



Illinois Department of Transportation

Office of Planning & Programming / Bureau of Research
126 East Ash Street / Springfield, Illinois 62704

October 5, 2016

Ms. Catherine Batey
Division Administrator
Federal Highway Administration
Attention: Micah Loesch
3250 Executive Park Drive
Springfield, Illinois 62703

Dear Ms. Batey:

Subject: Illinois FY2016 Final Expenditures Report
HPR-25-001-12
SPR-4000(47)

We have developed a final expenditures report for the subject project based on an accounting received from the Illinois Center for Transportation and our own records. The enclosures detail the actual expenditures for our entire research program incurred in FY2016. Enclosure A includes the estimated FY2012, FY2013, FY2014, FY2015 and FY2016 project budgets for our contract research (federal portion and match), actual federal portion expended to date, and the cumulative project match. Enclosure B includes the FY2016 pooled fund, national research, and AASHTO Technical Service Program actual expenditures.

We request your review and approval of these final expenditures reports. If you have any questions, please contact Megan Swanson at (217) 782-3547.

Sincerely,

A handwritten signature in blue ink that reads "LaDonna R. Rowden".

LaDonna R. Rowden, P.E.
Acting Bureau Chief of Research

MES/jy

Enclosures

cc: LaDonna Rowden Megan Swanson Roxy Heck
 Micah Loesch Roger Driskell

ENCLOSURE A: ICT Project Budgets and Spending: FY12 - FY16

Project #	Project Title	FY12		FY13		FY14		FY15		FY16		FY12 - FY16					FY12 - FY16		Comments				
		Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Total Cost Share Match Contributed	Total IDOT Budget		Budget (IDOT Share + Cost Share)	Expended (IDOT Share Expended +)	Total Budget % Spent to Date	Total IDOT Budget % Spent to Date
R27-SP18	Best Practices for Bike Trails	30,000	22,500	-	-	-	-	-	-	-	-	-	-	-	-	6,648	22,500	30,000	29,148	97.2%	100.0%		
R27-SP19	Effect of RAS on IDOT Asphalt Mixtures	30,000	22,500	-	-	-	-	-	-	-	-	-	-	-	-	10,290	22,500	30,000	32,790	109.3%	100.0%		
R27-SP20	Safety Benefits of Implementing Adaptive Signal Control Technologies	19,405	5,914	10,595	16,586	-	-	-	-	-	-	-	-	-	-	1,751	22,500	30,000	36,524	121.7%	100.0%		
R27-SP21	COSIM 2012 Update	1,933	-	23,591	9,777	-	-	-	-	-	-	-	-	-	-	2,903	19,143	25,524	12,680	49.7%	51.1%		
R27-SP22	Impact of HPMS Sample Counting for 24 Hours vs 48 Hours	-	-	14,832	10,127	10,568	8,789	-	-	-	-	-	-	-	-	3,257	19,050	25,400	25,001	98.4%	99.3%		
R27-SP23	Illinois Drainage Laws Update	-	-	-	-	30,000	21,736	-	764	-	-	-	-	-	-	-	14,548	22,500	30,000	37,048	123.5%	100.0%	
R27-SP24	Traffic Turf Evaluation	-	-	-	-	30,000	22,500	-	-	-	-	-	-	-	-	6,681	22,500	30,000	29,181	97.3%	100.0%		
R27-SP25	Data Analysis for Local Roadway Safety Assessments	-	-	-	-	30,000	22,499	-	-	-	-	-	-	-	-	8,886	22,500	30,000	31,385	104.6%	100.0%		
R27-SP26-C	Evaluation of Agricultural Based Alternative Deicers	-	-	-	-	17,275	11,823	12,725	10,677	-	-	-	-	-	-	7,913	22,500	30,000	35,148	117.2%	100.0%		
R27-SP27	AIMS Implementation - Investigation of Relationship between AIMS Shape Priorities and VST Friction Values	-	-	-	-	30,000	-	-	22,306	-	-	-	-	-	-	7,949	22,500	30,000	30,255	100.9%	99.1%		
R27-SP28	Evaluation of PG graded Asphalts with Low-level of ReOB (Sustainability Funds)	-	-	-	-	-	-	30,000	950	-	21,550	-	-	-	671	11,524	22,500	30,000	34,695	115.7%	100.0%		
R27-SP29	Thermodynamics between RAP/RAS and Virgin Aggregates during Hot Mix Asphalt (HMA) Production - A Literature Review	-	-	-	-	-	-	30,000	8,271	-	14,229	-	-	-	4,451	3,345	22,500	30,000	30,296	101.0%	100.0%		
R27-SP30	Speed Harmonization - Design Speed vs. Operating Speed Impact of High KAP on Pavement Structure	-	-	-	-	-	-	-	-	30,000	13,422	-	-	-	3,985	3,985	22,500	30,000	17,408	58.0%	59.7%		
R27-37		19,631	14,723	-	-	-	-	-	-	-	-	-	-	-	-	10,418	14,723	19,631	25,141	128.1%	100.0%		
R27-42	Long-Lasting High Friction Surface	195,856	62,382	-	84,517	-	4,627	-	(232)	-	-	-	-	-	-	34,989	146,892	195,856	243,321	124.2%	103.0%		
R27-44-T1	IDOT Pavement Design Course Development	29,649	-	120,351	73,969	-	14,683	-	-	-	-	-	-	-	-	47,059	112,500	150,000	143,971	96.0%	78.8%		
R27-45-T1	Evaluation of 3-D Laser Scanning Equipment	-	-	-	-	197,280	-	88,000	206,278	-	-	-	-	-	17,127	17,127	213,960	285,280	223,405	78.3%	96.4%		
R27-54	Storm Water Pollution & Erosion Control Product Testing & Training Center	12,168	8,675	49,229	37,360	-	-	-	-	-	-	-	-	-	-	3,460	46,048	61,397	63,083	102.7%	100.0%		
R27-60	Mechanistic-Empirical Design Implementation & Monitoring for Flexible Pavements	80,000	57,681	80,000	46,089	80,000	43,450	-	-	-	-	-	-	-	-	22,948	180,000	240,000	196,754	82.0%	81.8%		
R27-61	Mechanistic-Empirical Design Implementation & Monitoring for Rigid Pavements	69,867	27,340	87,263	53,477	82,871	62,426	-	28,985	-	-	-	-	-	-	12,138	180,001	240,001	257,130	107.1%	95.7%		
R27-66	Effectiveness of Innovative Speed Enforcement Techniques in Illinois	100,164	58,784	33,457	40,875	-	-	-	-	-	-	-	-	-	-	21,702	100,000	133,621	138,092	103.3%	99.7%		
R27-69	Improved Design for Driven Piles Based on a Pile Load Test Program in Illinois	43,756	20,341	-	12,476	-	-	-	-	-	-	-	-	-	-	12,736	32,817	43,756	52,150	119.2%	100.0%		
R27-70	Calibration & Refinement of Illinois' Earthquake Resisting System Bridge Design Methodology	200,973	93,141	-	57,590	-	-	-	-	-	-	-	-	-	-	41,262	150,730	200,973	216,573	107.8%	100.0%		
R27-73	Distance Technology Transfer Course Content Development	116,621	20,524	-	4,097	-	-	-	(1,156)	-	-	-	-	-	-	4,859	87,466	116,621	32,121	27.5%	26.8%		
R27-75	Clearview Font in Traffic Signs; Assessing IDOT Experiences and Needs	67,904	49,011	-	(1,264)	-	-	-	-	-	-	-	-	-	-	21,328	49,384	67,904	69,075	101.7%	96.7%		
R27-76	Light Emitting Diode (LED) Roadway Lighting Evaluation and Field Testing	135,900	98,275	-	3,043	-	-	-	-	-	-	-	-	-	-	53,421	101,925	135,900	155,643	114.5%	99.4%		
R27-77	Evaluating the Compatibility of Durable Pavement Markings on Various Pavements	90,085	46,164	131,448	62,765	30,324	75,993	-	-	-	-	-	-	-	-	25,000	188,893	251,857	247,886	98.4%	97.9%		
R27-78	Evaluating the Effects of Various Asphalt Binder Additives/Modifiers of Moisture Sensitivity in HMA	220,785	56,190	16,836	71,034	-	50,992	-	(80)	-	-	-	-	-	-	37,480	178,216	237,621	289,620	121.9%	100.0%		
R27-79	Designing, Producing & Constructing Fine-Graded Hot Mix Asphalt (HMA) on Illinois Roadways	121,079	75,391	63,136	27,687	16,000	47,034	-	-	-	-	-	-	-	-	37,108	150,161	200,215	224,531	112.1%	100.0%		
R27-82	Strengthening of Bridge Wood Pilings Retrofits for Moment Resistance	59,671	40,956	-	3,797	-	-	-	-	-	-	-	-	-	-	19,347	44,753	59,671	64,572	108.2%	100.0%		
R27-83	Goods Movement Study in Illinois: Applications to Freight Transportation & Logistics	17,013	12,949	-	-	-	(189)	-	-	-	-	-	-	-	-	4,208	12,760	17,013	16,907	99.4%	100.0%		
R27-87	Implementing Pavement Management Systems for Local Agencies	9,392	6,518	-	-	-	-	-	-	-	-	-	-	-	-	5,288	6,546	9,392	11,805	125.7%	99.6%		
R27-88	Bridge Decks: Mitigation of Cracking & Increased Durability	132,124	78,900	109,603	87,371	-	14,429	-	-	-	-	-	-	-	-	41,163	181,295	241,727	264,374	109.4%	99.7%		

As noted on prior annual report:
 FY15 \$232 IDOT Cost Share refund for incorrect benefit assessment and \$69 Cost Share Match refund.
 Overspent federal funding \$4,634.54 - Per ICT: "The University's Grants & Contracts office reduced the June 2011, invoice, by \$4,634.54. This invoice adjustment reduced the total IDOT cumulative spending (for FY08 - FY13) to \$523,046.13, compared to the total approved IDOT budget of \$523,054."
 **See below for additional information.

As noted on prior annual report:
 FY15 \$1,156 IDOT Cost Share refund for Center for Online Learning, Research and Service (COLR) charges listed on the transit recap but never posted to the fund \$372 Cost Share Match refund.

As noted on prior annual report:
 FY15 \$80 IDOT Cost Share refund for incorrect benefit assessment and \$24 Cost Share Match refund.
 As noted on prior annual report:
 Project Overlapped 2 IGAs. Total project spent was 100%

As noted on prior annual report:
 Total overspent \$0.23 - Per ICT: "In December 2013, the University's Grants & Contracts office issued a refund to IDOT in the amount of \$188.77. This refund reduced the cumulative IDOT spending on R27-83 to \$119,940.00, compared to the total approved IDOT budget of \$119,940." **See below for additional information.

ENCLOSURE A: ICT Project Budgets and Spending: FY12 - FY16

Project #	Project Title	FY12		FY13		FY14		FY15		FY16		FY12 - FY16					Total FY12 - FY16		FY12 - FY16		Comments			
		Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Total Cost Share Match Contributed	Total IDOT Budget	Budget (IDOT Share + Cost Share)	Expended (IDOT Share Expended +)		Total Budget % Spent to Date	Total IDOT Budget % Spent to Date	
R27-90	Investigation of Contributing Factors Re: Wrong-way Driving on Freeways	119,696	82,380	165,330	18,738	14,698	51,867	63,407	90,807	-	26,270	29,909	5,581	18,489	40,517	6,268	100,765	272,113	363,131	370,827	102.1%	99.2%		
R27-93	Transportation Conformity Particulate Matter Hot-Spot air quality Modeling	48,797	30,734	13,319	15,324	-	-	-	-	-	-	16,293	5,768	-	-	-	22,061	46,572	62,116	68,120	109.7%	98.9%		
R27-94	Performance Evaluation of Snow & Ice Plows	177,302	94,932	53,185	33,369	108,221	60,257	-	46,103	-	18,047	32,917	40,116	19,487	6,846	3,559	102,925	253,523	338,708	355,632	105.0%	99.7%		
R27-95	Field Evaluation of Smart Sensor Vehicle Detectors at Intersections & RR Crossings	54,016	40,420	152,940	78,825	70,584	84,028	-	4,882	-	-	17,294	23,405	26,879	1,450	-	69,027	208,155	277,540	277,182	99.9%	100.0%		
R27-96	Pedestrian/Bicyclist Warning Devices & Signs at Highway-Rail and Pathway-Rail Grade Crossings	124,033	86,105	21,474	15,479	-	-	-	-	-	-	24,488	5,030	-	-	-	29,518	107,508	145,507	131,102	90.1%	94.5%		
R27-97	Evaluation of Flashing Yellow Arrows (FYA) for Protected/Permissive Left Turn (PLT) Control	121,927	52,093	76,872	57,032	52,898	42,499	60,550	37,052	23,903	37,968	38,615	30,767	26,463	24,049	19,375	139,270	227,187	336,150	365,914	108.9%	99.8%		
R27-98	Evaluation of Concrete Cylinder Match Curing and Evaluation of 4"x8" Cylinders	89,067	64,445	-	-	-	-	-	-	-	-	33,906	-	-	-	-	33,906	66,800	89,067	98,351	110.4%	96.5%		
R27-99	Improvement for Determining the Axial Capacity of Drilled Shafts in Shale in Illinois	111,797	2,221	60,703	100,698	-	-	-	-	-	-	1,226	39,825	-	-	-	41,051	129,375	172,500	143,970	83.5%	79.6%		
R27-100	Best Practices for Implementation of Tack Coat Funding Set-Aside for B.S. and M.S. Students	275,242	127,391	154,776	155,798	-	-	-	-	-	-	54,779	67,062	-	-	-	121,841	321,777	430,018	405,030	94.2%	88.0%		
R27-101	Installation & Performance Testing of Ditch Checks & Inlet Protection Structures	50,000	1,715	50,000	7,327	50,000	7,076	50,000	31,615	50,000	51,612	508	3,201	2,875	15,960	26,893	49,437	125,000	250,000	148,782	59.5%	79.5%		
R27-102		75,056	33,837	93,531	48,593	160,817	38,682	81,840	98,118	-	89,203	11,074	21,208	10,886	36,419	55,036	134,623	308,433	411,244	443,056	107.7%	100.0%		
R27-103	"Green-Friendly" Best Management Practices (BMPs) for Interstate Rest Areas - Phase 2	109,207	58,971	48,247	59,107	-	(199)	-	(68)	-	-	33,090	31,549	(59)	(20)	-	64,559	118,091	157,454	182,371	115.8%	99.8%	As noted on prior annual report: FY14 \$199 IDOT Cost Share refund for incorrect benefit assessment and \$59 Cost Share Match refund. FY15 \$68 IDOT Cost Share refund for incorrect benefit assessment and \$20 Cost Share Match refund.	
R27-104	Native Vegetation Establishment for IDOT Erosion Control BMPs	90,224	-	70,961	112,295	30,905	31,773	-	-	-	-	-	11,794	9,396	-	-	21,190	144,068	192,090	165,258	86.0%	100.0%		
R27-105	Improvement of IDOT Bridge Scour Estimation Method at Sites with Cohesive Soils Using SRICOS Zmax - Phase 2	110,000	63,000	82,000	81,000	-	-	-	-	-	-	-	-	-	-	-	-	144,000	192,000	144,000	75.0%	100.0%		
R27-106	Formability of New High Performance Grade 50 Structural Steel	75,439	25,194	28,061	32,277	-	20,155	-	-	-	-	14,394	13,829	(2,348)	-	-	25,875	77,625	103,500	103,501	100.0%	100.0%		
R27-107	Load Testing of Rapid Deployment Plate & Tube Short-Span Bridge for County Roads - CANCELLED	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	CANCELLED - Could not agree on work plan that would meet IDOT's needs within the approved budget.
R27-108	Improving the Effectiveness of Nighttime Temporary Traffic Control Warning Devices	155,177	19,094	84,823	108,895	-	42,960	-	-	-	-	-	30,000	30,000	-	-	60,000	180,000	240,000	230,949	96.2%	95.0%		
R27-109	Effects of Flaggers & Spotters in Directing Work Zone Traffic for Illinois Multi-Lane Highways	73,203	18,866	81,863	69,007	12,000	37,152	-	-	-	-	7,345	33,742	14,994	-	-	56,081	125,300	167,066	181,106	108.4%	99.8%		
R27-110	Training and Implementing Findings of Queue & Users' Costs in Highway Work Zones - Phase 2	27,911	11,702	57,392	52,275	-	-	-	-	-	-	3,421	31,012	-	-	-	34,432	63,977	85,303	98,409	115.4%	100.0%		
R27-111	Effects of Intersection Right-Turn Lane Design & Skew on Safety & Operations	33,485	6,626	69,044	33,530	53,775	43,539	54,562	26,940	44,549	45,773	8,236	35,330	30,908	22,510	19,807	116,791	175,000	255,415	273,198	107.0%	89.4%		
R27-112	Testing of Portland Cement (Current ASTM C 150) with Limestone & Process Addition (ASTM C 465)	225,131	137,116	129,747	74,468	-	54,577	-	-	-	-	57,391	27,075	28,938	-	-	113,404	266,159	354,878	379,565	107.0%	100.0%		
R27-113	Modeling Seniors' Activity - Travel Data - Phase 2	70,824	49,938	54,239	29,640	-	14,216	-	-	-	-	17,394	20,479	4,620	-	-	42,493	93,793	125,063	136,286	109.0%	100.0%		
R27-114	Restoration Progress & Flood Disturbance at IDOT Wetland Mitigation Sites	60,774	24,077	20,440	27,077	-	-	-	-	-	-	6,238	7,369	-	-	-	13,608	60,000	81,214	64,762	79.7%	85.3%		
R27-115	Analysis of Superstructures of Integral Abutment Bridges	39,833	6,387	112,303	71,133	86,875	53,518	72,989	46,125	3,780	41,443	2,175	31,454	29,806	26,165	16,920	106,520	236,835	315,780	325,126	103.0%	92.3%		
R27-116	Investigation of Methods & Approaches for Collecting & Recording Roadway Inventory Data	86,927	5,091	128,073	99,251	-	56,516	-	-	-	-	976	51,690	3,678	-	-	56,343	161,250	215,000	217,202	101.0%	99.8%		
R27-117	National State Safety Engineers & Traffic Engineers Peer-to-Peer Workshop	-	-	50,000	37,500	-	-	-	-	-	-	-	19,875	-	-	-	19,875	37,500	50,000	57,375	114.8%	100.0%		
R27-118	Development of a Highway Incident Management Operational Training Guide	137,231	49,054	145,118	125,957	92,319	97,118	-	8,767	-	-	33,712	37,295	22,765	-	-	93,772	280,896	374,668	374,668	100.0%	100.0%		
R27-119	Real-Time Information Dissemination Requirements for Illinois per New Federal Rules 75CFR8422	-	-	-	-	86,131	22,492	111,801	109,386	37,838	39,952	-	-	16,698	43,236	3,233	63,167	172,645	235,770	234,997	99.7%	99.5%		
R27-120	Evaluating All-Weather Pavement Markings & Lab Methods to Simulate Field Exposure	68,090	2,481	179,590	45,934	107,017	78,151	45,303	52,517	10,400	42,022	-	1,406	98,594	-	-	100,000	307,400	410,400	321,105	78.2%	71.9%	CANCELLED - Originally planned as a small scale literature review type of study. Replaced with a large scale study, R27-128.	
R27-121	Performance of Polymer-Modified HMA and WMA Mixtures with RAP & RAS - Phase I - CANCELLED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
R27-122	Improvement of Driven Pile Installation and Design in Illinois - Phase 2	-	-	185,723	69,933	119,069	141,272	-	17,388	-	-	-	33,177	36,150	5,163	-	74,490	228,594	304,792	303,084	99.4%	100.0%		
R27-123	Street Lighting Technologies - Phase 2 of LED Street Lighting Evaluation	-	-	81,154	30,587	161,573	74,319	39,273	106,594	-	-	-	18,549	36,105	71,649	-	126,302	211,500	282,000	337,802	119.8%	100.0%		
R27-124	Evaluation of Aggregate Subgrade Materials Used as Pavement Subgrade/Granular Subbase	-	-	373,535	52,414	86,465	207,040	26,617	105,505	-	-	-	21,769	73,471	45,882	-	141,122	364,963	486,617	506,080	104.0%	100.0%		

ENCLOSURE A: ICT Project Budgets and Spending: FY12 - FY16

Project #	Project Title	FY12		FY13		FY14		FY15		FY16		FY12 - FY16					Total FY12 - FY16			FY12 - FY16		Comments	
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R27-125	Sustainable Aggregates Production - Green Applications for Aggregate By-Products	-	-	24,607	14,542	136,951	66,384	58,443	84,074	-	-	-	4,632	38,297	49,633	-	92,562	165,001	220,001	257,562	117.1%	100.0%	
R27-126	Temporary Stabilization Specification Improvements	-	-	167,473	26,361	82,523	79,632	-	41,366	-	-	-	19,985	25,515	13,919	-	59,419	187,497	249,996	206,779	82.7%	78.6%	
R27-127	Safety Efficiency Benefits of Implementing Adaptive Signal Control Technology in Illinois	-	-	48,011	26,351	460,141	53,704	99,727	168,827	52,121	232,776	-	19,425	27,647	62,558	83,577	193,207	495,000	660,000	674,864	102.3%	97.3%	
R27-128	Testing Protocols to Ensure Performance of High Asphalt Binder Replacement Mixes Using RAP and RAS	-	-	91,683	38,473	222,741	159,427	330,993	167,358	134,580	189,700	-	15,222	84,866	91,336	85,018	276,442	584,390	779,997	831,400	106.6%	95.0%	
R27-129	Implementation of AIMS in Measuring Aggregate Resistance to Polishing, Abrasion, and Breakage	-	-	84,522	47,936	40,478	40,481	-	4,428	-	-	-	12,226	16,549	3,416	-	32,191	93,750	125,000	125,035	100.0%	99.0%	
R27-130	Development of Improved Overlay Thickness Design Alternatives for Local Roads	-	-	21,755	11,258	98,245	36,124	-	42,618	-	-	-	2,464	26,098	24,879	-	53,441	90,000	120,000	143,441	119.5%	100.0%	
R27-131	Leveraging Traffic and Surveillance Video Cameras for Urban Traffic	-	-	100,000	57,427	99,980	82,699	-	7,716	-	-	-	31,513	49,575	2,482	-	83,570	149,985	199,980	231,412	115.7%	98.6%	
R27-132	Incorporating NEPA into the IDOT and MPO Planning Process	-	-	88,085	61,034	91,617	73,527	-	-	-	-	-	27,444	43,767	-	-	71,211	134,777	179,702	205,772	114.5%	99.8%	
R27-133	Calibration & Refinement of Illinois' Earthquake Resisting System Bridge Design Methodology - Phase 2	-	-	-	-	98,453	39,720	117,923	65,774	83,624	77,651	-	-	25,924	42,643	37,026	105,593	225,000	300,000	288,738	96.2%	81.4%	
R27-134	Strengthening of Bridge Wood Piling Retrofits for Moment Resistance - Phase 2	-	-	113,065	20,610	94,163	98,358	96,529	54,317	46,243	83,692	-	12,736	42,780	24,081	30,810	110,407	262,500	350,000	367,383	105.0%	97.9%	
R27-135	Enhancements to the Highway Construction Expert System - Phase 2	-	-	42,196	-	122,322	78,452	16,450	49,402	-	4,329	-	-	33,496	21,819	667	55,982	133,614	180,968	188,165	104.0%	98.9%	
R27-136	Development of Public Right of Way Accessibility Guideline (PROWAG) Resource Material	-	-	-	-	87,100	37,904	100,019	54,310	29,547	70,272	-	-	22,642	26,515	41,987	91,144	162,500	216,666	253,629	117.1%	100.0%	
R27-137	Evaluation of PCC Pavement and Structure Coring and In-Situ Testing Alternatives	-	-	-	-	116,021	75,939	93,705	67,772	77,775	49,518	-	-	32,553	34,020	32,864	99,437	215,626	287,501	292,665	101.8%	89.6%	
R27-138	Options & Recommendations for Web Data Base of Materials & Construction Inspections	-	-	-	-	80,000	56,844	-	-	-	-	-	18,285	-	-	-	18,285	60,000	80,000	75,129	93.9%	94.7%	
R27-139	Bridge Decks: Mitigation of Shrinkage Cracking-Phase 2	-	-	-	-	107,063	62,184	121,511	74,738	139,167	121,341	-	-	36,822	46,522	21,097	104,442	275,806	367,741	362,705	98.6%	93.6%	
R27-140	Effectiveness of Exterior Beam Rotation Prevention Systems for Bridge Deck Construction	-	-	-	-	74,081	19,890	161,809	96,035	64,109	92,348	-	-	9,090	37,080	-	46,170	224,999	299,999	254,442	84.8%	92.6%	
R27-141	Effective Post-Construction Best Management Practices to Infiltrate & Retain Storm Water Run-Off	-	-	-	-	56,309	2,896	108,461	54,609	82,227	115,377	-	-	591	34,229	27,898	62,718	184,279	246,997	235,600	95.4%	93.8%	
R27-142	Evaluation of Software Simulation of Road Weather Information System	-	-	-	-	-	-	207,028	36,575	76,412	120,647	-	-	-	12,192	40,361	52,552	212,580	283,440	209,774	74.0%	74.0%	
R27-143	Tree Establishment in Response to Hydrology at IDOT Wetland Mitigation Sites	-	-	-	-	24,947	11,820	54,895	34,336	-	-	-	6,173	16,864	-	-	23,037	59,882	79,842	69,194	86.7%	77.1%	
R27-144	Development & Implementation of Updated Urban Regional Flood Frequency Equations for Illinois-Phase 2	-	-	-	-	232,200	119,794	192,800	144,425	41,000	85,131	-	-	-	18,169	98,482	116,650	349,350	466,000	466,000	100.0%	100.0%	
R27-145	Modified Standard Penetration Test-based Drilled Shaft Design Method for Weak Rocks- Phase 2	-	-	-	-	181,881	6,027	158,572	68,574	298,528	295,818	-	-	1,790	3,937	114,971	120,699	479,236	638,981	491,118	76.9%	77.3%	
R27-146	Ultrasonic Tomography for Concrete Infrastructure Condition Assessment and Quality Assurance	-	-	-	-	230,838	137,974	132,404	88,046	136,758	103,408	-	-	26,680	52,541	62,402	141,623	375,000	500,000	471,051	94.2%	87.8%	
R27-147	Chloride Reduction Training	-	-	-	-	100,000	-	-	75,000	-	-	-	-	-	25,000	-	25,000	75,000	100,000	100,000	100.0%	100.0%	
R27-148	Development of Low-Water Crossing Design Guidelines for Very Low ADT Routes in Illinois	-	-	-	-	-	-	56,320	37,720	120,344	69,979	-	-	-	19,092	43,692	62,784	132,498	176,664	170,483	96.5%	81.3%	
R27-149-1	Mechanistic-Empirical (M-E) Design Implementation & Monitoring for Flexible Pavements	-	-	-	-	-	-	76,896	50,996	76,896	45,425	-	-	-	15,142	13,488	28,630	115,344	153,792	125,050	81.3%	83.6%	
R27-149-2	Mechanistic-Empirical (M-E) Design Implementation & Monitoring for Rigid Pavements	-	-	-	-	-	-	112,564	69,947	111,024	76,472	-	-	-	37,554	36,205	73,759	167,691	223,588	220,178	98.5%	87.3%	
R27-150	Revised Condition Rating Survey Models to Reflect All Distresses	-	-	-	-	-	-	93,711	12,130	101,957	47,469	-	-	-	8,181	23,992	32,172	146,751	195,668	91,771	46.9%	40.6%	
R27-151	Investigating the Optimum Performance of Reflective Pavement Markers	-	-	-	-	-	-	57,943	27,396	95,201	45,308	-	-	-	12,000	16,500	28,500	121,645	153,144	101,204	66.1%	59.8%	
R27-152	Validation and Revision of Fees Charged for Oversize/Overweight Vehicle Permits	-	-	-	-	-	-	35,441	7,582	164,305	41,771	-	-	-	4,947	13,231	18,178	149,810	199,746	67,531	33.8%	32.9%	
R27-153	Best Management Practices and Incentives to Expedite Utility Relocation	-	-	-	-	-	-	88,205	19,775	99,560	52,153	-	-	-	6,712	21,621	28,333	140,824	187,765	100,261	53.4%	51.1%	
R27-154	Effect of Early-Age Concrete Elastic Properties on Fatigue Damage in PCC Pavements Containing Fibers	-	-	-	-	-	-	74,486	51,421	110,975	62,895	-	-	-	20,473	43,836	64,310	138,826	185,461	178,626	96.3%	82.3%	

ENCLOSURE A: ICT Project Budgets and Spending: FY12 - FY16

Project #	Project Title	FY12		FY13		FY14		FY15		FY16		FY12 - FY16					FY12 - FY16		Comments					
		Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Budget (IDOT Share + Cost Share)	IDOT Share Expended	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Cost Share Match Contributed	Total Cost Share Match Contributed	Total IDOT Budget		Budget (IDOT Share + Cost Share)	Expended (IDOT Share Expended +)	Total Budget % Spent to Date	Total IDOT Budget % Spent to Date	
R27-155	Improving the Effectiveness of Smart Work Zone Technologies	-	-	-	-	-	-	73,508	31,425	105,737	77,058	-	-	-	17,253	39,394	56,647	134,434	179,245	165,130	92.1%	80.7%		
R27-156	Repair & Strengthening of Distressed/ Damaged Ends of Prestressed Beams with FRP Composites	-	-	-	-	-	-	119,428	29,013	126,873	62,555	-	-	-	17,242	24,495	41,736	184,726	246,301	133,304	54.1%	49.6%		
R27-157	Plasticity Requirements of the Aggregates as Subbase, Base, Surface, and Shoulder Courses	-	-	-	-	-	-	59,596	10,233	50,273	42,585	-	-	-	2,569	15,052	17,620	82,402	109,869	70,438	64.1%	64.1%		
R27-158	Crack Induction in Cement Stabilized Layers - CANCELLED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CANCELLED - Could not agree on work plan that would meet IDOT's needs.
R27-161	Construction and Performance Monitoring of Various Asphalt Mixes (Sustainability Funds)	-	-	-	-	-	-	248,187	55,578	257,688	155,144	-	-	-	21,460	70,077	91,537	379,406	505,875	302,259	59.7%	55.5%		
R27-162	Chemical and Compositional Characterization of Recycled Binders	-	-	-	-	-	-	81,700	15,373	62,645	79,199	-	-	-	4,565	29,410	33,975	108,259	144,345	128,546	89.1%	87.4%		
R27-163	Adapting Construction Staking and Inspection to Modern Technology	-	-	-	-	-	-	-	-	93,689	56,366	-	-	-	-	30,113	30,113	70,267	93,689	86,479	92.3%	80.2%		
R27-164	Design of Living Barriers to Reduce the Impacts of Snow Drifts on Illinois Freeways	-	-	-	-	-	-	-	-	90,281	-	-	-	-	-	-	-	67,711	90,281	-	0.0%	0.0%		
R27-165	Determine Whether a Deck with a Microsilica or Latex Concrete Overlay in Place can be Overlaid - CANCELLED	-	-	-	-	-	-	-	-	3,524	2,643	-	-	-	-	908	908	2,643	3,524	3,551	100.8%	100.0%	CANCELLED - Research could not address the needs of the Bureau of Bridges and Structures. This will be pursued by BBS through other routes.	
R27-166	Effectiveness of Waterproofing Systems for Bituminous Overlays on Bridge Decks - CANCELLED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CANCELLED - None of the RFP's were identified as meeting the needs of the department.
R27-167	Establishing Procedures and Guidelines for Pedestrian Treatments at Uncontrolled Locations	-	-	-	-	-	-	-	-	101,835	21,761	-	-	-	-	12,829	12,829	76,376	101,835	34,591	34.0%	28.5%		
R27-168	Field Performance Evaluations of Sustainable Aggregate By-Product Applications (Phase II of R27-125)	-	-	-	-	-	-	-	-	53,288	26,956	-	-	-	-	18,890	18,890	39,966	53,288	45,846	86.0%	67.4%		
R27-169	Opportunistic Traffic Sensing Using Existing Video Sources II (Phase II of R27-131)	-	-	-	-	-	-	44,776	-	55,224	56,432	-	-	-	-	27,135	27,135	75,000	100,000	83,567	83.6%	75.2%		
R27-170	Pavement Rehabilitation Strategy Course Development	-	-	-	-	-	-	-	-	113,589	35,222	-	-	-	-	18,569	18,569	85,192	113,589	53,791	47.4%	41.3%		
R27-171	Refinement of Load Factors for Illinois-specific LRFR Bridge Load Rating using WIM Data	-	-	-	-	-	-	-	-	40,024	-	-	-	-	-	-	-	30,018	40,024	-	0.0%	0.0%		
R27-172	Roadway Lighting's Impact on Altering Soybean Growth	-	-	-	-	-	-	-	-	75,270	26,658	-	-	-	-	14,813	14,813	60,942	75,270	41,471	55.1%	43.7%		
R27-173	Thermodynamics of HMA Plant Production with ABR Mixes - CANCELLED	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	CANCELLED - project no longer necessary with results of SP-27 and creation of I-FIT.
R27-174	Methodology for Evaluation of Seal Coat, Gravel and Dirt Roads	-	-	-	-	-	-	-	-	72,540	22,139	-	-	-	-	11,991	11,991	54,053	72,540	34,131	47.1%	41.0%		
R27-44	Technology Transfer & Editorial Support	250,351	94,226	199,649	126,523	360,000	145,736	400,000	153,171	440,000	369,740	50,111	67,402	77,638	81,598	196,970	473,719	1,237,500	1,650,000	1,363,115	82.6%	71.9%		
R27-45	Information Technology Support	200,000	52,121	220,000	57,700	42,720	45,406	260,000	73,518	280,000	20,226	27,719	29,409	23,785	38,206	10,775	129,893	752,040	1,002,720	378,865	37.8%	33.1%		
R27-46	Special Projects Engineering	280,000	162,313	300,000	235,668	320,000	148,049	340,000	170,583	360,000	126,886	86,321	125,547	78,870	90,874	67,596	449,207	1,200,000	1,600,000	1,292,705	80.8%	70.3%		
R27-160	Sustainability Engineering and Support (Sustainability Funds)	-	-	-	-	333,333	-	333,333	197,713	333,333	270,464	-	-	-	58,705	80,307	139,012	749,999	999,999	607,189	60.7%	62.4%		
XXX-XXX	Sustainability Hard Match Cost Share	-	-	-	-	-	-	-	-	-	-	-	-	-	-	28,631	28,631	-	-	-	-	-	-	
R27	Committed - General & Sustainability Funds	\$ 5,144,716	\$ 2,281,389	\$ 5,065,830	\$ 3,168,718	\$ 5,741,772	\$ 3,338,769	\$ 5,374,430	\$ 3,552,366	\$ 5,058,636	\$ 3,977,001	\$ 1,037,077	\$ 1,419,162	\$ 1,460,611	\$ 1,480,372	\$ 1,757,627	\$ 7,154,850	\$ 19,680,891	\$ 26,385,384	\$ 23,444,461				
R27	Uncommitted - General & Sustainability Funds	\$ 1,655,285		\$ 534,175		\$ 991,559		\$ 1,358,901		\$ 341,362								\$ 4,881,282						
	Total Federal Funds	\$ 6,800,001	\$ 2,281,389	\$ 5,600,005	\$ 3,168,718	\$ 6,733,331	\$ 3,338,769	\$ 6,733,331	\$ 3,552,366	\$ 5,399,998	\$ 3,977,001	\$ 1,037,077	\$ 1,419,162	\$ 1,460,611	\$ 1,480,372	\$ 1,757,627	\$ 7,154,850	\$ 19,680,891	\$ 31,266,666	\$ 23,444,461				
R60	ICT Administration - State Funds only	410,000	410,000	420,000	420,000	480,000	419,464	480,000	409,470	480,000	247,171	218,051	223,746	219,675	210,265	126,917	998,653	2,270,000	2,270,000	2,904,759				
	Total Federal & State Funds	\$ 7,210,001	\$ 2,691,389	\$ 6,020,005	\$ 3,588,718	\$ 7,213,331	\$ 3,758,233	\$ 7,213,331	\$ 3,961,836	\$ 5,879,998	\$ 4,224,172	\$ 1,255,128	\$ 1,642,908	\$ 1,680,286	\$ 1,690,637	\$ 1,884,544	\$ 8,153,503	\$ 21,950,891	\$ 33,536,666	\$ 26,349,220				

*Total budget can exceed 100% when more than the required cost share is contributed.

30.5%

** For R27-42 and R27-83, per ICT: "For both of these projects, the total IDOT spending is equal or less than the approved IDOT budget, because there are surpluses in a prior IGA(s) that equal or exceed the "overspending" that ICT reported for the current IGA that covers FY12 through FY16 (although budgets and expenditures were only reported through FY14)."

Cost Share is NOT required for the State funds.
Match dollars for the State funds are not used in the overall match calculation.

ILLINOIS HIGHWAY RESEARCH PROGRAM FY16 ENCLOSURE B HPR-25-001-12, SPR-4000(47)										
Fnctn. Code	Title (Status: C=Continuing, N=New)	Dates		PLANNED Funding Participation FY16			ACTUAL Funding Participation FY16			Comments
		Start	End	Federal	Study Total	PC	Federal	ICT Match	Study Total	
R27	Highway Problems (C) - 75% Federal Participating	7/15	6/16	\$ 4,050,000	\$ 4,050,000	1	\$ 3,977,001		\$ 3,977,001	
R27	25% ICT participation (C) - 25% Local Match	7/15	6/16	\$ -	\$ 1,350,000	2	\$ -	\$ 1,757,627	\$ 1,757,627	
R60	Administration (C) - R60 is 100% State Funds	7/15	6/16	\$ -	\$ 480,000	2	\$ -	\$ 126,917	\$ 247,171	ICT is not required to provide any match on state administrative funds. They choose to do so regardless.
	AASHTO Technical Services Programs	7/15	6/16	\$ 134,200	\$ 134,200	1	\$ -		\$ -	No TSPs were paid in FY16 due to the budget impasse. FY16 TSPs were included in the FY17 Work Plan, and \$298,200 was paid for FY16 TSPs in FY17.
Totals of all above without Pooled Funds:				\$ 4,184,200	\$ 6,014,200		\$ 3,977,001		\$ 5,981,799	
100% Federal SPR:				Funding Participation			Funding Participation			
				Federal	Total		Federal		Total	
5(021)	Base Funding for the North Central Superpave Center (C)			\$ 15,000	\$ 15,000	1	\$ -		\$ -	
5(193)	Midwest States Pooled Fund Crash Test Program (C)			\$ 65,000	\$ 65,000	1	\$ 65,000		\$ 65,000	
5(198)	Urban Mobility Study			\$ -	\$ -		\$ 25,000		\$ 25,000	
5(218)	Clear Roads Winter Highway Operations (C)			\$ 25,000	\$ 25,000	1	\$ 25,000		\$ 25,000	
5(231)	ITS Pooled Fund (ENTERPRISE) (C)			\$ 30,000	\$ 30,000	1	\$ 30,000		\$ 30,000	
5(232)	Study of the Impacts of Implements of Husbandry on Bridges (C)			\$ 10,000	\$ 10,000	1	\$ -		\$ -	
5(237)	Transportation Library Connectivity and Development (C)			\$ 20,000	\$ 20,000	1	\$ -		\$ -	
5(255)	Highway Safety Manual Implementation (C)			\$ 20,000	\$ 20,000	1	\$ -		\$ -	
5(267)	Accelerated Performance Testing for the NCAT Pavement Test Track			\$ 330,000	\$ 330,000		\$ 330,000		\$ 330,000	
5(281)	S-BRITE			\$ -	\$ -					
5(282)	Demonstration of Network Level Pavement Structural Evaluation with Traffic Speed Deflectometer (C)			\$ 25,000	\$ 25,000	1	\$ -		\$ -	
5(290)	Aurora Program			\$ -	\$ -		\$ 25,000		\$ 25,000	
5(292)	Assessing Roadway Traffic Count Duration and Frequency Impacts on AADT Estimations (C)			\$ 9,600	\$ 9,600	1	\$ -		\$ -	
5(293)	Mid-America Freight Coalition-II (C)			\$ 25,000	\$ 25,000	1	\$ -		\$ -	
5(297)	Improving Specifications to Resist Frost Damage in Modern Concrete Mixtures (C)			\$ 17,500	\$ 17,500	1	\$ 17,500		\$ 17,500	
5(313)	TECHNOLOGY TRANSFER CONCRETE CONSORTIUM (TTCC) (C)			\$ 12,000	\$ 12,000	1	\$ 12,000		\$ 12,000	
5(316)	Traffic Control Device Consortium			\$ -	\$ -		\$ 10,000		\$ 10,000	
5(319)	Transportation Management Center Pooled Fund Study			\$ -	\$ -		\$ 25,000		\$ 25,000	
5(330)	No Boundaries Roadway Maintenance Practices			\$ -	\$ -		\$ 10,000		\$ 10,000	
5(335)	2016-2020 Biennial Asset Mgt Conference & Training			\$ -	\$ -		\$ 12,000		\$ 12,000	
5(340)	Axle Length Classification Factor Analysis & Effects on ADT			\$ -	\$ -		\$ 12,000		\$ 12,000	
5(341)	National Road Research Alliance - NRRA			\$ -	\$ -		\$ 150,000		\$ 150,000	
5(342)	TRB Core Program Services for a Highway Research, Development and Technology Program (C-Annual) (Estimate)			\$ 212,871	\$ 212,871	1	\$ 222,411		\$ 222,411	
5(343)	MASH Implementation			\$ -	\$ -		\$ 50,000		\$ 50,000	
5(416)	Natl. Coop. Hwy. Research Prog. (C-Annual) (Estimate)			\$ 1,232,561	\$ 1,232,561	1	\$ 1,549,691		\$ 1,549,691	
	Contingencies for New Pooled Studies (N)			\$ 500,000	\$ 500,000	1				
	Subtotals:			\$ 2,549,532	\$ 2,549,532	1	\$ 2,570,602		\$ 2,570,602	
Grand Totals:				\$ 6,733,732	\$ 8,563,732		\$ 6,547,603		\$ 8,552,401	