter	Acctg Date	Work Order Date	Work Start Date	Modl Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Total	Federal Funds	State Funds	Other Funds	Est Before FY13	Fid After FY13	Fid After FY12	Study Period	Source Loc (Y/N)	Match (Y/N)	Units Year	EVIS	EVIS	Admit Date
196005	MIKOCZEE	ITSY-0219-00310C	DC	NA	SAFETY IMPROVEMENT	1	2005							NA				COMMUNICATIONS FOR ITS PROJECT TO INTEGRATE DIVISION 418 SIGNALING INTO THE NEW ANEX 2 PROJECT. SMC-4925	-400	\$78,366	\$23,519	\$0	\$0								Relevant Oash Data Cannot Be Isolated		
196004	TULSA	ITSY-0219-00310C	DC	NA	SAFETY IMPROVEMENT	6	2005	9/15/05	10/1/05	10/25/05	11/14/05	5/22/06		NA				US PROJECT ON THE BARRON OF EXISTING EMERGENCY MANAGEMENT AGENCIES IN TULSA REGION "AUTH" SMC-4925	-400	\$163,010	\$63,010	\$0	\$0								Relevant Oash Data Cannot Be Isolated		
196005	TULSA	ITSY-0219-00310C	DC	NA	SAFETY IMPROVEMENT	6	2005	7/21/05	6/1/06	6/23/05	5/12/05	14/07		NA				COMMUNICATIONS FOR ITS PROJECT TO INTEGRATE DIVISION 418 SIGNALING INTO THE NEW ANEX 2 PROJECT. SMC-4925	-400	\$7,158	\$1,550	\$0	\$0								Relevant Oash Data Cannot Be Isolated		
196004	OKMOWA	ITSY-0219-00310C	DC	US	SAFETY IMPROVEMENT	4	2005							NA				ITS PROJECT FOR INTEGRATION OF EXISTING COMPONENTS WITH OKMOWA COUNTY LINE EXTENSION NORTH 18 1/2 MILES AND NORTH 30 MILES. FORMERLY AQ32AC-5650	-400	\$326,326	\$72,326	\$0	\$0								Relevant Oash Data Cannot Be Isolated		
202205	OKOOC	STPA-118C-0041RW	RW	US-277	RIGHT OF WAY	7	2005							6	0.00	3.16		US-277 FROM LIST S. OF COMMERCE COUNTY LINE EXTENSION NORTH 18 1/2 MILES TO SUPER 2 R/W FOR 202205-2004	-400	\$34,000	\$34,000	\$0	\$0								Project Not in Traffic Engineering Division		
202205	OKMOWA	STPA-118C-0031RW	RW	US-277	RIGHT OF WAY	7	2005							12	5.30	11.73		US-277 FROM BLOOMINGDALE EXTENSION SMC-4925	-400	\$197,000	\$197,000	\$0	\$0								Project Not in Traffic Engineering Division		
202205	OKMOWA	S1PA-116C-0031UT	UT	US-277	JULIETTES	7	2005							12	5.30	11.73		US-277 FROM BLOOMINGDALE EXTENSION SMC-4925	-400	\$1,500,000	\$100,000	\$0	\$0								Project Not in Traffic Engineering Division		
202205	MIKOCZEE	STPA-110C-0031RW	RW	US-177	RIGHT OF WAY	7	2005							20	0.00	5.20		US-177 FROM THE CARTER COUNTY 202504 SMC-4920	-400	\$16,000	\$16,000	\$0	\$0								Project Not in Traffic Engineering Division		
202205	MIKOCZEE	S1PA-110C-0041UT	UT	US-177	JULIETTES	7	2005							20	0.00	5.20		US-177 FROM THE CARTER COUNTY 202504 SMC-4920	-400	\$16,000	\$16,000	\$0	\$0								Project Not in Traffic Engineering Division		
202704	PAINE	STPA-110C-0071	PA	SH-63	BRIDGE & SURFACE	4	2005	11/18/04	12/1/04	1/13/05	6/13/05	1/31/09		10	3.00	3.30		SH-63 APPROX. 1 MILE EAST OF TOLING AND EXTENDING EAST (PAC FOR PARTICIPATION) SMC-4920	-400	\$4,227,042	\$1,562,307	\$0	\$0								Project Not in Traffic Engineering Division		
202804	BEADJOY	STPA-118C-0110	MI	SH-100	RESURFACE	1	2005	7/28/05	6/1/06	6/23/05	5/26/05	1/3/06		24	0.00	7.26		SH-100 FROM QUINCY EXTEND NORTH 7.26 MILES THEN EAST TO MILES (PWR) CANCELLED 2005. ADD TO 0702	-400	\$87,750	\$87,750	\$0	\$0								Project Not in Traffic Engineering Division		
203004	OKMOWA	ITSY-0219-00310C	DC	NA	SAFETY IMPROVEMENT	4	2005							NA				ITS DIAGNOSTIC/NEARBY NEAREST COMMENTS INTO COMBINE WITH THE WORKING CONDITIONS WITH THE ROAD TO 0702/0701 "CHOP" AUTH"	-400	\$56,666	\$26,666	\$0	\$0								Relevant Oash Data Cannot Be Isolated		
214600	CHEROKEE	STPA-111A-0031R	TR	US30	SAFETY IMPROVEMENT	1	2005							4	0.00	0.00		US 30 INSTALL TRAFFIC SIGNAL INTERCONNECT SYSTEM @ INTER @ 010 RYNE ST & SH-51. INSTALL INTERCONNECTABLE TO METAL BRIDGE	-410	\$12,500	\$0,500	\$20,500								No Construction Date Available For Oash Analysis			
216200	OKMOWA	STPA-118A-0031R	TR	SH-63	SAFETY IMPROVEMENT	4	2005	7/21/05	6/1/06	6/23/05	1/15/06	2/12/07		0	9.97	11.97		SH-63 IMPROVE TRAFFIC SIGNALS @ VARIOUS LOCATIONS ALONG SH-63	-410	\$49,052	\$19,381	\$0	\$0									\$22,116	\$7,261
216200	OKMOWA	STPA-118E-0023R	RR	RR	CROSSING IMPROVEMENT	6	2005											PARLAND NST SIGS @ 4 LOC. SH-63 LOC. CLOSURE @ 2 LOC. W BRIDGE/ONE COL. GR. 4.50 (05/9/04)	-410	\$54,301	\$26,016	\$0	\$0								Project Not in Traffic Engineering Division		
216700	OKMOWA	S1PA-115E-0511C	EC	NA	PRELIMINARY ENGINEERING	4	2005							NA				STATEWIDE HYDRAULIC/SUBSOLOGY ANALYSIS AND REPORTS AT LOCATIONS STATEWIDE (SM-4620)	-400	\$300,000	\$300,000	\$0	\$0								Relevant Oash Data Cannot Be Isolated		
218700	OKMOWA	STPA-112B-0071EC	EC	SH-51	PRELIMINARY ENGINEERING	1	2005							16	0.00	0.00		SH-51 PREPARE ENVIRONMENTAL ASSESSMENT/ENGINEERING STUDIES. ASSESSMENT/ENGINEERING STUDIES. SH-51 FROM WAGONER TO TAKEULAH (SPC-6020)	-400	\$48,500	\$48,500	\$0	\$0								Relevant Oash Data Cannot Be Isolated		

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Date	HSIP	Work Type	Division	City	TRMA Act	Letter	Admin Date	Work Order Date	Work Start Date	Mod Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Fed Awar (Yrs)	11 Fed Awar (Yrs)	12 Fed Awar (Yrs)	13 Fed Awar (Yrs)	14 Fed Awar (Yrs)	15 Fed Awar (Yrs)	Study Period	Surface Lbr (M)	Maint (M)	Units Year	EWB	EWAC	At-Risk						
Z00006	OKLAHOMA	STP-15E (R6) EC	EC	NA	PRELIMINARY ENGINEERING	4	2005							N/A				SPATEWIDE DEVELOPMENT OF BRIDGE OVER RIVER CROSSING AT 200+00 TO 204+00. LANE WIDTH 80' (RMC - R600)	400	\$700,000	\$700,000	\$0	\$0										Relevant Oath Data Cannot Be Isolated									
Z00009	MURKOCREE	STP-15H (L3)		MAJPH	BRIDGE WATER PROOF SEAL	1	2005		4-21-05	5-1-05	5-7-05	12-27-05						DIV 1 DIMENSION WIDE SLANE PROJECT ADDITION	400	\$46,326	\$46,326	\$0	\$0										Relevant Oath Data Cannot Be Isolated									
Z00010	WRIGHT	STP-15H (L3)		MAJPH	BRIDGE WATER PROOF SEAL	3	2005		4-21-05	5-1-05	5-9-05	11-18-05						DIV 1 TO 2005+00 TO 0405+00 LANE ADDITION	400	\$34,246	\$34,246	\$0	\$0											Relevant Oath Data Cannot Be Isolated								
Z00014	MOBILE	STP-15H (R0)		MAJPH	BRIDGE WATER PROOF SEAL	4	2005		4-21-05	5-1-05	6-29-05	8-5-05						DIV 4 DIMENSION WIDE SLANE PROJECT FOR FFY 2005	400	\$37,720	\$37,720	\$0	\$0												Relevant Oath Data Cannot Be Isolated							
Z00016	GUYTON	STP-15H (R0)		MAJPH	BRIDGE WATER PROOF SEAL	5	2005		4-21-05	5-1-05	6-25	1-31-05						DIV 5 DIMENSION WIDE SLANE PROJECT FOR FFY 2005	400	\$35,908	\$35,908	\$0	\$0													Relevant Oath Data Cannot Be Isolated						
Z00044	HARPER	STP-15H (R6)		US-64	BRIDGE WATER PROOF SEAL	6	2005		4-21-05	5-1-05	6-30	7-25-05	3-7-05					DIV 6 DIMENSION WIDE SLANE PROJECT FOR FFY 2005	400	\$37,574	\$37,574	\$0	\$0														Relevant Oath Data Cannot Be Isolated					
Z00050	STEPHENS	STP-15H (R0)		MAJPH	BRIDGE WATER PROOF SEAL	7	2005		4-21-05	5-1-05	6-6-05	3-11-05	10-31-05					DIV 7 DIMENSION WIDE SLANE PROJECT FOR FFY 2005	400	\$50,106	\$50,106	\$0	\$0														Relevant Oath Data Cannot Be Isolated					
Z00060	TULSA	STP-15H (R7)		MAJPH	BRIDGE WATER PROOF SEAL	8	2005		4-21-05	5-1-05	6-3-05	8-17-05	11-8-05					DIV 8 DIMENSION WIDE SLANE PROJECT FOR FFY 2005	400	\$52,947	\$52,947	\$0	\$0														Relevant Oath Data Cannot Be Isolated					
Z20004	BEAVER	STP-16G (R4) TR	TR	MAJPH	SAFETY IMPROVEMENT	6	2005							MAJPH				US-2005H-03 INSTALL THERMOPLASTIC PAVEMENT MARKINGS BEGIN R/M N OF MAIN ST., IN BEAVER, EX 1 S. 274	400	\$15,000	\$15,000	\$0	\$0											No Construction Data Available For Oath Analysis								
Z20004	ELLIS	STP-16G (R4) TR	TR	MAJPH	SAFETY IMPROVEMENT	6	2005							MAJPH				US-2005H-05 INSTALL THERMOPLASTIC PAVEMENT MARKINGS BEGIN R/M S OF MAIN ST. IN ELLIS, EX 1 N 48 W	400	\$22,000	\$22,000	\$0	\$0												No Construction Data Available For Oath Analysis							
Z20004	HARPER	STP-16G (R4) TR	TR	MAJPH	SAFETY IMPROVEMENT	6	2005							MAJPH				US-2005H-07 INSTALL THERMOPLASTIC PAVEMENT MARKINGS BEGIN R/M S OF MAIN ST. IN HARPER, EX 1 N 48 W	400	\$15,000	\$15,000	\$0	\$0													No Construction Data Available For Oath Analysis						
Z20004	RODGERS	STP-16A (R5) TR	TR	SH-66	TRAFFIC SIGNALS	8	2005		9-16-05	10-1-06	2-21-06	7-5-06	10-5-06		2	6-42	6-42	SH-66 INSTALL TRAFFIC SIGNAL SYSTEM AT INTER. OF SH-66 AND CO RD EN-66 IN THE TOWN OF VESCHORS	400	\$101,048	\$101,048	\$0	\$0	0	2	1	0	2	2	5	25	\$200	1.00	\$10,200	\$6,688	\$10,533						
Z20004	OKLAHOMA	STP-15E (R6) EC	EC	NA	PRELIMINARY ENGINEERING	4	2005											ENGINEERING SERVICES TO SUPPORT DEPARTMENT STAFF - RDE & ASSOCIATES (RMC-4000)	400	\$50,000	\$50,000	\$0	\$0													Relevant Oath Data Cannot Be Isolated						
Z20004	OKLAHOMA	STP-15E (R6) EC	EC	NA	ENGINEERING	4	2005											ENGINEERING SERVICES TO SUPPORT DEPARTMENT STAFF - RDE & ASSOCIATES (RMC-4000)	400	\$50,000	\$50,000	\$0	\$0														Relevant Oath Data Cannot Be Isolated					
Z20004	OKLAHOMA	STP-15E (R7) EC	EC	NA	ENGINEERING	4	2005											ENGINEERING SERVICES TO SUPPORT DEPARTMENT STAFF - RDE & ASSOCIATES (RMC-4000)	400	\$25,000	\$25,000	\$0	\$0														Relevant Oath Data Cannot Be Isolated					
Z20004	OKLAHOMA	STP-15E (R6) EC	EC	NA	ENGINEERING	4	2005											ENGINEERING SERVICES TO SUPPORT DEPARTMENT STAFF - RDE & ASSOCIATES (RMC-4000)	400	\$25,000	\$25,000	\$0	\$0														Relevant Oath Data Cannot Be Isolated					
Z20004	OKLAHOMA	STP-15E (R7) EC	EC	NA	ENGINEERING	4	2005											SPATEWIDE DESIGN MANUAL	400	\$355,691	\$355,691	\$0	\$0														Relevant Oath Data Cannot Be Isolated					
Z20004	MUSKOGEE	STP-15A (R2) TR	TR	SH-144	SAFETY IMPROVEMENT	2	2005		5-16-05	7-6-05	6-1-05	6-24-05		20	4-40	4-60	0-50	SH-144 REPAIR SCHOOL ZONE BECAUSE FOR THE MAJOR DISTRICT FOR RDE-66 A20 TO 05-05	400	\$12,266	\$12,266	\$0	\$0	0	0	0	0	0	5	25	\$100	1.00	\$0	\$22	\$0	0.00						
Z20004	OSCEOLA	STP-15E (R2) RR	RR	RR	RAILROAD SIGNALS	6	2005											RAILROAD SIGNALS PROJECT @ 03	400	\$24,835	\$24,835	\$0	\$0														Project Not in Traffic Engineering Division					
Z20004	ELLIS	STP-12B (R4) RR	RR	RR	RAILROAD SIGNALS	6	2005											RAILROAD SIGNALS PROJECT @ 03	400	\$16,918	\$16,918	\$0	\$0													Project Not in Traffic Engineering Division						
Z20004	MOBILE	STP-16B (R5) RR	RR	RR	RAILROAD SIGNALS	5	2005											RAILROAD SIGNALS PROJECT @ 03	400	\$53,891	\$53,891	\$0	\$0														Project Not in Traffic Engineering Division					

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Proj. Title	HSIP	Work Type	Division	City	HSIP Act	Let Date	Award Date	Work Order Date	Work Sheet Date	Mile Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Est. Bid Price	11 Bids (Cn)	11 Bids (Cn)	11 Alter (Cn)	11 Alter (Cn)	11 Alter (Cn)	Study Period	Source Loc (Int)	Major Int	Units Year	EVALC	Mile/Bid												
																																				Relat Death Due Cannot Be Isolated	Relat Death Due Cannot Be Isolated	Relat Death Due Cannot Be Isolated									
250006	WAVES	STP-159(100)RR	RR	RR	CROSSING IMPR. 8445 SIGNALS	6	2005							N/A				MOVES SIGNAL FROM SIGNAL PED. MOUNT FLASHING LIGHTS SIG IN GATE ARMS LOCATIONS CO RD ENHANCE UPPENN'S MAINLINE A&P-200(14)0721	LSO	\$64,637	\$61,664	\$0	\$0						Project Natio Traffic Engineering Division	1427																	
268504	WOODS	STP-170(103)RR	RR	RR	CROSSING IMPR. 8445 SIGNALS	6	2005							N/A				AWARD CORRIDOR FROM WEST PED MOUNT FLASH LIGHTS SIG W GATE ARMS LOCATIONS CO RD ENHANCE UPPENN'S MAINLINE A&P-200(14)0721	LSO	\$78,960	\$37,974	\$0	\$0						Project Natio Traffic Engineering Division	1427																	
268604	WOODS	STP-170(104)RR	RR	RR	CROSSING IMPR. 8445 SIGNALS	6	2005							N/A				CONRA CORRIDOR FROM WEST PED. MOUNT FLASH LIGHTS SIG W GATE ARMS LOCATIONS CO RD ENHANCE UPPENN'S MAINLINE A&P-200(14)0721	LSO	\$1,103,964	\$93,198	\$0	\$0						Project Natio Traffic Engineering Division	1427																	
297104	ROCKERS	STP-168(100)RR	RR	RR	CROSSING IMPR. 8445 SIGNALS	6	2005							N/A				COLONIAH PROJ. PED. MOUNT FLASH LIGHTS SIG W GATE ARMS, CONCRETE SURFACE REPAIR, CLOSURE UP P&S'S STATION	2210	\$84,266	\$37,937	\$0	\$0						Project Natio Traffic Engineering Division	1427																	
297204	ROCKERS	STP-168(101)RR	RR	RR	CROSSING IMPR. 8445 SIGNALS	6	2005							N/A				CONRA CORRIDOR FROM WEST PED. MOUNT FLASH LIGHTS SIG W GATE ARMS LOCATIONS CO RD ENHANCE UPPENN'S MAINLINE A&P-200(14)0721	2210	\$92,411	\$54,170	\$0	\$0						Project Natio Traffic Engineering Division	1427																	
297304	OKAHOMA	HS10-185(498)RR	RR	RR	CROSSING IMPR. 8445 SIGNALS	4	2005							N/A				STATE INVENTORY ANALYSIS AND DATA INTEGRATION AND ASSESSMENT PROJECT AT P&S' STATION	LSO	\$,000,000	\$,000,000	\$0	\$0						Project Natio Traffic Engineering Division	1427																	
4184162	WHEELAND	STP-148(102)TR	TR	3A19	TRAFFIC SIGNALS	3	2005		2/16/05	3/6/05	3/26/05	5/14/07			0.32	0.32	0.00	US-55 INTERSECTION W/ STATE ST W/ I-240	LSO	\$12,852	\$12,852	\$0	\$0	0	4	4	0	2	5	25	\$200	1.00	\$1,340,440	\$12,852	\$0	\$0						107.27					
2411004	TULSA	NHC-000(655)TR	TR	UT169	CABLE BARRIER	6	2007	9/15/07	2/16/08	3/3/08	3/24/08	5/5/08	3/12/09		0.01	2.13	0.00	US-55 MEDIAN BARRIER AT 30TH ST & EXT NORTH TO BIRD CREEK CORPUS DEL RIO CO. RD 102.08		\$50,065	\$50,065	\$0	\$0	1	23	76	4	21	54	5	25	#####	2.77	\$2,726,040	\$52,237	\$0	\$0					6151					
2810104	TULSA	MS-004-269(221)TR	TR	1804	SAFETY IMPROVEMENT	6	2007	9/17/07	10/10/07	11/5/07	12/3/07	2/1/08	9/4/08		0.0			0.44/0.24 REPLACE OF SUPER ELEVATION W/ I-240		\$73,656																					Relevant Death Due Cannot Be Isolated						
2807004	KAWANOY	MS-004-14(131)TR	TR	1804	CABLE BARRIER	4	2007	9/19/07	10/4/07	11/5/07	11/30/07	3/17/08	11/3/09		0.05	25.52	31.05	US-66 MEDIAN BARRIER PROJECT FROM MP 150.0 TO 153.0	NA	\$74,836						6	13	34	4	6	15	5	25	3650	5.10	\$7,250,000	\$61,025	\$0	\$0						141.09		
2814504	OKAHOMA	MS-005-125(131)TR	TR	1805	CABLE BARRIER	4	2007	9/19/07	10/18/07	11/5/07	11/30/07	3/3/08	6/3/09		0.05	0.07	4.25	US-66 MEDIAN BARRIER @ MILEPOST 150 156& EXT NORTH TO MILEPOST 150		\$78,826							5	29	86	3	28	55	5	25	#####	4.22	\$6,991,120	\$88,862	\$0	\$0						102.22	
2818004	NAI	MS-005-47(122)TR	TR	1805	CABLE BARRIER	4	2007	9/21/07	1/17/08	2/4/08	2/29/08	4/17/08	6/5/09		0.05	20.05		US-66 MEDIAN BARRIER PROJECT FROM MP 27.0 TO 28.0 "N" I-40		\$,000,000								4	1	15	0	4	15	5	25	#####	8.00	\$6,277,000	\$145,942	\$0	\$0						42.74
0642004	TULSA	STP-172(421)		3A20	GRADE, DRAIN & SURFACE	6	2007	1/16/07	2/1/07	3/3/07	3/30/07	9/4/08		54	0.00	0.48		3A-20 FROM US-169 IN TULSA CO. EAST 0.4 MILES TO EAST OF 20TH AVE. I-40 RR 1006 ADD 1007.37 CONTRACT REVISIONS 1006&2 1011	040	\$1,380,196	\$6,681,128	\$0	\$0																				Project Natio Traffic Engineering Division				
2611005	NORLE	STP-158(105)W	W	US364	RIGHT OF WAY	4	2007											US-64 TR US-77 EXTEND EAST 10.0 MILES RW-FA-2011(04/07)	LSO	\$76,000	\$76,000	\$0	\$0																			Project Natio Traffic Engineering Division					
2612005	NORLE	STP-158(107)W	W	US364	UTILITIES	4	2007											US-64 TR US-77 EXTEND EAST 10.0 MILES UT-FA-2011(04/07)	LSO	\$462,000	\$462,000	\$0	\$0																					Project Natio Traffic Engineering Division			
280004	KAWANOY	TSY-010(62)IT	IT	US-62	SAFETY IMPROVEMENT	7	2007		2/16/07	6/1/07	6/30/07	10/17/07						7A INTEGRATION AND DATA ANALYSIS 3M-2007	040	\$712,697	\$45,200	\$0	\$0																				Project Natio Traffic Engineering Division				
280005	HITTSBERG	STP-161(88)TR	TR	SH31	SAFETY IMPROVEMENT	2	2007							14				0.00 TRS. CTRY (I-10) OVER AT MILEPOST 210.0 KAWANOY AREA	040	\$25,047	\$25,237	\$0	\$0																				Relevant Death Due Cannot Be Isolated				
2833004	OKAHOMA	TSY-023(63)IT	IT	NA	SAFETY IMPROVEMENT	4	2007		11/16/06	12/1/06	1/5/07	4/3/07	6/14/09					OKAHOMA AREA CADDISON COUNTIES TRANSPORTATION PROJECT BEEL-HUB RD. ADD 11.06 PRIORITY FUND 10/11	400	\$87,754	\$70,368	\$0	\$0																				Relevant Death Due Cannot Be Isolated				

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Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Proj. Date	HSIP	Work Type	Division	City	TMAA Atn	Letter	Admin Date	Work Order Date	Work Order Desc	Modif Comp Date	Control Station	Start Milepost	End Milepost	Length	Description	Fund Code	Project Total	Federal Funds	State Funds	Other Funds	Est. Before FY05	11 Before FY05	12 Before FY05	13 Before FY05	14 After FY05	15 After FY05	Study Period	Match Yr	FY05	EUAC	Actual B/C						
202100	DAWHER	STP-1138 (10) UT	UT	SH-16	UTILITY	7	2009							4			5.12	SH-16 BEGIN AT END OF ALIENE EAST 1/2 MI OF RIMMERE EXTEND EAST 1/2 MILES TO SH-202 (04)	550	\$6,536	\$6,536	\$0	\$0																	
202105	MONTICOSH	STP-1140 (05) UT	UT	SH-26	UTILITY	1	2009							6	16.66	17.40	0.56	EXTEND EAST 0.56 MILES IN C/O FOR UT FOR 2021 (05)	550	\$36,048	\$36,048	\$0	\$0																	
202105	MONTICOSH	STP-1140 (03) RW	RW	SH-26	RIGHT OF WAY	1	2009							6	16.66	17.40	0.56	RECONSTRUCT WEST OF 0.56 MI EXTENDING EAST 0.56 MILES IN C/O FOR 2021 (03)	550	\$85,000	\$85,000	\$0	\$0																	
202005	MIFREAY	STP-1130 (04) RW	RW	SH-170	RIGHT OF WAY	7	2009							3	0.00	1.80	1.80	TRUST AT FALLS CREEK EXT SOUTHEASTLY 1/8 MILES TO PALM GREEK ASSEMBLY NEW ALUMINUM (NEW FOR 2005 (04))	550	\$16,000	\$16,000	\$0	\$0																	
202005	MIFREAY	STP-1130 (07) UT	UT	SH-170	UTILITY	7	2009							3	0.00	1.80	1.80	TRUST AT FALLS CREEK EXT SOUTHEASTLY 1/8 MILES TO PALM GREEK ASSEMBLY NEW ALUMINUM (UT FOR 2005 (04))	550	\$35,500	\$35,500	\$0	\$0																	
206905	CREEK	RPY-1150 (10) RW	RW	SH-15	RIGHT OF WAY	6	2009							10	11.18	11.26	0.01	EXT OF SH-148 RW FOR 2009 (04) SMP-4000	550	\$7,000	\$7,000	\$0	\$0																	
209110	MADONER	RPY-1128 (15)		SH-72	CROSSING IMPR & SIGNS	1	2009							20	7.13	7.36	0.23	SH-72 BRIDGE AND SIGNALS AT 413 1/2 MI IN CONTACT (FOR FORCE ACCOUNT)	550	\$1,743,426	\$1,743,426	\$0	\$0																	
209705	CLEVELAND	STP-1140 (12) RW	RW	US-07	RIGHT OF WAY	3	2009							4			5.76	US-7 FROM 1/8 MILE NORTH OF SH-76 NORTH 75 MI TO MORGAN ROAD IN MORGAN (4 IN INDIVIDUAL ROW FOR 2009 (12) & 110)	550	\$1,100,000	\$1,100,000	\$0	\$0																	
209705	CLEVELAND	STP-1140 (11) UT	UT	US-7	UTILITY	3	2009							4	4.05	9.80	5.76	US-7 FROM 1/8 NORTH OF SH-76 NORTH 75 MI TO MORGAN ROAD IN MORGAN (11 IN INDIVIDUAL UT FOR 2009 (11) & 110)	550	\$102,400	\$102,400	\$0	\$0																	
200911	CLEVELAND	STP-1140 (24) EC	EC	US-7	PLANNING	3	2009							4	7.30	11.06	3.76	US-7 PREPARE PLANS TO IMPROVE 1/2 MILES FROM LEONARD TO MILE EC (157A B,C FOR 2009 (04) & 110)	550	\$1,000,000	\$1,000,000	\$0	\$0																	
216304	OKLAHOMA	TSY-0728 (03) IT	IT	NA	SAFETY IMPR/DELET	4	2009											WHICH IS LOCATED IN DIVISIONS 11 & V 73 IN CONTACT PROJECT "ALU"	040	\$30,368	\$30,368	\$0	\$0																	
200604	TULSA	STP-1170 (00) RR	RR		RAILROAD SIGNALS	6	2009											TULSA SIGNAL AT LANSARK W/ THE SOUTH WISCONSIN AND OKLAHOMA RAILROAD (WAS DOT 100R6E)	550	\$27,947	\$19,152	\$0	\$0																	
200704	TULSA	STP-1170 (10) RR	RR		RAILROAD SIGNALS	6	2009											TULSA SIGNAL AT WACLE AVE IN THE SOUTH WISCONSIN AND OKLAHOMA RAILROAD CO. APPROX 7 MILES NORTH OF WACLE AVE	550	\$25,466	\$14,936	\$0	\$0																	
206004	PINE	HSY-1608 (15) TR	TR	SH-61	TRAFFIC SIGNALS	4	2009							16	16.36	16.36		SH-61 INTERSECTION WITH MARINE ST INTERSECTION TRAFFIC SIGNALS	550	\$54,172	\$54,172	\$0	\$0																	
206604	PUSHMATAHA	HSY-1648 (09) TR	TR	US-27	TRAFFIC SIGNALS	2	2009							2	5.14	5.14		US-27 SH-2 TRAFFIC ACTUATED SIGNALS AND TO D-37 LATE AND BY TRAFFIC	550	\$24,141	\$24,141	\$0	\$0																	
227104	WASHINGTON	HSY-1744 (04) TR	TR	US-75	TRAFFIC SIGNALS	6	2009							21	19.46	19.46	0.00	RECONSTRUCT AND IMPROVE 1/2 MILES SOUTH OF SIGNALS TO 1/2 MI SOUTH OF SIGNALS TO 1/2 MI SOUTH OF SIGNALS TO	550	\$72,337	\$72,337	\$0	\$0																	
206604	WISCONSIN	HSY-1118 (10) TR	TR	SH-61	TRAFFIC SIGNALS	1	2009							12	18.66	18.66	0.00	INTERSECTION TRAFFIC SIGNALS 1/4 MILE SOUTH OF WISCONSIN 1/4 MILE SOUTH	550	\$14,266	\$14,266	\$0	\$0																	
206704	CREEK	STP-1150 (14) RR	RR		CROSSING IMPR & SIGNALS	6	2009											RECONSTRUCT AND IMPROVE 1/2 MILES SOUTH OF SIGNALS TO 1/2 MI SOUTH OF SIGNALS TO 1/2 MI SOUTH OF SIGNALS TO 1/2 MI SOUTH OF SIGNALS TO	550	\$59,276	\$51,448	\$0	\$0																	

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Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fwy Dir.	HSIP	Work Type	Division	City	TRMA Apts	Letter	Asmt Date	Work Order Date	Work Start Date	Modl Comp Date	Cont System	Start Mispnt	End Mispnt	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Fed Bldg Pct	11 Bldg Pct	MT Bldg Pct	Fed Atr Pct	11 Atr Pct	MT Atr Pct	Study Period	Service Life (Yrs)	Max Yr Int	Units/Year	EVMS	EVMS	AVMFD BNC					
252204	MICHIGAN	HSFY-1584(178) TR	TR	US-70	SAFETY IMPROVEMENT	2	2009		7-24-06	6-1-06	6-25-06	9-23-06	2-1-09	5	0-3	0-26	0.56	US-70 INSTALL SCHOOL ZONE ADVANCE WARNING SIGNS W/FLASHING RED CIRCLES SCHOOL ZONE PROJECT	US00	\$16,146	\$0	\$0	\$0	0	0	0	0	0	3	5	25	\$100	1.00	\$36,90	\$1,261		247.11				
257204	OSAGE	STP-1576(152) BR	BR	SH-59	RESURFACE	8	2009		5-10-06	6-1-06	6-25-06	5-22-06	1-21-09	26	0-00	5-26	0.56	RECONSTRUCT AND REPAVEMENT OF NORTH SIDE	US00	\$977,956	\$0	\$0	\$0	0	0	0	0	0	5	25	\$200	2.00	\$1,210,220	\$0,221		67.03					
4164	WISCONSIN	MR-005-2669(112) TR	TR	US-59	TRAFFIC SIGNALS	3	2009		10-18-07	11-5-07	11-27-07	3-24-08	7-13-09	6	4-50	4-00	0.10	REPAIR AND REPAVEMENT OF TRAFFIC SIGNAL CONTROL SYSTEMS (ADD TO 1007 LATE ADD BY TRAFFIC)	US00	\$55,200	\$0	\$0	\$0	0	0	0	0	0	1	10	5	25	\$200	2.00	\$1,210,220	\$0,221		67.03			
067712	WISCONSIN	WIS-0114(008)		US-69	GRADE DRAIN & SURFACE	4	2009		2-1-09	1-22-08	2-11-08	3-15-08	6-7-10	6	2-37	4-06	2.43	CONSTRUCT AND REPAVEMENT OF GRADE DRAIN AND SURFACE	US00	\$5,598,376	\$2,980,962	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
004204	CANTON	STP4-006(82)		US-70	GRADE DRAIN & SURFACE	7	2009		12-1-06	11-20-06	12-30-06	4-6-07	12-16-11	2	2-00	5-00	2.10	RECONSTRUCT AND REPAVEMENT OF GRADE DRAIN AND SURFACE	US00	\$9,094,710	\$9,094,710	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
202304	SPADY	STP4-128(67)		SH-59	GRADE/PAVING SURFACE	7	2009		12-1-06	11-20-06	12-30-06	11-6-09	4-12-10	3	0-67	3-62	2.56	RECONSTRUCT AND REPAVEMENT OF TRAFFIC SIGNALS	US00	\$6,665,541	\$6,665,541	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
207104	RODGERS	HSFY-166(180) TR	TR	SH-46	TRAFFIC SIGNALS	8	2009		10-1-06	9-17-06	10-28-06	2-11-10	7-21-10	4	0-00	0-10	0.10	RECONSTRUCT AND REPAVEMENT OF TRAFFIC SIGNALS	US00	\$434,159	\$434,159	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
241005	REBOURNA	MS-004(653)285 TR	TR	I-40	CABLE BARRIER	1	2009		8-1-07	7-23-06	8-12-06	10-5-09	5-6-10	27	2-71	7-71	5.00	RECONSTRUCT AND REPAVEMENT OF CABLE BARRIER	0900	\$503,366	\$466,448	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
241304	OSAGO	MS-010(416)25TR	TR	IS-340	CABLE BARRIER	7	2009							46			3.00	RECONSTRUCT AND REPAVEMENT OF CABLE BARRIER	0900	\$256,572	\$256,572	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
241304	OSAGO	MS-009(416)702TR	TR	IS-340	CABLE BARRIER	7	2009							46			3.00	RECONSTRUCT AND REPAVEMENT OF CABLE BARRIER	0900	\$416,769	\$416,769	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
251504	JOHNSON	HSFY-1366(112) TR	TR	US-37	INTERSECTION SIGNALS	3	2009		4-1-09	4-23-08	5-15-08	6-15-09	11-10-09					INSTALL TRAFFIC SIGNALS @ INTERSECTION OF STATE ST AND SHAWANEE	US00	\$62,236	\$62,236	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
268104	POTTAWATOMIE	HSFY-1636(151) TR	TR	US-17	SAFETY IMPROVEMENT	3	2009		2-1-09	1-22-06	2-27-06	6-9-06	10-31-09					INSTALL TRAFFIC SIGNALS @ INTERSECTION OF STATE ST AND SHAWANEE	US00	\$117,974	\$117,974	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
268204	OSAGO	STP-1802(254)RR	RR	RR	CROSSING IMPR. & SIGNALS	7	2009											CONSTRUCT AND REPAVEMENT OF CROSSING IMPROVEMENT AND SIGNALS	2410	\$1,200,986	\$1,200,986	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
269704	OSAGE	HSFY-156(158) TR	TR	US-69	SAFETY IMPROVEMENT	8	2009		12-1-06	11-20-06	12-30-06	3-26-09	6-11-09	3	0-00	0-00		INSTALL TRAFFIC SIGNALS @ INTERSECTION OF STATE ST AND SHAWANEE	US00	\$25,526	\$25,526	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
269804	RECONRA	HSFY-1084(178) TR	TR	I-49	TRAFFIC SIGNALS	5	2009		4-1-09	4-23-08	5-15-08	7-12-09	6-22-09	6	2-36	3-00	0.10	RECONSTRUCT AND REPAVEMENT OF TRAFFIC SIGNALS	US00	\$526,681	\$526,681	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
267004	CANAWAN	MS-009(421)25TR	TR	IS-340	CABLE BARRIER	4	2009							5			2.00	RECONSTRUCT AND REPAVEMENT OF CABLE BARRIER	0900	\$401,774	\$401,774	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
262204	OSAGE	HSFY-1564(167) TR	TR	US-75	SAFETY IMPROVEMENT	1	2009		8-1-09	7-23-06	10-27-06	12-3-09	8-5-10					INSTALL TRAFFIC SIGNALS @ INTERSECTION OF STATE ST AND SHAWANEE	US00	\$697,291	\$697,291	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
262404	MUSKOGEE	HSFY-1616(158) TR	TR	MA-RR	SAFETY IMPROVEMENT	1	2009		3-1-09	2-16-06	3-13-06	3-18-09	7-15-09					INSTALL TRAFFIC SIGNALS @ INTERSECTION OF STATE ST AND SHAWANEE	US00	\$59,436	\$59,436	\$0	\$0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Use Restricted, 23 USC 408

Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fwy Dir	HSIP	Work Type	Division	City	TMSA Area	LEDB	Alert Date	Work Order Date	Work Shift Date	Modl Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Total	Federal Funds	State Funds	Other Funds	Est. Before (Yrs)	Est. Before (Mts)	Est. Before (Dys)	Est. After (Yrs)	Est. After (Mts)	Est. After (Dys)	Study Period	Service Life (Yrs)	Max. Lmt	Units/Year	EWB	EUC	At-Risk					
252506	PITTSBURG	HSFG-106(225) TR	TR	MAJ.P	SAFETY IMPROVEMENT	2	2009		8-1-09	7-23-08	8-12-08	8-14-09	1-28-10					INSTALL RUMBLE STRIPS ALONG VARIOUS LOCATIONS IN DIVISIONS, APPROX. 1.0 TO 1.0 TO 0.80 REELS.	530	\$31,363	\$31,363	\$0	\$0	13	43	96	14	20	75	5	8	\$100	###	\$11,146,720	\$0,226	122.10					
252506	COCKER	HSFG-126(172) TR	TR	MAJ.P	SAFETY IMPROVEMENT	5	2009		3-1-09	2-19-08	3-15-09	5-1-09	6-25-09	Variable				INSTALL RUMBLE STRIPS ALONG VARIOUS LOCATIONS IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$14,656	\$14,656	\$0	\$0	22	73	173	15	59	106	5	8	\$100	###	\$3,015,760	\$1,461	627.01					
252704	BECKHAM	HSFG-006(2138) 332 TR	TR	MAJ.P	CABLE BARRIER	6	2009		9-1-09	8-20-06	9-23-08	10-13-09	5-5-10	4	7.66	15.21	8.35	3/4" WIRE-MESH BARRIER 10' X 10' TO 100'	100	\$1,191,522	\$1,722,260	\$0	\$0	12	10	26	1	4	44	6	25	\$650	833	\$15,932,240	\$8,217	242.10					
253304	WASHER	HSFG-138(115) TR	TR	MAJ.P	SAFETY IMPROVEMENT	6	2009		8-1-09	7-23-06	8-12-08	8-19-09	12-2-09					RUMBLE STRIPS VARIOUS LOCATIONS IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$14,326	\$14,326	\$0	\$0	11	40	125	26	77	79	5	8	\$100	###	\$3,015,760	\$3,274	652.03					
254304	OKLAHOMA	HSFG-155(173) TR	TR	MAJ.P	SIGNING	4	2009		10-1-09	9-17-08	10-27-09	11-17-09	6-1-10	68	0.00	19.26	19.26	NEW SIGN RELOCATION ALONG I-40 IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$64,115	\$64,115	\$0	\$0	5	6	18	2	6	30	5	25	\$100	1.00	\$3,300,400	\$41,337	89.39					
264404	TULSA	HSFG-176(459) TR	TR	SH-1	SIGNING	6	2009		10-1-09	9-17-08	11-2-09	3-1-10	2-20-11	90	0.00	5.45	5.45	NEW SIGN RELOCATION ALONG I-40 IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$20,381	\$20,381	\$0	\$0																		
264504	TULSA	HSFG-176(459) TR	TR	US-69	SIGNING	6	2009		5-1-09	5-14-08	6-1-09	5-9-09	11-4-09	81	0.00	9.26	9.26	NEW SIGN RELOCATION ALONG US-69 IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$27,521	\$27,521	\$0	\$0																		
265304	ADAMS	HSFG-156(115) TR	TR	SH-1	SIGNING	3	2009		5-1-09	5-14-08	6-1-09	5-9-09	11-4-09	4	0.00	9.26	9.26	NEW SIGN RELOCATION ALONG US-69 IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$14,526	\$14,526	\$0	\$0																		
265304	BECKHAM	HSFG-006(2140) 340 TR	TR	MAJ.P	STERMS & PAINT MARKING	5	2009		6-1-09	5-18-08	7-1-09	6-3-09	5-17-09	4	14.86	15.86	2.00	PAINT MARKING IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$10,606	\$10,606	\$0	\$0																		
265904	OKLAHOMA	STP-100(128) RR	RR	RR	CROSSING IMPROVEMENT	7	2009											SAFETY RAILING ON I-40 AT THE U.P. CROSSING NEAR APACHE (SIGNALS) APPROX. 0.75 MI. TO NORTH ST. N.	2010	\$78,181	\$78,181	\$0	\$0																		
265904	OKLAHOMA	STP-160(14) RR	RR	RR	CROSSING IMPROVEMENT	6	2009											SAFETY RAILING ON I-40 AT THE U.P. CROSSING NEAR WELLS (SIGNALS) APPROX. 0.75 MI. TO NORTH ST. N.	2010	\$52,636	\$52,636	\$0	\$0																		
265904	ROCKERS	STP-160(128) RR	RR	RR	CROSSING IMPROVEMENT	8	2009											SAFETY RAILING ON I-40 AT THE U.P. CROSSING NEAR WELLS (SIGNALS) APPROX. 0.75 MI. TO NORTH ST. N.	2010	\$20,134	\$20,134	\$0	\$0																		
265904	TULSA	STP-176(15) RR	RR	US-69	CROSSING IMPROVEMENT	5	2009											SAFETY RAILING ON I-40 AT THE U.P. CROSSING NEAR WELLS (SIGNALS) APPROX. 0.75 MI. TO NORTH ST. N.	2010	\$53,947	\$48,522	\$6,356	\$0																		
266304	LEFLORE	HSFG-140(175) TR	TR	MAJ.P	PAVEMENT MARKING	2	2009		9-1-09	7-23-06	5-15-09	10-9-09	6-3-10	50	0.00	4.26	4.26	PAVEMENT MARKING IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$14,134	\$10,278	\$0	\$0																		
266304	PITTSBURG	HSFG-161(228) TR	TR	US-69	PAVEMENT MARKING	2	2009											PAVEMENT MARKING IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$12,634	\$2,364	\$0	\$0																		
266604	OKLAHOMA	STP-160(14) RR	RR	RR	CROSSING IMPROVEMENT	6	2009											SAFETY RAILING ON I-40 AT THE U.P. CROSSING NEAR WELLS (SIGNALS) APPROX. 0.75 MI. TO NORTH ST. N.	2010	\$52,636	\$52,636	\$0	\$0																		
267004	ROCKERS	HSFG-162(158) TR	TR	MAJ.P	SAFETY IMPROVEMENT	3	2009		9-1-09	8-20-06	9-23-08	10-9-09	4-19-10					DIVISIONS RUMBLE STRIPS, MULTIPLE LOCATIONS	530	\$20,134	\$10,278	\$0	\$0	40	200	602	56	302	550	5	8	\$100	###	\$2,514,840	\$8,113	589.37					
267004	NOBLE	HSFG-154(175) TR	TR	MAJ.P	SAFETY IMPROVEMENT	4	2009		10-1-09	9-17-08	10-27-09	12-7-09	2-13-10					DIVISIONS RUMBLE STRIPS, MULTIPLE LOCATIONS	530	\$20,134	\$0,296	\$0	\$0	30	80	201	27	59	143	6	8	\$100	14.27	\$30,002,800	\$33,214	1336.12					
267004	OKLAHOMA	HSFG-156(170) TR	TR	SH-1	PAVEMENT MARKING	4	2009											PAVEMENT MARKING IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$10,000	\$0,000	\$0	\$0																		
267004	OKLAHOMA	HSFG-156(170) TR	TR	MAJ.P	SAFETY IMPROVEMENT	4	2009											PAVEMENT MARKING IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$10,000	\$0,000	\$0	\$0																		
267604	COCKER	HSFG-126(172) TR	TR	MAJ.P	PAVEMENT MARKING	5	2009											PAVEMENT MARKING IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$10,000	\$10,000	\$0	\$0																		
267604	JACKSON	HSFG-138(108) TR	TR	MAJ.P	PAVEMENT MARKING	5	2009											PAVEMENT MARKING IN DIVISIONS, APPROX. 1.0 TO 0.80 REELS.	530	\$20,000	\$5,000	\$0	\$0																		

FHWA copy

Use Restricted, 23 USC 408

Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fwy Dir.	Highway	Work Type	Division	City	TMSA Atn	Letter	Asmt Date	Work Order Date	Work Start Date	Actual Comp Date	Control Station	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Fed Est. Pct	11 Before Cntrl	11 After Cntrl	12 Before Cntrl	12 After Cntrl	Study Period	Start Year	End Year	EVALG	Actual DVC
257004	BARRIER	HSFG-10N(22)TR	TR	I-56	STREETS & PARKING IMPROVEMENT	7	2009	8-1-09	7-23-08	5-15-09	5-27-09	7-22-10	3	7.00	21.00	14.00	US FROM APPROX 0.15 MILE NORTH OF INTERCHANGE TO I-56 INTERCHANGE	530	\$36,538	\$17,188	\$0	\$0		0	0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data
257004	KOWANOE	HSFG-16N(16)TR	TR	I-44	STREETS & PARKING IMPROVEMENT	7	2009	8-1-09	7-23-08	5-15-09	5-27-09	7-22-10	4	0.00	0.00	0.00	US FROM I-44 NORTH TO I-56 INTERCHANGE	530	\$74,685	\$16,822	\$0	\$0		0	0	0	0	0					Relevant Crash Data Cannot Be Isolated
257004	TULSA	HSFG-17S(17)TR	TR	SH-61	STREETS & PARKING IMPROVEMENT	6	2009	9-11-09	10-3-08	10-29-09	3-15-10	7-23-10	6	5.2	10.40	5.20	US FROM I-44 NORTH TO I-56 INTERCHANGE	530	\$14,000	\$11,000	\$0	\$0		0	0	0	0	0					Relevant Crash Data Cannot Be Isolated
258004	STEPHENS	STFG-16P(17)TR	TR	SH-61	SAFETY IMPROVEMENT	6	2009	9-11-09	10-3-08	10-29-09	3-15-10	5-7-11	14	7.30	9.60	2.30	US FROM I-44 NORTH TO I-56 INTERCHANGE	400	\$23,368	\$56,417	\$0	\$0		0	0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data
258004	TULSA	STFG-17P(18)TR	TR	SH-61	SAFETY IMPROVEMENT	6	2009	9-11-09	10-3-08	10-29-09	3-15-10	5-7-11	14	7.30	9.60	2.30	US FROM I-44 NORTH TO I-56 INTERCHANGE	400	\$23,368	\$56,417	\$0	\$0		0	0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data
100010	WAGONER	STFG-17E(19)		SH-61	BRIDGE & APPROACHES	1	2010											US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$2,281,547	\$1,126,902	\$0	\$0		0	0	0	0					Project Not in Traffic Engineering Division
186700	ROGERS	STFG-18C(17)		SH-61	GRADE, DRAIN & SURFACE	6	2010											US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$58,261	\$42,715	\$0	\$0		0	0	0	0					Project Not in Traffic Engineering Division
203307	FRADY	STFG-18E(15)		SH-30	GRADE, DRAIN & SURFACE	7	2010											US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$1,097,526	\$1,097,526	\$0	\$0		0	0	0	0					Project Not in Traffic Engineering Division
241400	KOTTON	STFG-17C(19)RW	RW	SH-36	RIGHT OF WAY	7	2010											US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$1,676,400	\$1,676,400	\$0	\$0		0	0	0	0					Project Not in Traffic Engineering Division
242200	WALKER	STFG-19A(17)		US-59	GRADE, DRAIN & SURFACE	1	2010	10-15-09	11-2-08	12-2-09	3-15-10	2-23-12	6	9.60	11.60	2.00	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$6,686,236	\$2,202,766	\$0	\$0		0	0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data
242700	WAGLEEE	NR014M029		US075	CABLE BARRIER	1	2010	5-20-10	6-7-10	6-29-10	10-4-10	8-21-11	11	0.00	0.00	0.00	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$1,038,977	\$1,038,977	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
252200	DELWARRHE	HSFG-12N(136)		US-59	CABLE BARRIER	6	2010	12-17-09	1-11-10	1-15-10	2-22-10	8-9-10	4	6.50	10.00	3.50	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$1,106,036	\$1,106,036	\$0	\$0		0	0	0	0					Project Not in Traffic Engineering Division	
252400	PAINE	MS-0005-233(174)TR	TR	I-36	CABLE BARRIER	4	2010	5-20-10	6-7-10	7-2-10	8-3-10	4-4-11	2	7.11	12.11	5.00	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$543,788	\$31,544	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
253200	EMMALLE	HSFG-0005-56(20)TR	TR	US-60	CABLE BARRIER	3	2010	6-17-10	7-6-10	7-29-10	11-5-10	5-2-11	3	0.00	3.75	3.75	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$59,447	\$59,446	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
253200	MCHULOSH	HSFG-010N(123)TR	TR	US-69	CABLE BARRIER	1	2010	6-17-10	7-6-10	7-29-10	11-5-10	5-2-11	3	0.00	3.75	3.75	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$59,447	\$59,446	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
253200	MCDULTAN	HSFG-14N(18)TR	TR	US-70	SAFETY IMPROVEMENT	2	2010	12-17-09	1-11-10	1-15-10	2-22-10	8-9-10	4	0.00	2.71	2.71	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$101,104	\$101,104	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
253300	ROGERS	HSFG-16N(128)TR	TR	SH-159	SAFETY IMPROVEMENT	6	2010	2-16-10	3-1-10	3-15-10	4-26-10	10-8-10	10	0.00	0.00	0.00	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$74,782	\$74,782	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
254000	OKMURRAY	HSFG-16N(176)TR	TR	I-36	SIGNING	4	2010	10-15-09	11-2-08	11-20-09	2-7-10	6-8-10	4	0.00	2.84	2.84	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$35,965	\$35,965	\$0	\$0		0	0	0	0					Relevant Crash Data Cannot Be Isolated	
255700	CHOCWAY	HSFG-02N(100)TR	TR	US-70	SIGNING	2	2010	12-17-09	1-11-10	1-15-10	2-22-10	8-9-10	4	0.00	2.71	2.71	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$20,864	\$20,864	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
255900	OTTAWA	HSFG-19C(108)		SH-10	CABLE BARRIER	6	2010	12-17-09	1-11-10	1-15-10	2-22-10	10-5-10	20	0.00	0.00	0.00	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$1,038,977	\$1,038,977	\$0	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	
270004	WASHTA	MS-0002-241(14)SS	SS	US-60	CABLE BARRIER	5	2010	7-22-10	8-10-10	5-15-10	11-1-10	6-23-11	2	12.00	12.00	0.00	US FROM APPROX 0.15 MILE NORTH OF I-56 INTERCHANGE TO I-56 INTERCHANGE	530	\$1,038,407	\$1,557,328	\$327,164	\$0		0	0	0	0					Analysis Pending Availability of 5 Years of After Crash Data	

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Proj. Date	Agency	Work Type	Division	City	TRMA Act	Letter	Acct Date	Work Order Date	Work Shift Date	Modl Comp Date	Contract Status	Start Milepost	End Milepost	Length	Description	Fund Code	Project Total	Federal Funds	State Funds	Other Funds	Est. Bidder (Yrs)	11 Bidder (Yrs)	Final Bidder (Yrs)	11 After (Yrs)	Final After (Yrs)	Study Period	Success Lik (Yrs)	Major Int	Units Year	EWDB	EWAC	At-Risk			
273504	BRYAN	HSFG-1074(165) TR	TR	US-70	LANE/DRILL	2	2010		4-15-10	5-3-10	5-28-10	10-26-10		6	0.00	0.50	0.50	US-70 INSTALLATION OF DAMASCUS & IMPACT ATTRIBUTORS AT JOSEBELT BRIDGE AT LAKE TEOWMA	530	\$14,328	\$14,328	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data		
273504	BRYAN	HSFG-1074(165) TR	TR	US-70	LANE/DRILL	6	2010		4-15-10	5-3-10	5-28-10	10-26-10		6	0.00	0.50	0.50	US-70 INSTALLATION OF DAMASCUS & IMPACT ATTRIBUTORS AT JOSEBELT BRIDGE AT LAKE TEOWMA	530	\$14,328	\$14,328	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data		
273504	BRYAN	HSFG-1074(165) TR	TR	US-70	LANE/DRILL	3	2010		5-29-10	5-7-10	7-5-10	10-3-10	5-15-11	4	-2.00	-2.00	-2.00	US-70 THE WILL ROGERS TP GATE	530	\$39,258	\$39,258	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data		
273504	BRYAN	HSFG-1074(165) TR	TR	US-70	LANE/DRILL	6	2010		5-16-10	10-4-10	10-13-10	1-19-11	5-3-11	10	2.30	2.40	0.10	US-70 THE WILL ROGERS TP GATE	530	\$24,005	\$24,005	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data		
276604	SPRINT	BFY-1276(176) EC	EC	US-60	WISCONSIN ENGINEERING	4	2010							4	15.03	15.13	0.10	US-60 OVER POND CR US-60 OVER POND CR PROJECT AREA LIGHTING (S-TO THE WILL ROGERS TP GATE) PROJECT TO ADD TO 10.10, AS PER 198108A, & 2477700A EC-1200A	535E	\$1,198,000	\$1,045,000	\$0	\$0													Relevant Crash Data Cannot Be Isolated		
276604	OSBEK	BFY-1158(168) EC	EC	SH-60	PRELIMINARY ENGINEERING	6	2010							4	1.60	1.30	0.30	PRELIMINARY ENGINEERING ON US-60 LOCATIONS IN FREED CO. 19-60 N. TRNG CO. & 444 247200A, 242200A & 2188100A EC-100B	535E	\$9,400,000	\$9,400,000	\$0	\$0													Relevant Crash Data Cannot Be Isolated		
276504	WASHELE	S17A-134C(133) TR	TR	SH-76	BRIDGE IMPR.	4	2010		8-15-10	5-2-10	5-27-10	2-19-11	10-13-11	20	7.40	15.00	7.60	SH-76 TROW TALK NORTH OF THE GREEN CO. 19-60 N. TRNG CO. & 444 247200A, 242200A & 2188100A EC-100B	535E	\$25,055	\$25,055	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data		
276604	DANDY	HSFG-106(171) TR	TR	MA-16	LANE/DRILL	4	2010		8-15-10	5-7-10	5-27-10	1-13-11	7-22-11					INSTALLATION OF DAMASCUS & IMPACT ATTRIBUTORS AT JOSEBELT BRIDGE AT LAKE TEOWMA	535E	\$26,460	\$26,460	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data		
276604	BECKHAM	HSFG-105(169) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	5	2010											PAVEMENT MARKING 100' IN EAST SIDE OF SH-70 FROM 100 FT SOUTH OF 100' TO 200' IN EAST SIDE	535E	\$196,000	\$196,000	\$0	\$0													Relevant Crash Data Cannot Be Isolated		
277404	CARTER	HSFG-100(230) TR	TR	SH-75	STRIKES & PAVEMENT MARKING	7	2010							22	3.00	4.20	1.20	THEMOPASTIC PAVEMENT MARKING ALONG SH-75 BEGRAT LINCOLN ST AND 100' IN NORTH WEST 1/2 M TO 100' AND 51' IN HEROLD WORK	535E	\$25,000	\$25,000	\$0	\$0													Relevant Crash Data Cannot Be Isolated		
277404	MURRAY	HSFG-105(167) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	7	2010											MULTI-PHASE PAVEMENT MARKINGS SH-75 SUTHERLY MURRAY CO. ALSP. 1734000A IN CARTER CO.	535E	\$97,000	\$97,000	\$0	\$0													Relevant Crash Data Cannot Be Isolated		
278604	BUJAHMA	HSFG-104(162) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	4	2010											DIVISION 4 DIVISION WIDE STRIPING	535E	\$600,000	\$600,000	\$0	\$0														Relevant Crash Data Cannot Be Isolated	
278604	REQUYAH	HSFG-108(120) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	1	2010											DIVISION 1 DIVISION WIDE STRIPING	535E	\$100,000	\$100,000	\$0	\$0														Relevant Crash Data Cannot Be Isolated	
278604	ATOKA	HSFG-104(159) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	2	2010											DIVISION 2 DIVISION WIDE STRIPING	535E	\$200,000	\$200,000	\$0	\$0														Relevant Crash Data Cannot Be Isolated	
278604	CLEVELAND	HSFG-114(126) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	3	2010											DIVISION 3 DIVISION WIDE STRIPING	535E	\$300,000	\$300,000	\$0	\$0														Relevant Crash Data Cannot Be Isolated	
278604	BECKHAM	HSFG-104(152) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	5	2010											DIVISION 5 DIVISION WIDE STRIPING	535E	\$200,000	\$200,000	\$0	\$0														Relevant Crash Data Cannot Be Isolated	
278604	CHARROEN	HSFG-113(124) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	6	2010											DIVISION 6 DIVISION WIDE STRIPING	535E	\$200,000	\$200,000	\$0	\$0															Relevant Crash Data Cannot Be Isolated
278604	LOTE	HSFG-104(103) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	7	2010											DIVISION 7 DIVISION WIDE STRIPING	535E	\$300,000	\$300,000	\$0	\$0															Relevant Crash Data Cannot Be Isolated
278604	MAKES	HSFG-104(145) TR	TR	MA-16	STRIKES & PAVEMENT MARKING	6	2010											DIVISION 6 DIVISION WIDE STRIPING	535E	\$300,000	\$300,000	\$0	\$0															Relevant Crash Data Cannot Be Isolated
4 (red)	SEERVALE	HSFG-104(154)(20) TR	TR	140	CABLE BARRIER	3	2010		8-15-10	5-7-10	5-27-10	11-15-10	4-30-12	37	9.04	19.04	10.00	US-60 CABLE BARRIER IMP 1001 TO 1003 (MP 23.03) TO 18.53 (MP 14.23)	535E	\$693,264	\$693,264	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data		

HSIP Report FFY 2005 - 2013

Job Project #	County	Project No.	Fry Date	Funding	Work Type	Division	FY	FYMA Act	Letter	Acct Date	Work Order Date	Modl Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Fed Estm Pct	11 Before Crsh	11 After Crsh	11 After Crsh	11 After Crsh	Study Period	Source Title	Units / Yr	EV03	EV04	EV05	Adm Pct							
261004	MOBILE	MS-0084-0301-00 TR	TR	HS05	CABLE BARRIER	4	2011	3/6/11	10/20/11	11/2/11	11/29/11	3/1/12	10-01-2	003	12.2	8.02	800'± CABLE BARRIER W/ 20' TALL BR	USE	\$1,010,864					Analysis Pending Availability of 5 Years of After Crash Data																	
266004	BECKHAM	HSP-1056-0208 TR	TR	HS09	SCHOOL ZONE	6	2011	9/21/11	10/20/11	11/2/11	11/29/11	3/1/12	3-2-12	056	3.57	0.20	INSTALLATION OF SCHOOL ZONE ADVANCE WARNING SIGNS WITH FLASHING YELLOW SIGNALS AND ADVANCE WARNING SIGNAGE (W/ ADVANCE WARNING SIGNAGE AND TO BE IN ADVANCE WARNING)	USE	\$16,725					Analysis Pending Availability of 5 Years of After Crash Data																	
096610	FORT TOWNE	STP-0263-0372			ANDELI & RESURFACE	3	2011										SR-18 FROM COUNTY ROAD 674 TO SR-18 FROM TOWN OF EAST OF THE CREEK	USE	\$7,184,441	\$1,438,277	\$0	\$0		Project Not in Traffic Engineering Division																	
114107	TULSA	STP-1726-0508			PAVEMENT REHABILITATION	6	2011										CL. FACTS 5/4 MILE SECTION EXIST. LAYERS DEL. FR. 10. ADD TO 11.0. USE PLAN NUMBER 09	USE	\$6,495,304	\$550,000	\$0	\$0		Project Not in Traffic Engineering Division																	
203108	PINE	STP-1008-0168			SURFACE	4	2011										SR-33 FROM THE NEW ALIGNMENT OVER APPROX. 0.2 MILE (S. SIDE OF 0351.000)	USE	\$6,613,134	\$410,214	\$0	\$0		Project Not in Traffic Engineering Division																	
203109	PINE	STP-1008-0171			SURFACE	4	2011										SR-33 REG. APPROX. 0.2 MILE EAST OF APPROX. 0.2 MILE (S. SIDE OF 0351.000)	USE	\$5,600,000	\$555,505	\$0	\$0		Project Not in Traffic Engineering Division																	
200004	BECKHAM	STP-1126-0100			ANDELI & RESURFACE	6	2011										1.00 MILE TOWARD N.W. QUARTER 65 JAWES SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$8,864,031	\$37,956	\$0	\$0		Project Not in Traffic Engineering Division																	
251010	BECKHAM	STP-1126-0248 EC	EC		PRELIMINARY ENGINEERING	1	2011										US-50 FROM US-64 NORTH-3/4 MILE TOWARD N.W. QUARTER 65 JAWES SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$5,500,000	\$5,500,000	\$0	\$0		Project Not in Traffic Engineering Division																	
242100	MCURTAIN	STP-1126-0158 EC	EC		PRELIMINARY ENGINEERING	2	2011										SR-33 FROM JCT. US-29 EXTENSION WEST SIDE OF 0351.000 (S. SIDE OF 0351.000)	USE	\$1,005,100	\$1,005,100	\$0	\$0		Project Not in Traffic Engineering Division																	
248605	WAGNER	STP-1752-0133 RW	RW		RIGHT OF WAY	1	2011										SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$5,997,000	\$5,997,000	\$0	\$0		Project Not in Traffic Engineering Division																	
248606	WAGNER	STP-1752-0140 UT	UT		UTILITIES	1	2011										SR-16 REG. APPROX. 0.2 MILE NORTH OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$5,000,000	\$5,000,000	\$0	\$0		Project Not in Traffic Engineering Division																	
252204	PANOLA	MS-0044-0426 111 TR	TR		CABLE BARRIER	4	2011	6/20/11	7/21/11	7/29/11	4/3/12						SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$1,043,908	\$1,043,908	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
262004	MCCLAIN	HSP10-0052-0208 26 TR	TR	US	CABLE BARRIER	3	2011	10/27/10	11/8/10	12/1/10	14/11	5/29/11					SR-16 REG. APPROX. 0.2 MILE NORTH OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$816,886	\$816,886	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
262006	PICADILLY	HSP10-0060-0408 216 TR	TR	MD	CABLE BARRIER	3	2011	10/27/10	11/8/10	12/2/10	5/25/11	6/29/12					SR-16 REG. APPROX. 0.2 MILE NORTH OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$2,741,307	\$2,741,307	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
262008	BECKHAM	HSP10-0064-0408 259 TR	TR	MD	CABLE BARRIER	1	2011	10/27/10	11/8/10	12/1/10	5/21/11	6/9/11					SR-16 REG. APPROX. 0.2 MILE NORTH OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$1,466,947	\$1,466,947	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
262704	PANOLA	MS-0065-0226 123 TR	TR	US	CABLE BARRIER	4	2011	7/23/11	8/1/11	8/15/11	13/12	10/15/12					SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$816,886	\$816,886	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
264704	CLEVELAND	HSP11-1142-0120 TR	TR	US-77	ANDELI & TRAFFIC SIGNALS	3	2011	9/15/11	10/3/11	10/20/11	26/12	12/31/13					SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$1,598,467	\$1,598,467	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
270004	MAJOR	STPG-1478-0171			SAFETY SIGNALS	6	2011										SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$46,326	\$46,326	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
270504	MCCLAIN	MS-0044-1118-037 TR	TR	144	CABLE BARRIER	7	2011	10/27/10	11/8/10	11/9/10	3/7/11	6/4/12					SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$417,298	\$417,298	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
270604	MCCLAIN	MS-0044-1118-037 TR	TR	144	CABLE BARRIER	7	2011	10/27/10	11/8/10	11/9/10	3/7/11	6/4/12					SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$417,298	\$417,298	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	
270606	WAGNER	STPG-1724-0170			CROSSING IMPROVEMENTS	1	2011										SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$62,867	\$62,867	\$0	\$0		Project Not in Traffic Engineering Division																	
270608	CLEVELAND	STP-1444-0003 RW	TR	US-77	TRAFFIC SIGNALS	3	2011	11/18/10	12/6/10	14/11	3/7/11	7/3/11					SR-16 FROM 1/4 MILE WEST OF GARY SCHOOL PROP. TO ADD TO 11.0. REV. PROPOSED	USE	\$187,712	\$187,712	\$0	\$0		Analysis Pending Availability of 5 Years of After Crash Data																	

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Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Entry	HSIPs	Work Type	Division	City	TRMA Aftn	Letter	Alert Date	Work Order Date	Work Order Date	Modl Comp Date	Control Station	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Est Before FY13	Fid After CYS1	Est After CYS2	Est After CYS3	Est After CYS4	Est After CYS5	Est After CYS6	Est After CYS7	Est After CYS8	Est After CYS9	Est After CYS10										
259004	CARVER	MS-005-1105/071R	TR		CABLE BARRIER	7	2011		6-30-11	7-11-11	8-18-11	8-17-12		36	256	19-26	10.70	US-98 CABLE BARRIER BEG APPROX 0.255 MI N. OF LOVELLA EXT APPROX 16.770 MI APPROX 1.0 MI N. OF SH-155 EBE FR 05-11, ADD TO 05-30-11, BND SELECT	400-0	\$1,224,868	\$1,224,868	\$0	\$0																	Analysis Pending Availability of 5 Years of After Crash Data				
259005	LOVE	MS-005-1162/001TR	TR		TRAFFIC SIGNALS	7	2011		5-30-11	7-11-11	8-18-11	8-17-12					0.00	2.6 SIGNAL LIGHTS AT MILE 17.5	400-0	\$26,667	\$26,667	\$0	\$0															Analysis Pending Availability of 5 Years of After Crash Data						
260004	WINSTON	MS-000-0435/120TR	TR	L40	CABLE BARRIER	4	2011		9-18-11	9-12-11	10-31-11	4-4-13		5	1508	20-88	5.00	REPLACE EXISTING CABLE BARRIER FROM 0.510 TO 0.875, ADD 0.875-1.142, ADD TO 08-11, USE PLANING SELECT	400-0	\$1,550,300	\$1,550,300	\$0	\$0															Analysis Pending Availability of 5 Years of After Crash Data						
260004	WINSTON	MS-001-0098/1R	TR	L5-R	CABLE BARRIER	4	2011		9-18-11	9-12-11	10-31-11	4-4-13		6	486	9-94	5.00	US-91 CABLE BARRIER FROM 0.635 TO 1.100, BND ON THE E SIDE OF FL RAMP TO DWS DEL TR 04-11, ADD TO 08-11, USE PLANING SELECT	400-0	\$1,139,027	\$1,139,027	\$0	\$0															Analysis Pending Availability of 5 Years of After Crash Data						
260004	DUNHAM	MS-000-1055/011TR	TR	L30	CABLE BARRIER	4	2011		9-15-11	10-31-11	12-31-11	2-15-13		71	1155	15-55	5.00	2.90 CABLE BARRIER FROM 0.000 AS SH-155 WEST OF I-87, ADD TO 08-11, USE PLANING SELECT	400-0	\$553,934	\$553,934	\$0	\$0																	Analysis Pending Availability of 5 Years of After Crash Data				
260004	POTTAWATOMIE	STPY-1086-867/SS	SS		INTERSECT WIDEN	3	2011		7-21-11	8-1-11	10-7-11	6-15-12		12	1-47	1-89	0.02	US-9 INTERSECTION SAFETY IMPROVEMENT (LATE ADD TO 08-11, AS PER PROGRAM WIDEN)	400-0	\$353,191	\$353,191	\$0	\$0																Project Not In Traffic Engineering Division					
260004	WABASH	MS-000-0479/132TR	TR	L40	CABLE BARRIER	1	2011		9-15-11	10-31-11	12-31-11	6-5-12		23	450	7-50	3.00	CABLE BARRIER ALONG 4-00 COUNTRY ROAD LATE ADD TO 08-11, AS PER PROGRAM WIDEN	400-0	\$64,146	\$64,146	\$0	\$0																	Analysis Pending Availability of 5 Years of After Crash Data				
260004	WABASH	MS-003-1143/1R	TR		CABLE BARRIER	1	2011		9-18-11	9-12-11	10-31-11	11-16-12		6	496	9-34	3.50	SOUTH OF WABASH, EXTEND NORTH 0.5 MI	400-0	\$570,000	\$570,000	\$0	\$0																	Analysis Pending Availability of 5 Years of After Crash Data				
260004	WABASH	MS-003-1144/1R	TR		CABLE BARRIER	2	2011		9-18-11	9-12-11	10-31-11	11-16-12		3	000	8-50	8.00	US-66 RIGHT CHOICE WARD EXTEND NORTH 0.5 MI	400-0	\$1,577,400	\$1,577,400	\$0	\$0																		Analysis Pending Availability of 5 Years of After Crash Data			
260004	WABASH	MS-003-1145/1R	TR		GRANULAR	2	2011		9-18-11	9-12-11	10-31-11	11-16-12		2	000	11-03	11.03	US-66 RIGHT CHOICE WARD EXTEND NORTH 0.5 MI	400-0	\$553,337	\$553,337	\$0	\$0																		Analysis Pending Availability of 5 Years of After Crash Data			
260004	MCLAIN	MS-005-1212/086TR	TR	L56	CABLE BARRIER	3	2011		9-15-11	10-31-11	12-31-11	10-16-12		5	400	7-50	3.50	US-66 RIGHT CHOICE WARD EXTEND NORTH 0.5 MI	400-0	\$553,934	\$553,934	\$0	\$0																			Analysis Pending Availability of 5 Years of After Crash Data		
260005	POTTAWATOMIE	STPY-1086-861/3	3		RESURFACE	3	2011		8-22	14-28	6-03-12	10-16-12		20	8-22	14-28	6.00	US-177 FROM 0.014 NORTH OF SH-46 TO 0.100 NORTH OF SH-46	400-0	\$100,000	\$100,000	\$0	\$0																		Project Not In Traffic Engineering Division			
260007	DUNHAM	STPY-1086-865/EC	EC		PRELIMINARY ENGINEERING	4	2011		000	000	000	000						CONDUCT ENGINEERING SERVICES FOR THE DESIGN OF THE BRIDGE COMPANIES	400-0	\$500,000	\$500,000	\$0	\$0																			Relevant Crash Data Cannot Be Isolated		
260008	MCCORDIN	HSFY-1059/150R TR	TR	SH-3	SCHOOL SIGNS	2	2011		3-17-11	4-4-11	4-26-11	5-21-11		12	000	0-10	0.10	INSTALL ADVANCE WARNING SIGNS WITH FLASHING BEACONS ON SH-3 AS PER TRAFFIC	400-0	\$16,157	\$16,157	\$0	\$0																			Analysis Pending Availability of 5 Years of After Crash Data		
260008	KEENECE	HSFY-1067/180R TR	TR	SH-596	SAFETY IMPROVEMENT	3	2011		9-15-11	10-31-11	11-15-12	6-30-12		38	000	5-85	6-85	INSTALL CURBICAL TERMINAL AND 5' WALKWAY FROM 0.000 TO 0.700, BND ON THE N SIDE OF SH-596, ADD TO 08-11, USE PLANING SELECT	400-0	\$143,596	\$143,596	\$0	\$0																				Analysis Pending Availability of 5 Years of After Crash Data	
260008	POTTAWATOMIE	HSFY-0065-5418/186 TR	TR		SAFETY IMPROVEMENT	3	2011		7-21-11	8-1-11	10-25-11	6-14-12		41	000	7-72	7-72	0.02	INSTALL CURBICAL TERMINAL AND 5' WALKWAY FROM 0.000 TO 0.700, BND ON THE N SIDE OF SH-596, ADD TO 08-11, USE PLANING SELECT	400-0	\$1,065,226	\$1,065,226	\$0	\$0																			Analysis Pending Availability of 5 Years of After Crash Data	
260008	WABASH	HSFY-1057/001 TR	TR	MAR-8	SAFETY IMPROVEMENT	5	2011		9-18-11	9-12-11	10-31-11	11-20-11						INSTALL RUMBLE STRIPS ALONG WABASH LOCATIONS HELIX & BENTON CROSSING SH-46, USE PLANING SELECT	400-0	\$25,534	\$25,534	\$0	\$0																					Analysis Pending Availability of 5 Years of After Crash Data
260008	WABASH	HSFY-1020/656 TR	TR	MAR-8	SAFETY IMPROVEMENT	6	2011		9-18-11	9-12-11	10-31-11	11-5-11	3-21-12					INSTALL CURBICAL TERMINAL AND 5' WALKWAY FROM 0.000 TO 0.700, BND ON THE N SIDE OF SH-596, ADD TO 08-11, USE PLANING SELECT	400-0	\$143,492	\$143,492	\$0	\$0																				Analysis Pending Availability of 5 Years of After Crash Data	
260008	WABASH	STPY-1086-865/1R	TR		SCHOOL SIGNS	7	2011		4-14-11	5-2-11	5-26-11	6-24-11	5-25-11	14	1000	10-10	0.10	INSTALL SCHOOL ZONE ADVANCE WARNING SIGNS AND BEACONS ON SH-3	400-0	\$17,300	\$17,300	\$0	\$0																				Analysis Pending Availability of 5 Years of After Crash Data	

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Date	HSIP	Work Type	Division	FY	FHWA Act	Letter	Alert Date	Work Order Date	Mail Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Total	Federal Funds	State Funds	Other Funds	Fed Estim (P)	11 Before (P)	11 Before (C)	11 After (C)	11 After (P)	Study Period	Exec Loc (M)	Start Year	End Year	EOAC	Admin			
246004	OWASHEE	STP-110C-0201	TR		SCHOOL SIGNS	7	2011		6-16-11	7-11-11	6-23-11	6-16-11	22	0.96	0.96	0.00	INSTALLATION OF SCHOOL ZONE ADVANCE WARNING SIGNS (WBCK) IN GREENWICH FROM 11110 ADD TO 1015. (L) (B) (REJECT) "A" (U) (H)	304	\$10,560	\$12,360	\$0	\$0														Analysis Pending Availability of 5 Years of After-Crash Data
246104	LOVE	STP-102E-0103	TR		SCHOOL SIGNS	7	2011		6-16-11	7-11-11	6-15-11	6-16-11	2	14.36	14.36	0.00	US 716 WIDE PAVEMENT MARKINGS AT VARIOUS LOCATIONS (REJECT) "A" (U) (H)	304	\$10,682	\$13,526	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data	
246104	CHEROKEE	HSFG-111F-0301	TR		STRIPING & PAVERS	1	2011										DW 7 DIVISION WIDE PAVEMENT MARKING AT VARIOUS LOCATIONS	304	\$54,000	\$54,000	\$0	\$0												Relevant Crash Data Cannot Be Isolated		
246104	BECKHAM	HSFG-105F-0201	TR		STRIPING & PAVERS	5	2011										DW 5 DIVISION WIDE PAVEMENT MARKING AT VARIOUS LOCATIONS	304	\$30,000	\$30,000	\$0	\$0												Relevant Crash Data Cannot Be Isolated		
246104	OWASHEE	HSFG-118F-0201	TR		STRIPING & PAVERS	7	2011										DW 7 DIVISION WIDE PAVEMENT MARKING AT VARIOUS LOCATIONS	304	\$75,000	\$75,000	\$0	\$0												Relevant Crash Data Cannot Be Isolated		
246104	OKMUNA	HSFG-105F-0301	IT		SAFETY IMPROVEMENT	4	2011										DYNAMIC MESSAGE SIGNS AT VARIOUS LOCATIONS	304	\$74,240	\$60,000	\$0	\$0												Relevant Crash Data Cannot Be Isolated		
246104	TULSA	HSFG-107F-0501	IT		SAFETY IMPROVEMENT	8	2011										DYNAMIC MESSAGE SIGN LOCATED AT VARIOUS LOCATIONS	304	\$1,192,448	\$717,816	\$0	\$0												Relevant Crash Data Cannot Be Isolated		
246104	MCKEAN	STP-110A-1100	TR		SCHOOL SIGNS	3	2011		4-14-11	6-2-11	6-23-11	5-5-11	4	10.00	12.00	0.10	INSTALLATION OF SCHOOL ZONE ADVANCE WARNING SIGNS (WBCK) IN GREENWICH FROM 11110 ADD TO 1015. (L) (B) (REJECT) "A" (U) (H)	304	\$45,000	\$12,000	\$0	\$0												Analysis Pending Availability of 5 Years of After-Crash Data		
246104	BECKHAM	SEC117-107R-1001	SG		INTERSECTION	3	2011						2	8.91	7.76	0.65	INSTALLATION OF PARKING MARKINGS AT INTERSECTION OF 11110 AND 1015. (L) (B) (REJECT) "A" (U) (H)	304	\$100,500	\$15,000	\$0	\$0											Project Not in Traffic Engineering Division			
246104	DELAWARE	MS-026E-2011-114TR	TR		STRIPING & PAVERS	3	2011						6	5.22	9.41	4.21	ALONG 516 FROM NW 1/4 CORNER TO NW 1/4 CORNER (L) (B) (REJECT) "A" (U) (H)	304	\$37,360	\$37,360	\$0	\$0												Relevant Crash Data Cannot Be Isolated		
246104	CHEROKEE	HSF-111A-1301	TR		TRAFFIC SIGNALS	1	2011		6-15-11	10-31-11	10-23-11	10-23-11	12	17.00	17.00	0.10	INSTALLATION OF TRAFFIC SIGNAL SYSTEM AT INTERSECTION OF 11110 WEST 1/4 AND 1015. (L) (B) (REJECT) "A" (U) (H)	304	\$78,220	\$56,920	\$0	\$0													Analysis Pending Availability of 5 Years of After-Crash Data	
246104	OKMUNA	HSF-202E-0201	IT		SAFETY IMPROVEMENT	4	2012										STATEWIDE OPERATIONS & MAINTENANCE INCLUDING INTERSECTIONS	304	\$50,000	\$50,000	\$0	\$0												Project Not in Traffic Engineering Division		
246104	OKMUNA	MS-150E-0210	RR		STP 150L	4	2012										RAILROAD SIGNAL SURFACE IN BENEVOLENT CROSSING ON ROUTE 1015	304	\$1,200,000	\$1,000,000	\$0	\$0												Project Not in Traffic Engineering Division		
246104	OKMUNA	STP-120E-0201	RR		CROSSING IMPROVEMENT	7	2012										SIGNAL SURFACE WITH UNION PACIFIC RAILROAD CO	304	\$32,276	\$36,900	\$0	\$0												Project Not in Traffic Engineering Division		
246104	OKMUNA	STP-200E-0101	RR		CROSSING IMPROVEMENT	4	2012										CONTINUED OPERATION OF THE STATEWIDE OKMUNA RAILROAD ASSESSMENT INVENTORY AND REPORT	304	\$10,222	\$10,222	\$0	\$0												Relevant Crash Data Cannot Be Isolated		
246104	STEPHENS	STP-160E-0101	RR		RAILROAD SIGNALS	7	2012										SIGNAL PROJECT IN BENEVOLENT CROSSING ON ROUTE 1015	304	\$12,750	\$11,450	\$0	\$0												Project Not in Traffic Engineering Division		
246104	WAGONER	BSO-147E-0210	US 177		BRIDGE APPROACHES	3	2012										BILLWATER BRIDGE OVER FORCE MAIN ON ROUTE 1015 FROM W 1/4 CORNER TO W 1/4 CORNER OF 1015	304	\$16,000	\$16,000	\$0	\$0											Project Not in Traffic Engineering Division			
246104	OKMUNA	STP-200E-0201	RR		CROSSING IMPROVEMENT	7	2012										RAILROAD SIGNAL SURFACE WITH UNION PACIFIC RAILROAD	304	\$13,076	\$13,076	\$0	\$0												Project Not in Traffic Engineering Division		

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Page

Use Restricted, 23 USC 408

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Proj. Date	Work Type	Division	City	HSIA Act	Letter	Alert Date	Work Order Date	Work Order Desc	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	Other Funds	Est. Bkfst. Proj.	11 Bkfst. Proj.	11 Alter. Proj.	11 Alter. Proj.	Study Period	Source Loc. (Y/N)	Major Inv.	Units Year	EWIS	EUNG	Alt. Proj. Desc.	
20000	ALTA	STP-2601(00)R	RR	CROSSING IMPR. & REPAIR SIGNALS	2	2012	4-12									REPAIR SIGNALS & REPAIR AT ALLEN RD NEAR ALTA WITH DRAINAGE IMPROVEMENTS TO SIGNALS AT SOUTH 2601 WITH WINGS CT. SOUTH RAILWAY CO.	SE	\$55,948	\$55,948													Project Natick Traffic Engineering Division
20000	ALTA	STP-1001(00)R	RR	RAILROAD SIGNALS	1	2012	4-10-12									RAILROAD SIGNALS AT SOUTH 2601 WITH WINGS CT. SOUTH RAILWAY CO.	SE	\$24,928	\$24,928													Project Natick Traffic Engineering Division
242004	MAJOR	RPY-147(02)	9-65	BRIDGE & APPROACHES	6	2012	4-12-12									SH-85 OVER NORTON GREEN APPROX. 57 MILES NORTH OF CT SH-85 HIGH-ELECTRICITY AND TO US-2 ASPENHILL	SE	\$1,200,000	\$1,200,000												Project Natick Traffic Engineering Division	
209004	STEPHENS	STP-2660(00)R	RR	CROSSING IMPR. & REPAIR SIGNALS	7	2012	4-30-12									INDUCION CROSSING IMPR. & REPAIR SIGNALS AT WINDY BROOK RAILROAD CROSSING AT WILKINSON PACIFIC RAILROAD CO.	SE	\$745,998	\$745,998												Project Natick Traffic Engineering Division	
20000	TULLA	STP-2720(02)R	RR	CROSSING IMPR. & REPAIR SIGNALS	6	2012	4-30-12									REPAIR SIGNALS & REPAIR AT WILKINSON PACIFIC RAILROAD CO.	SE	\$33,775	\$33,775												Project Natick Traffic Engineering Division	
209004	WINDY	RPY-157(02)	9-19	BRIDGE & APPROACHES	6	2012	5-1-12									SH-85 OVER LOST MAN CREEK APPROX. 2.0 MILES NORTH OF CT. SH-85 RAILROAD	SE	\$62,117	\$62,117												Project Natick Traffic Engineering Division	
207004	WANE	HSIP-1005(408)70	HS05	CABLE MANGERS	4	2012	5-6-12	7-10-12	10-28-13							REPAIR MOUNTAIN SIGNALS WIGATE ARMS UTILIZATION PREDICTION AT WANE WILKINSON PACIFIC RAILROAD CO.	SE	\$41,948	\$41,948												Project Natick Traffic Engineering Division	
203004	NOVATA	STP-2610(00)R	RR	CROSSING IMPR. & REPAIR SIGNALS	6	2012	7-17-12									REPAIR MOUNTAIN SIGNALS WIGATE ARMS UTILIZATION PREDICTION AT NOVATA WILKINSON PACIFIC RAILROAD CO.	SE	\$75,074	\$75,074												Project Natick Traffic Engineering Division	
210004	BECKHAM	RPY-100(08)SS	SS	SH-150 BRIDGE & APPROACHES	5	2012	9-2-12									SH-150 OVER SALTWATER CREEK & CHARLTON APPROX. 1.5 MILES EAST OF THE TREADS ST. IN SO. ROVERMILLS COUNTY.	SE	\$1,001,256	\$1,001,256											Project Natick Traffic Engineering Division		
270005	MOODS	SS-2755(00)SS	SS	US-20 INTERSECTION MODIFICATION	6	2012	9-2-12									US-20 @ SH-150 IN THE CITY OF WINDHAM INTERSECTION WITH WINDHAM RIVER ROAD.	SE	\$0	\$0												Project Natick Traffic Engineering Division	
241104	ROTTON	STP-1170(05)	9-16	GRADE DRAIN & SURFACE	7	2012	9-6-12									ALLEN FROM THE HAMPS FIELD NORTH TO US-70M. RPT. R.F.S. INCLUDED (SEE 08-12, ADD US-72, UTILITY S)	SE	\$2,000,000	\$2,000,000											Project Natick Traffic Engineering Division		
207204	NOVATA	RPY-153(04)	9-19	BRIDGE REHABILITATION	6	2012	8-8-12									SH-85 OVER BIG CREEK APPROX. 4.6 MILES NORTH OF CT. OF SH-85 RAILROAD	SE	\$2,342,801	\$2,342,801												Project Natick Traffic Engineering Division	
209004	NOVA	STP-107N(25)TR	TR	STRIPES & PAVEMENT MARKING	3	2012	8-17-12	/				000	0-00			US-75 FROM THE ATOKA CANE NORTH TO SH-31 THERMOPLASTIC PAVEMENT MARKING	SE	\$4,000	\$4,000												Relevant Oaah Dual Canal Be Isolated	
209004	HIGHES	STP-130(105)TR	TR	STRIPES & PAVEMENT MARKING	3	2012	8-17-12	/				0-4	0-00			SH-85 FROM US-75 IN ALUTAMA EAST TO THE MONTOSHCH. THERMOPLASTIC PAVEMENT MARKING	SE	\$41,000	\$41,000												Relevant Oaah Dual Canal Be Isolated	
2191004	OTTAWA	RPY-159(02)	US-69	BRIDGE & APPROACHES	6	2012	9-23-12									US-69 OVER TROTTER CREEK APPROX. 7.7 MILES NORTH OF CT. US-69 CROSSING 2.5 MILES EAST OF CT. SH-85 US-69 BRIDGE 1-1, ADD TO 0.041, 10.404 (PFAI)	SE	\$2,913,381	\$2,913,381												Project Natick Traffic Engineering Division	
2191004	MINNES	RPY-146(07)	SH-85	BRIDGE & APPROACHES	6	2012	10-20-11	11-1-12	5-21-13			16				SH-85 OVER DRY WOOD CR. & OYONS, US BRIDGE 3.3, 3.4, 3.5, & 3.6 NORTH OF US BRIDGE 1-1, CT. NEAR INVERSOILL (PFAI)	SE	\$1,694,554	\$1,694,554											Project Natick Traffic Engineering Division		
2027004	ALPATA	RPY-100(02)	SH-00	BRIDGE & APPROACHES	6	2012	10-20-11	11-2-11	11-20-11	11-20-11	11-20-11	17				SH-85 OVER 7.5 M. E. OF US AT THE W. END OF TOWN OF PARK, EXT. 5.0. US BRIDGE 1-1, CT. NEAR INVERSOILL (PFAI)	SE	\$4,402,946	\$4,402,946												Project Natick Traffic Engineering Division	
2407004	KORTER	STP-1100(09)HP	HP	GRADE DRAIN & SURFACE	7	2012	1-15-12	2-6-12	4-23-12	10-31-13	30					SH-85 OVER 7.5 M. E. OF US AT THE W. END OF TOWN OF PARK, EXT. 5.0. US BRIDGE 1-1, CT. NEAR INVERSOILL (PFAI)	SE	\$1,411,618	\$1,411,618												Project Natick Traffic Engineering Division	
2617004	MICULIDAN	RPY-145(08)	SH-30	BRIDGE & APPROACHES	2	2012					27					SH-30 OVER 7.5 M. E. OF US AT THE W. END OF TOWN OF PARK, EXT. 5.0. US BRIDGE 1-1, CT. NEAR INVERSOILL (PFAI)	SE	\$1,945,256	\$1,945,256												Project Natick Traffic Engineering Division	

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Date	Agency	Work Type	Division	City	HSMA Aft	Letter	Asmt Date	Work Order Date	Work Shift Date	Modl Comp Date	Control Station	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Fed Estm (Yrs)	State Estm (Yrs)	Other Estm (Yrs)	Study Period	Service Life (Yrs)	Year/Int	Units/Year	Euro	Adm Exp						
200604	PUNY	STP-1008(02P)	P	SH03B	BRIDGE & APPROACHES	3	2013			3/21/13	4/1/13	7/9/13		12				SH-58 OVER CAHOON RIVER, FROM 0.75 MI NORTH OF US-177 NORTH TO 0.75 MILES SOUTH OF CAHOON RIVER BRIDGE OVER CAHOON RIVER, FROM 0.75 MI NORTH OF US-177 NORTH TO 0.75 MILES SOUTH OF CAHOON RIVER	W30	\$500,000	\$500,000	\$0	\$0															
200604	LOVE	STP-1402(060)	-	SH03B	BRIDGE & APPROACHES	7	2013			5/14/13	2/4/13	4/1/13		10				0.95 MI EAST OF MARIETTA RD, FROM 0.5 MI TO 1.0 MI, ROW SIGN	W30	\$6,307,676	\$6,307,676	\$0	\$0															
201704	MONTGOMERY	STP-1460(05)	-	US26	BRIDGE & APPROACHES	1	2013			9/19/13	10/24/13	2/19/14		6				0.20 MI OVER RUTTY CREEK, 4.7 MI E OF CAHOON RIVER	W30	\$2,175,000	\$2,175,000	\$0	\$0															
200004	MAYES	STP-1460(07)	-	SH03B	BRIDGE & APPROACHES	6	2013			9/19/13	10/24/13	2/19/14		16				SH-28 OVER ROCK CREEK, APPROX 4.5 MILES EAST OF JCT OF SH-28 N 59	W30	\$1,500,000	\$1,500,000	\$0	\$0															
201604	MONTGOMERY	STP-1500(07)	-	SH03B	BRIDGE & APPROACHES	8	2013			9/19/13	11/21/13	1/13/14		20				SH-10 OVER 35 CANADIAN CREEK, APPROX 0.5 MILES EAST OF JCT OF SH-10 N 59	W30	\$500,000	\$500,000	\$0	\$0															
200604	DOLPHIN	STP-1540(07R)	TR	SH03B	SAFETY IMPROVEMENT	4	2013							566				REPAIR AND MAINTENANCE COST FOR T-5 COMPONENTS OVER I-494 SPY 2008	W30	\$65,000	\$65,000	\$0	\$0															
200604	WALTON	STP-1520(15)SR	RR	RR	CROSSING IMPR	6	2013											REAR BELLA SIGNAR PROJ INSTALL FOR MAIN FLASHLIGHTS SIG AT GATEWAY @ CD US 226 S W BRIDGE (WALTON DOWNS)	W30	\$302,300	\$302,300	\$0	\$0															
250004	CAHOON	STP-1004(42TR)	TR	SH03B	FORCE ACCOUNT	4	2013							6				SH-65 FROM GREGORY RD, 0.6 MI E TO CAHOON RIVER, APPROX 0.5 MI S OF CAHOON RIVER	W30	\$84,126	\$84,126	\$0	\$0															
250005	CAHOON	STP-1004(46TR)	TR	SH004	FORCE ACCOUNT	4	2013							54				SH-4 FROM 9TH ST, 0.56 MI N 10142 THIS WILL BE A THERMOPLASTIC PROJECT BEL FROM 0.06 TO 0.21	W30	\$85,596	\$85,596	\$0	\$0															
250006	CAHOON	STP-1004(48TR)	TR	SH03B	FORCE ACCOUNT	4	2013							39				SH-5 FROM N 1738 MI TO SH-5 FROM SH-2, 50 MI E TO CAHOON RIVER, APPROX 0.5 MI S OF CAHOON RIVER	W30	\$65,700	\$65,700	\$0	\$0															
250007	CAHOON	STP-1004(47TR)	TR	SH15Z	FORCE ACCOUNT	4	2013							36				SH-15 FROM 9TH ST, 50 MI E TO CAHOON RIVER, APPROX 0.5 MI S OF CAHOON RIVER	W30	\$62,376	\$62,376	\$0	\$0															
250008	CAHOON	STP-1004(48TR)	TR	SH007	FORCE ACCOUNT	4	2013							22				SH-4 FROM 9TH ST, 0.56 MI N 10142 THIS WILL BE A THERMOPLASTIC PROJECT BEL FROM 0.06 TO 0.21	W30	\$202,360	\$202,360	\$0	\$0															
250009	CAHOON	MS-0004(40)SR	TR	IS040	FORCE ACCOUNT	4	2013							5				SH-4 FROM 9TH ST, 0.56 MI N 10142 THIS WILL BE A THERMOPLASTIC PROJECT BEL FROM 0.06 TO 0.21	W30	\$155,542	\$155,542	\$0	\$0															
250010	CAHOON	NH00-1100(07R)	TR	US001	FORCE ACCOUNT	4	2013							6				US-81 FROM GRADY C LN, 3.4 MI W OF SH-152 THIS WILL BE A THERMOPLASTIC PROJECT BEL FROM 0.06 TO 0.21	W30	\$45,922	\$45,922	\$0	\$0															
200604	WALTON	HSIP-0054(40)SR	TR	US26	CABLE BARRIER	4	2013			3/21/13	4/1/13	6/5/13	7/15/14	25				US-26 OVER EAST CLAY CRT, 0.1 MI EAST OF SH-152 FROM 0.13 MI TO 0.15 MI	W30	\$62,700	\$62,700	\$0	\$0															
260004	WALTON	STP-1002(14)	-	US03B	BRIDGE & APPROACHES	6	2013			9/19/13	10/25/13	2/15/14		4				SH-15 FROM 9TH ST, 50 MI E TO CAHOON RIVER, APPROX 0.5 MI S OF CAHOON RIVER	W30	\$500,000	\$500,000	\$0	\$0															
260004	WALTON	STP-1410(20)	-	SH03B	RESURFACE & BRIDGE	3	2013			6/20/13	7/1/13	11/1/13		6				SH-15 FROM 9TH ST, 50 MI E TO CAHOON RIVER, APPROX 0.5 MI S OF CAHOON RIVER	W30	\$204,300	\$204,300	\$0	\$0															
270005	WALTON	STP-1420(104)	-	SH03B	SAFETY IMPROVEMENT	6	2013											INTERSECTION SIGNALLAT WALKERS CREEK AND SH-152	W30	\$371,250	\$371,250	\$0	\$0															
270004	WALTON	STP-1500(20)	-	SH03B	BRIDGE & APPROACHES	8	2013			9/19/13	10/24/13	1/15/14		2				US-26 OVER ROCK CREEK, 4.7 MI E OF CAHOON RIVER	W30	\$420,000	\$420,000	\$0	\$0															
272004	MONTGOMERY	STP-1460(18)	-	US26	BRIDGE & APPROACHES	1	2013							6				US-26 OVER WYTHE CREEK, 0.5 MILES EAST OF CAHOON COUNTY LINE	W30	\$100,000	\$100,000	\$0	\$0															

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Entry	Agency	Work Type	Division	City	TMSA Area	Letter	Asmt Date	Work Order Date	Modl Comp Date	Coord System	Span	Span	Length	Description	Fund Code	Project Total	Federal Funds	State Funds	Other Funds	Est. Before FY13	Est. After FY13	F. of After FY13	Est. After FY13	Study Period	Service Life (Yrs)	Maint (Yr)	Units Year	EWRS	EUNO	Adopt Date	
271006	TULSA	HSIP172N0501R	TR	US05	INTERSECTION AND 1104P SIGNALS	6	2013		7-25-13	8-12-13	10-1-13	2-12-14	96			0.0	TRAFFIC SIGNAL INTERSECTION IMPROVEMENTS US 76 NORTH ROAD OFF RAMP FOR I-40 IN TULSA (7625 SIGNAL) FROM I-40 TO I-40+0.13	W330	\$10,618	\$10,618	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
286004	POTTAWATOMIE	HSIP1630E405101R	TR	IS00	CABLE BARRIER	3	2013		4-18-13	5-6-13	5-23-13	6-30-14	41			7.2	CABLE BARRIER INSTALLATION ALONG I-49 EAST OF SH-9	W330	\$30,418	\$30,418	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
280004	MOBILE	HSIP1630E405103R	TR	IS05	CABLE BARRIER	4	2013		1-17-13	2-4-13	2-25-13	7-20-13	33			3.0	POST OFFICE PARKWAY, SEBASTIAN DISTRICT, NORTH I-10 TO I-65	W330	\$51,417	\$51,417	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
222004	CHICKASAW	HSIP16211E0001R	TR	SH02	CABLE BARRIER	1	2013		4-18-13	5-6-13	5-29-13	7-30-13	10			9.9	CABLE BARRIER SH-2 FROM US-92 NORTH APPROX 0.5 MI. E. OF I-49 SOUTH APPROX 0.3 MI. E. OF I-10	W330	\$31,756	\$31,756	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
294000	CARRIER	HSIP16200D0101R	TR	SH05	SAFETY IMPROVEMENT	7	2013		1-17-13	2-4-13	2-25-13	6-21-13	22			0.0	INSTALL LAST IN THE WARNING SIGN-AHEAD	W330	\$62,200	\$62,200	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
300504	CHICKASAW	HSIP16200D0103R	TR	SH05	SAFETY IMPROVEMENT	2	2013		3-24-13	4-1-13	4-24-13	6-10-13	84-13			0.0	INSTALL INSTALLATION OF RUMBLE STRIPS ALONG VARIOUS HWYS IN CARRIER COUNTY INCLUDING AND EXCLUDING	W330	\$25,952	\$25,952	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
300004	OKMURRAY	HSIP16200D0101R	TR	SH02	TRAFFIC SIGNALS	4	2013		2-21-13	3-4-13	3-19-13	12-17-13	52			0.0	OKMURRAY CITY, INSTALL TRAFFIC SIGNAL AT I-70 AND I-275	W330	\$10,800	\$10,800	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
300004	OKMURRAY	HSIP16200D0101R	TR	US05	TRAFFIC SIGNALS	2	2013		3-24-13	3-4-13	3-19-13	10-05-13	2			0.0	TULSA TRAFFIC SIGNAL, I-70 EAST OF I-49 AND I-70 WEST OF I-49	W330	\$15,952	\$15,952	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
300004	OKMURRAY	HSIP16200D0101R	TR	US05	CABLE BARRIER	2	2013		6-20-13	7-1-13	7-19-13	10-21-13	4			10.0	CABLE BARRIER VARIOUS LOCATIONS ALONG I-49 IN OKMURRAY COUNTY	W330	\$3,500	\$3,500	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
300300	KOWANOE	HSIP16200D0101R	TR	SH00	CABLE BARRIER	7	2013		2-21-13	3-4-13	3-19-13	7-12-13	10-25-13	16			4.5	SH-200 FROM I-49 SOUTH APPROX 0.2 MI. EAST OF I-49 SOUTH APPROX 0.1 MI. WEST OF I-49 SOUTH	W330	\$14,938	\$14,938	\$0					Analysis Pending Availability of 5 Years of After Crash Data							
300004	OKMURRAY	HSIP16200D0101R	TR	SH07	SCHOOL SIGNS	7	2013		1-17-13	2-4-13	2-19-13	6-3-13	84-13	16			0.0	INSTALL VARIOUS WARNING SIGNS AT SCHOOLS	W330	\$15,948	\$15,948	\$0					Analysis Pending Availability of 5 Years of After Crash Data							
307204	BARBER	HSIP16200D0101R	TR	SH42	TRAFFIC SIGNALS	7	2013		7-25-13	8-12-13	8-29-13	1-15-14	5-3-14	36			0.0	INSTALL RUMBLE STRIPS ALONG I-49 FROM I-49 SOUTH APPROX 0.1 MI. WEST OF I-49 SOUTH	W330	\$24,507	\$24,507	\$0					Analysis Pending Availability of 5 Years of After Crash Data							
307504	WASHINGTON	HSIP16200D0101R	TR	US05	CABLE BARRIER	8	2013						8			16.5	CABLE BARRIER INSTALLATION ALONG I-49 FROM I-49 SOUTH APPROX 0.1 MI. WEST OF I-49 SOUTH	W330	\$30,222	\$30,222	\$0					Project Not In Traffic Engineering Division								
320004	BEAUFORT	HSIP16200D0101R	TR	SH05	SAFETY IMPROVEMENT	1	2013									0.0	INSTALL RUMBLE STRIPS ALONG I-49 FROM I-49 SOUTH APPROX 0.1 MI. WEST OF I-49 SOUTH	W330	\$12,868	\$12,868	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
320004	MINGOSHER	HSIP16200D0101R	TR	SH05	SAFETY IMPROVEMENT	4	2013		5-16-13	6-3-13	6-26-13	10-1-13	1,231-14			0.0	INSTALL RUMBLE STRIPS IN VARIOUS LOCATIONS ALONG SH-200 IN MINGOSHER COUNTY	W330	\$62,862	\$62,862	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
320004	BEAUFORT	HSIP16200D0101R	TR	SH05	SAFETY IMPROVEMENT	6	2013		7-25-13	8-12-13	8-11-13	11-4-13				0.0	INSTALL RUMBLE STRIPS IN VARIOUS LOCATIONS IN BARBERSHIRE COUNTY	W330	\$11,296	\$11,296	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
320004	CREEK	HSIP16200D0101R	TR	SH05	SAFETY IMPROVEMENT	8	2013		7-25-13	8-12-13	8-11-13	3-10-14	3,271-14			0.0	INSTALL RUMBLE STRIPS IN VARIOUS LOCATIONS IN BARBERSHIRE COUNTY	W330	\$23,717	\$23,717	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
320004	BECKHAM	HSIP16200D0101R	TR	SH02	SAFETY IMPROVEMENT	5	2013		5-16-13	6-3-13	6-26-13	10-28-13	26			0.0	INSTALL RUMBLE STRIPS ALONG I-49 FROM I-49 SOUTH APPROX 0.1 MI. WEST OF I-49 SOUTH	W330	\$15,800	\$15,800	\$0					Analysis Pending Availability of 5 Years of After Crash Data								
320004	CUSTER	HSIP16200D0101R	TR	SH06	SAFETY IMPROVEMENT	5	2013		6-20-13	7-1-13	7-18-13	10-7-13	11-6-13	32			2.0	INSTALL RUMBLE STRIPS IN VARIOUS LOCATIONS IN CUSTER COUNTY	W330	\$46,994	\$46,994	\$0					Analysis Pending Availability of 5 Years of After Crash Data							
320004	BEAUFORT	HSIP16200D0101R	TR	US05	SAFETY IMPROVEMENT	2	2013		6-20-13	7-1-13	7-29-13	11-4-13	4,241-14	10			0.0	INSTALL RUMBLE STRIPS IN VARIOUS LOCATIONS IN BEAUFORT COUNTY	W330	\$44,928	\$44,928	\$0					Analysis Pending Availability of 5 Years of After Crash Data							
320004	DELANE	HSIP16200D0101R	TR	SH02	SAFETY IMPROVEMENT	3	2013		6-20-13	7-1-13	7-29-13	11-18-13	1,381-14	11			0.0	INSTALL RUMBLE STRIPS IN VARIOUS LOCATIONS IN BEAUFORT COUNTY	W330	\$5,716	\$5,716	\$0					Analysis Pending Availability of 5 Years of After Crash Data							
320004	OKMURRAY	HSIP16200D0101R	TR	IS05	IMPACT ATTENUATORS	4	2013		8-22-13	9-9-13	9-28-13	10-25-13	2,281-14	5			1.0	REPLACEMENT OF IMPACT ATTENUATORS ALONG THE INTERSTATE 49 FROM OKMURRAY TO CUSTER COUNTIES	W330	\$22,078	\$22,078	\$0					Relevant Crash Data Cannot Be Isolated							

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Proj. Date	Priority	Work Type	Division	City	TMAA Area	Letter	Asmt Date	Work Order Date	Work Shift Date	Modl Comp Date	Contn System	Start Month	End Month	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Est. Before FY05	11 Before FY05	12 Before FY05	13 Before FY05	14 After FY05	15 After FY05	Study Period	Source Title	Match Amt	Units Year	FY05	EUNO	Activity	
32700	TULSA	HSPG-278(04)R	TR	US05	CABLE BARRIER	6	2013		9-15-13	10-7-13	11-1-13	3-17-14		50			6.00	US 75 FROM 20TH STREET WEST TO THE WASHINGTON (CABLE BARRIER)	W330	\$1,360,000	\$0	\$0							Analysis Pending Availability of 5 Years of After Crash Data								
32800A	WAGONER	HSPG-278(00)R	TR	SH05	PAVEMENT MARKINGS	1	2013							14			52.50	DIVISION 1 STRIPING AT VARIOUS LOCATIONS	W330	\$57,500	\$57,500	\$0						Relevant Crash Data Cannot Be Isolated									
32900	BRYAN	HSPG-207(04)R	TR	US07	PAVEMENT MARKINGS	2	2013							10			10.00	DIVISION 2 STRIPING AT VARIOUS LOCATIONS	W330	\$300,000	\$300,000	\$0						Relevant Crash Data Cannot Be Isolated									
32900A	MCKEAN	HSPG-248(00)R	TR	US05	PAVEMENT MARKINGS	3	2013							6			15.50	DIVISION 3 STRIPING AT VARIOUS LOCATIONS	W330	\$15,300	\$15,300	\$0						Relevant Crash Data Cannot Be Isolated									
32900B	BEOCHAW	HSPG-209(00)R	TR	US09	PAVEMENT MARKINGS	5	2013							6			36.27	DIVISION 5 STRIPING AT VARIOUS LOCATIONS	W330	\$711,026	\$711,026	\$0						Relevant Crash Data Cannot Be Isolated									
32900C	CHASSON	HSPG-213(00)R	TR	US06	PAVEMENT MARKINGS	6	2013							2			65.16	DIVISION 6 STRIPING AT VARIOUS LOCATIONS	W330	\$4,000	\$4,000	\$0						Relevant Crash Data Cannot Be Isolated									
32900D	TULSA	HSPG-278(00)R	TR	US10	PAVEMENT MARKINGS	6	2013							81			18.25	DIVISION 8 STRIPING AT VARIOUS LOCATIONS	W330	\$87,045	\$87,045	\$0						Relevant Crash Data Cannot Be Isolated									
32900E	OKMUNIA	HSPG-255(10)R	TR	US05	PAVEMENT MARKINGS	4	2013							5			5.32	DIVISION 1 STRIPING AT VARIOUS LOCATIONS	W330	\$25,000	\$25,000	\$0						Relevant Crash Data Cannot Be Isolated									
32900F	BEECHER	HSPG-206(00)R	TR	US06	PAVEMENT MARKINGS	6	2013							6			34.38	INSTALL MULTILAYER PAVEMENT MARKINGS (BEECHER, WOODWARD & MCKEAN)	W330	\$300,000	\$300,000	\$0						Relevant Crash Data Cannot Be Isolated									
32900G	CLADO	HSPG-208(00)R	TR	SH07	PAVEMENT MARKINGS	7	2013							16			20.78	INSTALL MULTILAYER PAVEMENT MARKINGS IN CADOT, COWANOE & BENDYDOWNS DISTRICT #1	W330	\$24,948	\$24,948	\$0						Relevant Crash Data Cannot Be Isolated									
32900H	PANEE	STP-156(06)	-	SH05	PAVEMENT MARKINGS	6	2014		10-17-13	11-4-13	11-25-13	1-6-14		14			0.78	INSTALL MULTILAYER PAVEMENT MARKINGS IN CADOT, COWANOE & BENDYDOWNS DISTRICT #1	W330	\$222,707	\$222,707	\$0						Project Not in Traffic Engineering Division									
32900I	BEOCHAW	STP-105(08)	-	SH03	GRADE, DRAIN & SURFACE	6	2014							20			1.00	OVERFLOW SOIL NORTH OF HIGHWAY TRAFFIC SIGNALS	W330	\$70,940	\$70,940	\$0						Project Not in Traffic Engineering Division									
32900J	KOWANOE	STP-150(04)	-	SH07	PAVEMENT MARKINGS	7	2014		10-17-13	11-4-13	1-2-14	3-6-14		24			0.25	INSTALL MULTILAYER PAVEMENT MARKINGS IN CADOT, COWANOE & BENDYDOWNS DISTRICT #1	W330	\$100,000	\$100,000	\$0						Project Not in Traffic Engineering Division									
32900K	BEOCHAW	HSPG-205(10)R	TR	US00	CABLE BARRIER	0	2014							1			60.00	INSTALL CABLE METAL BARRIER (R-10) DOWNSIDE	W330	\$62,041	\$62,041	\$0						Analysis Pending Availability of 5 Years of After Crash Data									
32900L	ATOKA	HSPG-200(00)R	TR	US00	CABLE BARRIER	2	2014							4			10.00	INSTALL CABLE BARRIER AT VARIOUS LOCATIONS (ATOKA, COWANOE & BENDYDOWNS DISTRICT #1)	W330	\$1,182,206	\$1,182,206	\$0						Analysis Pending Availability of 5 Years of After Crash Data									
32900M	KOWANOE	HSPG-256(00)R	TR	US07	TRAFFIC SIGNALS	7	2014		11-21-13	12-9-13	1-2-14	4-7-14	5-7-14	17			0.10	INSTALL TRAFFIC SIGNALS AT VARIOUS LOCATIONS (KOWANOE & BENDYDOWNS DISTRICT #1)	W330	\$5,400	\$5,400	\$0						Analysis Pending Availability of 5 Years of After Crash Data									
32900N	OKMUNIA	HSPG-250(00)R	TR	US05	CABLE BARRIER	1	2014		10-17-13	11-4-13	11-25-13			4			97.20	INSTALL CABLE BARRIER AT VARIOUS LOCATIONS (OKMUNIA, COWANOE & BENDYDOWNS DISTRICT #1)	W330	\$45,955	\$45,955	\$0						Analysis Pending Availability of 5 Years of After Crash Data									
32900O	MOVA	HSPG-238(01)R	TR	US10	SCHOOL SIGNS	6	2014		2-20-14	3-10-14	3-31-14			6			0.10	INSTALL SCHOOL SIGNS AT VARIOUS LOCATIONS (MOVA, COWANOE & BENDYDOWNS DISTRICT #1)	W330	\$2,540	\$2,540	\$0						Analysis Pending Availability of 5 Years of After Crash Data									
32900P	HICKEL	HSPG-281(01)R	TR	SH07	CABLE BARRIER	1	2014		5-15-14	6-2-14	6-19-14			6			61.25	INSTALL CABLE BARRIER AT VARIOUS LOCATIONS (HICKEL, COWANOE & BENDYDOWNS DISTRICT #1)	W330	\$3,300	\$3,300	\$0						Relevant Crash Data Cannot Be Isolated									
32900Q	BEHNKE	HSPG-207(00)R	TR	SH00	CABLE BARRIER	3	2014							14			13.00	INSTALL CABLE BARRIER AT VARIOUS LOCATIONS (BEHNKE, COWANOE & BENDYDOWNS DISTRICT #1)	W330	\$78,600	\$78,600	\$0						Relevant Crash Data Cannot Be Isolated									
32900R	WOODWARD	STP-277(02)NS	NS	US00	SCHOOL SIGNS	6	2014		5-15-14	6-2-14	6-15-14			6			0.00	INSTALL SCHOOL SIGNS AT VARIOUS LOCATIONS (WOODWARD, COWANOE & BENDYDOWNS DISTRICT #1)	W330	\$26,952	\$26,952	\$0						Project Not in Traffic Engineering Division									

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Date	Agency	Work Type	Division	FY	FHWA Afn.	Letter	Admin Date	Work Order Date	Work Sheet Date	Modal Comp Date	Control System	Start/Stop	Length	Description	Fund Code	Project Total	Federal Funds	State Funds	Other Funds	Fed Estmt Pct	11 Before Cmts	11 After Cmts	12 After Cmts	13 After Cmts	14 After Cmts	Study Period	Scored Ltr	Mark Ltr	Units Year	FY03	FY04	EVALG	Adopt Bnd					
289704	MICHIGAN	NK-022N(180) TR	TR	US00	PAVEMENT MARKING	2	2009	5-13-08						000	0-00	3.00 MI. ABERDEEN PAVEMENT MARKING		\$40,000																							
290004	PITTSBURGH	NK-029N(119) TR	TR	US00	PAVEMENT MARKING	2	2009	5-13-08						000	0-00	16.9877 MI. TO MONROE CO. I-75/204/02B PAVEMENT MARKING		\$70,000																							
287604	TULSA	STFG-027N(425) TR	TR	SI-01	PAVEMENT MARKING	6	2009	5-23-08						000	0-15	13.00 MI. PAVED/REPLACE/RESURFACING 1.8 MI. TO WESTON, OKLA. I-40/02B		\$134,000																							
290004	TULSA	STFG-027N(425) TR	TR	SI-05	PAVEMENT MARKING	6	2009	5-23-08						000	0-00	1.60 MI. S-412 INTERCHG. & EXT. N. I-40 TO I-40/02B		\$30,000																							
286704	TULSA	STFG-027N(427) TR	TR	US00	PAVEMENT MARKING	6	2009	5-23-08						000	0-00	0.85 MI. I-40/02B I-40/02B		\$30,000																							
290004	TULSA	STFG-027N(428) TR	TR	US00	PAVEMENT MARKING	6	2009	5-23-08						000	0-00	0.10 MI. I-40/02B I-40/02B		\$30,000																							
290004	TULSA	STFG-027N(429) TR	TR	US00	PAVEMENT MARKING	6	2009	5-23-08						000	0-00	1.60 MI. S-412 INTERCHG. & EXT. N. I-40 TO I-40/02B		\$30,000																							
281504	OKMULGEE	NK-024N(088) TR	TR	US00	CABLE BARRIER	1	2009	7-18-08	9-21-09	9-19-08	10-07-08	7-22-09	0-11	1-16	3.68 MI. S-412 INTERCHG. & EXT. N. I-40 TO I-40/02B		\$66,375							1	9	36	1	12	35	5	25	\$650	352	\$1,381,940	\$64,146						
4 Fed/02/2008		MS-005E(114) 011 TR	TR	IS05	CABLE BARRIER	7	2009	7-21-08	9-16-09	10-06-08	10-28-09	6-1-09	6-31-09	000	6-18	5.00 MI. I-40/02B I-40/02B		\$55,000																							
280704	BARBER	MS-005E(114) 006 TR	TR	IS05	CABLE BARRIER	7	2009	7-28-08	9-16-09	10-06-08	10-28-09	6-1-09	6-31-09	000	11-86	5.00 MI. I-40/02B I-40/02B		\$70,000																							
280704	BARBER	NK-029N(114) TR	TR	US12	PAVEMENT MARKING	4	2009	8-26-08	/					000	0-00	2.26 MI. I-40/02B I-40/02B		\$50,000																							
4 Fed/02/2008		MS-000A(418) 005 TR	TR	IS00	CABLE BARRIER	7	2009	1-14-09	11-69					000	0-00	3.00 MI. I-40/02B I-40/02B		\$25,572																							
4 Fed/02/2008		MS-000A(417) 006 TR	TR	IS00	CABLE BARRIER	7	2009	1-22-09	1-22-09	2-2-08	2-12-08	3-16-09	10-31-09	000	11-60	3.00 MI. I-40/02B I-40/02B		\$45,758																							
285704	BRVAN	NK-022N(179) TR	TR	US00	SAFETY IMPROVEMENT	2	2009	2-10-08	3-12-07	3-30-08	4-24-09	11-12-09		000	0-00	0.10 MI. S-70 INTERSECTION MODIFICATION AT I-40/02B I-40/02B		\$19,987																							
4 Fed/02/2008		MS-000A(420) 125 TR	TR	IS00	CABLE BARRIER	4	2009	3-12-08	3-12-08	3-12-08	4-1-08	10-25-11		000	21-00	2.00 MI. I-40/02B I-40/02B		\$49,774																							
281404	BECKHAM	MS-000A(1000) 015 TR	TR	IS00	CABLE BARRIER	5	2009	3-20-08	3-20-08	4-14-08	6-3-09	6-13-10		001	19-00	5.00 MI. I-40/02B I-40/02B		\$57,594																							
283804	OK-CHAWA	STFG-055E(709) TR	TR		PAVEMENT MARKING	4	2009	4-13-08						000	0-00	0.10 MI. I-40/02B I-40/02B		\$30,000																							
283804	OK-CHAWA	HSFG-055A(714) TR	TR	SI-07	SIGNING	4	2009	7-5-09	9-30-09	9-30-09	5-23-10	5-13-10		000	0-00	7.25 MI. I-40/02B I-40/02B		\$24,407																							
280804	BARVN	STFG-055E(175) TR	TR	SI-05	GLANDING	3	2009	12-23-08	1-11-09	2-11-09	6-17-10	5-30-10		000	0-00	0.00 MI. I-40/02B I-40/02B		\$34,988																							
282704	LOCAN	MS-005E(420) 150 TR	TR	IS05	CABLE BARRIER	4	2009	1-11-09	1-28-10	2-11-09	2-24-10	7-1-10	2-28-11	000	13-28	10.00 MI. I-40/02B I-40/02B		\$1,300,907																							
270404	TULSA	NK-020A(088) TR	TR	US169	CABLE BARRIER	6	2009	2-12-10	3-18-10	4-12-10	4-29-10	7-5-10	5-23-10	001	11-00	5.00 MI. I-40/02B I-40/02B		\$50,375																							

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Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fwy Dir	HSIP	Work Type	Division	City	THMA Apts	Letter	Asmt Date	Work Order Date	Actual Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Fed Estim Pct	NI Before C/Pct	NI After C/Pct	Study Period	Source Ltr (url)	Mail Ltr	Units Year	EVMS	EVALG	Adm Pct																		
220204	COSEX	SIFG-1194-001	TR	SH05	INTERSECTION AND 4 TRAFFIC SIGNALS					4-1-10	5-19-10	6-19-10	15-11	000	0-12	0.00	TRAFFIC SIGNAL INTERSECTION IMPROVEMENTS SR167 & TURNER TURNPIKE GATE DEL F10-10, ADD TO 0-10, CONST TIMING ISSUES "ALTI"		\$14,576							Analysis Pending Availability of 5 Years of After Crash Data																								
262204	MOBILE	MS-3054-079	TR	IS05	CABLE BARRIER					3-16-10	4-23-10	6-7-10	103-10	000	4-36	61.00	3.6 CABLE MEDIUM BARRIER, W/ 1827 TO 1833		\$92,160							Analysis Pending Availability of 5 Years of After Crash Data																								
276504	CHAMPN	STFG-1137-001	TR	US06	STRIPING & PAVEMENT MARKINGS					2-20-10	2-22-10			000	31-26	2.97	CHAMPN, MAJOR, TEXAS, WOODS & WOODWARD, W/ 1500, 1510, 1520, 1530, 1540, 1550, 1560, 1570, 1580, 1590, 1600, 1610, 1620, 1630, 1640, 1650, 1660, 1670, 1680, 1690, 1700, 1710, 1720, 1730, 1740, 1750, 1760, 1770, 1780, 1790, 1800, 1810, 1820, 1830, 1840, 1850, 1860, 1870, 1880, 1890, 1900, 1910, 1920, 1930, 1940, 1950, 1960, 1970, 1980, 1990, 2000, 2010, 2020, 2030, 2040, 2050, 2060, 2070, 2080, 2090, 2100, 2110, 2120, 2130, 2140, 2150, 2160, 2170, 2180, 2190, 2200, 2210, 2220, 2230, 2240, 2250, 2260, 2270, 2280, 2290, 2300, 2310, 2320, 2330, 2340, 2350, 2360, 2370, 2380, 2390, 2400, 2410, 2420, 2430, 2440, 2450, 2460, 2470, 2480, 2490, 2500, 2510, 2520, 2530, 2540, 2550, 2560, 2570, 2580, 2590, 2600, 2610, 2620, 2630, 2640, 2650, 2660, 2670, 2680, 2690, 2700, 2710, 2720, 2730, 2740, 2750, 2760, 2770, 2780, 2790, 2800, 2810, 2820, 2830, 2840, 2850, 2860, 2870, 2880, 2890, 2900, 2910, 2920, 2930, 2940, 2950, 2960, 2970, 2980, 2990, 3000, 3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 3090, 3100, 3110, 3120, 3130, 3140, 3150, 3160, 3170, 3180, 3190, 3200, 3210, 3220, 3230, 3240, 3250, 3260, 3270, 3280, 3290, 3300, 3310, 3320, 3330, 3340, 3350, 3360, 3370, 3380, 3390, 3400, 3410, 3420, 3430, 3440, 3450, 3460, 3470, 3480, 3490, 3500, 3510, 3520, 3530, 3540, 3550, 3560, 3570, 3580, 3590, 3600, 3610, 3620, 3630, 3640, 3650, 3660, 3670, 3680, 3690, 3700, 3710, 3720, 3730, 3740, 3750, 3760, 3770, 3780, 3790, 3800, 3810, 3820, 3830, 3840, 3850, 3860, 3870, 3880, 3890, 3900, 3910, 3920, 3930, 3940, 3950, 3960, 3970, 3980, 3990, 4000, 4010, 4020, 4030, 4040, 4050, 4060, 4070, 4080, 4090, 4100, 4110, 4120, 4130, 4140, 4150, 4160, 4170, 4180, 4190, 4200, 4210, 4220, 4230, 4240, 4250, 4260, 4270, 4280, 4290, 4300, 4310, 4320, 4330, 4340, 4350, 4360, 4370, 4380, 4390, 4400, 4410, 4420, 4430, 4440, 4450, 4460, 4470, 4480, 4490, 4500, 4510, 4520, 4530, 4540, 4550, 4560, 4570, 4580, 4590, 4600, 4610, 4620, 4630, 4640, 4650, 4660, 4670, 4680, 4690, 4700, 4710, 4720, 4730, 4740, 4750, 4760, 4770, 4780, 4790, 4800, 4810, 4820, 4830, 4840, 4850, 4860, 4870, 4880, 4890, 4900, 4910, 4920, 4930, 4940, 4950, 4960, 4970, 4980, 4990, 5000, 5010, 5020, 5030, 5040, 5050, 5060, 5070, 5080, 5090, 5100, 5110, 5120, 5130, 5140, 5150, 5160, 5170, 5180, 5190, 5200, 5210, 5220, 5230, 5240, 5250, 5260, 5270, 5280, 5290, 5300, 5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390, 5400, 5410, 5420, 5430, 5440, 5450, 5460, 5470, 5480, 5490, 5500, 5510, 5520, 5530, 5540, 5550, 5560, 5570, 5580, 5590, 5600, 5610, 5620, 5630, 5640, 5650, 5660, 5670, 5680, 5690, 5700, 5710, 5720, 5730, 5740, 5750, 5760, 5770, 5780, 5790, 5800, 5810, 5820, 5830, 5840, 5850, 5860, 5870, 5880, 5890, 5900, 5910, 5920, 5930, 5940, 5950, 5960, 5970, 5980, 5990, 6000, 6010, 6020, 6030, 6040, 6050, 6060, 6070, 6080, 6090, 6100, 6110, 6120, 6130, 6140, 6150, 6160, 6170, 6180, 6190, 6200, 6210, 6220, 6230, 6240, 6250, 6260, 6270, 6280, 6290, 6300, 6310, 6320, 6330, 6340, 6350, 6360, 6370, 6380, 6390, 6400, 6410, 6420, 6430, 6440, 6450, 6460, 6470, 6480, 6490, 6500, 6510, 6520, 6530, 6540, 6550, 6560, 6570, 6580, 6590, 6600, 6610, 6620, 6630, 6640, 6650, 6660, 6670, 6680, 6690, 6700, 6710, 6720, 6730, 6740, 6750, 6760, 6770, 6780, 6790, 6800, 6810, 6820, 6830, 6840, 6850, 6860, 6870, 6880, 6890, 6900, 6910, 6920, 6930, 6940, 6950, 6960, 6970, 6980, 6990, 7000, 7010, 7020, 7030, 7040, 7050, 7060, 7070, 7080, 7090, 7100, 7110, 7120, 7130, 7140, 7150, 7160, 7170, 7180, 7190, 7200, 7210, 7220, 7230, 7240, 7250, 7260, 7270, 7280, 7290, 7300, 7310, 7320, 7330, 7340, 7350, 7360, 7370, 7380, 7390, 7400, 7410, 7420, 7430, 7440, 7450, 7460, 7470, 7480, 7490, 7500, 7510, 7520, 7530, 7540, 7550, 7560, 7570, 7580, 7590, 7600, 7610, 7620, 7630, 7640, 7650, 7660, 7670, 7680, 7690, 7700, 7710, 7720, 7730, 7740, 7750, 7760, 7770, 7780, 7790, 7800, 7810, 7820, 7830, 7840, 7850, 7860, 7870, 7880, 7890, 7900, 7910, 7920, 7930, 7940, 7950, 7960, 7970, 7980, 7990, 8000, 8010, 8020, 8030, 8040, 8050, 8060, 8070, 8080, 8090, 8100, 8110, 8120, 8130, 8140, 8150, 8160, 8170, 8180, 8190, 8200, 8210, 8220, 8230, 8240, 8250, 8260, 8270, 8280, 8290, 8300, 8310, 8320, 8330, 8340, 8350, 8360, 8370, 8380, 8390, 8400, 8410, 8420, 8430, 8440, 8450, 8460, 8470, 8480, 8490, 8500, 8510, 8520, 8530, 8540, 8550, 8560, 8570, 8580, 8590, 8600, 8610, 8620, 8630, 8640, 8650, 8660, 8670, 8680, 8690, 8700, 8710, 8720, 8730, 8740, 8750, 8760, 8770, 8780, 8790, 8800, 8810, 8820, 8830, 8840, 8850, 8860, 8870, 8880, 8890, 8900, 8910, 8920, 8930, 8940, 8950, 8960, 8970, 8980, 8990, 9000, 9010, 9020, 9030, 9040, 9050, 9060, 9070, 9080, 9090, 9100, 9110, 9120, 9130, 9140, 9150, 9160, 9170, 9180, 9190, 9200, 9210, 9220, 9230, 9240, 9250, 9260, 9270, 9280, 9290, 9300, 9310, 9320, 9330, 9340, 9350, 9360, 9370, 9380, 9390, 9400, 9410, 9420, 9430, 9440, 9450, 9460, 9470, 9480, 9490, 9500, 9510, 9520, 9530, 9540, 9550, 9560, 9570, 9580, 9590, 9600, 9610, 9620, 9630, 9640, 9650, 9660, 9670, 9680, 9690, 9700, 9710, 9720, 9730, 9740, 9750, 9760, 9770, 9780, 9790, 9800, 9810, 9820, 9830, 9840, 9850, 9860, 9870, 9880, 9890, 9900, 9910, 9920, 9930, 9940, 9950, 9960, 9970, 9980, 9990, 1000																																	

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fwy Entry	HSIP#	Work Type	Division	Fwy	Length	Letter	Asmt Date	Work Order Date	Work Order Date	Modif Comp Date	Control System	Sign Support	Ext Support	Length	Description	Fund Code	Project Cost	Federal Funds	Other Funds	Fed Aids	State Funds	Other Funds	Analysis Period	Study Period	Source Life (Yrs)	Maint /M	Units /Year	FWD	EUNO	Actual Bnd
250004	RIWA	HSFG-23P-00A11R	TR	HS05	TRAFFIC SIGNALS	3	2012	5-25-12	74-12						000	000	0.00	DIVISION II INSTALLATION OF MULTI-LANE TRAFFIC SIGNALS WITH 5 LANE TRAFFIC SIGNAL SYSTEMS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$314,300										Relevant Oash Date Cannot Be Isolated			
250104	FORTWA/TOME	HSFG-20B-00B1TR	TR	US270	TRAFFIC SIGNALS	3	2012	5-25-12	74-02					002	210	002	210	0.00	REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$150,000									Relevant Oash Date Cannot Be Isolated			
250504	WELFLORE	SIFG-MIA-2111R	TR	US299	CONCRETE BARRIERS	2	2012	6-27-12	74-02	6-6-12	6-24-12	6-30-12		005	1100	005	1100	0.25	REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$105,577									Relevant Oash Date Cannot Be Isolated			
251104	BECHAM	HSFG-20F-0101R	TR	HS05	TRAFFIC SIGNALS	6	2012	5-27-12	74-12						000	000	0.00	DIVISION II INSTALLATION OF MULTI-LANE TRAFFIC SIGNALS WITH 5 LANE TRAFFIC SIGNAL SYSTEMS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$180,000									Relevant Oash Date Cannot Be Isolated				
252704	MURRAY	HSFG-20A-0011R	TR	SH07	CONCRETE BARRIERS	7	2012	7-2-12	81-12	9-10-12	10-2-12	1-7-13		008	140	008	140	0.10	REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$107,777									Relevant Oash Date Cannot Be Isolated			
252704	BRYAN	HSFG-20G-00A1TR	TR	SH09	CONCRETE BARRIERS	2	2012	7-30-12	9-20-12	10-9-12	10-24-12	11-25-12	2-13-13	004	511	004	511	9.55	REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$53,356									Relevant Oash Date Cannot Be Isolated			
255504	MURKIN	MS-2005-0701-201TR	TR	HS05	CONCRETE BARRIERS	1	2012	8-8-12	8-25-12	10-8-12	10-31-12	1-7-13		001	1000	001	1000	1.00	REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$100,000									Relevant Oash Date Cannot Be Isolated			
252704	KOHANCHE	HSFG-20C-00A1TR	TR	SH09	CONCRETE BARRIERS	7	2012	8-8-12	9-20-12	10-8-12	10-31-12	1-7-13		004	000	004	000	10.00	REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$53,356									Relevant Oash Date Cannot Be Isolated			
251904	MURKIN	HSFG-2005-0701-201TR	TR	HS05	CONCRETE BARRIERS	1	2012	9-15-12	9-11-12					001	1000	001	1000	1.00	REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$100,000									Relevant Oash Date Cannot Be Isolated			
96304	OK-ARROW	MP-0204-1030069P	IP	HS05	TRAFFIC SIGNALS	4	2011	1-20-11	2-2-11	4-25-11	6-20-11	1-7-13						REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$0	\$0									Relevant Oash Date Cannot Be Isolated			
198604	OK-ARROW	STP-0505-0811ES	SS	SH07A	CONCRETE BARRIERS	5	2015	10-16-15	11-3-14	11-20-14	2-6-15							REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$10,000,000	\$10,000,000									Relevant Oash Date Cannot Be Isolated			
198705	EVINE	RAMA-041803-00	US17	US17S	TRAFFIC SIGNALS	4	2009											REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$15,000	\$15,000									Relevant Oash Date Cannot Be Isolated			
213204	CLEVELAND	SIFP-14812-001R	TR	SH09	CONCRETE BARRIERS	3	2006											REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$74,475	\$74,475									Relevant Oash Date Cannot Be Isolated			
216205	OK-ARROW	TSY-022038-00	HS05	SAFETY IMPROVEMENT	4													REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$0	\$0									Relevant Oash Date Cannot Be Isolated			
226604	CLEVELAND	MP-032294-00P	IP	HS05	TRAFFIC SIGNALS	3	2009											REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$263,304	\$263,304									Relevant Oash Date Cannot Be Isolated			
259211	OK-ARROW	HSFG-25F-25A-00	TR	MONEY ONLY	4	2015												REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$30,000	\$30,000									Relevant Oash Date Cannot Be Isolated			
276904	WARRN	SIFP-25G-0413S	SS	SH07A	CONCRETE BARRIERS	3	2015	5-24-15	6-1-15	6-29-15								REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$36,078	\$36,078									Relevant Oash Date Cannot Be Isolated			
276904	WARRN	SIFP-25G-0413S	SS	SH07A	CONCRETE BARRIERS	3	2015											REPAIR AND REPAIR TRAFFIC SIGNALS IN TOWN OF JEFFERSON. (ADD TO DATE LATE ADDITION)	SESE	\$1,032,496	\$1,032,496									Relevant Oash Date Cannot Be Isolated			

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Date	HSIP	Work Type	Division	City	HSIP Act	Letter	Award Date	Work Order Date	Work Order Date	Mail Comp Date	Control Station	Start Milepost	End Milepost	Length	Description	Fund Code	Project Cost	Federal Funds	State Funds	Other Funds	Fed Bidder Price	11 Bidder Price	12 Bidder Price	13 Bidder Price	Study Period	Source Title	Max Limit	Units Year	FY05	EUNO	Activity			
276004	COVINA	STP-225(04)SS	05/17/2014	SS	SH05 - BRIDGE & APPROACHES	3	2015											SH-05 IN EXISTING BRIDGE NORTH OF STEPHENS DR. FR 03-15 ADD TO DS. 15 JULITY 8834ES "AULT"	NSD	\$0,300	\$0,300													Analysis Pending Availability of 5 Years of After Crash Data			
300604	PRADO	STP-225(04)DOTR	07/20/14	TR	SH05 - BRIDGE & APPROACHES	7	2014			10/6/14	10/31/14	5-4-15						SH-05 IN EXISTING BRIDGE AND APPROACHES OVER RIVER APPROX 1.5 MI NW OF GARDIN DR. EXTEND SW APPROX 200 FT	NSD	\$0,000,000	\$0,000,000														Analysis Pending Availability of 5 Years of After Crash Data		
300604	CORNER	HSF1-1106(04)DOTR		TR	SH05 - SCHOOL SIGNS	7												SCHOOL ZONE ADVANCE WARNING SIGNS @ 100' AND 200' APPROX ON DEL FR 03-11 ADD TO 70' BCD REJECT	NSD	\$0	\$0													Analysis Pending Availability of 5 Years of After Crash Data			
209604	OKMURRAY	HSF10-258(10)TR		TR	HS04 - INTERSECTION AND T-INT SIGNALS	4	2015			3/15/15	5/15/15	5-1-15						445 AND 450 DEL. DR. INTERSECTION IMPROVEMENTS & INTERSECTION PAINT. ADD TO DS.15, BCD REJECT "AULT"	NSD	\$7,565,447	\$7,565,447														Analysis Pending Availability of 5 Years of After Crash Data		
302304	TULSA	HSF10-270(04)DOTR		TR	HS04 - TRAFFIC SIGNALS	6	2016											REPLACEMENT OF TRAFFIC SIGNAL BACKLATES @ VARIOUS LOCATIONS WITHIN DV#6 DMV 18 DIV 2 DEL FR 03-15 ADD TO FFY 2015 AS PER 104FT	NSD	\$7,763,225														Analysis Pending Availability of 5 Years of After Crash Data			
307404	TULSA	HSF10-270(04)DOTR		TR	US04 - SIGNING	6	2014			10/6/14	11/3/14	3-10-15						STANDARDS INSTALL IMPROVED CURVE SIGNAGE AND TRANSVERSE FURLE WITH ADVANCE WARNING SIGNS @ 100' FORMER I-10 SP-250(04)TR	NSD	\$44,105	\$44,105														Analysis Pending Availability of 5 Years of After Crash Data		
300304	OKMURRAY	STP-258(03)TRCTP-270(04)DOTR		TR	HS04 - SIGNING	4	2015			3/15/15	4/27/15	5-20-15						INSTALL CURVE OBJECT MARKERS AT VARIOUS LOCATIONS ALONG DEL FR 03-15 ADD TO DS.15 BCD REJECT	NSD	\$300,000	\$300,000														Analysis Pending Availability of 5 Years of After Crash Data		
300304	MURKIN	HSF10-275(04)DOTR		TR	SH05 - SAFETY IMPROVEMENT	5	2014			8/21/14	5/26/14	11-3-14						INSTALLATION AND UPDATING OF SIGNAGE AT VARIOUS LOCATIONS THROUGHOUT	NSD	\$305,952	\$305,952															Analysis Pending Availability of 5 Years of After Crash Data	
306604	SARFIELD	HSF10-240(04)DOTR		TR	US04 - SIGNALS	4	2015			11/20/14	1/28/15	4-15-15						US-4124 LINES EAST OF END INSTALL ADVANCE WARNING SIGNS @ RR CROSSING WITH FLASHERS & DEL FR 03-15 ADD TO DS.15 BCD REJECT	NSD	\$71,916	\$71,916															Analysis Pending Availability of 5 Years of After Crash Data	
300504	PRADO	HSF10-220(03)DOTR		TR	US04 - SAFETY IMPROVEMENT	7	2014			8/21/14	5/8/14	3-25-15						PAVING INSTALLATION AND REPAIRS AT SIGNALS STRIPPER & FURLE STREET AT VARIOUS LOCATIONS	NSD	\$50,435	\$50,435																Analysis Pending Availability of 5 Years of After Crash Data
302304	PRADO	HSF10-225(04)DOTR		TR	SH05 - SCHOOL SIGNS	7	2014			8/21/14	5/8/14	10-3-14						SH-05 IN EXISTING SCHOOL ZONE WARNING SIGNS WITH FLASHING BEACONS AT VARIOUS LOCATIONS	NSD	\$31,300	\$31,300																Analysis Pending Availability of 5 Years of After Crash Data
303604	MORTCOSH	HSF10-240(04)DOTR		TR	STRMS & PAVEMENT MARKINGS	1	2014											INSTALLATION OF MULTI-POLYMER PAVEMENT MARKINGS AT VARIOUS LOCATIONS	NSD	\$35,166	\$35,166															Analysis Pending Availability of 5 Years of After Crash Data	
303704	FTTULSA	HSF10-215(04)DOTR		TR	STRMS & PAVEMENT MARKINGS	2	2015											INSTALL MULTI-POLYMER & THERMOPLASTIC PAVEMENT MARKINGS AT VARIOUS LOCATIONS	NSD	\$60,000	\$60,000																Analysis Pending Availability of 5 Years of After Crash Data
303704	FOOTMAN/TOLME	HSF10-206(02)DOTR		TR	STRMS & PAVEMENT MARKINGS	3	2014											INSTALLATION OF MULTI-POLYMER PAVEMENT MARKINGS AT VARIOUS LOCATIONS	NSD	\$45,276	\$45,276																Analysis Pending Availability of 5 Years of After Crash Data
310404	TEJAS	HSF10-270(01)DOTR		TR	STRMS & PAVEMENT MARKINGS	6	2015											DIAGNOSTIC INSTALLATION OF MULTI-POLYMER PAVEMENT MARKINGS AT VARIOUS LOCATIONS	NSD	\$155,000	\$155,000															Analysis Pending Availability of 5 Years of After Crash Data	
310204	TULSA	HSF10-270(04)DOTR		TR	STRMS & PAVEMENT MARKINGS	6	2014											DIAGNOSTIC INSTALLATION OF MULTI-POLYMER PAVEMENT MARKINGS AT VARIOUS LOCATIONS	NSD	\$1,000,000	\$1,000,000															Analysis Pending Availability of 5 Years of After Crash Data	
314004	KNOXVY	HSF10-206(05)DOTR		TR	STRMS & PAVEMENT MARKINGS	4	2015											PAVING OF MULTI-POLYMER & THERMOPLASTIC PAVEMENT MARKINGS AT VARIOUS LOCATIONS	NSD	\$1,300,000	\$1,300,000															Analysis Pending Availability of 5 Years of After Crash Data	
314004	SPAWT	HSF10-270(04)DOTR		TR	US04 - SCHOOL SIGNS	4	2015			2/15/15	3-2-15	7-15-15						DIAGNOSTIC INSTALLATION OF SCHOOL SIGNS AT VARIOUS LOCATIONS	NSD	\$25,440	\$25,440																Analysis Pending Availability of 5 Years of After Crash Data

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Page

HSIP Report FFY 2005 - 2013

Job #	County	Project No.	Fry Date	Agency	Work Type	Division	FY	FYMA Act	Letter	Asmt Date	Work Order Date	Work Order Date	Mod Comp Date	Control System	Start Milepost	End Milepost	Length	Description	Fund Code	Project Total	Priority Funds	Other Funds	Fed Bridge Pct	11 Fed Pct	11 State Pct	11 Other Pct	NI After Pct	Study Period	Source Title	Year Int	Units Year	EVMS	EVMS	AVM Pct		
364504	WOODS	SF1-238162-00	TR	US04	BRIDGE & APPROACHES	6	2015											US-84 OVER HOUSTON CR. 0.1 MI WEST OF US-50	NOISE	\$1,500,000	\$1,500,000						Analysis Pending Availability of 5 Years of After Crash Data									
364604	BEVAN	HSF1-237100-00	TR	US09	LANEWAY	2	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$30,500	\$30,500						Analysis Pending Availability of 5 Years of After Crash Data									
365004	CHOCWAY	HSF1-212614-00	TR	US27	LANEWAY	2	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
366004	COBEC	HSF1-218627-00	TR	US04	LANEWAY	6	2015			11-20-15	12-28-14	12-28-14	12-28-14					INSTALLATION OF GUARDRAILS AND CABLE BARRIERS ALONG WITH A NEW 40' WIDE R/W TO 14.1 MI WEST OF US-271	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
366204	CARFIELD	HSF1-226202-00	TR	US04	SCHOOL SIGNS	4	2015											SCHOOL SIGNS	NOISE	\$20,000	\$20,000						Analysis Pending Availability of 5 Years of After Crash Data									
371404	JOHNSTON	SF1-238162-00	TR	US09	BRIDGE & APPROACHES	3	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
384704	LEFLORE	HSF1-240604-00	TR	US27	LANEWAY	2	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
384704	MCKURTAIN	HSF1-240604-00	TR	US27	LANEWAY	2	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
255002	OKMULGEE	HSF1-226202-00	TR	US04	LANEWAY	4	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
271004	ROGERS	SF1-238162-00	TR	US09	INTERSECTION	6	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
270504	STEPHENS	SF1-286016-00	TR	US09	BRIDGE & APPROACHES	7	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
318804	TULSA	HSF1-272059-00	TR	US09	TRAFFIC SIGNALS	6	2015			6-16-15	7-6-15	7-20-15						TRAFFIC SIGNALS	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
315204	WAGNER	HSF1-272059-00	TR	US09	TRAFFIC SIGNALS	1	2015											TRAFFIC SIGNALS	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
270000	WAGNER	HSF1-272059-00	TR	US09	TRAFFIC SIGNALS	6	2015											TRAFFIC SIGNALS	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
307000	WAGNER	HSF1-272059-00	TR	US09	TRAFFIC SIGNALS	6	2015											TRAFFIC SIGNALS	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
316004	MULTIPLE	HSF1-238162-00	TR	US09	SIGNALS	9	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
313204	MCKEAN	HSF1-238162-00	TR	US09	CABLE BARRIER	3	2015			6-16-15	7-6-15	6-3-15						US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
315504	MURKIN	HSF1-238162-00	TR	US09	CABLE BARRIER	7	2015			6-16-15	7-6-15	6-3-15						US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									
316000	LOVE	HSF1-238162-00	TR	US09	SIGNALS	7	2015											US-271 FROM DOWNTOWN TO TP EAST TO US-70 US-70 EAST TO US-271 FROM DOWNTOWN TO TP EAST (2002-2014)	NOISE	\$1,000,000	\$1,000,000						Analysis Pending Availability of 5 Years of After Crash Data									

C. Assessment of the Effectiveness of the Improvements (Program Evaluation)

1. Graphs of General Highway Safety Trends

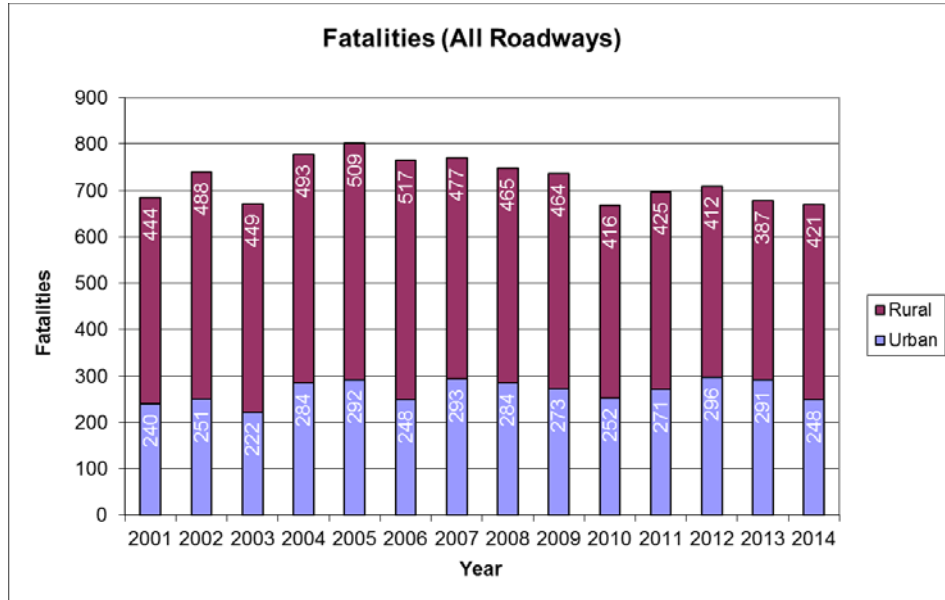


Fig. 1

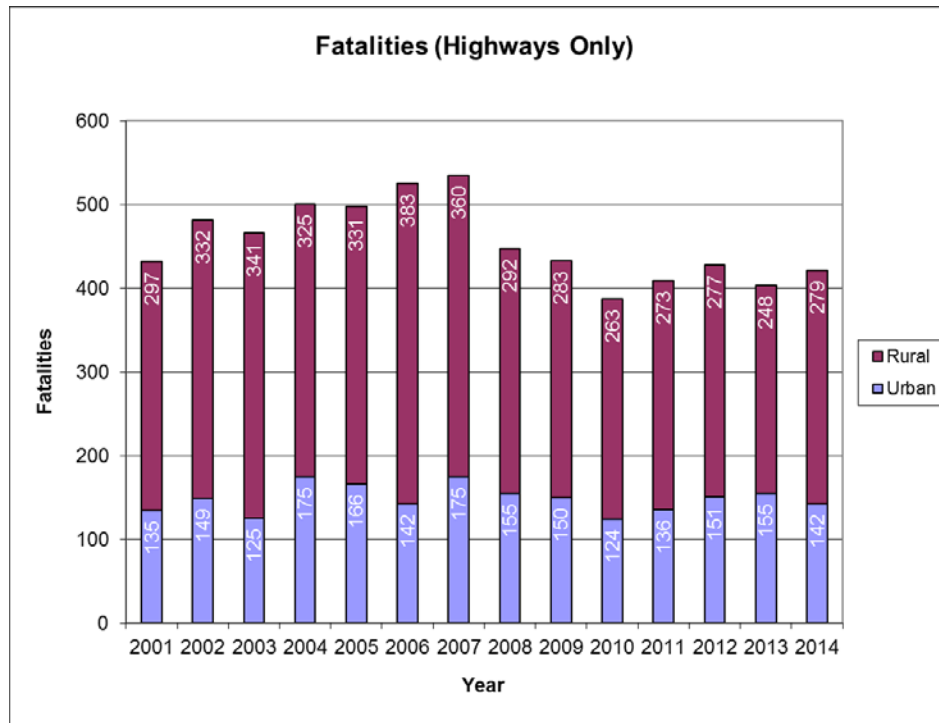


Fig. 2

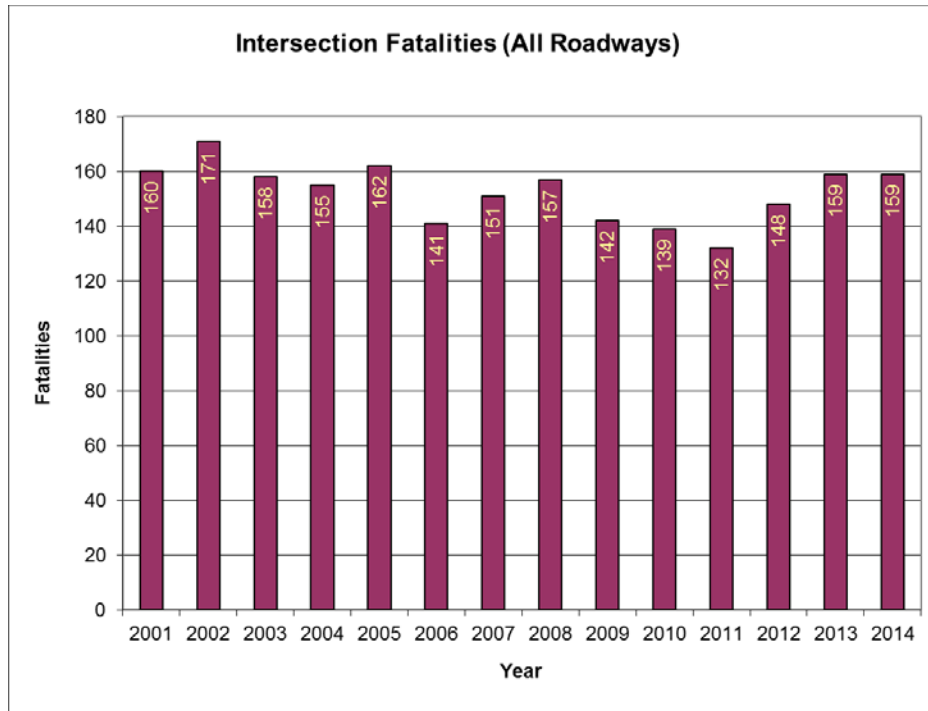


Fig. 3

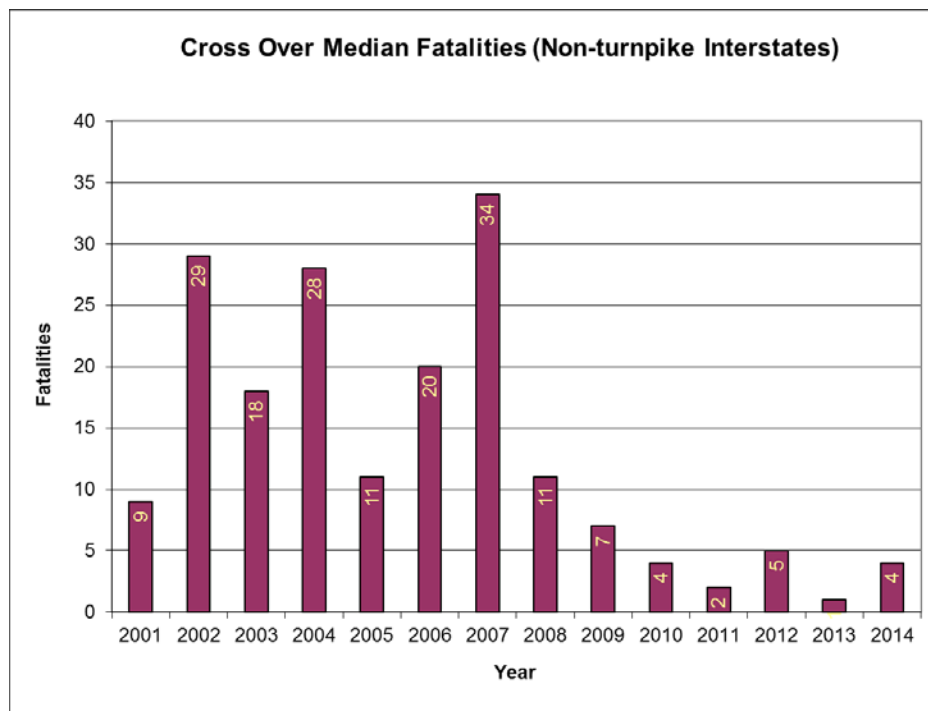


Fig. 4

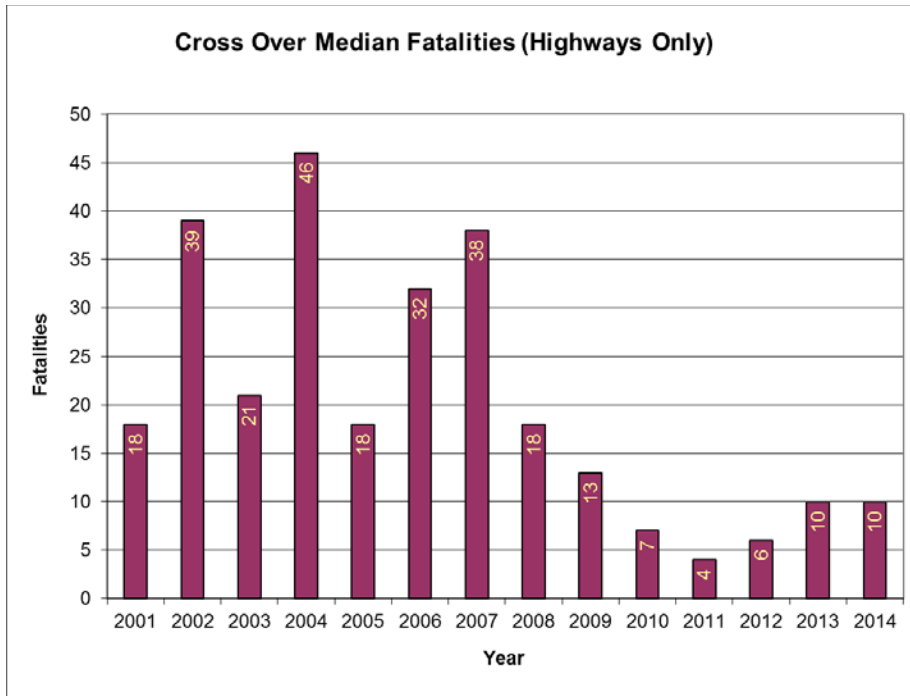


Fig. 5

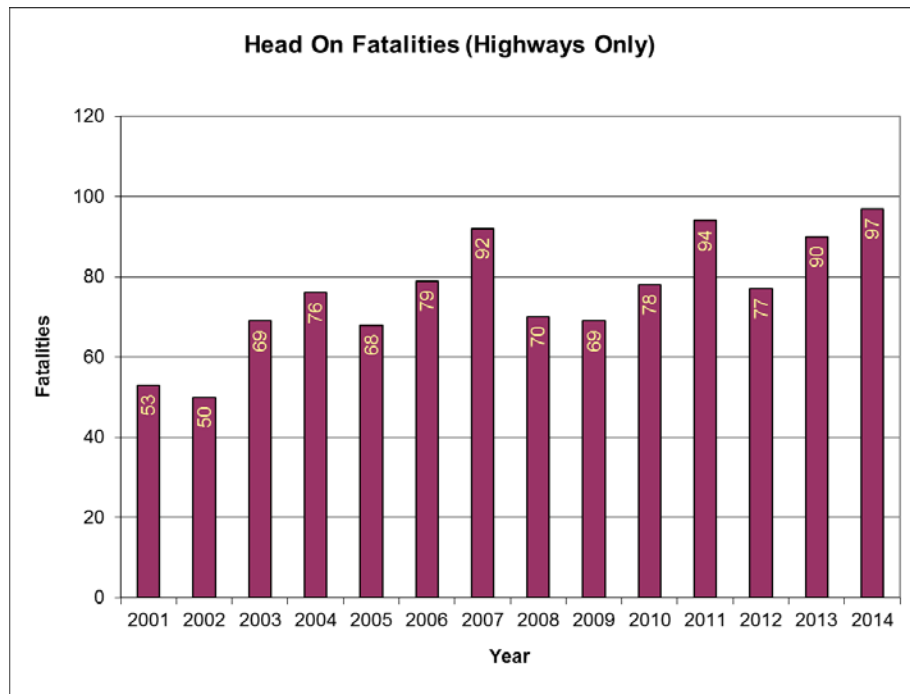


Fig. 6

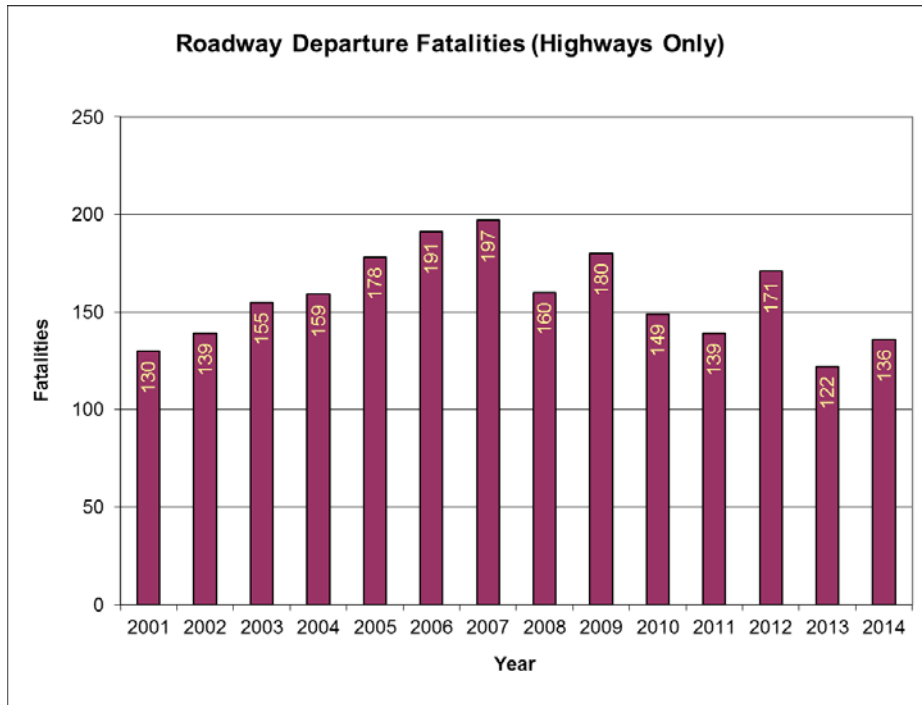


Fig. 7

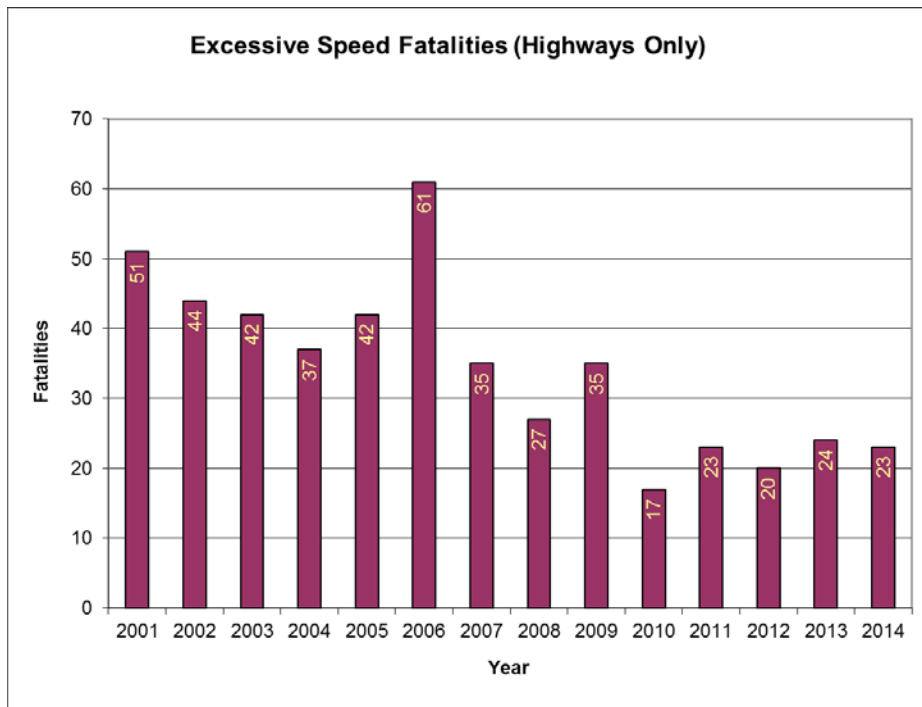


Fig. 8

See reference information in Appendix D for more trends and crash facts for Oklahoma.

2. Description of Overall HSIP Effectiveness

Improved site ranking methodologies include using only injury/fatal crash history (to better concentrate on reducing these crash types), introduction of Bayesian methods, specialized reports for prioritization of specific systemic mitigations, and probability-adjusted rate-based rather than frequency-based methods in order to emphasize higher risk rural locations. Key systemic improvements (e.g. cable barrier and shoulder rumble strips) are being implemented on relevant construction projects.

a. SHSP Emphasis Areas

Crossover fatalities and injuries have diminished drastically on highways treated with cable median barrier. Because of this success, installation of cable median barrier is being considered even for highways with narrow medians. The overall fatality trend for 2013 is downward, with the decrease dominated by declines in single vehicle crashes, roadway departures, and rural crashes.

b. Subprogram types

Distinct subprograms exist for cable barrier, guard rail, shoulder rumble strip, low cost intersection safety improvement, retroreflective backplates, curve delineation, high friction surface treatment, and intersection signalization. The cable barrier program has been the longest running and has had the most obvious success to date.

c. System Wide Treatments

Most SHSP targeted areas are, or are planned to become, system wide. Systemic intersection treatment is moving toward implementation with site screening in progress and a small number of sites already treated.

D. High Risk Rural Roads Program (HRRRP)

ODOT did not utilize any HRRRP funds for FFY 2014. Oklahoma did not meet the HRRR Special Rule for FFY 2016 funding, based on a decline in fatalities per hundred million vehicle miles of travel on rural collectors and local roads, per 23 U.S.C 148(g)(1). See Appendix G1 for calculations.

E. Older Drivers and Pedestrians Special Rule

Oklahoma did not meet the criteria for the Older Drivers and Pedestrians Special Rule, based on a decline in the rate of fatalities and serious injuries per capita among the State's population of persons aged 65 and older, per 23 U.S.C. 148(g)(2). See Appendix G2 for calculations.

F: References


Lindeburg, Michael R., P.E. Engineering-In-Training Reference Manual, 8th Ed. Professional Publications, Inc. Belmont, 1998.

Toole, Joseph S., Associate Administrator for Safety. Memorandum. Subject: INFORMATION: Highway Safety Improvement Program (HSIP) Reporting Guidance. USDOT / FHWA. May 14, 2009.

Furst, Tony, Associate Administrator for Safety. Memorandum. Subject: Highway Safety Improvement Program – Map021 Interim Eligibility Guidance. USDOT / FHWA. October 4, 2012.

Rogoff, Peter, Acting Undersecretary for Policy. Memorandum. Subject: Guidance on Treatment of the Economic Value of a Statistical Life (VSL) in U.S. Department of Transportation Analyses – 2014 Adjustment. Office of the Secretary of Transportation. June 13, 2014.

Appendix A: Initial Request with HSIP Project Categories (Toole Memorandum)


U.S. Department of Transportation
Federal Highway Administration

Oklahoma Division
June 3, 2009

5801 N Broadway Ext., Ste. 300
Oklahoma City, OK 73118
Phone: 405-254-3300
Fax: 405-254-3302
www.fhwa.dot.gov/okdiv

In Reply Refer To:
HDA-OK

Gary Ridley
Director
Oklahoma Department of Transportation
200 NE 21st Street
Oklahoma City, OK 73105

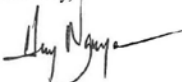
Attention: Messrs. Harold Smart, Joe Kyle and Ms. Ginger Miller

Dear Mr. Ridley:


Enclosed is the guidance package for reporting requirements under Title 23 U.S.C. Section 148(g) and 23 CFR 924. The Department needs to submit its annual reporting on Highway Safety Improvement Program (HSIP), "5 Percent" Report, and the Railway-Highway Crossing Report. The HSIP report shall also contain information regarding the High Risk Rural Roads Program (HRRRP), which is a component of the HSIP.


The guidance for the annual Railway-Highway Crossing and "5 Percent" reports remain the same and are available on the web at <http://safety.fhwa.dot.gov/safetealu/usc130.htm> and <http://safety.fhwa.dot.gov/safetealu/fiveguidance.htm>. However, the HSIP reporting guidance has been updated to reflect the recent revision of 23 CFR Part 924 which was effective January 23, 2009.

The State should submit all three reports together to FHWA Division Office **no later than August 31** of each year. If you have any questions, please contact me at 405-254-3345, or huy.nguyen@dot.gov.

Sincerely,

Huy Nguyen, P.E.
Safety Engineer

Enclosure
Cc: David Streb, ODOT

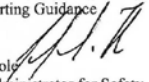



U.S. Department of Transportation
Federal Highway Administration

Memorandum

SENT VIA ELECTRONIC MAIL

Subject: **INFORMATION:** Highway Safety Improvement Program (HSIP) Reporting Guidance Date: May 14, 2009

From: Joseph S. Toole 
Associate Administrator for Safety In Reply Refer To: HSSP

To: Division Administrators

The FHWA Office of Safety has updated the Highway Safety Improvement Program (HSIP) Reporting Guidance to reflect the recent revisions to the HSIP regulation (23 CFR Part 924), which was effective January 23, 2009. This guidance supersedes the April 4, 2006, guidance entitled "Highway Safety Improvement Program Reporting Requirements 23 USC 148(g)".

The guidance for the annual Railway-Highway Crossing and "5 Percent" reports remains the same and is available on the Office of Safety's Web site, as follows:


- Railway Highway Crossing Report (May 5, 2006)
<http://safety.fhwa.dot.gov/safetealu/usc130.htm>
- The "5 Percent" Report (April 5, 2006)
<http://safety.fhwa.dot.gov/safetealu/fiveguidance.htm>

These reports are due to the FHWA Division Office by August 31, 2009, and to the FHWA Office of Safety by September 30, 2009. If you have any questions or need additional information, please contact Ms. Karen Yunk at (609) 637-4207.

Thank you for your continued support in ensuring successful implementation of the HSIP.

Attachment

cc: Director of Field Services
Safety Field



**HIGHWAY SAFETY IMPROVEMENT PROGRAM
REPORTING GUIDANCE
May 15, 2009**

The Highway Safety Improvement Program (HSIP) Reporting Guidance is being revised to reflect the reporting requirements of Title 23 of the Code of Federal Regulations, Part 924 (23 CFR 924). This guidance supersedes the April 4, 2006 "Guidance for Highway Safety Improvement Program Reporting Requirements 23 U.S.C. 148(g)."

Table of Contents

1. Introduction	2
2. Reporting Frequency and Schedule	2
3. Content and Structure of the HSIP Report	3
A. Program Structure	3
B. Progress in Implementing the HSIP projects	4
C. Assessment of the Effectiveness of the Improvements (Program Evaluation)	6
D. High Risk Rural Roads Program (HRRRP)	7
4. Protection of Data from Discovery & Admission into Evidence	9
Attachment 1: General Listing of Projects	10
Attachment 2: Highway Safety Improvement Categories	11

1. Introduction

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) established the Highway Safety Improvement Program (HSIP) as an FHWA core program and provided a significant increase in the funding available for infrastructure-related highway safety improvement projects. This program is established as section 148 of Title 23, United States Code (23 U.S.C. 148) and regulated under 23 CFR 924.

Given the emphasis on this program, it is important that FHWA be able to demonstrate that the program is being effectively carried out, and that the projects being implemented are achieving results. The ultimate measure of the success of this program is a significant nationwide decline, in real terms, in the number of fatalities and serious injuries. To ensure that the program is being implemented as intended and that it is achieving its purpose, an annual report on the HSIP implementation and effectiveness is required by 23 U.S.C. §148(g) and 23 CFR 924. Furthermore, State Departments of Transportation (SDOT) that can clearly demonstrate the success of the safety program, through regular reporting, can use the report to communicate to others within their State about the importance of continuing to focus on improving highway safety.

The following guidance will assist the States in meeting the HSIP reporting requirements of 23 U.S.C. §148(g) and 23 CFR 924. Pursuant to 23 CFR 924.15, the HSIP report shall also contain information regarding the High Risk Rural Roads Program (HRRRP), which is a component of the HSIP.

While 23 U.S.C. §148(g) also includes a requirement to address railway-highway crossings, this information should be collected in a separate report required under 23 U.S.C. § 130(g). At the option of the State, the three reports required under Section 148 (the HSIP report, the railway-highway crossing report and the transparency (5%) report (Section 148(c)(1)(D)) may be submitted separately, or combined into one report with three distinct sections. *(See guidance for the Railway-Highway Crossing Reporting requirements dated May 5, 2006, and guidance for the "5% of most hazardous locations" dated April 5, 2006, for additional information on those reports.)*

2. Reporting Frequency and Schedule

Pursuant to 23 CFR 924.15, States reports shall be submitted to the FHWA Division Administrator no later than August 31st of each year. The report should be no more than 10 pages in length, excluding general listing of projects.

Pursuant to 23 CFR 924.15, the report shall be for a defined one year reporting period. It is at the discretion of the SDOT, in consultation with the FHWA Division Office, to define the reporting period. The States have the flexibility to report based on calendar year, federal fiscal year or State fiscal year. However, the reporting period must be clearly indicated at the beginning of the report and be consistent from year to year.

The Division Offices will forward the reports electronically to the FHWA Office of Safety by September 30th each year. These dates coincide with the other HSIP-related reports required under SAFETEA-LU (e.g., the report describing at least 5% of the locations exhibiting the most severe safety needs and the railway-highway crossing report).

3. Content and Structure of the HSIP Report

The report should address ALL projects implemented with HSIP and HRRRP funds, including local projects and non-infrastructure projects (i.e. implemented with HSIP flex funds). In addition, States should also report on projects identified through the HSIP but implemented with other funding sources. States are encouraged to coordinate with their planning organizations and local government agencies to obtain all relevant information to ensure complete HSIP reporting.

The HSIP report should consist of four sections: program structure, progress in implementing HSIP projects, assessment of the effectiveness of the improvements, and the HRRRP. The content and structure of each section is described below.

A. Program Structure

The report should briefly describe the structure of the State's HSIP, including the HRRRP, and any significant program changes that have been implemented since the beginning of SAFETEA-LU. This should include, but not be limited to, the following:

- i. Program Administration
- ii. Program Methodology

i. Program Administration

Briefly describe how the HSIP funds are administered in the State (i.e. centrally or via districts). If the HSIP is administered at the district level, describe the funding allocation process (i.e. formula, crash data). Describe any innovative practices (i.e. road safety audits) used to implement the HSIP. Describe how local roads are addressed as part of the HSIP. For example, are local road (non-State owned and operated) projects identified using the same methodology as State roads? If not, describe how local road projects are identified under A.2) below. Describe how highway safety improvement projects are selected for implementation (i.e. competitive application process). Lastly, describe overall coordination and collaboration with internal (i.e. planning) and external (i.e. regional planning organizations) partners as it relates to the HSIP.

ii. Program Methodology

The program and project identification processes must be developed in consultation with the FHWA Division Administrator. Since these processes will not likely change on an annual basis, it is recommended that they be submitted to the Division Administrator under separate cover from the annual HSIP report. The Division Administrator should maintain a copy of current program and project identification processes. For the purposes of the annual HSIP report, States should indicate the date the program methodology was last updated and submit a brief summary of the following key elements:

- Data used
 - Crash (i.e. all crashes, fatal only, fatal plus serious injury, fatal plus all injuries)
 - Exposure (i.e. traffic volume, population)
 - Roadway (i.e. geometry, pavement condition)
- Project Identification Methodology (i.e. frequency, equivalent property damage only, critical rate, safety performance functions, empirical bayes)
- Summary of targeted programs being implemented under the HSIP (i.e. median crossover, intersection, safe corridor, horizontal curve)
- Extent to which systemwide improvements are implemented as part of the HSIP (i.e. proportion of spot location vs. systemwide improvements)
- Extent to which highway safety improvement projects align with the State's SHSP
- Project prioritization process (i.e. incremental benefit cost ratio, ranking based on net benefit, etc.)

B. Progress in Implementing the HSIP projects

States should describe the progress in implementing HSIP projects during the specified reporting period. This description should include the following:

- i. HSIP funds available (programmed)
- ii. Number and general listing of the types of projects initiated
 - Identify how the projects relate to the State SHSP and the State's safety goals and objectives

i. HSIP Funds Available (Programmed):

For the purpose of this report, the term "HSIP funds" includes those funds that are available (programmed) to implement highway safety improvement projects that have been identified as part of the State's HSIP. At a minimum, this would include projects obligated using HSIP funds (Section 148), Hazard Elimination funds (Section 152), Optional Safety funds, penalty transfer funds (from Sections 154 and 164), safety belt performance grant funds (Section 406), and incentive grant funds (from sections 157 and 163). In addition, the report should include other non-safety funds (i.e. STP, ARRA, State, local) that were available (programmed) to implement highway safety improvement projects. HRRRP funds are addressed in Part D below and Railway-Highway Crossing Program funds are addressed under separate reporting requirements.

"Available" (Programmed) funds are those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) for the reporting period and can be expended on highway safety improvement projects. States should not only report available (programmed) funds, but also the amount of available (programmed) funds that were obligated for the specified reporting period.

This information could be presented in a format similar to that illustrated below. If this format is used, it should be supplemented with a narrative briefly describing the information presented. The report should also discuss any impediments to obligating HSIP funds and plans to overcome this challenge in the future.

HSIP Project Funding		
Reporting Period: MM/DD/YYYY to MM/DD/YYYY		
Funding Category	Programmed*	Obligated
HSIP (Section 148)		
Hazard Elimination (Section 152)		
Optional Safety		
Penalty Transfer (154 and 164)		
Safety Belt Performance Grants (Section 406)		
Incentive Grants (i.e. Sections 157, 163)		
Other Federal-aid funds (i.e. STP, ARRA)		
State and Local Funds		
Total		

* "Available" (Programmed) funds refer to those funds that have been programmed in the Statewide Transportation Improvement Program (STIP) and can be expended on highway safety improvement projects.

Lastly, briefly describe the amount of HSIP funds, either dollar amounts or percentage basis that were available (programmed) and obligated to local safety projects for the specified reporting period. Local safety projects are those projects implemented on non-State owned and operated roadways.

ii. General Listing of Projects:

Pursuant to 23 CFR 924.15, States shall provide the number and general listing of the types of projects obligated using HSIP funds for the reporting period. The general listing of the projects obligated shall be structured to identify how the projects relate to the State Strategic Highway Safety Plan (SHSP) and the State's safety goals and objectives. For each project obligated with HSIP funds, the following information should be provided:

- Improvement Category
- Project output (i.e. miles of rumble strips)
- Project cost
- Relationship to the State's SHSP

Attachment 1 illustrates how this information can be presented in a tabular format. This table should be supplemented with a narrative briefly describing the information presented.

The improvement category should align with the list of highway safety improvement projects in 23 CFR 924, as shown in Attachment 2. While a single project may consist of multiple project types, each project should be assigned to only one category. The category chosen should align with the primary purpose of the project. For example, the State recently completed a pavement overlay at intersection A to improve the skid resistance on the approaches to the intersection. This project could be categorized as (1) intersection safety improvement, (4) installation of skid resistant surface and (11) improvement of highway signage and pavement markings. The State

chose improvement category (4) installation of skid resistant surface since that was the primary purpose of the project.

The project output will vary depending on the type of projects implemented. For example, if the State recently completed a rumble strip project, the project output would be the miles of rumble strips installed for that project. On the other hand, if the county had a project to improve pedestrian accommodations at ten intersections in their region, the project output would be 10 intersections.

The cost should reflect the total cost of each project.

For each HSIP project, the State must demonstrate the relationship to the SHSP. States should not only link each project to the appropriate SHSP emphasis area (i.e. intersection, roadway departure), but also the strategy that most closely aligns with the primary purpose of the project.

C. Assessment of the Effectiveness of the Improvements (Program Evaluation)

This section should provide a demonstration of the effectiveness of the HSIP in two parts:

- i. Overview of general highway safety trends
- ii. Description of the overall effectiveness of the HSIP

i. Overview of general highway safety trends

Present and describe figures showing the general highway safety trends (for the past five years) in the State (crashes, serious injuries and fatalities and any other information the State deems useful) by number and by rate.

ii. Description of overall HSIP effectiveness

As appropriate, the summary of program effectiveness should consist of three components, as noted below. Provide any other information that demonstrates the effectiveness and success of the HSIP. For example, in some instances, successful implementation of programs, strategies and/or treatments may lead to policy level changes, whereas safety treatments are being applied across all projects and not just safety specific projects. Such changes should be noted in the annual report as they represent a shift in safety culture.

Also, briefly describe significant program changes that have occurred since the beginning of SAFETEA-LU. For example, some States have begun targeting fatal and serious injury crashes in their HSIP, rather than all crashes. Other States have taken steps to address local roads as part of the HSIP. This information will help FHWA qualitatively assess the effects SAFETEA-LU has had on the HSIP.

SHSP Emphasis Areas

Present information regarding SHSP emphasis areas that relate to the HSIP. Present and describe trends in emphasis area performance measures (i.e. fatalities and serious injuries, all crashes).

Subprogram Types

Many States have subprograms that are administered under the HSIP. These subprograms may target subsets of the SHSP emphasis areas or specific strategies (i.e. median barrier program). States should report on the overall effectiveness of these subprograms. Continuing with the example, if a State has been implementing a median barrier program for the past several years, trends in cross median crashes could be presented.

Systemwide Treatments

Many States are beginning to implement treatments on a systemwide basis. States should also report on the effectiveness of these treatments in reducing the target crash type. For example, the State has been targeting horizontal curve crashes by implementing chevron warning signs on a systemwide basis for the past several years. The State should report on the effectiveness (i.e. percent reduction of targeted crash type) of this treatment.

D. High Risk Rural Roads Program (HRRRP)

This section of the HSIP report should provide information on the progress of HRRRP implementation. The content of the HRRRP portion of the report should mirror that of the HSIP, as outlined in sections B and C above, except that it is specific to the HRRRP. HRRRP funds are set aside for construction and/or operational improvements to improve safety on roadways functionally classified as rural major or minor collectors, or rural local roads.

The HRRRP portion of the HSIP report should consist of three parts:

- i. Basic program implementation information
- ii. Methods used to identify HRRR
- iii. Overall HRRRP effectiveness

i. Program Implementation

Based on the specified reporting period, the following should be addressed:

- HRRRP funds available (programmed)
- Number and type of HRRRP projects initiated

HRRRP Funds Available (Programmed)

This section of the report should only address the funds set aside for the HRRRP. Other funds (i.e. STP, ARRA, Rural Safety Innovation Program, State, local) used to obligate projects identified through the HRRRP should also be identified in the report. If additional HSIP funds are used to support the HRRRP, that information should be captured in the HSIP portion of the report. "Available" (Programmed) refers to the HRRRP funds that have been programmed in the Statewide Transportation Improvement Program (STIP) for the reporting period and can be expended on HRRR projects. In addition to the amount of HRRRP funds available

(programmed), States should also report the amount of HRRRP funds obligated for the specified reporting period.

This information could be presented in a format similar to that illustrated below. If this format is used, it should be supplemented with narrative briefly describing the information presented. The report should also discuss any impediments to obligating HRRR funds and plans to overcome this challenge in the future.

HRRRP Project Funding		
Reporting Period: MM/DD/YYYY to MM/DD/YYYY		
Funding Category	Programmed*	Obligated
HRRRP		
Other Federal-aid funds (i.e. STP, ARRA, Rural Safety Innovation Program)		
State and Local funds		
Total		

* "Available" (Programmed) refers to the HRRRP funds that have been programmed in the Statewide Transportation Improvement Program (STIP) and can be expended on HRRR projects.

HRRRP Projects Initiated

States should provide the number and general listing of the types of projects obligated using HRRRP funds for the reporting period. The general listing of the projects obligated should be structured to identify how the projects relate to the State Strategic Highway Safety Plan (SHSP) and the State's safety goals and objectives. For each project obligated with HRRR funds, the following information should be provided:

- Improvement Category
- Project output (i.e. miles of rumbles strips)
- Project cost
- Relationship to the State's SHSP

Attachment 1 illustrates how this information can be presented in a tabular format. This table should be supplemented with narrative briefly describing the information presented.

The improvement category should align with the list of highway safety improvement projects in 23 CFR 924, as shown in Attachment 2. However, those items designated with a caret (^) are not eligible for HRRRP funds and should not be used to categorize HRRRP projects. In addition, while all HRRRP projects would be considered "construction and operational improvements on high risk rural roads," this project category should not be used to define the project type for HRRRP reporting purposes. Also, while a single project may consist of multiple project types, each project should be assigned to only one category. The category chosen should align with the primary purpose of the project.

The project output will vary depending on the type of projects implemented.

The cost should reflect the total cost of each project.

For each HRRR project, the State should demonstrate the relationship to the SHSP. States should not only link each project to the appropriate SHSP emphasis area (i.e. intersection, roadway departure), but also the strategy that most closely aligns with the primary purpose of the project.

ii. Methodology used to identify HRRR locations

States should briefly describe methods and data used to identify HRRR locations, if it is different than the program methodology described under the HSIP Program Structure (A). This description should include, but not be limited to, a description of the crash and volume data used to calculate the statewide and location specific fatality and incapacitating injury crash rates for each applicable roadway classification.

If the State does not currently have the capability of locating crashes (or determining volumes) on all public roadways, this section should clearly describe:

- o the data-based methods that were used to select projects for HRRRP and
- o the steps underway to improve the data systems to permit the required analysis.

If applicable, States should also clearly describe the methods and data used to determine projected increases in fatalities and incapacitating injuries based on projected traffic volumes. The report should briefly describe the extent to which projects identified using this methodology are implemented under the HRRRP.

iii. Narrative summarizing the overall HRRRP effectiveness

States should present and describe figures showing the general highway safety trends related to the HRRRP. For example, this could include the number of fatalities and serious injuries occurring on roadways functionally classified as a rural major, minor collector and rural local roads in the State for the past five years.

4. Protection of Data from Discovery & Admission into Evidence

Section 148(g)(4) stipulates that data compiled or collected for the preparation of the HSIP Report "...shall not be subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in an action for damages arising from any occurrence at a location identified or addressed in such reports..." This information is also protected by 23 USC 409 (discovery and admission as evidence of certain reports and surveys).

Project	Improvement Category (see Attachment 2)	Output (i.e. in miles)	Cost	Relationship to SHSP	
				Emphasis Area	Strategy
Total					

Attachment 1: General Listing of Projects

Attachment 2: Highway Safety Improvement Categories

Highway Safety Improvement Project Categories

(Source: 23 CFR 924)

While a single project may consist of multiple project types, each project should be assigned to only one category. The category chosen should align with the primary purpose of the project.

- (1) An intersection safety improvement project
- (2) Pavement and shoulder widening
- (3) Installation of rumble strips or other warning devices
- (4) Installation of skid resistant surface at an intersection or other location with a high frequency of crashes
- (5) An improvement for pedestrian or bicyclist safety or for the safety of persons with disabilities
- *(6) Construction of any project for the elimination of hazards at a railway-highway crossing that is eligible for funding under 23 U.S.C. 130, including the separation or protection of grades at railway-highway crossings.
- *(7) Construction of railway-highway crossing safety feature, including installation of highway-railway grade crossing protective devices
- *(8) The conduct of an effective traffic enforcement activity at a railway-highway crossing
- (9) Construction of a traffic calming feature
- (10) Elimination of a roadside obstacle or roadside hazard
- (11) Improvement of highway signage and pavement markings
- (12) Installation of a priority control system for emergency vehicles at signalized intersections
- (13) Installation of a traffic control or other warning device at a location with high crash potential
- ^(14) Transportation safety planning
- ^(15) Improvement in the collection and analysis of data
- (16) Planning integrated interoperable emergency communications equipment, operational activities or traffic enforcement activities (including law enforcement assistance) relating to work zone safety.
- (17) Installation of guardrails, barriers (including barriers between construction work zones and traffic lanes for the safety of road users and workers), and crash attenuators.
- (18) The addition or retrofitting of structures or other measures to eliminate or reduce crashes involving vehicles and wildlife
- (19) Installation and maintenance of signs (including fluorescent yellow-green signs) at pedestrian-bicycle crossings and in school zones.
- *(21) Construction and operational improvements on high risk rural roads. [Do not use for the HRRRP portion of the report.]
- ^(22) Conducting road safety audits.

* Include only if railway-highway or high risk rural roads projects are funded with HSIP-type funds, NOT the set-aside funds for these programs. Projects implemented using the set-aside funds for these programs have separate reporting requirements.

^ These project categories should not be included in the HRRRP portion of the report. They are not considered construction or operational improvements and therefore are not eligible for HRRR funds.

+ Describe in narrative

Appendix B: B/C Ratio and EUAC (Lindeburg 13-7, 13-15, 13-16)

Table 13.1
Discount Factors for Discrete Compounding

factor name	converts	symbol	formula
single payment compound amount	P to F	$(F/P, i\%, n)$	$(1+i)^n$
single payment present worth	F to P	$(P/F, i\%, n)$	$(1+i)^{-n}$
uniform series sinking fund	F to A	$(A/F, i\%, n)$	$\frac{i}{(1+i)^n - 1}$
capital recovery	P to A	$(A/P, i\%, n)$	$\frac{i(1+i)^n}{(1+i)^n - 1}$
uniform series compound amount	A to F	$(F/A, i\%, n)$	$\frac{(1+i)^n - 1}{i}$
uniform series present worth	A to P	$(P/A, i\%, n)$	$\frac{(1+i)^n - 1}{i(1+i)^n}$
uniform gradient present worth	G to P	$(P/G, i\%, n)$	$\frac{(1+i)^n - 1}{i^2} - \frac{n}{i(1+i)^n}$
uniform gradient future worth	G to F	$(F/G, i\%, n)$	$\frac{(1+i)^n - 1}{i^2} - \frac{n}{i}$
uniform gradient uniform series	G to A	$(A/G, i\%, n)$	$\frac{1}{i} - \frac{n}{(1+i)^n - 1}$

13 CALCULATING UNIFORM SERIES EQUIVALENCE

A cash flow that repeats each year for n years without change in amount is known as an *annual amount* and is given the symbol A . As an example, a piece of equipment may require annual maintenance, and the maintenance cost will be an annual amount. Although the equivalent value for each of the n annual amounts could be calculated and then summed, it is more expedient to use one of the uniform series factors. For example, it is possible to convert from an annual amount to a future amount by use of the (F/A) factor.

$$F = A(F/A, i\%, n) \quad 13.8$$

A *sinking fund* is a fund or account into which annual deposits of A are made in order to accumulate F at $t = n$ in the future. Since the annual deposit is calculated as $A = F(A/F, i\%, n)$, the (A/F) factor is known as the *sinking fund factor*.

An *annuity* is a series of equal payments (A) made over a period of time.¹⁰ Usually, it is necessary to "buy into" an investment (e.g., a bond, an insurance policy, etc.) in order to ensure the annuity. In the simplest case of an annuity

¹⁰An annuity may also consist of a lump sum payment made at some future time. However, this rare interpretation is not considered in this chapter.

that starts at the end of the first year and continues for n years, the purchase price (P) is

$$P = A(P/A, i\%, n) \quad 13.9$$

The present worth of an *infinite (perpetual) series* of annual amounts is known as a *capitalized cost*. There is no $(P/A, i\%, \infty)$ factor in the tables, but the capitalized cost can be calculated simply as

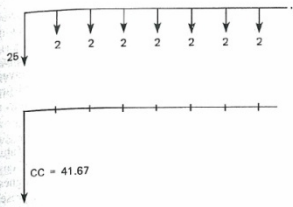
$$P = \frac{A}{i} \quad (i \text{ in decimal form}) \quad 13.10$$

Alternatives with different lives will generally be compared by way of *equivalent uniform annual cost*, or EUAC. An EUAC is the annual amount that is equivalent to all of the cash flows in the alternative. The EUAC differs in sign from all of the other cash flows. Costs and expenses expressed as EUACs, which would normally be considered negative, are actually positive. The term *cost* in the designation EUAC serves to make clear the meaning of a positive number.

Example 13.4

Maintenance costs for a machine are \$250 each year. What is the present worth of these maintenance costs over a 12-year period if the interest rate is 8%?

ECONOMICS



C. Annual Cost Method

Alternatives that accomplish the same purpose but that have unequal lives must be compared by the *annual cost method*.¹⁶ The annual cost method assumes that each alternative will be replaced by an identical twin at the end of its useful life (infinite renewal). This method, which may also be used to rank alternatives according to their desirability, is also called the *annual return method* or *capital recovery method*.

Restrictions are that the alternatives must be mutually exclusive and repeatedly renewed up to the duration of the longest-lived alternative. The calculated annual cost is known as the *equivalent uniform annual cost* (EUAC) or just *equivalent annual cost*. Cost is a positive number when expenses exceed income.

Example 13.13

Which of the following alternatives is superior over a 30-year period if the interest rate is 7%?

	alternative A	alternative B
type	brick	wood
life	30 years	10 years
initial cost	\$1800	\$450
maintenance	\$5/year	\$20/year

(solution)

$$\begin{aligned} \text{EUAC}(A) &= 1800(A/P, 7\%, 30) + 5 \\ &= (1800)(0.0806) + 5 \\ &= \$150 \\ \text{EUAC}(B) &= 450(A/P, 7\%, 10) + 20 \\ &= (450)(0.1424) + 20 \\ &= \$84 \end{aligned}$$

¹⁶Of course, the annual cost method can be used to determine the superiority of assets with identical lives as well.

Alternative B is superior since its annual cost of operation is the lowest. It is assumed that three wood facilities, each with a life of ten years and a cost of \$450, will be built to span the 30-year period.

25 CHOICE OF ALTERNATIVES: COMPARING AN ALTERNATIVE WITH A STANDARD

With specific economic performance criteria, it is possible to qualify an investment as acceptable or unacceptable without having to compare it with another investment. Two such performance criteria are the *benefit-cost ratio* and the *minimum attractive rate of return*.

A. Benefit-Cost Ratio Method

The benefit-cost ratio method is often used in municipal project evaluations where benefits and costs accrue to different segments of the community. With this method, the present worth of all benefits (irrespective of the beneficiaries) is divided by the present worth of all costs. The project is considered acceptable if the ratio equals or exceeds 1.0, that is, if $B/C \geq 1.0$.

When the benefit-cost ratio method is used, disbursements by the initiators or sponsors are *costs*. Disbursements by the users of the project are known as *disbenefits*. It is often difficult to determine whether a cash flow is a cost or a disbenefit (whether to place it in the numerator or denominator of the benefit-cost ratio calculation).

Regardless of where the cash flow is placed, an acceptable project will always have a benefit-cost ratio greater than or equal to 1.0, although the actual numerical result will depend on the placement. For this reason, the benefit-cost ratio method should not be used to rank competing projects.

The benefit-cost ratio method of comparing alternatives has seen extensive use in transportation engineering where the ratio is often (but not necessarily) written in terms of annual benefits and annual costs instead of present worths. Another characteristic of highway benefit-cost ratios is that the route (road, highway, etc.) is usually already in place and that various alternative upgrades are being considered. There will be existing benefits and costs associated with the current route. Therefore, the *change* (usually an increase) in benefits and costs is used to calculate the benefit-cost ratio.¹⁷

$$B/C = \frac{\Delta \text{ user benefits}}{\Delta \text{ investment cost} + \Delta \text{ maintenance} - \Delta \text{ residual value}} \quad 13.21$$

¹⁷This discussion of highway benefit-cost ratios is not meant to imply that everyone agrees with Eq. 13.21. In *Economic Analysis for Highways* (International Textbook Company, Scranton, PA, 1969), author Robley Winfrey takes a strong stand on one aspect of the benefits versus disbenefits issue: highway maintenance. Regular highway maintenance costs (according to Winfrey) should be placed in the numerator as a subtraction from the user benefits. This mandate has been called the *Winfrey method* by some.

ECONOMICS

Notice that the change in *residual value (terminal value)* appears in the denominator as a negative item. An increase in the residual value would decrease the denominator.

Example 13.14

By building a bridge over a ravine, a state department of transportation can shorten the time it takes to drive through a mountainous area. Estimates of costs and benefits (due to decreased travel time, fewer accidents, reduced gas usage, etc.) have been prepared. Should the bridge be built? Use the benefit-cost ratio method of comparison.

	millions
initial cost	40
capitalized cost of perpetual annual maintenance	12
capitalized value of annual user benefits	49
residual value	0

(solution)

If Eq. 13.21 is used, the benefit-cost ratio is

$$B/C = \frac{49}{40 + 12 + 0} = 0.942$$

Since the benefit-cost ratio is less than 1.00, the bridge should not be built.

If the maintenance costs are placed in the numerator, the benefit-cost ratio value will be different, but the conclusion will not change.

$$B/C_{\text{alternate method}} = \frac{49 - 12}{40} = 0.925$$

B. Rate of Return Method

The minimum attractive rate of return (MARR) has already been introduced as a standard of performance against which an investment's actual rate of return (ROR) is compared. If the rate of return is equal to or exceeds the minimum attractive rate of return, the investment is qualified. This is the basis for the *rate of return method* of alternative selection.

Finding the rate of return can be a long, iterative process. Usually, the actual numerical value of rate of return is not needed; it is sufficient to know whether or not the rate of return exceeds the minimum attractive rate of return. This *comparative analysis* can be accomplished without calculating the rate of return simply by finding the present worth of the investment using the minimum attractive rate of return as the effective interest rate (i.e., $i = \text{MARR}$). If the present worth is zero or positive, the investment is qualified. If the present worth is negative, the rate of return is less than the minimum attractive rate of return.

26 RANKING MUTUALLY EXCLUSIVE MULTIPLE PROJECTS

Ranking of multiple investment alternatives is required when there is sufficient funding for more than one investment. Since the best investments should be selected first, it is necessary to be able to place all investments into an ordered list.

Ranking is relatively easy if the present worths, future worths, capitalized costs, or equivalent uniform annual costs have been calculated for all the investments. The highest-ranked investment will be the one with the largest present or future worth, or the smallest capitalized or annual cost. Present worth, future worth, capitalized cost, and equivalent uniform annual cost can all be used to rank multiple investment alternatives.

However, neither rates of return nor benefit-cost ratios should be used to rank multiple investment alternatives. Specifically, if two alternatives both have rates of return exceeding the minimum acceptable rate of return, it is not sufficient to select the alternative with the highest rate of return.

An *incremental analysis*, also known as a *rate of return on added investment study*, should be performed if rate of return is used to select between investments. An incremental analysis starts by ranking the alternatives in order of increasing initial investment. Then, the cash flows for the investment with the lower initial cost are subtracted from the cash flows for the higher-priced alternative on a year-by-year basis. This produces, in effect, a third alternative representing the costs and benefits of the added investment. The added expense of the higher-priced investment is not warranted unless the rate of return of this third alternative exceeds the minimum attractive rate of return as well. The choice criterion is to select the alternative with the higher initial investment if the incremental rate of return exceeds the minimum attractive rate of return.

An incremental analysis is also required if ranking is to be done by the benefit-cost ratio method. The incremental analysis is accomplished by calculating the ratio of differences in benefit to differences in costs for each possible pair of alternatives. If the ratio exceeds 1.0, alternative 2 is superior to alternative 1. Otherwise, alternative 1 is superior.¹⁸

$$\frac{B_2 - B_1}{C_2 - C_1} \geq 1 \quad [\text{alternative 2 superior}] \quad 13.22$$

27 ALTERNATIVES WITH DIFFERENT LIVES

Comparison of two alternatives is relatively simple when both alternatives have the same life. For example, a problem might be stated: "Which would you rather have: car A with a life of five years, or car B with a life of five years?"

¹⁸It goes without saying that the benefit-cost ratios for all investment alternatives by themselves must also be equal to or greater than 1.0.

Appendix C: Discount Rates

Discount Rates

- Discount Rate = $[(1 + \text{Market Interest Rate}) / (1 + \text{Inflation Rate})] - 1$.

The discount rate (commonly called an interest rate in business investments) represents the time value of money. It is usually expressed as an annual compounded rate that represents the rate of interest money will earn over a future period. The **AASHTO Pavement Design Guide** explains the discount rate in the following way:

"A governmental unit that decides to spend money improving a highway, for example, loses the opportunity to "invest" this money elsewhere. That rate at which money could be invested elsewhere is sometimes known as the "Opportunity Cost Of Capital" and is the appropriate discount rate from performing the present value calculations on public projects should represent the opportunity cost of capital to the taxpayer as reflected by the average market rate of return. However, the market ... rate of interest includes an allowance for expected inflation as well as a return that represents the real cost of capital."

- The **Oklahoma Turnpike Authority** uses approximately 5% to 6% bonds. (Should receive more information from OTA, 1/15/97.)
- Oklahoma State Treasury's** office has availability to invest in US Treasury Bills (0-12 months) varies
Notes (1-20 years) 6.94 % (20 year Note)
Bonds (30 years) 6.85 %
They currently invest in bills and notes.
- FHWA** considers "Best Practice" to use a 3% to 5% discount rate.
- Corps of Engineers**, use a discount rate based on interest-bearing securities. Currently, all projects having terms exceeding 15 years have a discount rate of 7-3/8%.
- American Concrete Paving Association**, Frank Cunningham recommends 3% for government projects.
- Asphalt Institute**, Gary Fitts says it varies from 2% to 6%. Most states settle on 3% or 4% with 4% being the most common.
- "**PONTIS**" a National Bridge Management tool for AASHTO contributing states comes with the default value of 2.5% discount rate.

Further Life-Cycle Analysis of Proj No.: BHF-186(176)

I have reevaluated the study using a constant-dollar analysis (discount rate adjust for inflation). Below list a summary of the sensitivity.

Discount Rate	Uniform Equivalent Annual Cost		
	Widen w/ Exist. Steel	Replace Steel	Difference
2.00%	\$124,803	\$105,793	\$19,010
3.00%	\$151,122	\$137,866	\$13,256
4.00%	\$177,804	\$173,084	\$4,720
4.46%	\$190,074	\$190,075	-\$1
5.00%	\$204,479	\$210,506	-\$6,027
6.00%	\$231,252	\$249,377	-\$18,125
7.00%	\$258,283	\$289,155	-\$30,872
15.00%	\$485,100	\$616,008	-\$130,908
20.00%	\$630,751	\$821,325	-\$190,574

- + A survey* of commonly used discount rates indicate a 15% discount rate is unjustified. Discount rates should be in the 2% to 4% or 4% to 7.5% range depending on whether "Constant Dollars" or "Nominal Discount Rate" is used.
- + This study was perform using "Constant Dollars" and the discount rate of 2 to 4% should be used.
- + Both options are equal using a 4.46% discount rate.
- + At 15% discount rate, it will be very difficult justifying anything beyond maintain existing situation. Future accidents, delays due to congestion and detours due to failed roadways will not greatly impact the present cost. To rebuild the superstructure 75 years in the future with today's dollars at \$4,106,621 will have the present cost of \$100.

* See Attachment

- * **1995 Federal Register (12/21/95)**
applies to the Department of Interior's "**Bureau of Reclamation**"
for all 1996 Water Resource Projects use 7.625% discount rate.
- * **Michigan DOT** uses 4% discount rate.
- * **South Carolina DOT** - BMS uses 4% and PMS uses 3 - 3.5%.
- * **South Dakota DOT** - While we have no official policy on this figure, we have used figures in the 3 to 5% range and never above 5%.
- * Executive Office of the President - The **Office of Management & Budget** Circular No. A-94 recommends the following discount rates. Programs with durations longer than 30 years may use the 30-year interest rate.

Effective Dates: March 96 through February 97

Nominal Discount Rates

3-Year	5-Year	7-Year	10-Year	30-Year
5.4 %	5.5 %	5.5 %	5.6 %	5.7 %

Real Discount Rates (No Inflation)

3-Year	5-Year	7-Year	10-Year	30-Year
2.7 %	2.7 %	2.8 %	2.8 %	3.0 %

When government expenses provide a mix of cost savings and external social benefits, the OMB recommends the net present value of such investment should be evaluated with a 7% real discount rate.

Appendix D: Oklahoma Highway Safety Office Crash Facts

**2013
OKLAHOMA
Crash Facts**

Oklahoma Department of Public Safety

Highway Safety Office

3223 N. Lincoln Blvd.

Okla. City, OK 73105-5403

Telephone (405) 523-1570

Fax (405) 523-1586

Web Site: www.ohso.ok.gov

Document Location:

http://www.ok.gov/ohso/Data/Crash_Data_and_Statistics/Crash_Facts_2013.html

This publication is issued by the Oklahoma Department of Public Safety as authorized by the Commissioner of Public Safety. The Oklahoma Department of Libraries has been notified of the posting of the 2013 Crash Fact Book to the Department of Public Safety web site: www.dps.state.ok.us.

NOTE: Oklahoma Crash Facts for 2014 are not yet available as of August 31, 2015.

Appendix E: Guidance on Treatment of the Economic Value of a Statistical Life (VSL) in U.S. Department of Transportation Analyses – 2014 Adjustment.



**U.S. Department of
Transportation**

Office of the Secretary
of Transportation

1200 New Jersey Avenue, SE
Washington, DC 20590

June 13, 2014

**MEMORANDUM TO: SECRETARIAL OFFICERS
MODAL ADMINISTRATORS**

From: Peter Rogoff
Acting Under Secretary for Policy
x64540

Kathryn Thomson
General Counsel
x64702

Subject: Guidance on Treatment of the Economic Value of a Statistical Life (VSL) in
U.S. Department of Transportation Analyses – 2014 Adjustment

Departmental guidance on valuing reduction of fatalities and injuries by regulations or investments has been published periodically by this office since 1993. We issued a thorough revision of our guidance in 2013 and indicated that we planned to issue annual updates to adjust for changes in prices and real incomes since then.

Our 2013 revision indicated a VSL of \$9.1 million in current dollars for analyses using a base year of 2012. Using the 2013 value as a baseline, and taking into account both changes in prices and changes in real incomes, we now find that these changes over the past year imply an increased VSL of \$9.2 million for analyses prepared in 2014. The procedure for adjusting VSL for changes in prices and real incomes is described on pages 6-7 of the guidance. We also indicated in our guidance that VSL values for future years could be projected based on forecasts of median real wages by the Congressional Budget Office and an elasticity of VSL with respect to income of 1.0. Based on revised wage forecasts from the Congressional Budget Office issued in September 2013, we estimate that there will be an expected 1.18 percent annual growth rate in median real wages over the next 30 years (2013-2043). These estimates imply that VSL in future years should be estimated to grow by 1.18 percent per year before discounting to present value.

This guidance also includes a table of the relative values of preventing injuries of varied severity, unchanged since the 2013 guidance. We also prescribe a sensitivity analysis of the effects of using alternative VSL values. Instead of treating alternative values in terms of a probability distribution, analysts should apply only a test of low and high alternative values of \$5.2 million and \$13.0 million.

This guidance and other relevant documents will be posted on the Reports page of the Office of Transportation Policy website, <http://www.dot.gov/policy>, and on the General Counsel's regulatory information website, <http://www.dot.gov/regulations>. Questions should be addressed to Jack Wells, (202) 366-9224 or jack.wells@dot.gov.

cc: Regulations officers and liaison officers

Revised Departmental Guidance 2014:
Treatment of the Value of Preventing Fatalities and Injuries
in Preparing Economic Analyses

On the basis of the best available evidence, this guidance identifies \$9.2 million as the value of a statistical life to be used for U.S. Department of Transportation analyses assessing the benefits of preventing fatalities and using a base year of 2013. It also establishes policies for projecting future values and for assigning comparable values to prevention of injuries.

Background

Prevention of injury, illness, and loss of life is a significant factor in many private economic decisions, including job choices and consumer product purchases. When government makes direct investments or controls external market impacts by regulation, it also pursues these benefits, often while also imposing costs on society. The Office of the Secretary of Transportation and other DOT administrations are required by Executive Order 13563, Executive Order 12866, Executive Order 12893, OMB Circular A-4, and DOT Order 2100.5 to evaluate in monetary terms the costs and benefits of their regulations, investments, and administrative actions, in order to demonstrate the faithful execution of their responsibilities to the public. Since 1993, the Office of the Secretary of Transportation has periodically reviewed the published research on the value of safety and updated guidance for all administrations. Our previous guidance, issued on February 28, 2013, stated that we planned to update our guidance annually to adjust for changes in prices and real incomes. This guidance updates our values based on 2013 prices and real incomes.

The benefit of preventing a fatality is measured by what is conventionally called the Value of a Statistical Life (VSL), defined as the additional cost that individuals would be willing to bear for improvements in safety (that is, reductions in risks) that, in the aggregate, reduce the expected number of fatalities by one. This conventional terminology has often provoked misunderstanding on the part of both the public and decision-makers. What is involved is not the valuation of life as such, but the valuation of reductions in risks. While new terms have been proposed to avoid misunderstanding, we will maintain the common usage of the research literature and OMB Circular A-4 in referring to VSL.

Most regulatory actions involve the reduction of risks of low probability (as in, for example, a one-in-10,000 annual chance of dying in an automobile crash). For these low-probability risks, we shall assume that the willingness to pay to avoid the risk of a fatal injury increases proportionately with growing risk. That is, when an individual is willing to pay \$1,000 to reduce the annual risk of death by one in 10,000, she is said to have a VSL of \$10 million. The assumption of a linear relationship between risk and willingness to pay therefore implies that she would be willing to pay \$2,000 to reduce risk by two in 10,000 or \$5,000 to reduce risk by five in 10,000. The assumption of a linear relationship between risk and willingness to pay (WTP) breaks down when the annual WTP becomes a substantial portion of annual income, so the assumption of a constant VSL is not appropriate for substantially larger risks.

When first applied to benefit-cost analysis in the 1960s and 1970s, the value of saving a life was measured by the potential victim's expected earnings, measuring the additional product society might have lost. These lost earnings were widely believed to understate the real costs of loss of life, because the value that we place on the continued life of our family and friends is not based entirely, or even principally, on their earning capacity. In recent decades, studies based on estimates of individuals' willingness to pay for improved safety have become widespread, and offer a way of measuring the value of reduced risk in a more comprehensive way. These estimates of the individual's value of safety are then treated as the ratio of the individual marginal utility of safety to the marginal utility of wealth. These estimates of the individual values of changes in safety can then

be aggregated to produce estimates of social benefits of changes in safety, which can then be compared with the costs of these changes.

Studies estimating the willingness to pay for safety fall into two categories. Some analyze subjects' responses in real markets, and are referred to as revealed preference (RP) studies, while others analyze subjects' responses in hypothetical markets, and are described as stated preference (SP) studies. Revealed preference studies in turn can be divided into studies based on consumer purchase decisions and studies based on employment decisions (usually referred to as hedonic wage studies). Even in revealed preference studies, safety is not purchased directly, so the value that consumers place upon it cannot be measured directly. Instead, the value of safety can be inferred from market decisions that people make in which safety is one factor in their decisions. In the case of consumer purchase decisions, since goods and services usually display multiple attributes, and are purchased for a variety of reasons, there is no guarantee that safety will be the conclusive factor in any purchasing decision (even products like bicycle helmets, which are purchased primarily for safety, also vary in style, comfort, and durability). Similarly, in employment decisions, safety is one of many considerations in the decision of which job offer to accept. Statistical techniques must therefore be used to identify the relative influence of price (or wage), safety, and other qualitative characteristics of the product or job on the consumer's or worker's decision on which product to buy or which job to accept.

An additional complication in RP studies is that, even if the real risks confronted by individuals can be estimated accurately by the analyst, the consumer or employee may not estimate these risks accurately. It is possible for individuals, through lack of relevant information or limited ability to analyze risks, to assign an excessively low or high probability to fatal risks. Alternatively, detailed familiarity with the hazards they face and their own skills may allow individuals to form more accurate estimates of risk at, for example, a particular job-site than those derived by researchers, which inevitably are based on more aggregate data.

In the SP approach, market alternatives incorporating hypothetical risks are presented to test subjects, who respond with what they believe would be their choices. Answers to hypothetical questions may provide helpful information, but they remain hypothetical. Although great pains are usually taken to communicate probabilities and measure the subjects' understanding, there is no assurance that individuals' predictions of their own behavior would be observed in practice. Against this weakness, the SP method can evaluate many more alternatives than those for which market data are available, and it can guarantee that risks are described objectively to subjects. With indefinitely large potential variations in cost and risk and no uncontrolled variation in any other dimension, some of the objections to RP models are obviated. Despite procedural safeguards, however, SP studies have not proven consistently successful in estimating measures of WTP that increase proportionally with greater risks.

RP studies involving decisions to buy and/or use various consumer products have focused on decisions such as buying cars with better safety equipment, wearing seat belts or helmets, or buying and installing smoke detectors. These studies often lack a continuum of price-risk opportunities, so that the price paid for a safety feature (such as a bicycle helmet) does not necessarily represent the value that the consumer places on the improvement in safety that the helmet provides. In the case of decisions to use a product (like a seatbelt) rather than to buy the product, the "price" paid by the consumer must be inferred from the amount of time and degree of inconvenience involved in using the product, rather than the directly observable price of buying the product. The necessity of making these inferences introduces possible sources of error. Studies of purchases of automobiles probably are less subject to these problems than studies of other consumer decisions, because the price of the safety equipment is directly observable, and there are usually a variety of more or less expensive safety features that provide more of a range of price-risk trade-offs for consumers to make.

While there are many examples of SP studies and RP studies involving consumer product purchases, the most widely cited body of research comprises hedonic wage studies, which estimate the wage differential that

employers must pay workers to accept riskier jobs, taking other factors into account. Besides the problem of identifying and quantifying these factors, researchers must have a reliable source of data on fatality and injury risks and also assume that workers' psychological risk assessment conforms to the objective data. The accuracy of hedonic wage studies has improved over the last decade with the availability of more complete data from the Bureau of Labor Statistics' (BLS) Census of Fatal Occupational Injuries (CFOI), supported by advances in econometric modeling, including the use of panel data from the Panel Study of Income Dynamics (PSID). The CFOI data are, first of all, a complete census of occupational fatalities, rather than a sample, so they allow more robust statistical estimation. Second, they classify occupational fatalities by both industry and occupation, allowing variations in fatalities across both dimensions to be compared with corresponding variations in wage rates. Some of the new studies use panel data to analyze the behavior of workers who switch from one job to another, where the analysis can safely assume that any trade-off between wage levels and risk reflects the preferences of a single individual, and not differences in preferences among individuals.

VSL estimates are based on studies of groups of individuals that are covered by the study, but those VSL estimates are then applied to other groups of individuals who were not the subjects of the original studies. This process is called benefit transfer. One issue that has arisen in studies of VSL is whether this benefit transfer process should take place broadly over the general population of people that are affected by a rulemaking, or whether VSL should be estimated for particular subgroups, such as workers in particular industries, and people of particular ages, races, and genders. Advances in data and econometric techniques have allowed specialized estimates of VSL for these population subgroups. Safety regulations issued by the U.S. Department of Transportation typically affect a broad cross-section of people, rather than more narrowly defined subgroups. Partly because of that, and partly for policy reasons, we do not consider variations in VSL among different population groups (except to take into account the effect on VSL of rising real income over time).

Principles and policies of DOT guidance

This guidance for the conduct of U.S. Department of Transportation analyses is a synthesis of empirical estimates, practical adaptations, and social policies. We continue to explore new empirical literature as it appears and to give further consideration to the policy resolutions embodied in this guidance. Although our approach is unchanged from previous guidance, the numbers and their sources are new, consistent with OMB guidance in Circular A-4 and other sources, and with the use of the best available evidence. The methods we adopt are:

1. Prevention of an expected fatality is assigned a single, nationwide value in each year, regardless of the age, income, or other distinct characteristics of the affected population, the mode of travel, or the nature of the risk. When Departmental actions have distinct impacts on infants, disabled passengers, or the elderly, no adjustment to VSL should be made, but analysts should call the attention of decision-makers to the special character of the beneficiaries.
2. In preparing this guidance, we have adjusted the VSL from the year of the source data to the year before the guidance is issued, based on two factors: growth in median real income and monetary inflation, both measured to the last full year before the date of the guidance.
3. The value to be used by all DOT administrations will be published annually by the Office of the Secretary of Transportation.
4. Analysts should project VSL from the base year to each future year based on expected growth in real income, according to the formula prescribed on page 8 of this guidance. Analysts should not project future changes in VSL based on expected changes in price levels.

5. Alternative high and low benefit estimates should be prepared, using a range of VSLs prescribed on pages 10-11 of this guidance.

In Circular A-4 (2003), the Office of Management and Budget endorsed VSL values between \$1 million and \$10 million, drawing on two recently completed VSL meta-analyses.¹ In 2013 dollars, these values would be between \$1.25 million and \$12.5 million. The basis for our 2008 guidance comprised five studies, four of which were meta-analyses that synthesized many primary studies, identifying their sources of variation and estimating the most likely common parameters. These studies were written by Ted R. Miller;² Ikuho Kochi, Bryan Hubbell, and Randall Kramer;³ W. Kip Viscusi;⁴ Janusz R. Mrozek and Laura O. Taylor;⁵ and W. Kip Viscusi and Joseph Aldy.⁶ They narrowed VSL estimates to the \$2 million to \$7 million range in dollar values of the original data, between 1995 and 2000 (about \$3 million to \$9 million at current prices). Miller and Viscusi and Aldy also estimated income elasticities for VSL (the percent increase in VSL per one percent increase in income). Miller's estimates were close to 1.0, while Viscusi and Aldy estimated the elasticity to be between 0.5 and 0.6. DOT used the Viscusi and Aldy elasticity estimate (averaged to 0.55), along with the Wages and Salaries component of the Employer Cost for Employee Compensation, as well as price levels represented by the Consumer Price Index, to project these estimates to a 2007 VSL estimate of \$5.8 million.

Since these studies were published, the credibility of these meta-analyses has been qualified by recognition of weaknesses in the data used by the earlier primary studies whose results are synthesized in the meta-analyses. We now believe that the most recent primary research, using improved data (particularly the CFOI data discussed above) and specifications, provides more reliable results. This conclusion is based in part on the advice of a panel of expert economists that we convened to advise us on this issue. The panel consisted of Maureen Cropper (University of Maryland), Alan Krupnick (Resources for the Future), Al McGartland (Environmental Protection Agency), Lisa Robinson (independent consultant), and W. Kip Viscusi (Vanderbilt University). The Panel unanimously concluded that we should base our guidance only on hedonic wage studies completed within the past 10 years that made use of the CFOI database and used appropriate econometric techniques.

A White Paper prepared for the U.S. Environmental Protection Agency (EPA) in 2010 identified eight hedonic wage studies using the CFOI data;⁷ we also identified seven additional studies, including five published since the EPA White Paper was issued (see Table 1). Some of these studies focus on estimating VSL values for narrowly defined economic, demographic, or occupational categories, or use inappropriate econometric techniques, resulting in implausibly high VSL estimates. We therefore focused on nine studies that we think

¹ Viscusi, W. K. and J.E. Aldy (2003). "The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World." *Journal of Risk and Uncertainty*, 27(1): 5-76; and Mrozek, J.R. and L. O. Taylor (2002). "What Determines the Value of a Life? A Meta-Analysis." *Journal of Policy Analysis and Management*. 21(2).

² Miller, T. R. (2000). "Variations between Countries in Values of Statistical Life." *Journal of Transport Economics and Policy*. 34(2): 169-188. http://www.bath.ac.uk/e-journals/jtep/pdf/Volume_34_Part_2_169-188.pdf

³ Kochi, I., B. Hubbell, and R. Kramer (2006). "An Empirical Bayes Approach to Combining and Comparing Estimates of the Value of a Statistical Life for Environmental Policy Analysis." *Environmental and Resource Economics*. 34(3): 385-406.

⁴ Viscusi, W. K. (2004). "The Value of Life: Estimates with Risks by Occupation and Industry." *Economic Inquiry*. 42(1): 29-48.

⁵ Mrozek, J. R., and L. O. Taylor (2002). "What Determines the Value of Life? A Meta-Analysis." *Journal of Policy Analysis and Management*. 21(2).

⁶ Viscusi, W. K. and J. E. Aldy (2003). "The Value of a Statistical Life: A Critical Review of Market Estimates Throughout the World." *Journal of Risk and Uncertainty*. 27(1): 5-76.

⁷ U.S. Environmental Protection Agency (2010), *Valuing Mortality Risk Reductions for Environmental Policy: A White Paper (Review Draft)*. Prepared by the National Center for Environmental Economics for consultation with the Science Advisory Board – Environmental Economics Advisory Committee.

are useful for informing an appropriate estimate of VSL. There is broad agreement among researchers that these newer hedonic wage studies provide an improved basis for policy-making.⁸

The 15 hedonic wage studies we have identified that make use of the CFOI database to estimate VSL are listed in Table 1. Several of these studies focus on estimating how VSL varies for different categories of people, such as males and females,⁹ older workers and younger workers,¹⁰ blacks and whites,¹¹ immigrants and non-immigrants,¹² and smokers and non-smokers,¹³ as well as for different types of fatality risks.¹⁴ Some of these studies do not estimate an overall (“full-sample”) VSL, instead estimating VSL values only for specific categories of people. Some of the studies, as the authors themselves sometimes acknowledge, arrive at implausibly high values of VSL, because of econometric specifications which appear to bias the results, or because of a focus on a narrowly-defined occupational group. Moreover, these papers generally offer multiple model specifications, and it is often not clear (even to the authors) which specification most accurately represents the actual VSL. We have generally chosen the specification that the author seems to believe is best. In cases where the author does not express a clear preference, we have had to average estimates based on alternative models within the paper to get a representative estimate for the paper as a whole.

Table 1: VSL Studies Using CFOI Database
(VSLs in millions of dollars)

	<u>Study</u>	<u>Year of Study</u> \$	<u>VSL in Study- Year</u> \$	<u>VSL in 2012</u> \$	<u>Comments</u>
1.	Viscusi (2003) *	1997	\$14.185M	\$21.65M	Implausibly high; industry-only risk measure
2.	Leeth and Ruser (2003) *	2002	\$7.04M	\$8.90M	Occupation-only risk measure
3.	Viscusi (2004)	1997	\$4.7M	\$7.17M	Industry/occupation risk measure
4.	Kniesner and Viscusi (2005)	1997	\$4.74M	\$7.23M	Industry/occupation risk measure
5.	Kniesner <i>et al.</i> (2006) *	1997	\$23.70M	\$36.17M	Implausibly high; industry/occupation risk measure

⁸A current survey of theoretical and empirical research on VSL may be found in: Cropper, M., J.K. Hammitt, and L.A. Robinson (2011). “Valuing Mortality Risk Reductions: Progress and Challenges.” *Annual Review of Resource Economics*. 3: 313-336. <http://www.annualreviews.org/doi/abs/10.1146/annurev.resource.012809.103949>

⁹Leeth, J.D. and J. Ruser (2003). “Compensating Wage Differentials for Fatal and Nonfatal Injury Risks by Gender and Race.” *Journal of Risk and Uncertainty*, 27(3): 257-277.

¹⁰Kniesner, T.J., W.K. Viscusi, and J.P. Ziliak (2006). “Life-Cycle Consumption and the Age-Adjusted Value of Life.” *Contributions to Economic Analysis and Policy*. 5(1): 1-34; Viscusi, W.K. and J.E. Aldy (2007). “Labor Market Estimates of the Senior Discount for the Value of Statistical Life.” *Journal of Environmental Economics and Management*. 53: 377-392; Aldy, J.E. and W.K. Viscusi (2008). “Adjusting the Value of a Statistical Life for Age and Cohort Effects.” *Review of Economics and Statistics*. 90(3): 573-581; and Evans, M.F. and G. Schaur (2010). “A Quantile Estimation Approach to Identify Income and Age Variation in the Value of a Statistical Life.” *Journal of Environmental Economics and Management*. 59: 260-270.

¹¹Viscusi, W.K. (2003). “Racial Differences in Labor Market Values of a Statistical Life.” *Journal of Risk and Uncertainty*. 27(3): 239-256, and Leeth, J.D. and J. Ruser (2003), *op. cit.*

¹²Hersch, J. and W.K. Viscusi (2010). “Immigrant Status and the Value of Statistical Life.” *Journal of Human Resources*. 45(3): 749-771.

¹³Viscusi, W.K. and J. Hersch (2008). “The Mortality Cost to Smokers.” *Journal of Health Economics*. 27: 943-958.

¹⁴Scotton, C.R. and L.O. Taylor. “Valuing Risk Reductions: Incorporating Risk Heterogeneity into a Revealed Preference Framework.” *Resource and Energy Economics*. 33 and Kochi, I and L.O. Taylor (2011). “Risk Heterogeneity and the Value of Reducing Fatal Risks: Further Market-Based Evidence.” *Journal of Benefit-Cost Analysis*. 2(3): 381-397.

6.	Viscusi and Aldy (2007) *	2000			Industry-only risk measure; no full-sample VSL estimate
7.	Aldy and Viscusi (2008) *	2000			Industry-only risk measure, no full-sample VSL estimate
8.	Evans and Smith (2008)	2000	\$9.6M	\$12.84M	Industry-only risk measure
9.	Viscusi and Hersch (2008)	2000	\$7.37M	\$9.86M	Industry-only risk measure
10.	Evans and Schaur (2010)	1998	\$6.7M	\$9.85M	Industry-only risk measure
11.	Hersch and Viscusi (2010)	2003	\$6.8M	\$8.43M	Industry/occupation risk measure
12.	Kniesner <i>et al.</i> (2010)	2001	\$7.55M	\$9.76M	Industry/occupation risk measure
13.	Kochi and Taylor (2011)*	2004			VSL estimated only for occupational drivers
14.	Scotton and Taylor (2011)	1997	\$5.27M	\$8.04M	Industry/occupation risk measure; VSL is mean of estimates from three preferred specifications
15.	Kniesner <i>et al.</i> (2012)	2001	\$4M - \$10M	\$5.17M - \$12.93M	Industry/occupation risk measure; mean VSL estimate is \$9.05M

* Studies shown in grayed-out rows were not used in determining the VSL Guidance value.

We found that nine of these studies provided usable estimates of VSL for a broad cross-section of the population.¹⁵ We excluded Viscusi (2003) and Kniesner *et al.* (2006) on the grounds that their estimates of VSL were implausibly high (Viscusi acknowledges that the estimated VSLs in his study are very high). We excluded Leeth and Ruser (2003) because it used only variations in occupation for estimating variation in risk (the occupational classifications are generally regarded as less accurate than the industry classifications). We excluded Viscusi and Aldy (2007) and Aldy and Viscusi (2008) because they did not estimate overall “full-sample” VSLs (they focused instead on estimating VSLs for various subgroups). We excluded Kochi and Taylor (2011) because it estimated VSL only for a narrow occupational group (occupational drivers). For Scotton and Taylor (2011) and Kniesner *et al.* (2012) we calculated average values for VSL from what appeared to be the preferred model specifications. For our 2013 guidance, we adopted the average of the VSLs estimated in the remaining nine studies, updated to 2012 dollars (based both on changes in the price level and changes in real incomes from the year for which the VSL was originally estimated). This average was \$9.14 million, which we rounded to \$9.1 million for purposes of that guidance.

For any one study, updating to 2012 was essentially multiplying the base year VSL of that study by the ratio of 2012 CPI to the study’s base year CPI and by the ratio of 2012 Real Incomes to the study’s base year Real Incomes. The following equation shows the calculation:

¹⁵ In addition to Viscusi (2004) [cited in footnote 4], Viscusi and Hersch (2008) [cited in footnote 13], Evans and Schaur (2010) [cited in footnote 10], Hersch and Viscusi (2010) [cited in footnote 12], and Scotton and Taylor (2011) [cited in footnote 14], these include Kniesner, T.J. and W.K. Viscusi (2005). “Value of a Statistical Life: Relative Position vs. Relative Age.” *AEA Papers and Proceedings*. 95(2): 142-146; Evans, M.F. and V.K. Smith (2008). “Complementarity and the Measurement of Individual Risk Tradeoffs: Accounting for Quantity and Quality of Life Effects.” National Bureau of Economic Research Working Paper 13722; Kniesner, T.J., W.K. Viscusi, and J.P. Ziliak (2010). “Policy Relevant Heterogeneity in the Value of Statistical Life: New Evidence from Panel Data Quantile Regressions.” *Journal of Risk and Uncertainty*. 40: 15-31; and Kniesner, T.J., W.K. Viscusi, C. Woock, and J.P. Ziliak (2012). “The Value of a Statistical Life: Evidence from Panel Data.” *Review of Economics and Statistics*. 94(1): 74-87.

$$2012 \text{ VSL} = \text{Base Year VSL} * (2012 \text{ CPI}/\text{Base Year CPI}) * (2012 \text{ Real Income}/\text{Base Year Real Income})$$

For example, in the case of the 2005 Kniesner and Viscusi study, the VSL estimate is \$4.74 million in 1997 dollars. To adjust that 1997 estimate to 2012 dollars, we use the ratio of 2012 CPI to 1997 CPI and the ratio of 2012 real dollars to 1997 real dollars. The resulting estimate in 2012 dollars is \$7.23 million:

$$\$7.23 \text{ million } (\$2012) = \$4.74 \text{ million} * (229.594/160.5) * (335/314)$$

Our VSL guidance will be updated each year to take into account both the increase in the price level and the increase in real incomes. The procedure for updating the overall VSL value is the same as that for updating values for individual VSL studies shown above. For the 2013 update, the formula is as follows:

$$2013 \text{ VSL} = 2012 \text{ VSL} * (2013 \text{ CPI}/2012 \text{ CPI}) * (2013 \text{ Real Income}/2012 \text{ Real Income})$$

$$\$9.22 \text{ million} = \$9.14 \text{ million} * (232.957/229.594) * (\$333/\$335)$$

Again, we round the VSL value to two significant digits, or \$9.2 million.

The VSL literature is generally in agreement that VSL increases with real incomes, but the exact rate at which it does so is subject to some debate. In our 2011 guidance, we cited research by Viscusi and Aldy (2003) that estimated the elasticity of VSL with respect to increases in real income as being between 0.5 and 0.6 (i.e., a one-percent increase in real income results in an increase in VSL of 0.5 to 0.6 percent). We accordingly increased VSL by 0.55 percent for every one-percent increase in real income. More recent research by Kniesner, Viscusi, and Ziliak (2010) has derived more refined income elasticity estimates ranging from 2.24 at low incomes to 1.23 at high incomes, with an overall figure of 1.44.¹⁶ An alternative specification yielded an overall elasticity of 1.32. Similarly, Costa and Kahn (2004) estimated the income-elasticity of VSL to be between 1.5 and 1.6.¹⁷ These empirical results are consistent with theoretical arguments suggesting that the income-elasticity of VSL should be greater than 1.0.¹⁸

In view of the large increase in the income elasticity of VSL that would be suggested by these empirical results, and because the literature seems somewhat unsettled, we decided in our 2013 guidance to increase our suggested income-elasticity figure only to 1.0. While this figure is lower than the elasticity estimates of Kniesner *et al.* and Costa and Kahn, it is higher than that of Viscusi and Aldy, the basis for our previous guidance. It is difficult to state with confidence whether a cross-sectional income elasticity (such as those

¹⁶ Kniesner, T.J., W.K. Viscusi, and J.P. Ziliak (2010). "Policy Relevant Heterogeneity in the Value of Statistical Life: New Evidence from Panel Data Quantile Regressions." *Journal of Risk and Uncertainty*. 40(1):15-31.

¹⁷ Costa, D.L. and M.E. Kahn (2004). "Changes in the Value of Life, 1940-1980." *Journal of Risk and Uncertainty*. 29(2): 159-180.

¹⁸ Eeckhoudt, L.R. and J.K. Hammitt (2001). "Background Risks and the Value of a Statistical Life." *Journal of Risk and Uncertainty*. 23(3): 261-279; Kaplow, L. (2005). "The Value of a Statistical Life and the Coefficient of Relative Risk Aversion." *Journal of Risk and Uncertainty*, 31(1); Murphy, K.M. and R.H. Topel (2006). "The Value of Health and Longevity." *Journal of Political Economy*. 114(5): 871-904; and Hammitt, J.K. and L.A. Robinson (2011). "The Income Elasticity of the Value per Statistical Life: Transferring Estimates between High and Low Income Populations." *Journal of Benefit-Cost Analysis*. 2(1): 1-27.

estimated in these empirical analyses), representing the difference in sensitivity to fatality risks between low-income and high-income workers in a given population, corresponds to a longitudinal elasticity, representing the way in which VSL is affected by growth in income over time for an overall population. Consequently, we adopt this more moderate figure, pending more comprehensive documentation.

The index we use to measure real income growth as it affects VSL is the Median Usual Weekly Earnings (MUWE), in constant (1982-84) dollars, derived by BLS from the Current Population Survey (Series LEU0252881600 – not seasonally adjusted). This series is more appropriate than the Wages and Salaries component of the Employment Cost Index (ECI), which we used previously, because the ECI applies fixed weights to employment categories, while the weekly earnings series uses a median employment cost for wage and salary workers over the age of 16. A median value is preferred because it should better reflect the factors influencing a typical traveler affected by DOT actions (very high incomes would cause an increase in the mean, but not affect the median). In contrast to a median, an average value over all income levels might be unduly sensitive to factors that are less prevalent among actual travelers. Similarly, we do not take into account changes in non-wage income, on the grounds that this non-wage income is not likely to be significant for the average person affected by our rules. The MUWE has been virtually unchanged for the past decade, so this has very little effect on the VSL adjustment over the past ten years. However, it is likely to be more significant in the future.

We have chosen the Consumer Price Index for All Urban Consumers Current Series (CPI-U) as a price index that similarly is representative of changes in the value of money that would be considered by a typical worker making decisions corresponding to his income level. This index grew from 2002 to 2012 by 27.62 percent, raising estimates of VSL in 2002 dollars by over 27 percent over ten years.

In 2011, we adopted a procedure for estimating VSL in each future year as it would respond to expected growth in real income levels. Logical consistency required that higher incomes in the future would influence projected VSLs, just as they affect the current year's baseline. The procedure we now specify uses the projected rate of growth of the Real Median Wage for Workers Covered by Social Security, estimated by the Congressional Budget Office (CBO).¹⁹ While the growth rate forecast fluctuates significantly over the next decade in response to incentives in the Affordable Care Act to receive wage compensation versus health insurance benefits, we believe that it is reasonable to use a long-term average growth rate to estimate changes in future VSL. We have calculated the average projected growth rate in the real median wage, based on the CBO data over the next 30 years, to be 1.18 percent per year. With an income elasticity of 1.0, the base-year VSL should thus be increased by 1.18 percent per year to estimate VSL for any future year (in base-year dollars), before discounting to present value.²⁰

For future years, the formula for calculating future values of VSL is therefore:

$$VSL_{2013+N} = VSL_{2013} \times 1.0118^N$$

where VSL_{2013+N} is the VSL value N years after 2013

¹⁹ The projected growth of the mean real wage is reported by CBO in its 2013 Long-Term Budget Outlook. CBO has provided us with unpublished forecasts of median real wages, which grow slightly more slowly than mean real wages and which we believe are more relevant to estimating the VSL of the average person affected by transportation-related safety risks. We use these projected median real wage forecasts in our guidance for adjustments of future VSLs.
<http://www.cbo.gov/publication/45308>

²⁰ $1.0118^{1.0} = 1.0118$ (annual income growth factor of 1.0118, raised to the power of the income elasticity, 1.0, yields annual real VSL growth of 1.0118).

and VSL₂₀₁₃ is the VSL value in 2013 (i.e., \$9.2 million).

When conducting sensitivity analyses using alternative VSL values (see page 10), analysts should use those alternative VSL values in place of the \$9.2 million value used here. We emphasize that future VSL values should be adjusted only for changes in real wages, not for changes in price levels. For analysts using base years prior to 2013, the VSL for 2012 (adjusted for changes in real income and prices) is \$9.1 million. For 2011 this value was \$9.0 million in 2011 dollars.

Value of Preventing Injuries

Nonfatal injuries are far more common than fatalities and vary widely in severity, as well as probability. In principle, the resulting losses in quality of life, including both pain and suffering and reduced income, should be estimated by potential victims’ WTP for personal safety. While estimates of WTP to avoid injury are available, often as part of a broader analysis of factors influencing VSL, these estimates are generally only available for an average injury resulting in a lost workday, and not for a range of injuries varying in severity. Because detailed WTP estimates covering the entire range of potential disabilities are unobtainable, we use an alternative standardized method to interpolate values of expected outcomes, scaled in proportion to VSL. Each type of accidental injury is rated (in terms of severity and duration) on a scale of quality-adjusted life years (QALYs), in comparison with the alternative of perfect health. These scores are grouped, according to the Abbreviated Injury Scale (AIS), yielding coefficients that can be applied to VSL to assign each injury class a value corresponding to a fraction of a fatality.

In our 2011 guidance, the values of preventing injuries were updated by new estimates from a study by Spicer and Miller.²¹ The measure adopted was the quality-adjusted percentage of remaining life lost for median utility weights, based on QALY research considered “best,” as presented in Table 9 of the cited study. The rate at which disability is discounted over a victim’s lifespan causes these percentages to vary slightly, and the study shows estimates for 0, 3, 4, 7, and 10 percent discount rates. These differences are minor in comparison with other sources of variation and uncertainty, which we recognize by sensitivity analysis. Since OMB recommends the use of alternative discount rates of 3 and 7 percent, we present the scale corresponding to an intermediate rate of 4 percent for use in all analyses. The fractions shown should be multiplied by the current VSL to obtain the values of preventing injuries of the types affected by the government action being analyzed.

**Table 2: Relative Disutility Factors by Injury Severity Level (AIS)
For Use with 3% or 7% Discount Rate**

AIS Level	Severity	Fraction of VSL
AIS 1	Minor	0.003
AIS 2	Moderate	0.047
AIS 3	Serious	0.105
AIS 4	Severe	0.266

²¹ Rebecca S. Spicer and Ted R. Miller. “Final Report to the National Highway Traffic Safety Administration: Uncertainty Analysis of Quality Adjusted Life Years Lost.” Pacific Institute for Research and Evaluation. February 5, 2010. http://ostpxweb.dot.gov/policy/reports/QALY_Injury_Revision_PDF_Final_Report_02-05-10.pdf

AIS 5	Critical	0.593
AIS 6	Unsurvivable	1.000

For example, if the analyst were seeking to estimate the value of a “serious” injury (AIS 3), he or she would multiply the Fraction of VSL for a serious injury (0.105) by the VSL (\$9.2 million) to calculate the value of the serious injury (\$966,000). Values for injuries in the future would be calculated by multiplying these Fractions of VSL by the future values of VSL (calculated using the formula on page 8).

These factors have two direct applications in analyses. The first application is as a basis for establishing the value of preventing nonfatal injuries in benefit-cost analysis. The total value of preventing injuries and fatalities can be combined with the value of other economic benefits not measured by VSLs, and then compared to costs to determine either a benefit/cost ratio or an estimate of net benefits.

The second application stems from the requirement in OMB Circular A-4 that evaluations of major regulations for which safety is the primary outcome include cost-effectiveness analysis, in which the cost of a government action is compared with a non-monetary measure of benefit. The values in the above table may be used to translate nonfatal injuries into fatality equivalents which, when added to fatalities, can be divided into costs to determine the cost per equivalent fatality. This ratio may also be seen as a “break-even” VSL, the value that would have to be assumed if benefits of a proposed action were to equal its costs. It would illustrate whether the costs of the action can be justified by a VSL that is well within the accepted range or, instead, would require a VSL approaching the upper limit of plausibility. Because the values assigned to prevention of injuries and fatalities are derived in part by using different methodologies, it is useful to understand their relative importance in drawing conclusions. Consequently, in analyses where benefits from reducing both injuries and fatalities are present, the estimated values of injuries and fatalities prevented should be stated separately, as well as in the aggregate.

While these injury disutility factors have not been revised in this update of our VSL guidance, the peer review process for this guidance raised the question as to whether their accuracy could be further improved. We therefore believe that a more thorough review of the value of preventing injuries is warranted. While the results of that review are not incorporated in this guidance, we plan to incorporate the results of that review in future guidance as soon as it is completed.

Recognizing Uncertainty

Regulatory and investment decisions must be made by officials informed of the limitations of their information. The values we adopt here do not establish a threshold dividing justifiable from unjustifiable actions; they only suggest a region where officials making these decisions can have relatively greater or lesser confidence that their decisions will generate positive net benefits. To convey the sensitivity of this confidence to changes in assumptions, OMB Circular A-4 and Departmental policy require analysts to prepare estimates using alternative values. We have previously encouraged the use of probabilistic methods such as Monte Carlo analysis to synthesize the many uncertain quantities determining net benefits.

While the individual estimates of VSL reported in the studies cited above are often accompanied by estimates of confidence intervals, we do not, at this time, have any reliable method for estimating the overall probability distribution of the average VSL that we have calculated from these various studies. Consequently, alternative VSL values can only illustrate the conclusions that would result if the true VSL actually equaled the higher or lower alternative values. Analysts should not imply a known probability that the true VSL would exceed or fall short of either the primary VSL figure or the alternative values used for sensitivity analysis. Kniesner et al.

(2012) suggest that a reasonable range of values for VSL is between \$4 million and \$10 million (in 2001 dollars), or \$5.2 million to \$13.0 million in 2013 dollars. This range of values includes all the estimates from the eight other studies on which this guidance is based. For illustrative purposes, analysts should calculate high and low alternative estimates of the values of fatalities and injuries by using alternative VSLs of \$5.2 million and \$13.0 million, with appropriate adjustments for future VSL values and for values of injuries calculated using the VSL.

Because the relative costs and benefits of different provisions of a rule can vary greatly, it is important to disaggregate the provisions of a rule, displaying the expected costs and benefits of each provision, together with estimates of costs and benefits of reasonable alternatives to each provision.

This guidance and other relevant documents will be posted on the Reports page of the Office of Transportation Policy website, <http://www.dot.gov/policy>. Questions should be addressed to Jack Wells, (202) 366-9224, or jack.wells@dot.gov.

Appendix F: Highway Safety Improvement Program – Map021
Interim Eligibility Guidance



Memorandum

Subject: **INFORMATION:** Highway Safety Improvement Program - MAP-21 Interim Eligibility Guidance

Date: October 4, 2012

From: Tony Furst
Associate Administrator for Safety

In Reply Refer To:
HSSP

To: Division Administrators

Moving Ahead for Progress in the 21st Century Act (Public Law 112-141), or MAP-21, made some subtle but significant changes to the Highway Safety Improvement Program (HSIP). The significant change to HSIP in MAP-21 is that the types of projects eligible for HSIP funds are no longer constrained by an inclusionary list. MAP-21 continues to focus the HSIP on significantly reducing traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP also continues to require a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance.

Under MAP-21, a highway safety improvement project is any strategy, activity or project on a public road that is consistent with the data-driven State Strategic Highway Safety Plan (SHSP) and corrects or improves a hazardous road location or feature or addresses a highway safety problem. MAP-21 did not continue the 10% flexibility provision established in SAFETEA-LU. States are no longer required to certify they have met various safety infrastructure needs in order to fund non-infrastructure projects. Further, there is no longer a limit to how much a state can spend on any project types. The use of HSIP funds must be compliant with Title 23 and can be used for both infrastructure and non-infrastructure projects that are consistent with the State's SHSP, correct or improve a hazardous road location of feature, or address a highway safety problem.

The attached guidance, which clarifies the new HSIP eligibility guidance, was posted on the FHWA MAP-21 Website on September 25, 2012 (<http://www.fhwa.dot.gov/map21/guidance/guidehsip.cfm>). This guidance provides clarification on project consistency with the SHSP; project selection through a data driven process; project relationship to performance goals, measures and targets; general project eligibility; and highway safety improvement projects that may warrant additional consideration, such as exceptions to the eligibility of projects to maintain minimum levels

Appendix G1: High Risk Rural Roads Special Rule Calculations

Rural Collectors & Local Roads ¹					
Calendar Year	Fatalities ²	DVMT ³	VM ⁴	Fatality Rate per HMVMT ⁵	5-Year Rolling Average Fatality Rate
2005	314	23904268	8725057820	3.60	
2006	271	24844344	9068185560	2.99	
2007	242	24891708	9085473420	2.66	
2008	302	24989413	9121135745	3.31	
2009	260	23354116	8524252340	3.05	3.12
2010	261	23351200	8523188000	3.06	3.02
2011	265	23522815	8585827475	3.09	3.03
2012	245	23756572	8671148780	2.83	3.07
2013	215	22461715	8198525975	2.62	2.93

¹Local Roads, Minor Collectors, and Major Collectors; Urban Area Type = Rural

²Persons fatally injured on rural collectors/local roads. Fatality Analysis Reporting System:
<http://www.nhtsa.gov/FARS>

³Daily Vehicle Miles Traveled, rural collectors/local roads, from Oklahoma Highway Pavement Management System report

⁴Total annual vehicle miles of travel, rural collectors/local roads.

⁵Persons fatally injured per hundred million vehicle miles of travel on rural collectors/local roads

Appendix G2: Older Drivers and Pedestrians Special Rule Calculations

23 U.S.C. 148(g)(2) **Older drivers.**— 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, that State shall be required to include, in the subsequent Strategic Highway Safety Plan of the State, strategies to address the increases in those rates, taking into account the recommendations included in the publication of the Federal Highway Administration entitled “Highway Design Handbook for Older Drivers and Pedestrians” (FHWA–RD–01–103), and dated May 2001, or as subsequently revised and updated.

The number fatalities and serious per capita (i.e., per person) for any single year is calculated as follows (designated as *I&F Rate*):

$$I\&F \text{ Rate} = \frac{\text{Total number of drivers and pedestrians aged 65 or older killed or seriously injured in State}}{\text{Total number of residents aged 65 or older in State} \times 1 \text{ Year}}$$

The units of *I&F Rate* are $\frac{\text{Injuries}}{\text{Persons} \times \text{Years}}$ i.e. injuries per person per year. This number has been multiplied by 1000 for reporting purposes, in compliance with the apparent intent of published guidance.

An alternative calculation has been recommended based on the following: Published tables indicate, by State, the number of residents in that State aged 65 or more, **per 1,000 residents of the State**. This number (designated as *65 Rate*) is thus by definition

$$\begin{aligned} 65 \text{ Rate} &= \frac{\text{Total number of residents aged 65 or older in State}}{\text{Total number of residents in State}/1000} \\ &= \frac{\text{Total number of residents aged 65 or older in State}}{\text{Total number of residents in State}} \times 1000 \end{aligned}$$

The units of *65 Rate* are $\frac{\text{Persons}}{\text{Persons}}$ i.e. it is a dimensionless ratio.

If the total number of relevant injuries and fatalities is divided by this ratio, the result, designated as *Unknown Metric*, is

$$\begin{aligned} \text{Unknown Metric} &= \frac{\text{Total number of drivers and pedestrians aged 65 or older killed or seriously injured in State}}{65 \text{ Rate} \times 1 \text{ Year}} \\ &= \frac{\text{Total number of drivers and pedestrians aged 65 or older killed or seriously injured in State}}{\text{Total number of residents aged 65 or older in State} \times 1000 \times 1 \text{ Year}} \Big/ \frac{\text{Total number of residents in State}}{\text{Total number of residents in State}} \\ &= \frac{\text{Total number of drivers and pedestrians aged 65 or older killed or seriously injured} \times \text{Total number of residents}}{\text{Total number of residents aged 65 or older} \times 1000 \times 1 \text{ Year}} \end{aligned}$$

The units of *Unknown Metric* are thus $\frac{\text{Injuries} \times \text{Persons}}{\text{Persons} \times \text{Years}}$ or $\frac{\text{Injuries}}{\text{Years}}$. These units, in which “persons” cancel out, do not reflect a “per capita” number, as specified by 148(g)(2). Furthermore, *Unknown Metric* does not reflect the rate of injuries per year either; it is equal to this rate divided by the (dimensionless) fraction of older residents in the State.

In the following table, *I&F Rate* is reported as “Deaths and Serious Injuries per 1,000 (65 & Older)”. *Unknown Metric* is also reported.

Victims 65 Years of Age and Older												Persons 65 & Older per 1,000 Population ²	Total Oklahoma Population 65 & Older ³	Deaths & Serious Injuries per 1,000 (65 & Older) per 148(g)(2)	Five Year Rolling Average of Death/Injury Rate	Unknown Metric	Five Year Rolling Average of Unknown Metric
Drivers						Pedestrians					Killed and Seriously Injured ⁶						
Year	Injuries ¹		Fatalities			Injuries ¹		Fatalities									
	Minor Injuries ⁷	Serious Injuries ⁸	FARS ⁴	HSO ⁵	ODOT ¹	Minor Injuries ⁷	Serious Injuries ⁸	FARS ⁴	HSO ⁵	ODOT ¹							
2005	747	186	75	76	76	10	10	10	10	10	281	129	468968	0.60		2.18	
2006	723	169	72	70	70	6	7	7	7	7	255	133	473545	0.54		1.92	
2007	736	221	74	74	74	17	8	5	5	5	308	132	480140	0.64		2.33	
2008	739	222	85	85	85	13	6	4	4	4	317	135	490637	0.65		2.35	
2009	688	204	88	86	88	10	12	4	3	3	308	134	495962	0.62	0.61	2.30	2.22
2010	711	235	67	67	65	11	10	5	5	5	317	136	508741	0.62	0.61	2.33	2.25
2011	758	227	82	82	79	9	6	9	9	9	324	136	515859	0.63	0.63	2.38	2.34
2012	803	237	69	69	72	12	10	8	9	8	324	141	534381	0.61	0.62	2.30	2.33
2013	757	223	71		73	10	12	10		11	316	142	549197	0.58	0.61	2.23	2.31
2014*	827	192			91	8	7			4	294		562531	0.52	0.59		

¹Oklahoma SAFE-T Crash Database.

²FHWA (Older Drivers and Pedestrians Special Rule Interim Guidance)

³U.S. Census Bureau, Population Estimates Division, <http://www.census.gov/popest/data/historical/index.html>

⁴Fatality Analysis Reporting System

⁵Oklahoma Highway Safety Office Crash Facts

⁶Sum of ODOT serious injuries and FARS fatalities (if available) or ODOT fatalities

⁷Injury Severity = 3 = B = Non-Incapacitating

⁸Injury Severity = 4 = A = Incapacitating

*Data for 2014 are incomplete