

**COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING**



**ANNUAL PERFORMANCE AND
EXPENDITURE REPORT
FOR
FISCAL YEAR 2017 ANNUAL WORK PROGRAM
PROJECT SP 0017 (001)
JUNE 16, 2016 THROUGH JUNE 15, 2017**

SEPTEMBER 2017

Introduction

The Annual Performance and Expenditure Report is required under 23 CFR 420.117. This document outlines the transportation planning activities conducted by the Kentucky Transportation Cabinet (KYTC) under Planning (Part I) of the SPR work program for the period of June 16, 2016 through June 15, 2017 (Fiscal Year 2017).

Many issues faced the Division of Planning during the period of this work program. Many analyses, studies, and traffic forecasts were initiated during the past year to support the KYTC lettings. The Division continued to work to increase our utilization of our roadway data management software, Highways by EXOR. Improvements to the quality of the data were made through collection efforts with our Area Development District (ADD) partners, and efficiencies in this program resulted in our ability to collect updated data quicker than was previously expected. Planning continued work with our ADD partners to maintain the digital base map of roadways and utilize that information to create visual representations of the state highway systems for use by KYTC, other agencies, and the general public. The Division continued efforts at intermodal planning and completed an update of the Freight Plan. The Division made great efforts to aid the Cabinet and our MPO partners in reviewing various Notices of Proposed Rule Making. We worked closely with the Office of Special Programs in getting CMAQ, TE, and Safe Routes to School projects into the MPO Transportation Improvement Programs so funding could be authorized. The Division implemented the Strategic Highway Investment Formula for Tomorrow (SHIFT) which will be a lynchpin in Kentucky's implementation of Performance Based Planning and Programming.

All these activities occurred while the Division of Planning continued to collect necessary data, manage and report the data as required, respond to requests for data both within and outside the Cabinet, forecast future transportation demands, plan for the transportation needs within the Commonwealth, coordinate with our rural and metropolitan planning partners, address air quality concerns, support project selection for the Six-Year Highway Plan and Statewide Transportation Improvement Program, and address other State and Federal requirements.

Attached are accomplishments for each chapter of the FY 2017 Work Program. Expenditures are summarized in the document showing the initial budget, expenditures, and percentages of expenditures.

FY 2017
SPR CHAPTER FUNDING SUMMARY

<u>CHAPTER AND TITLE</u>		<u>BUDGETED</u>	<u>EXPENDED</u>
1	SPR Work Program	\$55,300	\$27,269
2	Personnel Training	\$250,900	\$62,483
3	Traffic and Equipment Management	\$1,797,100	\$2,144,287
4	Roadway Systems	\$672,900	\$445,333
5	Cartography	\$416,500	\$210,926
6	Highway Information System	\$1,649,800	\$1,273,945
7	Strategic Corridor Planning	\$2,063,800	\$1,739,725
8	Statewide Transportation Planning	\$843,000	\$1,345,975
9	Metropolitan Planning Organizations	\$396,700	\$451,819
10	Performance Measures and Congestion/Mobility Analysis	\$141,000	\$159,886
11	Air Quality	\$68,500	\$53,282
12	Multimodal Transportation	\$269,800	\$204,137
13	Traffic Data Forecasting	\$751,500	\$980,151
14	Bicycle and Pedestrian Program	<u>\$220,200</u>	<u>\$215,121</u>
	Planning Total	\$9,597,000	\$9,314,342
	Percent Expended		97%
15	Highway Safety Improvement Program	\$500,000	\$469,254
16	Value Engineering and Quality Assurance	<u>\$500,000</u>	<u>\$411,034</u>
	Other Items Total	\$1,000,000	\$880,288
	Percent Expended		88%
	TOTAL	\$10,597,000	\$10,194,630
	Percent Expended		96%

CHAPTER 1

SPR Work Program

RESPONSIBLE UNIT

Division of Planning
Customer Service Branch

PURPOSE AND SCOPE

The Customer Service Branch in the Division of Planning is responsible for administrative, budgetary, and expenditure tracking activities directly attributable to the completion of the SPR Planning Work Program chapters.

PROPOSED ACTIVITIES FOR 2016-2017

- Coordinate with all other branches in the Division of Planning in order to prepare the annual SPR Planning Work Program.
The Customer Service Branch created well over 400 pieces of correspondence in the form of memos and letters. Almost all of which were related to processing contracts, MOAs, letter agreements and other activities related to the SPR Work Program. 100% Complete
- Prepare monthly expenditure reports for each chapter of the SPR Planning Work Program.
Ran 12 expenditure reports, one per month. 100% Complete
- Update accomplishments of the SPR Planning Work Program quarterly.
Ran 12 expenditure reports, one per month. Communicated the results of those reports to branch managers and District Office Planning Supervisors quarterly to assist them in reporting quarterly accomplishments. 100% Complete
- Coordinate and prepare the annual SPR Planning Work Program and Accomplishments and Expenditures Report.
Ran final expenditure reports and reported total expenditures as well as percentage of budgeted amounts. Prepared FY 2017 Work Program. 100% Complete

PRODUCTS

The Internal Customer Service Section will coordinate and prepare the annual SPR Planning Work Program and the annual SPR Planning Work Program Accomplishments and Expenditures Report. This Section will also prepare and distribute to other Branches monthly expenditure reports for all chapters in the SPR Planning Work Program. The Internal Customer Service Branch will update accomplishments to the SPR Planning Work Program quarterly and distribute these updates to other Branches.

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$55,300	\$9,269	2%
OTHER			
TOTAL	\$55,300	\$9,269	2%

CHAPTER 2

Personnel Training

RESPONSIBLE UNIT

Division of Planning

PURPOSE AND SCOPE

The training of personnel is essential to the transportation program in order to keep pace with changing techniques and evaluate new procedures and developments as well as to help better develop the abilities of employees as they assume the vacated duties brought on through mass retirements, promotions, and transfers. This is particularly essential to the Cabinet’s programs as more efficient and detailed technical analyses and assistance are required.

PROPOSED ACTIVITIES FOR 2016-2017

An effort will be made to continue a level of staff training which will maintain the integrity of professional career development and improvement of technological skills. Such training will include, but not be limited to the following workshops, classes, and conference or like training. This will not include registration fees to attend annual meetings or conferences except fees for portions of such conferences that do provide eligible training. We will also provide annual in-state Traffic Count Technician Training for District personnel. Training for Highway District Office Planning personnel, ADD personnel, and MPO personnel in procedures, regulations, technical issues, etc., may also be included as necessary to provide for improved coordination and efficiency within and between the Statewide and Metropolitan planning efforts.

SEE THE FOLLOWING 4 PAGES FOR PROPOSED TRAINING AND CONFERENCES

PRODUCTS

Personnel with career development opportunities, improved technological skills, broadened knowledge, enhanced capabilities, and more efficient operation.

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$215,900	\$44,861	21%
OTHER	\$35,000	\$17,622	50%
TOTAL	\$250,900	\$62,483	25%

Other

- Other Operational Cost \$35,000
For items such as travel, mileage, equipment and other cost directly associated with the completion of this work chapter.

Chapter 2 Personnel Training

	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program	Highway Safety Improvement Program	Quality Assurance
Conferences	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
GIS T						X				X				A		
GIS-KYTC				X	X	X	X	X		A		X	X	A		
KAMP Annual Meeting				A	A	X										
COGNA Annual Meeting					X											
HIS Conf			X			X						X	X			
Asset Mangement Conf										X		X				
Bentley Training Conf						X										
HIDAC						X										
ACEC Partnering Conference			A	X		X	A	A		A	A	A	A	A		
TRB Annual Meeting						X	A	X	X	X	X	X	X	X		
TRB Tools of the Trade: Small and Medium Communities							X		X	A	X	X	X	X		
National Freight Conf							X					A				
Bicycle and Pedestrian Facilities Conf							X		X					A		
ITE Section Conference							X	X	X			A	A	X		
American Planners Association							X	X	X		X	X	X	X		
AMPO									X							
NADO								X								
North American Travel Monitoring Expo & Conf			X										X			
AASHTO Standing Committees			X	X	X	X	X	X	X	A	X	X	X	X		
The Committee for Non Motorized Transportation														A		
TRB Workgroups/Research			X	X	X	X	X	X	X	X	X	X	X	X		
WVDOH Planning Conference									X							
Ohio Planning Conference									X							
UK Transportation Research and Innovation Program							X									
ASCE Conference							X									
TRB Automated Vehicle Symposium							X									
KYTC/FHWA Freight Conference								A	A			X	X			
Nature's Call to Action Conference							X									

X =Planned to attend but did not attend

A =Planned to attend and did attend

A =Did not plan to attend but did attend

Chapter 2 Personnel Training	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program	Highway Safety Improvement Program	Quality Assurance
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Training Events	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PEEK			X													
TMG			X										X			
High Desert Jackalope Training			A							A			X			
Adobe Illustrator					X								X			
Microstation				X	X	X	X	X								
HPMS						X							X			
Business Objects Training						X	X	X		A		A	X			
SQL Training						X				A			A			
Visual Basic (macros)						X				A			X			
Bentley InRoads							X									
Public Involvement in Transportation Decision Making Process							X	X	X				X	X		
Effective Communications in Public Involvement							X	X	X				X	X		
Fundamentals of Title VI/EJ							X	X	X							
Practical Conflict Management Skills for Env Issues							X	X								
Highway Capacity 2010							X			X		X	X			
KYTC Traffic Engineering Design							X	X	X				A	A		
Public Involvement							X	X	X			X	X	X		
Road Safety Audit Training							X		X			X		X		
Highway Safety Manual Training							X	X	X					A		
Purpose and Needs Statement Training							X	X								
NEPA							X	X	X							
GIS						X	X	X	X	A	A	A	A	A		
Microsimulation							X						A			

Chapter 2 Personnel Training	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program	Highway Safety Improvement Program	Quality Assurance
Administration of FHWA Planning and Research Grants							X		X			X	X	X		
Planning for Operations							X		X	A	A	A		A		
Congestion Management and Reliability							X		X	A	A	A	A			
Transportation and Land Use							X		X			X	X			
Climate Change							X		X		A					
STAQS											X					
MOVES									X		A					
TransCAD/Modeling							X		X				A			
Census Training					X		X	X	X	X	X		X			
Training for State Bike/Ped Coordinator														A		
Air Quality Conformity							X		X		A					
FHWA/NHTSA Safety Target Setting								A	A							
New Technology and Urban Planning								A	A							
KIPDA/TARC Louisville Bike/Ped Summit								A								
KSP Open Portal Solutions Service								A	A							
NHI Basics of Transportation Planning									A							
Designing for Bicyclist Safety Parts I & II									A							
Regional Mobility Council Transportation Summit									A							
Pavement and Bridge Condition Performance Measures Final Rule									A							

Chapter 2 Personnel Training	SPR Work Program	Personnel Training	Traffic and Equipment Management	Roadway Systems	Cartography	Highway Information System	Strategic Corridor Planning	Statewide Transportation Planning	Metropolitan Planning Organizations	Performance Measures and Congestion/ Mobility Analysis	Air Quality	Multimodal Transportation	Traffic Data Forecasting	Bicycle and Pedestrian Program	Highway Safety Improvement Program	Quality Assurance
	System Performance/Freight/CMAQ Performance Measures Final Rule									A						
ITS America Connected Vehicle 102 Training						A										
ASCE Annual Section Meeting						A										
ITS PCB To Choose or Not to Choose Travel Time Reliability Reminder						A										
KyOPS New and Improved: A Users Introduction						A										
FHWA Talking Freight Truck Platooning						A										
Scenario Planning Workshop						A										

X =Planned to attend but did not attend

A =Planned to attend and did attend

A =Did not plan to attend but did attend

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

PURPOSE AND SCOPE

The primary functions of the Traffic and Equipment Management Branch are to collect, process, and store traffic data. Traffic data is used in virtually every decision made in transportation engineering. Applications of this information include, but are not limited to: project/program planning, project selection, pavement design, safety analysis, capacity analysis, air quality assessment, and federal funding.

The Branch is comprised of two Sections: the Equipment Section and the Data Section.

The Equipment Section is responsible for the procurement, distribution, operation, maintenance, and repair of all equipment used at traffic data acquisition stations. Personnel perform site designs, installations, construction inspections, and maintenance at traffic data acquisition stations throughout the state. Additional duties of Equipment Section personnel include providing technical expertise and training to District personnel and performing traffic counts as necessary.

The Data Section is responsible for performing quality control, processing, and maintaining data collected from data acquisition stations located statewide. Personnel generate several different reports from said data throughout the year. These reports are prepared for the Federal Highway Administration (FHWA), Kentucky Transportation Cabinet (KYTC), Kentucky Transportation Center (KTC), various planning agencies, and other governmental agencies. Data is also made available for public consumption.

PROPOSED ACTIVITIES FOR 2016-2017

- Maintain, update, analyze, provide QA/QC, and make available data from approximately 17,300 traffic count stations including coverage, interstate, automatic traffic recorder (ATR), weigh in motion (WIM), and ramp sites. **All traffic count station data were checked for quality control and assurance of data prior to entering into database. Data was updated as it was received. Data was continuously maintained and made available via regularly updated information on the Division of Planning website and by request from the TEMAC Branch. 100% Complete**
- Migrate to new database (Jackalope). Maintain existing database (TRADAS) in parallel with new database for quality control until new database is deemed fully functional and reliable. **Have maintained parallel operation of the new and old databases since the beginning of count season. Intend to do so throughout the entire season, assess the new database, and abandon the old for next count season if able.**
- Download, process, and analyze data for every day of the year from approximately 95 permanent ATR stations. **Available ATR data was downloaded daily. All ATR data was checked for quality control and assurance of data upon entering into database. 100% complete.**
- Submit monthly reports of hourly ATR records to FHWA. **Reports were generated and sent to FHWA monthly. 100% Complete**

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- With KYTC District Offices, collect and process vehicle volume data from approximately 5,000 short-duration, portable-machine, coverage and ramp counts. Received approximately 4,715 counts of approximately 4,980 assigned from District Offices for short-duration counts in calendar year 2016. Assigned approximately 5,300 short-duration counts to Districts in calendar year 2017. 95% Complete
- With KYTC District Offices, collect and process vehicle volume data from approximately 500 short-duration, portable-machine, local-road, bridge counts. Short duration local road bridge counts are typically performed in the off-peak for counting (December-February). Approximately 30 local road bridge counts were performed in calendar year 2016.
- With KYTC District Offices, review, assign, collect, process, analyze, and distribute data from special count stations that are requested by the highway districts and other divisions. The number of special counts varies from year to year with the average being approximately 100 total, each of which typically includes multiple volume and turning movement counts. Approximately 50 special counts (100% of those received) were reviewed, assigned, processed, analyzed and distributed in calendar year 2016.
- Concurrent with coverage, interstate, ATR, WIM, and ramp counts, collect and process vehicle classification data from approximately 1,000 stations, which complies with the FHWA, *Traffic Monitoring Guide* recommendation of 25%-30% for Major Collectors and above. Vehicle classification data was collected and processed from approximately 755 stations of approximately 4,100 non-local roads (~18%) in calendar year 2016.
- Provide traffic data for annual FHWA required Highway Performance Monitoring System (HPMS) report. All data required of the Data Team for the annual FHWA HPMS report was provided. 100% Complete
- Update axle and monthly factors used in adjusting short term counts from data collected at ATR and vehicle classification stations. Updated seasonal, axle and design hour factors at the end of calendar year 2016. 100% Complete
- Update in-house databases to include any new stations or roadway alignment changes. Correct beginning and ending milepoints to better represent traffic generators. All in-house databases were updated in a timely manner as needed. 100% Complete
- Collect, process, and analyze continuously collected data. Submit a minimum of one-week, WIM data from permanent WIM stations to FHWA quarterly. Periodically calibrate WIM data collection equipment, as needed, in order to assure quality data. WIM data was collected daily from approximately 30 traffic data collection stations and was processed and analyzed weekly. 100% complete. File format issues (FHWA switched from the 2001 Traffic Monitoring Guide (TMG) format to the 2013 TMG format this fiscal year) were still hindering complete quality assurance capabilities. We are in the process of switching databases to provide QA/QC capabilities. Once the quality assurance issue is rectified, continuous data (in lieu of monthly, one-week data) will be submitted to FHWA. This includes past data and all future data. WIM data collection sites are monitored daily and maintained by Equipment Team personnel, when possible. Maintenance activities beyond the capabilities of in-house personnel are assigned to private electrical consultants through a maintenance contract.

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- Review proper operation and coverage of ATR sites. Install additional ATR sites as necessary. Review of functional classifications and geographic locations of all ATR sites was performed. 100% Complete
- Investigate and purchase new traffic data collection equipment to provide for safer, more efficient and more accurate methods of collection. Investigated new technologies including but not limited to new automatic data recorder (ADR) hardware, handheld data collectors, radar detectors, GPS units, modems, solar power assemblies, wireless detectors, WIM technologies, and video detectors. Purchases included but were not limited to: piezoelectric sensors, pneumatic tubing, miscellaneous portable count materials, and protective clothing. 100% Complete
- Certify, repair, and maintain approximately 800 traffic data recorders. . The TEMAC Equipment Team certified approximately 800 automatic data recorders (ADRs). ADRs were maintained and repaired throughout the year, as required. 100% Complete
- Inspect, repair, and maintain, where possible, approximately 570 vehicle sensor locations (~100 ATRs and ~470 semi-permanent). Permanent vehicle sensor locations were inspected concurrent with annual short term traffic data collection. Sites requiring maintenance were noted and, where feasible, repaired by Equipment Team personnel. Maintenance activities beyond the capabilities of in-house personnel are assigned to private electrical consultants through a maintenance contract as funding allows. 100% Complete
- Administer contracts and provide oversight of Contractor(s) for the repair and maintenance of ATR and semi-permanent vehicle sensor locations. Major maintenance activities (at a minimum, the replacement of in-pavement sensors) for 8 ATR stations were assigned to the electrical contractors.
- Track upcoming highway projects and produce plans, specifications, and construction cost estimates for new and replacement traffic sensor installations for submittal into construction and pavement rehabilitation contracts. Approximately 27 sets (100% of requested) of plans and specifications including approximately 50 ATR and semi-permanent count station sites were produced and submitted by the Equipment Team for construction and pavement rehabilitation contracts.
- Provide construction oversight, when required, and perform final inspections of new and replacement traffic sensor installations. Performed final inspections on approximately 39 newly installed traffic sensor stations. Provided construction oversight periodically, as required. 100% Complete
- Provide contract management and oversight of Consultant assisting with field data collection and other tasks. Process and provide quality assurance of the provided counts. Assigned and provided oversight for approximately 400 individual traffic counts. Processed and provided quality assurance of all submitted counts.
- Provide traffic count technician training and support, as needed. Individual traffic count technician training and support was provided throughout the year as requested.

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
 Traffic and Equipment Management Branch

PRODUCTS

- Volume and classification data from ATRs. Data was retrieved for a minimum of six months from 81 ATR stations. Automatic Traffic Recorder (ATR) data was downloaded and processed daily and a report of hourly records was submitted to FHWA monthly. Data was analyzed to ensure proper operation of ATRs. Maintenance issues were referred to the Equipment Team and repaired where feasible. As funding permits, sites that require in-pavement sensor maintenance will be repaired by electrical contractors through the maintenance agreements or by future projects let by the Division of Planning.
- Volume, classification, and weight data from WIM sites. WIM data is collected daily from approximately 30 traffic data collection stations and is processed and analyzed weekly. File format issues (FHWA switched from the 2001 Traffic Monitoring Guide (TMG) format to the 2013 TMG format this fiscal year) are still hindering complete quality assurance capabilities. We are in the process of switching databases to provide QA/QC capabilities. Once the quality assurance issue is rectified, continuous data (in lieu of monthly, one-week data) will be submitted to FHWA. This includes past data and all future data. WIM data collection sites are monitored daily and maintained by Equipment Team personnel, when possible. Maintenance activities beyond the capabilities of in-house personnel are assigned to private electrical consultants through a maintenance contract. 100% Complete
- Volume and classification data from short-duration machine counts. Received approximately 4,715 counts of approximately 4,980 assigned from District Offices for short-duration counts in calendar year 2016. Assigned approximately 5,300 short-duration counts to Districts in calendar year 2017. Of 216 interstate sites, completed data collection from 147. We were unable to collect data from remaining stations due to construction in the vicinity and/or malfunctioning sensors. 95% Complete
- Volume and classification data from special counts. Approximately 50 special counts (100% of those received) were reviewed, assigned, processed, analyzed and distributed.
- Axle and monthly factors Updated seasonal, axle and design hour factors at the end of calendar year 2016.
- Databases containing count station and count data information Database information for count station and count data was updated as needed.
- Accurate local DVMT data for FHWA reporting through HPMS. Accurate local DVMT data for FHWA was reported through HPMS.

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$1,272,100	\$1,640,352	129%
OUTSOURCED PERSONNEL	\$300,000	\$335,035	112%
OTHER	\$225,000	\$168,901	75%
TOTAL	\$1,797,100	\$2,144,287	119%

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$50,000 contract for outsourced traffic counts to be performed by consultant under Statewide Traffic Counting contract.
- \$250,000 for traffic data collection station installation and maintenance

Other

- \$150,000 for purchase of new traffic data collection equipment and supplies
- \$75,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 4

Roadway Systems

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2016-2017

- Track roadway construction or maintenance projects to identify changes in roadways and their effect on roadway system designations. **Daily activity including contact and email with District Offices for project status updates. Posting notification for Data Management when traffic dates are changed as well as updating the Project Tracker Database with current information. 100% Complete**
- Coordinate the two-way flow of information between the Highway District planning staffs and Central Office Transportation Systems and Data Management branch staffs regarding roadway construction and ownership status. **Communicate almost daily with Data Management personnel on activities regarding updating and/or revising H.I.S. based on District Planning recommendations. Phone calls, emails, regular meeting with Data Management Staff, and sometime visits are made to the respective Highway District Office to check on project status. 100% Complete**
- Generate official documentation recommending appropriate SPRS revisions to the Commissioner of the Department of Highways for approval. (KRS 177.020 and 603 KAR 3:030). **Currently Official orders are required for all changes to the SPRS. Created official orders for all new construction projects and began doing official orders for data review changes as well, instead of electronic change orders. 100% Complete**
- Ensure the SPRS reflects roadways of significance, and correlates with the functional classification system and the electronic base map coverage. **Reviewed SPRS and functional class for all new road alignments along with recommendations and input from the Districts to make classification changes. Evaluate as projects were opened and official orders were generated. 100% Complete**
- Prepare quarterly reports for publication on the internet of SPRS mileage and of the designated routes and mileage of roads in the NHS and NN systems. **Reports every quarter and made sure they were published on the website. 100% Complete**
- Review revisions to the SPRS to discover any modifications made necessary to other systems such as functional classification, NHS, or NN classifications. **Typically new alignment reviews check to see if any surrounding roads needed classification changes due to the new alignment. Changes to NHS and NN require a separate official order. This is a part of the process of doing an Official Order. Map updated December 2016. 100% Complete**
- As requested by local public agencies or Highway Districts, review requests for revisions of functional classification, NHS and NN. As appropriate, prepare request from Cabinet to FHWA for system revision. **Did several official orders to reclassify SPRS road system as well as functional class at the districts requests. 100% Complete**
- As necessary or appropriate, review interstate frontage roads. Coordinate documentation by Highway District offices of suitability for transfer to local government and prepare request from Cabinet to FHWA for permission to complete transfer of property to local government. **These require that the District (for KYTC) address certain criteria from the Federal-Aid Policy Guide 23 CFR 620B. 100% Complete**

CHAPTER 4

Roadway Systems

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- As necessary or appropriate, prepare and submit request for approval by AASHTO Standing Committee on Highways, U.S. Route Numbering Special Committee, for any significant change to routing of a U.S. numbered highway. Submittals are made to the Special Committee twice a year as necessary – one was completed for the Fall 2017 meeting in July 2017 to establish-designate Interstate I-65 from the William H. Natcher Parkway near Bowling Green, Kentucky, to US 60 South of Owensboro, Kentucky. 100% Complete
- Provide all system revision information to the Data Management branch and others as appropriate. Daily contact with Data Management to ensure that all Systems data is accurate in HIS. 100% Complete
- Compile data to provide ton-mile statistics to the Governor’s Office for Local Development for coal transported on Kentucky Highways as required by KRS 177.977 and KRS 42.455. Reports are drawn in Exor forms from data entered for the previous calendar year. “Ton-Miles by County will be posted by the end of September 2017 to Office of Budget and Fiscal Management. 90% Complete
- Publish Kentucky’s Official Coal Haul Highway System Report as required by KRS 177.977 and KRS 42.455. New Coal Haul Report and supporting maps will be published to the website in September. Website updated for Coal Haul – Updated listing and map in September. 90% Complete
- Provide the Division of Maintenance coal haul route information for their review of bridge weight limits. Develop the update of the Extended Weight Coal and Coal By-Products Haul Road System for replacement of the current system in the Highway Information System database. Prepare the Official Order for approval of the updated Extended Weight system. Bridge information for review by Maintenance will be send at end of September. The Extended Weight data will be updated in HIS at the end of September 2017. Official Order updates for the Secretary’s signature. Added KY 188 in Bell County in August 2017. 80% Complete
- Review and coordinate right-of-way information between the HDO staffs and Central Office Transportation Systems and Division of Right-of-Way and Utilities staffs regarding request for official transfers. Compile data in Project Wise. Several state routes where transferred to local government, a total of 6.967 miles of roadway was removed from the State Primary Road System. 16 Official Order where send to Right-of-Way and Utilities and the Secretary of the Finance and Administration Cabinet. 100% Complete
- Compile and provide Governmental Accounting Standards Board (GASB) information on total mileage and estimate value of state roads removed from the SPRS for the FY 2014 to KYTC’s Office of Budget and Fiscal Management. GASB report was send to the Office of Budget and Fiscal Management in July 2017. A total of 6.967 miles was removed from the State Primary Road System and 10.519 miles was added to the State Primary Road System. 100% Complete

CHAPTER 4

Roadway Systems

RESPONSIBLE UNIT

Division of Planning
 Transportation Systems Branch

PRODUCTS

- Official Order Changes to the State Primary Road System **39 Official Orders pertaining to 75 state and/or local roads were completed, including transfers. Discovered and processed changes resulting from roadway data collection and roadway system data reviews. 100% Complete**
- State Primary Road System Official Order Listings and Functional Classification Reports
Update State Primary Road listings for each official order completed. Revise mileage totals and update revisions page to reflect current changes. Revised SPRS listing to the Planning webpage. 100% Complete
- Quarterly Reports on internet: State Primary Road System Mileage, National Highway System routes and mileage, Designated National Truck Network routes and mileage **Updated NHS and NTN reports on web at beginning of each quarter. Put SPRS mileage report out on the web upon Districts requests. 100% Complete**
- GIS map files incorporating project design files for decision-making and use by other Branches
Incorporated project design files into GIS map documents to create decision-making maps for nearly 40 projects. Communicated with Data Management Branch on information obtained for input into HIS for HPMS reporting. 100% Complete
- Coal Haul System Report with associated maps and separate datasets to Department of Local Governments, KYTC Budgets and KYTC Bridge Maintenance. **Compiled Coal Haul reports and shapefiles. Created maps of producing counties as well as a statewide map. Mailed out approx. 570 Coal Haul forms and approx. 325 Coal Haul Updates. 80% Complete**
- Inform FHWA of modification of functional classification **None Required**
- Request to FHWA for modification of National Truck Network (NN) or Official Order Change to State Designated National Truck Network **None Required**
- Request to FHWA for modification of National Highway System **None Required**
- Request to FHWA for permission to relinquish interstate frontage road to local government **None Required**

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$647,900	\$441,713	68%
OTHER	\$25,000	\$3,620	1%
TOTAL	\$672,000	\$445,333	66%

Other

- \$25,000 Other Operational Cost
 For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 5

Cartography

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2016-2017

- Provide electronic mapping for all city, county, district, state, and special-purpose cartographic products. Over 171 County Maps, SPRS, and Functional Classification Maps were updated and exported on the internet. About 125 City Maps, SPRS, and Functional Classification Maps were updated and exported on the internet. District Maps for SPRS and Functional Class were exported and updated. All 12 District maps updated. 100% Complete
- Maintain and publish electronic formats of cartographic products for display on the Internet. Web pages updated regularly. Over 360 SPRS/Functional Maps. Posted Planning study, 306 (over 2,000 documents included) Report Documents for SPAC placed on Web. Worked on New Web Page format – over 40 Web pages updated. 100% Complete
- Update the Official State Highway Map electronic files and accomplish necessary publication. Monitor inventory at 17 locations and coordinate additional deliveries as needed. Reviewed updated highway information from Districts and Systems Team to ensure routes are correct on Official Highway Map. Obtained printing exception from Finance, processed form for contract and updated RFP document for contract. Revised coloration of map to match KY Tourism materials and updated roads on statewide map and 15 inset maps as required. Prepared for publication and press-checked printing of 800,000 maps. Continue to monitor inventory and shipping of product to 17 locations. Created alternate format digital versions of the map for publication on the web page and for usage in GIS software. 100% Complete
- Create reports and exhibits for various Division projects and studies to assist transportation decision-makers in their roles. Compiled 570 Route segments as well as a statewide map. Created several maps for each District for use in developing District/Regional Transportation Plans, such as Priority Routes, Several SHIFT District Maps, Created numerous exhibits and posters for KYTC's Projects. 100% Complete
- Provide mapping and graphic assistance to other Divisions and Departments as requested. Updated and produced a new map of all Scenic Byways Updated the data for all state rest areas Updated a new Functional Classification Code. There were several maps prepared for Multimodal Freight Transportation NTN, NHS, TWC, Interstate and Parkways. Also prepared five YOU ARE HERE enlarged maps generated for all rest areas and welcome centers. 100% Complete Develop and provide to outside entities digital maps as requested. Responded to nearly 3,940 map sales request/emails – mailed out 29,484 maps. Provided some highway updates to Rand McNally and AAA. Map Sales generated \$563. 100% Complete
- Develop and provide geographic information systems (GIS) files locating non-roadway modes of transportation. Air Map Quality Map & Web page 100% Complete

CHAPTER 5

Cartography

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PRODUCTS

- Official Highway Map Contract obtained for 2017 map, graphic files generated, roadway updates made to statewide map and 15 inset maps, printing QC'd and 800,000 copies printed and distributed as needed. 100% Complete
- State Primary Road System Maps Updated county maps at least 171 times
Updated city maps 125 times 100% Complete
- Functional Classification Maps Same as for State Primary Road Systems. 100% Complete
- Other Highway Data Maps (i.e., traffic counts, NHS, NN, etc. maps) 100% Complete
Statewide Coal Haul Map
National Highway System (NHS)
FHWA Urbanized Areas
County Reference Map
- Cabinet and Planning Project Exhibit Maps/Displays 100% Complete
Highway District SHIFT Map
Air Quality
Provide highway updates to Rand McNally, AAA
- GIS Analyses of various data for transportation decision-making 100% Complete
As requested – See Comments above
- General and special purpose maps as requested by other agencies 100% Complete
As requested – See Comments above
- Geographic information systems (GIS) electronic files 100% Complete
Map 21 Associated shapefiles.

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$261,500	\$146,413	56%
OUTSOURCED PERSONNEL	\$10,000	\$64,261	643%
OTHER	\$145,000	\$253	1%
TOTAL	\$416,500	\$210,926	51%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$10,000 for highway map outsourced production assistance.

Other

- \$140,000 for Official Highway Map Publication.
- \$5,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PURPOSE AND SCOPE

The Highway Information System chapter enables the Data Management Branch to oversee maintenance of the Transportation Cabinet's Highway Information System (HIS) database. This database serves as the Cabinet's storage unit for Geographic Information System (GIS) road centerlines and information about roadway characteristics, transportation systems, and roadway analysis. The branch contributes to the KYTC Asset Management program by providing an up-to-date route network of asset locations for other divisions and also providing asset extraction capabilities for updates to the network. The branch uses HIS information to produce the Highway Performance Monitoring System (HPMS) data submittal required annually by the Federal Highway Administration (FHWA). The HPMS submittal is also used within the Cabinet to assist with the analysis and measurement of highway system performance. The branch regularly reviews Functional Classification with the Highway District Offices, Metropolitan Planning Organizations (MPOs), and local officials. It also coordinates all Functional Classification and National Highway System (NHS) changes associated with road changes or external entity requests. The branch provides roadway information to many areas within the Cabinet, other governmental agencies, consultants, and the public via the Division's website, the Cabinet's Transportation Enterprise Database (TED), or direct requests. In order to support all of these functions with accurate and timely data, the branch routinely extracts and analyzes data from Computer-Aided Design (CAD) project construction plans, Cabinet Photo Van collection efforts, and on-site collection activities performed by branch staff.

PROPOSED ACTIVITIES FOR 2016-2017

- Maintain the Cabinet's GIS route network for Kentucky's public highways. Improve processes and procedures for reviewing, editing, and updating the network. **Updated centerline locations and attributes impacted by 104 state road projects. Processed 3,940 local road centerline location and attribute changes in 91 counties. 100% Complete**
- Provide up-to-date route network locations, route lengths, and highway data for use by internal and external customers. Ensure accuracy of information provided. **Provided up-to-date information to customers inside and outside the Cabinet using CAD design files, Photo Van data, field collection, GIS tools, and aerial imagery. 100% Complete**
- Adapt CAD project construction plans and use GIS software to generate maps for resolving road ownership and highway data questions caused by road construction impacts. **Generated 127 maps for road construction projects and distributed to appropriate staff for review and response as appropriate. 100% Complete**
- Update the route network with newly acquired road centerline data extracted from CAD project construction plans, Global Positioning System (GPS) collection methods, and Photo Van collection methods. Update and verify roadway mileage and highway data. **Used CAD design files to update new state road centerlines, mileages, and inventory on pace with project openings for 104 projects. Used GPS collection methods to field-verify information obtained with CAD design files. Used Photo Van data and images to improve accuracy of road centerlines and inventory. 100% Complete**

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- Utilize Photo Van images and data to verify accuracy and validity of route log entries, roadway features and information, and other highway data stored within HIS. **Data in HIS regularly reviewed and updated as necessary with more accurate and valid information captured from Photo Van images and data. 100% Complete**
- Perform office reviews to verify HIS data meets the required standards established by this Division and FHWA. **Reviewed weekly reports and quality control checks to ensure proper data maintenance. Utilized HPMS Field Manual to verify data quality and completeness. Performed checks to ensure local road centerline changes met standards. 100% Complete**
- Assist the Division of Maintenance in the implementation of pavement performance measures reporting and analysis via HPMS. **Adapted Division of Maintenance pavement data to meet HPMS software requirements and ensure its successful load into the software. 100% Complete**
- Assist in the implementation of national performance measures reporting and analysis in accordance with federal legislation, regulations, policies, and/or guidelines. **Attended webinars and meetings regarding implementation. Continuing to evaluate best methods for implementation within Kentucky's data environment. 25% Complete**
- Provide guidance to Cabinet leadership and the Office of Information Technology (OIT) regarding availability and appropriateness of highway data as it relates to the redevelopment of the Cabinet's SYP database. **Provided guidance regarding the availability and appropriateness of highway data to assist OIT in its implementation of the SYP redevelopment. 25% Complete**
- Develop appropriate Cabinet sources for providing data screening methods used in the assembly of the Cabinet's Highway Plan. Modify HIS data collection, storage, and analysis processes as needed in order to satisfy Highway Plan assembly requirements. **Recommended appropriateness of data items for use in data screening methods. Oversaw the Highway Plan "Data Verification" phase. 100% Complete**
- Assist with analyses of highway system performance and the Unscheduled Projects List. Provide an up to date route network for locating Unscheduled Projects. **Maintained up-to-date route network location of Unscheduled Projects. Created HIS data extraction procedures to satisfy Highway Plan project scoring. 100% Complete**
- Update Rating Indices, Capacities, and Volume/Service Flow ratios in the HIS database and distribute to customers. **Generated new capacity and V/SF values and made available to internal data customers. Final determination on best method for incorporating these into HIS still needed 90% Complete**
- Improve production methods used to calculate Rating Indices, Capacities, and Volume/Service Flow ratios. **Implemented the capacity and V/SF tool created by the Kentucky Transportation Center (KTC) to calculate the new capacity and V/SF values. Testing of results indicates the tool generates appropriate values given data limitations. 100% Complete**
- Process and submit annual HPMS report. **HPMS submitted on time, June 15 (2,005 sample sections). Gathered and processed data from other areas of the Cabinet. 100% Complete**
- Improve HPMS submittal production methods. Investigate results of HPMS report and analyze potential process changes to improve submittal. **Generated the HPMS data extract using Bentley's TIG tool, resulting in improved data extraction methods. 100% Complete**

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- Maintain currency of HPMS software and update procedures as required by federal legislation, regulations, policies, and/or guidelines. Used web-based HPMS 8.0 and followed software validations and requirements. Used the latest edition of the HPMS Field Manual. Updated data storage model to reflect HPMS guidelines. 100% Complete
- Coordinate with other Cabinet Divisions regarding their asset management needs. Assist with Cabinet-wide asset management data collection and data dissemination. Coordinated data collection and dissemination efforts with Divisions of Maintenance, Traffic Operations, Highway Design, Right of Way and Utilities, Program Management, Motor Carriers, and Rural and Municipal Aid. Generated 127 maps for resolving road ownership and highway data questions caused by road construction impacts. Updated metadata in HIS to communicate information about data collection and usage to customers. 100% Complete
- Work with OIT to maintain the most current version of the HIS database. Perform acceptance testing and help deploy upgrades to other data owners within the Cabinet. Worked with OIT testing several HIS database fixes to confirm product reliability and functionality prior to installation. 100% Complete
- Work with OIT to improve HIS data exchange with TED and other Cabinet databases. Worked with TED and GIS Branches in OIT for reporting, mapping, and sharing of HIS data within the Cabinet. Supported OIT's implementation of new routines to more efficiently exchange data between HIS and TED. Continued development of a link between HIS and the Division of Maintenance's OMS/PMS databases (Bentley Systems contract). 90% Complete
- Review Functional Classification in cooperation with Highway Districts and MPO's. Review Functional Classification change requests from Highway Districts and other external entities. Finished in-depth and cooperative Functional Classification review with staff from the remaining MPO and the corresponding Highway District Office. Requested and received FHWA approval of over 150 segment changes. Updated HIS data to reflect changes. 100% Complete
- Coordinate changes to the NHS and Strategic Highway Network following proper procedures for approval from FHWA and the Department Of Defense. Requested and received FHWA approval for adding 19 miles of road to the NHS as a result of cooperative review with MPOs and Highway District Offices. 100% Complete
- Process Superload route network changes to support the Department of Vehicle Regulation's overweight/overdimensional permitting procedures. Superload implementation is not yet in production, so no route network changes were necessary. The related training for this task is currently in process. The production environment should be live in FY18. 25% Complete
- Accurately locate Photo Van images to the HIS route network. Provide an up-to-date route network for image location accuracy. Accurately located Photo Van data to HIS up-to-date route network. 100% Complete

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PRODUCTS

- Certification of Public Road Mileage by June 1 Submitted June 1 (79,942 centerline miles). 100% Complete
- HPMS submittal by June 15 Submitted June 15 (2,005 sample sections). 100% Complete
- Weekly snapshots of HIS route network and highway data HIS data extracted weekly and provided to TED for Cabinet-wide consumption. 100% Complete
- Up-to-date and accurate route network locations, route lengths, and highway data to support Cabinet Performance Measures and Asset Management activities Provided information to customers inside and outside the Cabinet with timely updates. 100% Complete
- Maps for resolving road ownership and highway data questions caused by road construction 127 maps created. 100% Complete
- Official Cabinet Route Logs Updated timely due to on-the-ground changes. 100% Complete
- Unscheduled Project locations and Highway Plan data screening outputs Updated timely due to on-the-ground changes. 100% Complete
- Rating Indices, Capacities, and Volume/Service Flow ratios Generated new capacity and V/SF values and made available to internal data customers. 100% Complete
- Route network and highway data Change Reports reflecting HIS processing activities Completed in a timely manner for each processing activity that required notification to other stakeholders 100% Complete
- Queries and routines for quality control of HIS data Reviewed Quality Assurance report weekly and parameter-based inquiry (PBI) and TIG results monthly. 100% Complete
- Functional Classification change requests Requested and received FHWA approval of over 150 segment changes identified during cooperative review with MPOs. 100% Complete
- Photo Van image locations Updated timely due to on-the-ground changes. 100% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$649,800	\$750,990	116%
OUTSOURCED PERSONNEL	\$650,000	\$473,400	73%
OTHER	\$350,000	\$49,554	14%
TOTAL	\$1,649,800	\$1,273,944	77%

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$150,000 for database development and enhancement projects
- \$150,000 for data research and analysis projects
- \$200,000 for Local Road Centerline collection with all of the 15 Area Development Districts, with contracts less than \$100,000 for each
- \$75,000 for special road data collection projects
- \$75,000 for production of FHWA 536 Report

Other

- \$50,000 for Asset Management Data Collection (Photo Van Operation)
- \$150,000 for IT database support
- \$100,000 for data expansion, improvement, and maintenance
- \$25,000 for Other Operational Costs (items such as travel, mileage, equipment and other costs directly associated to the completion of this work chapter)

CHAPTER 7

Strategic Corridor Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
Strategic Corridor Planning Team

PURPOSE AND SCOPE

The Strategic Corridor Planning Team evaluates system and corridor needs for the state maintained roadways. It enhances and continues to update an evaluation process for prioritizing projects for consideration for inclusion in the Six-Year Highway Plan, the District Transportation Plan (Consisting of the Unscheduled Projects List) and the Unscheduled Needs List. It also conducts technical project studies consisting of large studies to Data Needs Analysis (DNA) Studies in order to perform the necessary levels of planning to develop a conceptual and draft purpose and need statement, identifies major environmental issues including environmental justice, initiates consultation with local officials, initiates agency coordination and conducts appropriate levels of public involvement. It identifies and evaluates alternatives, generates project cost estimates and recommends phasing priorities where appropriate. The team oversees outsourced activities and works with the Highway District Offices (HDOs), Metropolitan Planning Organizations (MPOs), and Area Development Districts (ADDs) as needed to complete necessary tasks. Through analysis of data, sustainable and fundable projects will be identified.

PROPOSED ACTIVITIES FOR 2016-2017

- Continue to develop and update policy and procedures for evaluating corridor level needs. **This task is ongoing. We continue to evaluate the policy and procedures for each study, placing emphasis on the KYTC's push for Performance Based Flexible Solutions (PBFS). 100% Complete**
- Conduct corridor, system, small urban area studies, data needs analyses (DNA), and other studies. **For a list of active studies and percent complete, please see the PRODUCTS below.**
- Respond to inquiries about corridor planning issues. **All inquiries to planning studies are responded to in a timely manner. Recently completed studies are available online for the public to view and posted on ProjectWise. 100% Complete**
- Identify, evaluate and prioritize corridor, system, and small urban area needs through data analysis and public involvement. **Corridor and Small Urban Area Studies involve the identification, evaluation, and prioritization of recommended roadway improvements through data analysis and involvement from the public, and/or local officials/stakeholders advisory committees. 100% Complete**
- Oversee outsourced activities. **Most of our studies are completed by consultants with district and Division of Planning assistance in the form of co-Project Managers who oversee the study. At the end of the FY 2017 fourth quarter, KYTC had 12 active planning studies that were outsourced to a consultant. 100% Complete**
- Evaluate identified needs statewide to assist in prioritizing projects for programming in the Highway Plan. **PIFs are made for long-term needs identified through our corridor and Small Urban Area studies. Our studies also provide cost estimates to be used in programming future projects. This process is ongoing. This year the SHIFT program was started as a data analysis tool based on identified needs to assist in prioritizing projects for the Highway Plan. 100% Complete**

CHAPTER 7

Strategic Corridor Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
Strategic Corridor Planning Team

PRODUCTS

Ten studies were completed during the period of July 1, 2016 to June 30, 2017. All but one were completed by consultants. The completed studies are as follows:

- District 10 Intersections Study, All District 10 Counties – N/A – October 2016 (SPR)
- KY 151 Safety Study, Anderson & Franklin Co.'s – N/A – November 2016 (SPR, in-house)
- Hodgenville to I-65 Scoping Study, Hardin & Larue Co.'s – 4-8505.00 – November 2016
- Glasgow Small Urban Area Study, Barren Co. – N/A – December 2016 (SPR)
- KY 8 Mary Ingles Highway Scoping Study, Campbell Co. – N/A – December 2016 (SPR)
- KY 8 Licking River Bridge Scoping Study, Campbell & Kenton Co.'s – 6-1086.00 – December 2016 (SPR)
- US 31W/KY 446 Scoping Study, Warren Co. – N/A – January 2017 (SPR)
- KY 90 Scoping Study, Barren Co. – 3-8819.00 – January 2017
- KY 1932 Chenoweth Lane Scoping Study, Jefferson Co. – 5-531.00 – February 2017
- Richmond/Berea Small Urban Area Study, Madison Co. – N/A – June 2017 (SPR)

Ongoing studies and their respective status at the end of FY 2017 are as follows:

<u>County(ies)</u>	<u>Route</u>	<u>Item No.</u>	<u>% Complete</u>
Lewis/Rowan	KY 59/KY 344/KY 377	9-231.00	98%
Christian	KY 115/US 41	2-381.00 (SPR)	90%
Lincoln	US 27	8-167.00	45%
Breckinridge/Hardin	KY 86	4-8901.00	50%
All District 4 Counties	Various Routes	N/A (SPR)	10%
All District 10 Counties	Various Routes	N/A (SPR)	10%
Warren	US 68X/US 231X	N/A (SPR)	0%
Kenton	KY 1303	N/A (SPR)	0%
Jefferson	KY 1065	N/A (SPR)	0%

<u>County</u>	<u>Small Urban Area</u>	<u>Item No.</u>	<u>% Complete</u>
Carter	Grayson	N/A (SPR)	90%
Mason	Maysville	N/A (SPR)	90%

Many of the current studies are large-scale efforts that have included or will include agency coordination and significant public involvement activities. All of the studies have required or will require coordination with the Highway District Offices and Area Development District Offices to assemble the project team, provide input on study issues, assist with scheduling meetings, and review reports. The Area Development District Offices will also develop Socioeconomic Studies/Environmental Justice reports for many of the studies.

CHAPTER 7

Strategic Corridor Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
Strategic Corridor Planning Team

Those projects listed above followed by (SPR) were funded with SPR Work Program funds. In addition, some SPR funding was used for management, oversight, and review of strategic corridor planning activities.

Summarizing, 21 projects have been worked on during the past fiscal year, with ten being completed, eight in various stages of completion, and three just started. With the start of the new fiscal year, additional projects will soon begin.

- **Data Needs Analysis (DNA) Studies**

A DNA study will be completed for all projects in the Highway Plan, that have not already been the subject of a planning study and that are intended to be advertised for Consultant services, prior to the Advertisement. Seven DNA studies have been completed by District and Central Office Planners in FY 2017. These studies include projects identified by Item No.'s 3-202.00, 3-2042.00, 4-441.00, 10-8903.00, 10-8910.00, 10-8913.00, and 10-8915.00.

- Priorities for Highway Plan Programming that are sustainable and fundable.

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$838,800	\$914,666	109%
OUTSOURCED PERSONNEL	\$1,200,000	\$821,390	68%
OTHER	\$25,000	\$3,669	15%
TOTAL	\$2,063,800	\$1,739,725	84%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$1,200,000 to outsource for Research and/or Planning Studies.

Other

\$25,000 Other Operational Cost

For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 8

Statewide Transportation Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PURPOSE AND SCOPE

The Statewide Planning Team conducts a comprehensive statewide transportation planning process with the Area Development Districts (ADDs), Metropolitan Planning Organizations (MPOs), and the Highway District Offices (HDOs). This process includes consideration of all modes and development of a policy driven and data-based approach to identification, analysis and prioritization of needs. The team also updates a Long-Range Statewide Transportation Plan (LRSTP) as needed and ensures that the LRSTP and LRSTP Program are FAST Act compliant. Through these processes and partnerships, this team provides meaningful input to the Highway Plan through the Unscheduled Needs List (UNL) and District Transportation Plan (DTP).

PROPOSED ACTIVITIES FOR 2016-2017

- Review and update the Public Participation Plan as needed. Ongoing review, no changes needed. Last updated February 2016. 100% Complete
- Review and update the Transportation Cabinet Strategic Plan as needed. Ongoing review, no changes needed. Last updated September 2015. 100% Complete
- Review and update the Long-Range Statewide Transportation Plan as needed. Ongoing review, no changes needed. Last updated November 2014. 100% Complete
- Develop and implement processes as needed to ensure FAST Act compliance. Continuing activity – Attended multiple internal and technical committee meetings as well as reviewed federal regulations. Kept ADDs, MPOs and HDOs informed of KYTC's progress on statewide and regional prioritization efforts as well as statewide performance targets and performance measures development through the Statewide Transportation Planners (STP) Meetings, other meetings and e-mail correspondence. 100% Complete
- Coordinate with other transportation modes, land use, environmental, and other resource agencies. Continuing activity – Attended multi-modal planning committee meetings and worked directly with the ADDs, MPOs and HDOs to obtain and confirm data used in the Project Information Forms (PIF) database as part of the project prioritization process. 100% Complete
- Enhance the statewide transportation planning process by including data collection and analysis, public involvement, and coordination. Continuing activity – Maintained the Statewide Project Identification Forms (PIF) database with help from planning partners (ADDs, MPOs and HDOs), kept the <http://yourturn.transportation.ky.gov> website with direct link from the KYTC webpage to the LRSTP, PIP and other Statewide Public Involvement Documents, and spot checked data provided to the PIF database from the HPMS and HIS databases, while working to develop a new PIF database. 100% Complete
- Identify, evaluate, and prioritize transportation projects through data analysis and public involvement. Continuing activity – Coordinated public involvement and project identification activities with ADDs, MPOs and HDOs incorporating PIF database for data storage. Developed Strategic Highway Investment Formula for Tomorrow (SHIFT) processes for project evaluation, scoring and prioritization including a prioritization website for sharing documents and information with SHIFT participants. 100% Complete

CHAPTER 8

Statewide Transportation Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PROPOSED ACTIVITIES FOR 2016-2017

- Recommend sustainable and fundable projects through performance based planning. **Continuing activity –Working with new data driven SHIFT prioritization process that identifies projects most in need of improvement in defined performance areas to aid in project selection. 100% Complete**
- Develop the draft recommended highway plan including update of project scoring, prioritization processes and other methods as needed. **Used SHIFT to evaluate and score projects to be incorporated in a draft recommended plan for Governor to review and revise in the fall of 2017. 75% Complete**
- Maintain and oversee further development of the Project Identification Form/Unscheduled Needs List (an online database for use as a tool in project prioritization and analysis). **Continuing activity – Development underway for a new and improved PIF database. 75% Complete**
- Maintain and oversee further development of the District Transportation Plan containing the Unscheduled Projects List (UPL) and supporting arguments for prioritization using Performance Based-Planning and Programming (PBPP) principles in compliance with FAST Act initiatives. **Continuing activity – This next evolution of the DTP is being used to document and detail SHIFT scoring and prioritization processes. 75% Complete**
- Coordinate with other Divisions, Districts, and Agencies and incorporate applicable plans as necessary to ensure compliance with FAST Act. **Continuing activity - Coordinated through the SHIFT prioritization process to identify data driven projects using identified performance measures. 100% Complete**
- Coordinate and oversee the ADD Regional Transportation Program. **Continuing activity – Implemented new ADD contracts. Provided ADDs guidance on deliverables. Attended and addressed Regional Transportation Committees. Processed invoices, and facilitated ADD Planner Assessments. Coordinated between ADD's and HDO's on the development and presentation of SHIFT processes. 100% Complete**
- Coordinate with and assist the Highway District Offices as they develop the District Transportation Plan. **Continuing activity – Coordinating with planning partners to document SHIFT prioritization approach and results. 100% Complete**
- Provide guidance and review of Socio-economic reports for quality and consistency. **Continuing activity – Reviewed the following Socio-economic reports developed by the ADDS in FY 2017: 100% Complete**
 - Pembroke, Christian County – 2-381.00
 - US-27, Lincoln County – 8-167.00
 - KY-86, Breckinridge County – 4-8901.00

CHAPTER 8

Statewide Transportation Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PRODUCTS

- Long-Range Statewide Transportation Plan Ongoing review, no changes needed. Last updated November 2014. 100% Complete
- Transportation Cabinet Strategic Plan Update Ongoing review, no changes needed. Last updated September 2015. 100% Complete
- Unscheduled Needs List Managed data entry, verification, and refinement of existing PIF's into web application, and reviewed for quality and consistency. Reviewed proposed PIF's and assigned control numbers. Developing updated streamlined PIF. 100% Complete
- Annual Work Programs and Contracts for 15 Area Development Districts Completed revisions for FY18 work program. Clarified ADD deliverables and their due dates, and reviewed deliverables for completeness. 100% Complete
- Statewide Transportation Planning Meetings STP Meetings held in August, November, January and April. 100% Complete
- Individual ADD Planner Assessments ADD Planners assessed on continuing basis for 15 ADDs throughout FY 2017. 100% Complete
- Public Participation Plan Update Ongoing review, no changes needed. Last updated February 2016. 100% Complete
- Draft Recommended Highway Plan SHIFT Scoring process implemented for prioritizing projects to be used in development of recommended Highway Plan in fall of 2017. 75% Complete
- District Transportation Plan/Prioritization documentation containing the Unscheduled Projects List. This evolution of the DTP is being drafted and used to document and detail SHIFT scoring and prioritization processes. 75% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$743,000	\$1,325,697	178%
OUTSOURCED PERSONNEL	\$75,000	\$0	0%
OTHER	\$25,000	\$20,279	81%
TOTAL	\$843,000	\$1,345,975	160%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$75,000 to outsource for studies and assistance related to the Statewide Planning SPR Work Program

Other

- \$25,000 Other Operational Cost
- For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 9

Metropolitan Planning Organizations
(Areas over 50,000 Population)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
MPO Team

PURPOSE AND SCOPE

The MPO Team provides technical assistance to and coordination with the Metropolitan Planning Organizations (MPOs) for developing and maintaining a continuing, cooperative, and comprehensive (3C) transportation planning process in each of the urbanized areas. This process ensures that state and local transportation projects remain eligible to receive federal funding. Specific planning activities to be conducted in each MPO area are outlined in the MPOs' Unified Planning Work Programs (UPWPs).

PROPOSED ACTIVITIES FOR 2016-2017

- Draft and administer contracts with MPOs and Local Public Agencies (LPAs), providing oversight for federal funds. *Continuing activity-Administered existing contracts with nine MPOs plus Louisville Metro Government for planning activities during FY 2017 and implemented new contracts for Planning activities to be undertaken in 2018. 100% Complete*
- Provide technical assistance, oversight and review of MPO activities, programs, documents, models, and tools. *Continuing activity-Provided technical assistance, oversight and review of MPO activities, programs, documents, models, and tools as needed. 100% Complete*
- Represent the Cabinet at technical, policy, and other committee meetings, and at certification reviews. *Continuing activity-Participated in technical and policy committee meetings at each of the nine MPOs and participated in the Evansville and Cincinnati MPO certification reviews. 100% Complete*
- Promote planning processes in each MPO area that are consistent with current federal regulations. *Continuing activity-Worked with MPOs to promote planning processes consistent with federal regulations as needed. 100% Complete*
- Work with MPOs, transit agencies, and other state transportation agencies to implement performance-based planning processes, including selection of appropriate performance targets and development and implementation of processes to achieve those targets. *Continuing activity-Kept MPOs informed of KYTC's progress on setting statewide performance targets and organized meeting with MPOs and the Office of Transportation Delivery (OTD) to discuss transit asset management plans; participated in FHWA safety target setting workshop. 100% Complete*
- Work with the MPOs, Highway District Offices (HDOs), other agencies, and representatives of various modes of transportation to collect data, identify needs (including connectivity gaps in access to essential services such as housing, employment, health care, education, and recreation), identify funding sources, complete Project Identification Forms (PIFs) and evaluate and rank projects, encouraging consistency between local, regional and state plans and programs and across various modes of transportation. *Continuing activity-Worked with various agencies to collect data, identify needs and funding sources and complete PIFs. Extensive project evaluations and rankings were conducted as part of the Strategic Highway Investment Formula for Tomorrow (SHIFT) processes. 100% Complete*

CHAPTER 9

Metropolitan Planning Organizations (Areas over 50,000 Population)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
MPO Team

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- Participate in planning studies affecting the metropolitan planning areas, including planning studies for rural and small urban areas near metropolitan planning area boundaries. **Continuing activity-Participated in I-69 Ohio River Crossing study in Evansville; KY1065 (Outer loop) Transportation Scoping Study in Louisville; Boone County Transportation Planning Study and KY1303 (Turkeyfoot Road) Scoping Study in Northern Kentucky, Bicycle-Pedestrian Master Plan and Transit Stop Facilities Inventory studies in Lexington; Multimodal Implementation Plan, US 31W Bypass study, and a Plano Road Corridor Plan studies in Bowling Green; a Bicycle Facilities Plan study in Radcliff-Elizabethtown; and a Bike-Ped Master Plan study in Owensboro. 100% Complete**
- Conduct regular Statewide Transportation Planning meetings, to include discussions on current metropolitan planning issues. **Continuing activity-Conducted STP meetings in August and November, 2016 and January and April, 2017. 100% Complete**
- Coordinate with MPOs and other agencies on air quality issues. **Continuing activity-Participated in Interagency Consultation activities in areas subject to air quality conformity and maintained knowledge of existing and proposed air quality regulations. 100% Complete**
- Collaborate with representatives of neighboring MPOs and transportation agencies to promote consistency in performance measures, performance targets, data collection and analysis, and transportation plans and programs within multi-state MPOs and between adjacent MPOs, as applicable. **Continuing activity-Collaborated with the Charleston, WV MPO on issues related to KYOVA. 100% Complete**
- Develop and update metropolitan planning agreements, as needed. **Continuing activity-New agreements in place for Bowling Green, Elizabethtown, and Owensboro; final draft completed for July 2017 adoption in Lexington; and made progress on new agreement for Huntington. 100% Complete**

PRODUCTS

- Compliant and consistent Transportation Improvement Programs (TIPs), Metropolitan Transportation Plans (MTPs) and other documents. **Current TIPs and MTPs in place for all nine MPOs.**
- A Statewide Transportation Improvement Program (STIP) that is consistent with the MPOs' TIPs. **2017-2020 STIP complete and updated as needed.**
- Contracts with MPOs and LPAs to carry out planning activities in the urbanized areas. **Contracts in place with all nine MPOs and Louisville Metro.**
- Statewide Transportation Planning meetings. **Held STP meetings in August, November, January and April.**
- Special studies as needed. **No special studies were undertaken in FY 2017**

CHAPTER 9

Metropolitan Planning Organizations
(Areas over 50,000 Population)

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch
MPO Team

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$346,700	\$441,961	127%
OUTSOURCED PERSONNEL	\$25,000	\$0	0%
OTHER	\$25,000	\$9,858	39%
TOTAL	\$396,700	\$451,819	114%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**Outsourcing**

- \$25,000 Various studies, as needed.

Other

- \$25,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 10

Performance Measures and Congestion/Mobility Analysis

RESPONSIBLE UNIT

Division of Planning

PURPOSE AND SCOPE

The federal transportation legislation, 23 CFR Part 490, as detailed in the Moving Ahead for Progress in the 21st Century bill (MAP-21) and the Federal Register, requires each state to calculate performance measures/targets for the Interstate and non-Interstate National Highway System (NHS) for the purpose of carrying out the National Highway Performance Program (NHPP). The Modal Team is responsible for NHPP areas related to system performance and traffic congestion, freight movement on the interstate, on-road mobile source emissions, and consideration of a greenhouse gas (GHG) emission measures. The analysis includes reviewing, commenting, and complying with FHWA's Notice of Proposed Rule Making (NPRM) relating to these measures, as well as adapting performance measurements to comply with the final rule.

Participate in the pooled fund study for Mobility Measurement in Urban Transportation (MMUT) Research Project to track and guide the mobility measure research.

PROPOSED ACTIVITIES FOR 2016-2017

Using National Performance Management Research Data Set (NPMRDS) and the NPRM for 23 CFR Part 490, the Division of Planning will calculate performance measures and performance targets for the following categories:

System Performance

- Measure the Travel Time Reliability and Peak Hour Travel Times experienced by all traffic on the interstate system and on the non-interstate NHS system. Percent of roadway providing reliable travel time. Submitted comments to amended rulemaking. Developed spreadsheet format without volume weighting. 100% Complete
- Measure the amount of Excessive Delay experienced by all traffic in areas over 1 million population and per capita impact. Submitted comments to the amended rulemaking. Developed spreadsheet to identify procedure based on June 1, 2017 webinar. 100% Complete
- Excessive Delay-The measure identifies peak times when vehicles are travelling at speeds below expected speeds: 35 mph for freeways/ expressways or 15 mph. Submitted comments to the amended rulemaking. Developed spreadsheet to identify procedure based on June 1, 2017 webinar. 100% Complete

Freight

- Measures the Travel Time Reliability and Congestion experienced by freight vehicles on the interstate system Submitted comments to the amended rulemaking. Developed spreadsheet to identify bottlenecks. 100% Complete
- Measure the portions of the Interstate System where actual truck travel speeds throughout the year are at least 50 mph. This measure considers use of the system every day throughout the year. Submitted comments to the amended rulemaking. Developed spreadsheet to identify bottlenecks. 100% Complete

Congestion Mitigation (CM)

- Measure the Emission Reduction resulting through the delivery of projects. Submitted comments to the amended rulemaking. Need discussion with OLP for who will house this PM. 50% Complete

CHAPTER 10

Performance Measures and Congestion/Mobility Analysis

RESPONSIBLE UNIT

Division of Planning

- Measure the traffic congestion and emission reductions through the delivery of CMAQ funded projects. **Provided information as requested. 100% Complete**
- Measure the total emissions reduced per fiscal year, by all CMAQ-funded projects by criteria pollutant and applicable precursors in nonattainment and maintenance areas. **Provided information as requested. Need discussion with OLP for who will house this PM. 50% Complete**

Maintenance and Distribution of Data

- Acquire monthly NPMRDS data, keep server current, and assist in implementing improved data location. Check changes in network quarterly. **100% Complete**
- In coordination with Data Management Branch, develop and maintain a correlation between the NPMRDS Traffic Message Channel (TMC) and KYTC's Linear Referencing System (LRS) at a sub-TMC or Link-level for each unique TMC network. **100% Complete using HERE network**
- Assist in efforts to make travel time/speed data readily available to other personnel of KYTC and partners, as appropriate. **100% Complete**
- Participate in the Texas Transportation Institute's (TTI) pooled-funded Urban Mobility Study. Several elements of research affect measuring mobility, working with travel time data, and MAP-21 Performance Measures. **100% Complete**
- Participate in NPMRDS educational opportunities including monthly webinars, as available. **100% Complete**

PRODUCTS

- Percent of the Interstate System providing for Reliable Travel. **Awaited Final Rule 100% Complete**
- Percent of the non-Interstate NHS providing for Reliable Travel. **Awaited Final Rule 100% Complete**
- Percent of the Interstate System in urbanized areas with a population over 1 million, where peak hour travel times meet expectations. **Awaited Final Rule 100% Complete**
- Percent of the non-Interstate NHS in urbanized areas with a population over 1 million, where peak hour travel times meet expectations. **Awaited Final Rule 100% Complete**
- Percent of the Interstate System Mileage providing for Reliable Truck Travel Time. **Awaited Final Rule 100% Complete**
- Percent of the Interstate System Mileage Uncongested. **Awaited Final Rule 100% Complete**
- Annual Hours of Excessive Delay Per Capita, in urbanized areas with a population over 1 million in nonattainment or maintenance for any of the criteria pollutants under the CMAQ program.
- Total tons of emissions reduced from funded CMAQ projects for applicable criteria pollutants and precursors in all nonattainment and maintenance areas for one or more of the NAAQS criteria pollutants. **Awaited Final Rule 100% Complete**
- AASHTO and Federal Register comments on Performance Measure NPRM. **Provided in August, 2016 100% Complete**
- Simplify, streamline, process, and legally share travel time data with KYTC staff and public. **100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$71,000	\$136,662	192%
OUTSOURCED PERSONNEL	\$50,000	\$22,983	46%
OTHER	\$20,000	\$241	1%
TOTAL	\$141,000	\$159,886	113%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$50,000 Develop Statewide historical Performance Measure values **Task completed in-house while awaiting final rule making**

Other

- \$10,000 Other Operational Costs
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.
- \$10,000 TTI Urban Mobility Study (pooled-fund study) **Paid 100% Complete**

CHAPTER 11

Air Quality

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Air Quality Team

PURPOSE AND SCOPE

The Air Quality Team will coordinate and perform analyses necessary to determine regional air quality conformity. They will also assist in the development of regulations, guidance, and best practices in order to ensure compliance and deliver transportation projects within designated nonattainment and maintenance areas. The team will communicate and coordinate with KYTC Offices and Divisions as well as other Cabinets as needed.

PROPOSED ACTIVITIES FOR 2016-2017

- Perform Regional Air Quality (AQ) Conformity Analysis for metropolitan and rural areas as needed. **100% Complete**
- Monitor AQ data submissions to other agencies – State, federal, local, and academic research. **Reviewed AQ conformity analysis reports from OKI, EMPO, and KIPDA. 100% Complete**
- Provide Kentucky transportation-related data to KY Energy and Environmental Cabinet – Division of Air Quality (EEC-DAQ) for their development of the State Implementation Plans (SIPs) for nonattainment and maintenance areas as well as for other projects. Review, comment, and participate during the preparation of mobile emission budgets for the development of SIPs, SIP amendments, maintenance demonstrations, and budget adjustments. **Provided KY EEC-DAQ requested data for the new 2015 Ozone standard and RFG analysis. Reviewed and commented on MVEBs for NKY 100% Complete**
- Work with KYTC-IT to develop annual updates to the Kentucky VIN/Fleet registration age/type distribution data for use with MOVES. Explore incorporation of other useful datasets. **The 2016 registration data was finished and distributed to the appropriate agencies 100% Complete**
- Prepare Cabinet responses to citizen/agency inquiries for the signature by Governor, Secretary, or Director. **Drafted 5 letters for the director's response to requests for Louisville, KYOVA, and NKY for amendments to the TIPs or MTPs 100% Complete**
- Attend necessary meetings and conferences to stay abreast of the AQ issues as needed. **Attended 9 AQ related meetings 100% Complete**
- Monitor changes and maintain a clearinghouse of knowledge for the Division/Cabinet concerning AQ regulations. This includes maintaining a working knowledge of the National Ambient Air Quality Standard (NAAQS) for the 8-hour ozone and PM_{2.5} standards, EPA's current emissions model, air quality regulations, and implementation guidance. **Partial counties of Boone, Kenton and Campbell redesignated from nonattainment to maintenance for 2008 ozone standard. No changes with PM_{2.5}. Minor updates to the EPA MOVES model 100% Complete**
- Inform KYTC staff, KYTC management, partner cabinets, MPOs, ADDs, public officials, and the general public about air quality, conformity analysis, federal guidelines, and new developments regarding greenhouse gas/climate change requirements. Disseminate information about same. **Preparing and learning on how new PMs. Mayor's office out of Louisville has started a project to develop a GHG Inventory for the city 100% Complete**
- When new ozone standards are adopted, educate local governments to understand transportation impacts. **No new areas will be affected, which would need the educated training 100% Complete**

CHAPTER 11

Air Quality

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Air Quality Team

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- Maintain AQ Website- Maintain appropriate active web-links. Updated the AQ Website in regards to PM_{2.5} and Ozone information, which included new maps and links as the new information was received. Also added new GHG section, an upcoming AQ issue being dealt with at State and Federal levels 100% Complete
- Develop and maintain a KYTC AQ email distribution list for AQ information. 100% Complete
- Participate and/or facilitate monthly AQ conference calls and quarterly meetings. This includes participating in interagency consultation calls regarding transportation conformity for updates and amendments to MTP plans, SIPs, TIPs, and STIPs. Participated in 4 conference calls regarding amendments for KIPDA, OKI, other areas, and FHWA 100% Complete
- Assist with new programs as required by FAST Act, Clean Air Act Amendment (CAAA), NAAQS, and others. Preparing and learning how new PMs from FHWA will affect CMAQ. Still waiting to determine where CMAQ PM will be housed 100% Complete
- Maintain expertise in MOVES_2014a or current AQ model. This includes performing the emissions model runs for ozone and PM_{2.5} regional conformity analyses for areas designated as nonattainment. These areas include but are not limited to Louisville, NKY, Ashland, and Christian County. Developed detailed knowledge on MOVES_2014a model and the post-processing of the data in MySQL 100% Complete
- Coordinate special AQ/MOVES training when needed. Updates to EPA MOVES Model incorporated 100% Complete
- Provide support to the KYTC Office of Local Programs and local agencies for Congestion Management and Air Quality (CMAQ) related issues, as requested. Assist District Offices with the preparation of CMAQ applications including emission calculations and documentation. Received a few calls during the last application cycle (fall 2016). Assisted by helping with emissions for MPO areas that did not have the resources. For the MPO areas that did have the resources, those calls were directed to the appropriate contact 100% Complete
- Maintain a working knowledge of emerging issues and best practices, such as emission reduction strategies. Freight team and AQ coordinate regularly to share information that might be helpful for emission reductions and diesel retrofitting 100% Complete
- Other duties and special projects as assigned. GHG Inventory tool being developed for Louisville. Staying apprised in how PMs will affect AQ/CMAQ 100% Complete

CHAPTER 11

Air Quality

RESPONSIBLE UNIT

Division of Planning
 Multimodal Programs Branch
 Air Quality Team

PRODUCTS

- Ozone and PM_{2.5} regional conformity analysis as required for nonattainment and maintenance areas. **100% Complete**
- Conforming statewide and MPO planning documents. **100% Complete**
- Data to Division of Air Quality as requested. **100% Complete**
- Emission calculations for CMAQ, Green House Gases/Cross Cutting (GHG/CC) as requested. **100% complete**
- VIN/Fleet data for use with MOVES. **100% Complete**
- KYTC AQ website maintenance. **100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$65,100	\$53,073	82%
OTHER	\$5,000	\$210	1%
TOTAL	\$70,100	\$53,282	76%

Other

- \$5,000 Other Operational Cost
 For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PURPOSE AND SCOPE

The Modal Team will collect data, plan, promote, and assist in the development of a multimodal and intermodal transportation systems in Kentucky. The programs addressed in this chapter are public riverports, railroads, truck freight, and ferryboats. The team will administer and have oversight/support of ferry operations, Ferryboat Formula Funds (FBP), Kentucky Short Line Railroad Crossing and Safety Improvement (KRCSI) grants, Kentucky Riverport Improvement (KRI) grants, and other federal or state multimodal contracts. The team serves as staff support for the Water Transportation Advisory Board.

PROPOSED ACTIVITIES FOR 2016-2017

Public Riverports

- Maintain Kentucky's guidelines for KRI grant applications, as defined by current budget bill. **Major update of guidance and application process. 100% Complete**
- Review any KRI grant applications received. **Received 4 applications. 100% Complete**
- Provide staff support for the Water Transportation Advisory Board. **Held 2 meetings in FY 17. 100% Complete**
- Interface with the public and private riverports in the state by responding to information requests and serving as a member of the Kentucky Association of Riverports. Conduct annual on-site visits of active public riverports in the state. **Visited each developed public riverports and attend KAR meetings as requested. 100% Complete**
- Actively participate as a member on the AASHTO Standing Committee on Water Transportation (SCOWT). **Attended SCOWT conference calls. 100% Complete**
- Request and compile annual operations reports from riverports. **Requested from all riverports. Reports returned by 6 of 8 active ports. 100% Complete**
- Update the KYTC Waterways Plan as needed. Plan and host riverport meetings as needed. **Collected ideas for next Waterways Plan/Study. Attended and planned several riverport meetings and site visits. 100% Complete**
- Maintain KYTC's Riverports website. **Weekly or monthly updates. 100% Complete**

Railroads

- Oversee KRCSI projects including contract administration and project inspection. **Two rounds (using older, leftover funds), six total contracts. 100% Complete.**
- Work with Division of Right of Way to administer KRCSI projects as defined by the current budget bill. Review any KRCSI grant applications received. **Two rounds (using older, leftover funds), six total contracts. Transferred to RWU as appropriate. 100% Complete.**
- Assist with development and maintenance of the statewide railroad GIS mapping and data set using RR GIS, RR maps, RR annual reports, and aerial photographs. **Completed by Carol Brent. 100% Complete.**
- Update the KYTC Rail Plan as needed. **100% Complete**
- Participate in various rail studies and research with KYTC involvement. **Monitoring Midwest passenger rail study. Waybill Data loaded into Tableau via ITTS. 100% Complete**

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- Collect railroad annual reports and rail accident/incident reports as directed in 603 KAR 7:090. **100% Complete**
- Actively participate as a member on the AASHTO Standing Committee on Rail Transportation (SCORT), American Railway Engineering and Maintenance-of-Way Association (AREMA), American Short Line & Regional Railroad Association (ASLRRA), and Kentucky Operation Lifesaver. Monitor, track, and distribute information about railroad line abandonments in Kentucky. **100% Complete**
- Respond to public inquiries on passenger and freight rail issues. **Many more blocked crossing complaints in FY 17 compared to previous years. 100% Complete**
- Plan and host rail industry stakeholder meeting as needed. **Met with railroad company representatives several times. 100% Complete**
- Maintain KYTC's Railroads website. **100% Complete**

Freight

- Provide technical assistance and disseminate information to MPOs, ADDs, HDOs, and project teams regarding freight movement, planning, and safety. **100% Complete**
- Evaluate, log, store, and update freight data from MPOs, ADDs, and HDOs as needed. **100% Complete**
- Participate in regional freight planning efforts. **100% Complete**
- Continue involvement with Mid-America Freight Coalition (MAFC), Institute for Trade and Transportation Studies (ITTS), and National Cooperative Highway Research Program (NCHRP), as appropriate. **100% Complete**
- Visit intermodal sites and communicate with rail, water, and road modes to identify freight-related needs and concerns involving highways. **100% Complete**
- Continue relationships with Economic Development to identify and promote intermodal freight. **100% Complete**
- Update information for FHWA Intermodal Connector as needed. **Worked with MPOs for CUFC updates to NHFN. 100% Complete**
- Update the State Freight Plan as needed. **Amendment in final stages; expected submittal to FHWA September 2017. 90% Complete**
- Review draft procedure and perform analysis for MAP-21 Freight Performance Measures. **100% Complete**
- Maintain KYTC's Freight website. **100% Complete**
- Create and implement methodology for considering freight in PIFs, plans, and projects. **Developed Freight LOS and used on multiple projects. KYTC Freight Network used in SHIFT freight scoring. 100% Complete**

Ferryboats

- Coordinate the Kentucky Ferryboat Program. **100% Complete**
- Share information concerning Federal Ferryboat Formula Fund (FBP) program and administer FBD funds. Work with ferry authorities to develop fiscally constrained plans for FBP funds. **Did not complete fiscally constrained plans for FBP funds. 50% Complete**

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

- Plan and host ferryboat meeting as needed. *Awaiting release of FY 17 FBP allocation. 100% Complete*
- Conduct annual on-site visits of Kentucky ferryboat operations. *100% Complete*
- Maintain KYTC's Ferryboat website. *100% Complete*

PRODUCTS

- Kentucky Riverport Improvement project/contract administration *100% Complete*
- Updated Statewide Rail, Waterway, and Freight Plans as needed *100% Complete*
- Updated railroad GIS database and maps for KYTC and public purposes *100% Complete*
- Annual Rail Report *100% Complete*
- Annual Riverport Report *100% Complete*
- Ferryboat operation contracts, site inspections, and invoice review/approval *100% Complete*
- Intermodal Connectors documentation *CUFC sent to FHWA for approval 75% Complete*
- FBP awards administered *100% Complete*
- Rail industry stakeholders meeting as needed *100% Complete*
- Annual Waterways/Ferryboats meeting as needed *100% Complete*
- Contracts and guidance for KRCSI *100% Complete*
- Updated website, meeting minutes, agendas, logistics, and guidance for Water Transportation Advisory Board *100% Complete*

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$148,900	\$179,953	121%
OUTSOURCED PERSONNEL	\$75,000	\$21,731	29%
OTHER	\$45,000	\$3,453	1%
TOTAL	\$269,800	\$204,137	76%

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$75,000 Waterways Plan. **Waited to complete Freight Plan update to FAST Act. 0% Complete**

Other

- \$25,000 Mid America Freight Coalition, a MAASHTO subcommittee paid as a pooled fund* study. **100% Complete**
- \$0 Institute for Trade and Transportation Studies, a SAASHTO subcommittee paid as a pooled fund* study. KYTC has pre-paid July 2012-June 2017.
- \$5,000 Operation Lifesaver - Educational Material (School Children) **100% Complete**
- \$15,000 Other Operational Cost-
For items such as travel, mileage, equipment, and other costs directly associated to the completion of this work chapter
- Tennessee Tombigbee Waterway Dues* are paid through Regional Planning (EA51 General Fund \$50,000) **100% Complete**

* Pooled Fund projects paid via KYTC Research Arm/Innovation Engineer

CHAPTER 13

Traffic Data Forecasting Statewide Traffic Model

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Forecasting and Modeling Team

PURPOSE AND SCOPE

The Forecasting and Modeling Team analyzes traffic trends, provides current and projected traffic volume estimates for planning, project development, environmental analysis, operations, and other purposes. They update and maintain local, regional, and statewide traffic models (KySTM). They collect, process, and assemble data for determining route location or relocation, selecting among alternate routes, or as input into KySTM.

PROPOSED ACTIVITIES FOR 2016-2017

Traffic Forecasting- Reports, Studies, and Analysis

- Prepare traffic estimates for planning studies, design projects, maintenance, and other purposes, as requested and/or needed. **Received 28 traffic forecast requests and 27 completed. 100% Complete**
- Administer statewide traffic forecasting contracts. Provide quality review for traffic projections prepared by the MPOs' and consultants. **Provided quality review for 2 forecasting projects prepared by Districts as part of their design contract and 9 by Central Office Planning as part of their planning contracts. 100% Complete**
- Maintain databases that track traffic forecasts and traffic forecast parameters. Make databases available to other users and offices as appropriate. **Database maintained and a copy made available to other users within the Division of Planning. Provided a monthly report to all District and Design end users of forecasts. 100% Complete**
- Maintain the traffic forecasting web page as a tool for other users. Develop database to track model development and archive status. **Updated forms on webpage 100% Complete**
- Maintain and update internal traffic forecasting tools (e.g. ESAL spreadsheets; turning movement spreadsheets) and Traffic Forecasting report. **Updated ESAL spreadsheet and turning movement spreadsheets. 100% Complete**
- Provide future year forecasting of K-factors/D-factors for the Highway Performance Monitoring System (HPMS) and compare result with TRADAS (or current software) outputs. **Provided factors for HPMS in May 100% Complete**
Participate in Regional Forecaster User's Group. This group includes forecasters from surrounding states that are trying to identify the state of practice for traffic forecasts. **No Forecaster User's Group sessions were held during the year. 100% Complete**
- Provide support to Division of Highway Design in implementation of new Mechanical Pavement Design Guide (MEPDG). **Created new Pavement Design Form with Highway Design 100% Complete**
- Create, publish, and email monthly Traffic Forecast Status Report. Update Forecast milestone dates on Branch Calendar, at least monthly. **Provided a monthly report to all District and Design end users of forecasts. 100% Complete**

CHAPTER 13

Traffic Data Forecasting Statewide Traffic Models

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Forecasting and Modeling Team

Modeling- Reports, Studies, and Analysis

- Administer statewide modeling contracts. Provide quality review for models prepared by the MPOs and Project Development consultants. **Completed 8, initiated 2, and oversaw 4 other letter agreement projects including SHIFT analysis. Participated in three planning contracts. 100% Complete**
- Maintain databases that track traffic models, traffic modeling parameters, model use, and archive status. Make databases available to users. **Database maintained and a copy made available to other users within the Division of Planning. 100% Complete**
- Maintain the traffic modeling web page as a tool for users. **Web pages were reviewed and updates proposed. 100% Complete**
- Obtain and use vehicle registration, employment, and travel time data for use in Travel Demand Models. Research other data sources available. Evaluate benefit/cost of purchased data. **Acquired 2015 employment data for 2015 base conditions. Continue to download HERE data monthly for use in Travel Demand Models and to test potential performance measures. 100% Complete**
- Host/Facilitate the Traffic Model Users Group and TransCAD workshop for traffic forecasters and traffic modelers composed of members from government, academia, and the private sector. **No Model User's Group sessions were held during the year. Participated in a Freight Workshop 50% Complete**
- Participate in Caliper workshops held at adjacent states or conduct local workshop as well as foster a peer exchange with such agencies regarding statewide model and regional models. **Completed or enhanced three regional models 100% Complete**
- Create or modify multi-county and regional models as needed for Project Development. **Participated in two District Access/Connectivity Studies using KYSTM for next SHIFT considerations. 100% Complete**
- Conduct studies to better calibrate and validate models. Attend peer reviews of TMA-MPO models and coordinate model updates as needed for small MPO models. **Participated in a peer review of the OKI model's use for a Ohio River Bridge study. Member of NCHRP 8-94 which is studying how to "right size" a model for a given set of parameters. 100% Complete**
- In coordination with Project Development, identify areas needing an area-wide model. **Developed regional model for two small area studies (SUA) and enhanced the Warren County area model for a Glasgow SUA. 100% Complete**
- Further standardize the interface and formats used in macro level models. **100% Complete**
- Create, publish, and email monthly Traffic Model Status Report. Update Model milestone dates on Branch Calendar, at least monthly. **100% Complete**

PRODUCTS

- Project, Corridor, Road User Cost Reports or other traffic forecasts as requested **100% Complete**
- Monthly Traffic Forecast Status Report **100% Complete**
- Monthly Traffic Model Status Report **100% Complete**

CHAPTER 13

Traffic Data Forecasting
Statewide Traffic Models

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Forecasting and Modeling Team

PRODUCTS (continued)

- Monthly review/update of Branch calendar. **100% Complete**
- Project Development coordination regarding models and forecasts **100% Complete**
- Traffic forecast factors for HPMS **100% Complete**
- Updated tools for consultants and District (e.g. ESAL Calculator; look-up tables)
- Develop, as needed, Travel Demand Models such as:
 - ◆ County or highway district area macro models **100% Complete**
 - **District 9 multi-county model**
 - **Reviewed and participated on 29 projects with modeling**
 - **Enhanced Zone counts in the Warren and Hardin MPO area models**
 - ◆ Corridor and small area micro-simulation models **Created 2 new Microsimulation models**
 - ◆ Continued validation and calibration of new and existing models
 - **Enhanced KYSTM to generate travel time for any region of counties**
 - **Initiated the use of TREDIS to generate economic measures for SHIFT**
 - ◆ **(Added)** SHIFT travel-time coordination using STDM and TREDIS
 - **Modeled over 720 projects for SHIFT using STDM**
 - **Ran TREDIS for 1,111 projects for SHIFT's economic component**

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$310,500	\$315,899	102%
OUTSOURCED PERSONNEL	\$400,000	\$664,028	166%
OTHER	\$41,000	\$225	1%
TOTAL	\$751,500	\$980,151	130%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$200,000 for updates to the Statewide model (outsource) **Spent \$300,000 for update to Statewide model and modeling over 720 projects for SHIFT 100% Complete**
- \$200,000 for updates to Regional Models **Spent \$126,000 to model a Bridge Closure and update EASLs 75% Complete**

Other

- \$25,000 Other Operational Cost - For items such as travel, mileage, meeting registration, and workshop fees.
- \$4,000 VISSIM License for PTV Micro-Simulation Software. **Paid by OIT 100% Complete**
- \$12,000 13 Caliper License fees for TransCAD and TransModeler **Paid by OIT 100% Complete**

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PURPOSE AND SCOPE

The team coordinates and manages the state's Bicycle and Pedestrian Program within Transportation Cabinet and coordinates associated efforts and work within other Cabinets and organizations. They work to expand active transportation opportunities in Kentucky by providing assistance to state and local governments and other groups as requested. This assistance will be in the form of technical advice, development of plans, review of engineering elements, and coordinating studies. The responsibility of the Kentucky Pedestrian and Bicycle Coordinator is to prepare, assist, and promote bicycle and pedestrian programs and projects throughout the state by working with project teams to recommend opportunities for bicycle and pedestrian facilities with proposed and ongoing highway projects. The Bicycle and Pedestrian Coordinator will act as the secretariat for the Kentucky Bicycle and Bikeway Commission and continue to coordinate regular meeting, special meetings, and the annual conference.

The Bicycle and Pedestrian team will coordinate with the Cabinet for [Tourism, Arts and Heritage, the Governor's Office of Local Development](#), the Cabinet for Health and Family Services, the TAP and LPA programs, and the Department for Local Governments to promote and implement pedestrian and bicycle travel projects within the state.

The KYTC Office of Local Programs and the Department for Local Government both administer programs and provide funding that supports and encourages active transportation. The team will coordinate with them, regarding Scenic Byways, the Transportation Alternatives Program (Now called S.T.P. Set Aside or T.E.), Recreational Trail Programs, and the CMAQ program.

PROPOSED ACTIVITIES FOR 2016-2017

Planning

- Assist local governments in the planning, development, improvement and implementation of local bicycle and pedestrian network facilities and provide guidance from and to the FHWA, AASHTO and other national organizations. **The team worked with 32 communities, including three in MPO areas, to improve or create plans for bicycle and or pedestrian facilities. 100% Complete**
- Participate in the KYTC Strategic Highway Safety Plan development and implementation. Pedestrian and bicycle safety are now stand alone sections. **The team helped to develop and implement the long term highway safety plan. Three meetings for this time period. 100% Complete**
- Participate in FHWA Pedestrian Fatality Focus Study for Louisville and Kentucky. **Attended conference calls and reviewed data. 100% Complete**
- Revise, update, and provide guidance for the development of the US Bike Route and statewide bike route touring network. Provide guidance for any changes to the USBR system by submittal to AASHTO for approval and the coordination with the Adventure Cycling Association for route concurrence. **The team is working with 16 different counties and the Adventure Cycling Association to propose 2 new US Bike Routes; USBR 23 in western KY and USBR in eastern KY. 100% Complete**
- Review, revise, and update the Pedestrian and Bicycle Travel Policy, as needed. **Reviewed; no updates needed at this time. 100% Complete**

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

Engineering and Projects

- Answer requests concerning planning and design guidelines regarding pedestrian and bicycle facilities and provide consideration reviews of bicycle and pedestrian projects and facilities with KYTC's HDO and CO Divisions, ADDs, MPOs, and local government. **100% Complete**
- Review the list of proposed resurfacing projects for opportunities to improve biking and walking facilities through restriping and other improvements as part of Maintenance activities. Review for compliance with local bike/ped plans where appropriate. **The team is working to complete the GIS data base of all bike/ped facilities within state right-of-way. This will provide greater opportunities for inclusion of bike/ped facility enhancements, ADA sidewalk upgrades, and better planning for an estimate of what work needs to be done and the cost; creating a better basis for data driven project planning. 100% Complete**
- Provide bicycle and pedestrian consideration reviews within traffic forecast summaries. **The team completed 18 ped/bike consideration reviews in conjunction with forecast reports in FY 2017. 100% Complete**
- Work with the Department of Local Government, Office of Rural and Municipal Aid, and the Local Public Agency with bike/ped projects; providing reviews, recommendations, and current resource guidance (from KYTC, FHWA, AASHTO, ADA, and more). **The team worked with 14 LPA projects that included bike/ped facilities. 100% Complete**
- Review Share the Road sign requests for applicability and proper system placement. **The team reviewed Share the Road Sign requests and provided recommendations for 6 counties and one city. 100% Complete**
- Develop/update coordination with HDO, Maintenance, Traffic Operations, Design, and Planning the Share the Road (STR) sign procedures. **100% Complete**
- GIS applications- Develop and maintaining a GIS data base of:
 - Bicycle and pedestrian network facilities associated with state maintained roadways. **The KY Transportation Center (KTC) collected a complete GIS database of bike/ped facilities within state right of way. The ADD collection efforts provide bike/ped facility data for all roadways within city boundaries, then QA/QC'ed KTC data. This data is displayed and available via online interactive maps. 100% Complete**
 - Local government and Regional bicycling & pedestrian master plans. Document the linkage between the local and regional network facilities. **The online index of available bike/ped plans are now more readily available through sorting by approved/non-approved, county/city, and advocacy organization. 100 % Complete**
- Coordinate to obtain federal, state, local, or private funds available to the cabinet. **100% Complete**
- Provide technical training that includes pedestrian and bicycle best practices and design elements to planners, designers, maintenance and other KYTC staff statewide. **100% Complete**
- Provide technical training that includes pedestrian and bicycle best practices and design elements to planners, designers, and maintenance staff with local governments and other organizations statewide. **The team partnered with the State Health Dept to hold two regional planning workshops and provide additional resources online. 100% Complete**

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2016-2017 (continued)

Education & Enforcement

- Provide training to HDO, ADD, MPO, and local staffs on how to conduct walkability and bikeability audits as requested. The FHWA staff coordinates one bike/walk assessment a year as part of a national emphasis on bike/ped travel and safety. 100% Complete
- Facilitate public education and awareness of non-motorized modes of transportation, as opportunity arises. The team presented bike/ped planning information and resource material at 4 state level bike/ped planning events, 5 community planning meetings and workshops, 3 regional planning meetings, and many other community level events to promote and improve conditions for bicycling and walking. 100% Complete
- Provide educational brochures for DMV offices, bike shops, bike/run clubs, multi-sport retail businesses, health departments, and various bike/ped advocacy groups. 100% Complete
- Work with local law enforcement to promote education and enforcement of pedestrian and bicycle safety laws. Provide information brochures and prepare a presentation at the annual Life Savers Conference. The team coordinated with local law enforcement KY State Police. 100% Complete
- Respond to citizens' need for information; maps, suggested bike routes/events, walking trails, and the availability of funding sources for projects as requested. The Bike/Ped team responded to 24 different letters or emails specifically related to bicycling or pedestrian travel concerns in KY. 100% Complete
- Develop and maintain a clearinghouse of information concerning active transportation - research, methods, the criteria to CO Divisions, ADDs, MPOs, and the local government. 100% complete
- Maintain and update the <http://transportation.ky.gov/Bike-Walk/Pages> and the <http://transportation.ky.gov/share-the-road> websites. The team continues to maintain and update 11 pages on the KYTC web site associated with the Bike/Ped program and bike/ped travel. The bike/ped plans pages was redesigned to provide sorting by approved/non-approved, county/city, and advocacy organization. The switch to a new web software system platform is complete. 100% Complete

Kentucky Bicycle and Bikeways Commission (KBBC)

- Plan quarterly KBBC meetings. The team coordinated and conducted 4 regular KBBC meetings and one annual business meeting with KYTC staff, and other organizations throughout the year. Each meeting was offered through web video or in-person. The meetings were held in accordance with KRS 61.805 to 61.850. 100% complete
- Plan annual KBBC Conference. The team coordinated and held the 2016 meeting at Natural Bridge State Park. 100% complete
- Prepare agenda before each KBBC meeting and minutes after each KBBC meeting. 100% Complete
- Assist KBBC on communications and technical matters. The team worked with the KYTC Office of Audits to determine a set process for completing the necessary financial audits each year associated with the Share the Road License Plates funds. 100% Complete
- Assist in facilitating the Paula Nye Education Grant program. The team worked with 10 communities or organizations (11 applications) in 2016 to prepare their final Paula Nye Grant applications. 100% Complete

CHAPTER 14

Bicycle and Pedestrian Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PRODUCTS

- Completed local bike/ped master plans. 9 plans completed or updated for FY 2017 100% Complete
- A clearing house/tool box of bike/ped resources and related items for the creation or improvement of local master plans. Updated and 100% Complete
- Updated bike/ped brochures and promotional materials. 100% Complete
- Bike/ped technical training courses. 100% Complete
- Walkability/Bikeability Audits. 3 walkability audits 100% Completed
- Quarterly and annual KBBC meetings. All meeting and associated material 100% Complete
- Nye Grant status reports. 100% Complete
- KYTC Bike/Walk. Web pages current and future (new) web pages have been 100% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$99,000	\$129,028	130%
OUTSOURCED PERSONNEL	\$85,300	\$83,386	98%
OTHER	\$35,000	\$2,707	1%
TOTAL	\$220,200	\$215,121	98%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Other

- \$10,000 bike/ped training course instruction with site field visits. 100% Complete
- \$10,000 for Kentucky Bicycle and Bikeway Commission meetings. 100% Complete
- \$5,000 for bike/ped Brochures updates 100% Complete
- \$5,000 for bike/ped educational and safety items for drivers, cyclists, and pedestrians. 100% Complete
- \$5,000 Other Operational Cost
- For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

CHAPTER 15

Highway Safety Improvement Program

RESPONSIBLE UNIT

Division of Traffic Operations
Traffic Engineering Branch
Highway Safety Improvement Program Team

PURPOSE AND SCOPE

The Highway Safety Improvement Program (HSIP) Team evaluates, develops, and implements safety improvements on all roadways. It enhances and continues to update an evaluation process for prioritizing projects for consideration for inclusion in the Highway Safety improvement Program. It also conducts Road Safety Audit Reviews performing the necessary levels of evaluation to identify and develop a conceptual purpose and need statement of safety issues needs. It identifies and evaluates alternatives, generates project cost estimates and recommends phasing priorities where appropriate. The team oversees outsourced activities and works with the other Division and Agencies as needed to complete necessary tasks.

PROPOSED ACTIVITIES FOR 2016-2017

- Continue to develop and update procedures for evaluating safety needs.
- Conduct Roadway Safety Audit Reviews.
- Respond to inquiries about safety issues.
- Identify, evaluate and prioritize safety needs through data analysis and public involvement.
- Evaluate identified needs District wide/Statewide to assist in prioritizing projects for programming in the Highway Safety Improvement Program.

PRODUCTS

- Crash Analysis
- Road Safety Audit Reviews
- Alternatives Studies
- Feasibility Studies
- Special Studies
- Environmental Studies
- Utility Studies
- Project Estimates
- Priorities for Highway Safety Improvement Program

CHAPTER 15

Highway Safety Improvement Program

RESPONSIBLE UNIT

Division of Traffic Operation
Traffic Engineering Branch
Highway Safety Improvement Program Team

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$500,000	\$469,254	94%
OTHER			
TOTAL	\$500,000	\$469,254	94%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Provide \$25,000 to each of 12 Districts to administer the Highway Safety Improvement Program (HSIP), including planning, implementation, evaluation, and reporting.

SEE ATTACHED SPREADSHEET FOR ACCOMPLISHMENTS

\$0	County	Road	BMP	EMP	Description	Total Cost	Design Cost	R/W Cost	Utility Cost	Construction Cost	Item No.	Remark	Project Type
01	BALLARD	KY 473			RECONSTRUCT THE INTERSECTION OF KY 473 AT MOSSTOWN RD FROM 'Y' TO 'T' INTERSECTION IN BALLARD COUNTY.	\$40,000	\$40,000				01-09007	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
01	CALLOWAY	KY 280	0.000	9.209	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 280 FROM KY 94 EAST OF MURRAY (MP 0.000), SOUTHEAST TO KY 1536 (MP 9.209).	\$54,500				\$54,500	01-09000	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #1 (\$171,755.51) DGA BASE, CHANNEL	089 - ROADWAY SAFETY-M&P
01	CALLOWAY	KY 94/US 45	-	-	TRAFFIC SIGNAL REBUILDS AT THE INTERSECTIONS OF KY 94 AND KY 1660 IN CALLOWAY COUNTY, AND US 45 AND KY 1276 IN GRAVES COUNTY. (2014BOP)	\$50,000				\$50,000	01-00909	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER ITEMS PROVIDED BY THE CABINET AND CHANGE ORDER #1	088 - SAFETY PROMO/EDU
01	CALLOWAY	US 641	0.498	3.556	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 641 BEGINNING AT MP 0.498 AND ENDING AT MP 3.556 IN CALLOWAY COUNTY. (2016BOP)	\$250,000	\$250,000				01-09006	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
01	CALLOWAY	KY 299	3.103	10.665	MINOR SHOULDER WIDENING ON KY 299 FROM KY 121 (MP 3.103) TO THE CALLOWAY/MARSHALL COUNTY LINE (MP 10.665) IN CALLOWAY COUNTY.	\$71,899				\$71,899	01-00910	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR	089 - ROADWAY SAFETY-M&P
01	CALLOWAY	KY 299	3.103	10.665	MINOR SHOULDER WIDENING ON KY 299 FROM KY 121 (MP 3.103) TO THE CALLOWAY/MARSHALL COUNTY LINE (MP 10.665) IN CALLOWAY COUNTY.	\$519,500				\$519,500	01-00910	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
01	MCCRACKEN	KY 1954	0.000	3.040	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1954 FROM KY 348 TO 0.085 MI SOUTH OF KY 3075. (2014BOP)	\$60,000		\$60,000			01-09002	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
01	MCCRACKEN	KY 1954	0.000	3.040	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1954 FROM KY 348 TO 0.085 MI SOUTH OF KY 3075. (2014BOP)	\$425,000			\$425,000		01-09002	THIS AUTHORIZATION PROVIDES INITIAL UTILITY FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
02	HANCOCK	US 60	7.750	8.550	ROADSIDE SAFETY IMPROVEMENTS ALONG US 60 FROM JUST S OF BIG RIVERS RD (KY 3092) (MP 7.75), EXTENDING SE TO (MP 8.55).	\$60,000	\$60,000				02-00909	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
02	HENDERSON	US 41	20.090	20.290	INSTALLATION OF HIGH FRICTION SURFACE ON NB US 41 FROM MP 20.090 TO MP 20.290. (2016BOP)	\$140,000				\$140,000	02-00991	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	089 - ROADWAY SAFETY-M&P
02	HENDERSON	US 41	20.090	20.290	INSTALLATION OF HIGH FRICTION SURFACE ON NB US 41 FROM MP 20.090 TO MP 20.290. (2016BOP)	-\$27,920				-\$27,920	02-00991	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% FOR	089 - ROADWAY SAFETY-M&P
02	HOPKINS	KY 112	1.925	9.372	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 112 BEGINNING AT MP 1.925 AND ENDING AT MP 9.372 IN HOPKINS COUNTY. (2016BOP)	\$250,000	\$250,000				02-09006	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
02	HOPKINS	KY 70	7.096	16.170	TRENCH, RESTORE AND PAVE SHOULDERS AND INSTALL GUARDRAIL ALONG KY 70 FROM KY 109 (MP 7.096) TO ILLINIS CENTRAL RAILROAD CROSSING SOUTHWEST OF MADISONVILLE (MP 16.170).	\$550,000				\$550,000	02-00992	TO BE LET TO CONTRACT.	089 - ROADWAY SAFETY-M&P
02	HOPKINS	KY 70	7.096	16.170	TRENCH, RESTORE AND PAVE SHOULDERS AND INSTALL GUARDRAIL ALONG KY 70 FROM KY 109 (MP 7.096) TO ILLINIS CENTRAL RAILROAD CROSSING SOUTHWEST OF MADISONVILLE (MP 16.170).	\$916,173				\$916,173	02-00992	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING	089 - ROADWAY SAFETY-M&P
02	MCLEAN	US 431	-	-	INSTALL INTERSECTION CONFLICT WARNING SYSTEM AT THE INTERSECTION OF US 431 AND KY 85 EAST OF ISLAND.	-\$19,124				-\$19,124	02-09004.01	FUNDS HAVE BEEN TRANSFERED TO ITEM NO. 02-09004.01 SCHEDULED FOR THE OCT. 28, 2016 LETTING. ITEM NO. 02-	
02	MCLEAN	US 431	-	-	INSTALL INTERSECTION CONFLICT WARNING SYSTEM AT THE INTERSECTION OF US 431 AND KY 85 EAST OF ISLAND.	\$99,000				\$99,000	02-09004.01	09004.01	
02	MUHLENBERG	US 62	-	-	RECONSTRUCT THE INTERSECTION OF US 62 AT KY 175 FROM 'Y' TO 'T' INTERSECTION AND PROVIDE INTERSECTION SIGHT DISTANCE IN MUHLENBERG COUNTY.	\$50,000	\$50,000				02-09007	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
02	MUHLENBERG	KY 189	0.000	5.380	MINOR SHOULDER WIDENING ON KY 189 FROM CHRISTIAN/MUHLENBURG COUNTY LINE (MP 0.00) TO KY 175 (MP 5.38) IN MUHLENBURG COUNTY.	\$500,000				\$500,000	02-00912	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	
02	MUHLENBERG	KY 189	0.000	5.380	MINOR SHOULDER WIDENING ON KY 189 FROM CHRISTIAN/MUHLENBURG COUNTY LINE (MP 0.00) TO KY 175 (MP 5.38) IN MUHLENBURG COUNTY.	\$360,379				\$360,379	02-00912	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	
02	OHIO	KY 54	0.000	6.018	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 54 FROM THE DAVIESS/OHIO COUNTY LINE TO KY 69. (2014BOP)	\$381,352				\$381,352	02-09002	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
02	OHIO	KY 54	0.000	6.018	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 54 FROM THE DAVIESS/OHIO COUNTY LINE TO KY 69. (2014BOP)	\$1,000,000				\$1,000,000	02-09002	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
03	BARREN	KY 2189	0.000	6.010	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 2189 FROM US 31W EAST OF PARK CITY (MP 0.000), SOUTH TO US 68 WEST OF GLASGOW (MP 6.010).	\$145,000				\$145,000	03-09006	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #3 (\$249,519.80), ASPHALT BASE, ENTRANCE PIPE, GEOTEXTILE FABRIC AND CHANNEL LINING.	089 - ROADWAY SAFETY-M&P
03	BARREN	US 31E	0.000	6.700	GUARDRAIL END TREATMENT UPGRADES ON US 31E FROM MP 0.00 TO MP 6.7 IN BARREN COUNTY.	\$51,932				\$51,932	03-00927	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING. LC	089 - ROADWAY SAFETY-M&P
03	BARREN	US 68	0.000	18.883	GUARDRAIL END TREATMENT UPGRADES ON US 68 FROM MP 0.000 TO MP 18.883 IN BARREN COUNTY. (2016BOP)	\$282,000				\$282,000	03-00929	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
03	SIMPSON	KY 100	0.000	8.375	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 100 FROM LOGAN-SIMPSON CO. LINE TO ALLEN ROAD (MP 8.375) IN SIMPSON COUNTY, KY. (2014BOP)	\$260,000		\$260,000			03-09008	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY FUNDS TO BEGIN THE RIGHT OF WAY PHASE OF THE PROJECT. DE.	090 - ROADWAY SFTY-CAPITA
03	SIMPSON	KY 100	0.000	8.375	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 100 FROM LOGAN-SIMPSON CO. LINE TO ALLEN ROAD (MP 8.375) IN SIMPSON COUNTY, KY. (2014BOP)	\$370,000			\$370,000		03-09008	THIS AUTHORIZATION PROVIDES INITIAL UTILITY FUNDS FOR THE PROJECT. LC	090 - ROADWAY SFTY-CAPITA
03	VARIOUS	VARIOUS	-	-	STRIPING ON VARIOUS ROUTES IN DISTRICT 3.	\$47,800				\$47,800	03-00925	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	
03	VARIOUS	VARIOUS	-	-	STRIPING ON VARIOUS ROUTES IN DISTRICT 3.	\$500,000				\$500,000	03-00925	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	

03	VARIOUS	VARIOUS	-		HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 3.	\$540,000		\$540,000		THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS FOR THE PROJECT. PROJECT TO BE COMPLETED VIA FORCE ACCOUNT PROCEDURES.	089 - ROADWAY SAFETY-M&P
03	WARREN	KY 185	0.000	0.400	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY-185 FROM US-68 TO DOUBLE SPRINGS ROAD IN BOWLING GREEN. (2016BOP)	\$16,703		\$16,703	03-00924	THIS MOD. ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUDNS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
03	WARREN	US 68	20.889	27.284	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 68 BEGINNING AT MP 20.889 AND ENDING AT MP 27.284 IN WARREN COUNTY. (2016BOP)	\$125,000	\$125,000		03-09012	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
04	BRECKINRIDGE	US 60	-	-	SIGNAL REBUILD AT US 60 AND KY 261 SOUTH OF HARDINSBURG.	\$100,000		\$100,000	04-00988	SCHEDULED FOR THE OCT. 28, 2016 LETTING.	089 - ROADWAY SAFETY-M&P
04	BRECKINRIDGE	US 60	-	-	SIGNAL REBUILD AT US 60 AND KY 261 SOUTH OF HARDINSBURG.	-\$12,397		-\$12,397	04-00988	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	GRAYSON	US 62	25.659	30.239	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 62 BEGINNING AT MP 25.659 AND ENDING AT MP 30.239 IN GRAYSON COUNTY. (2016BOP)	\$100,000	\$100,000		04-09005	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
04	GREEN	US 68	-	-	SIGNAL REBUILD AT MAIN STREET (US 68) AND WEST COLUMBIA AVENUE (KY 417) IN GREENSBURG	\$100,000		\$100,000	04-00987	SCHEDULED FOR THE OCT. 28, 2016 LETTING.	089 - ROADWAY SAFETY-M&P
04	GREEN	US 68	-	-	SIGNAL REBUILD AT MAIN STREET (US 68) AND WEST COLUMBIA AVENUE (KY 417) IN GREENSBURG	\$10,152		\$10,152	04-00987	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	HARDIN	KY 1600	3.315	8.528	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1600 FROM KY 220 (MP 3.315) TO KY 920 (MP 8.528) AT THE MEADE COUNTY LINE. (2014BOP)	\$1,505,701		\$1,505,701	04-09000	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	HARDIN	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN HARDIN, NELSON, AND TAYLOR COUNTIES LOCATED IN DISTRICT 4. (2014BOP)	\$223,850		\$223,850	04-09003	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	HARDIN	KY 316	6.500	6.500	INTERSECTION IMPROVEMENTS AT KY 361 (MP 6.50) AND DECKARD SCHOOL ROAD (CR-1073) IN HARDIN COUNTY, KY.	\$349,190		\$349,190	04-00986	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	HARDIN	KY 567	1.815	1.867	INSTALL GUARDRAIL ALONG KY 567 FROM 0.566 MILES EAST OF SIMPSON BROTHERS DRIVE (MP 1.815) TO 0.090 MILES WEST OF MIDDLE CREEK ROAD (MP 1.867).	-\$2,400		-\$2,400	04-00939	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
04	HARDIN	KY 567	1.815	1.867	INSTALL GUARDRAIL ALONG KY 567 FROM 0.566 MILES EAST OF SIMPSON BROTHERS DRIVE (MP 1.815) TO 0.090 MILES WEST OF MIDDLE CREEK ROAD (MP 1.867).	\$15,000		\$15,000	04-00939	TO BE LET TO CONTRACT	090 - ROADWAY SFTY-CAPITA
04	NELSON	US 62	20.141	27.006	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 62 FROM KY 1858 (MP 20.141) TO CS 4021 (MP 27.006). (2016BOP)	\$30,000	\$30,000		04-09004	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY AND UTILITY FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
04	NELSON	US 62	20.141	27.006	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 62 FROM KY 1858 (MP 20.141) TO CS 4021 (MP 27.006). (2016BOP)	\$265,000	\$265,000		04-09004	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY AND UTILITY FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
04	NELSON	KY 49	4.520	9.442	MINOR SHOULDER WIDENING ON KY 49 FROM MP 4.520 TO MP 9.442 IN NELSON COUNTY.	-\$119,983		-\$119,983	04-00938	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	NELSON	KY 49	4.520	9.442	MINOR SHOULDER WIDENING ON KY 49 FROM MP 4.520 TO MP 9.442 IN NELSON COUNTY.	\$691,000		\$691,000	04-00938	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
04	TAYLOR	KY 55	6.500	6.600	TRENCH SHOULDERS ON KY 55, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE LEFT TURN LANE ONTO KY 1061 IN TAYLOR COUNTY. (2016BOP)	\$11,086		\$11,086	04-00936	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	TAYLOR	KY 55	6.500	6.600	TRENCH SHOULDERS ON KY 55, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE LEFT TURN LANE ONTO KY 1061 IN TAYLOR COUNTY. (2016BOP)	\$156,100		\$156,100	04-00936	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDS FOR THE CONSTRUCTION PHASE OF THE PROJECT. TJ	089 - ROADWAY SAFETY-M&P
04	TAYLOR	KY 55	6.500	6.600	TRENCH SHOULDERS ON KY 55, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE LEFT TURN LANE ONTO KY 1061 IN TAYLOR COUNTY. (2016BOP)	\$104,030		\$104,030	04-00936	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #1 (90,661.35) ASPHALT BASE, MILLING & TEXTURING, EDGE KEY, ENGINEERING AND OTHER ITEMS.	089 - ROADWAY SAFETY-M&P
04	TAYLOR	US 68	2.800	3.100	TRENCH SHOULDERS ON US 68, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE A LEFT TURN LANE ONTO HIDDEN MEADOWS DRIVE IN TAYLOR COUNTY. (2016BOP)	\$5,576		\$5,576	04-00937	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	TAYLOR	US 68	2.800	3.100	TRENCH SHOULDERS ON US 68, ADD BASE, OVERLAY, AND RESTRIPE TO PROVIDE A LEFT TURN LANE ONTO HIDDEN MEADOWS DRIVE IN TAYLOR COUNTY. (2016BOP)	\$96,200		\$96,200	04-00937	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDS FOR THE CONSTRUCTION PHASE OF THE PROJECT. TJ	089 - ROADWAY SAFETY-M&P
04	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 4.	-\$57,853		-\$57,853	04-00940	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
04	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 4.	\$465,000		\$465,000	04-00940	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
05	BULLITT	KY 480	3.292	11.723	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 480 FROM KY 1442 (MP 3.292) EXTENDING EAST TO THE NELSON CO. LINE (MP 11.723) IN BULLITT COUNTY, KY. (2014BOP)	\$1,660,000		\$1,660,000	05-09007	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	090 - ROADWAY SFTY-CAPITA
05	BULLITT	KY 480	3.292	11.723	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 480 FROM KY 1442 (MP 3.292) EXTENDING EAST TO THE NELSON CO. LINE (MP 11.723) IN BULLITT COUNTY, KY. (2014BOP)	\$87,169		\$87,169	05-09007	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING	090 - ROADWAY SFTY-CAPITA
05	JEFFERSON	KY 155	-	-	SAFETY IMPROVEMENTS AT THE INTERSECTION OF KY 155 (TAYLORSVILLE RD) AND KY 1747 (HURSTBOURNE PKWY) IN JEFFERSON COUNTY. (2014BOP)	\$17,000	\$17,000		05-09008	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P

05	JEFFERSON	US 31W	0.000	6.669	TRENCH AND PAVE SHOULDERS ON DIXIE HIGHWAY (US 31W) FROM THE HARDIN COUNTY LINE TO 500 FEET NORTH OF STONEGATE MANOR DRIVE (MP 6.669).		\$465,000	\$465,000	05-00927	TO BE LET TO CONTRACT IN NOVEMBER.	089 - ROADWAY SAFETY-M&P
05	JEFFERSON	I 65	-	-	INSTALL HIGH FRICTION SURFACE ON I-65 MAINLINE THROUGH "HOSPITAL CURVE" AND INSTALL LINEAR DELINEATION PANELS ON CENTER AND OUTSIDE BARRIER WALLS.		\$335,000	\$335,000	05-00929	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	LC 089 - ROADWAY SAFETY-M&P
05	SHELBY	KY 53	10.040	19.609	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 53 BEGINNING AT MP 10.040 AND ENDING AT MP 19.609 IN SHELBY COUNTY. (2016BOP)		\$100,000	\$100,000	05-09012	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT.	TJ 090 - ROADWAY SFTY-CAPITA
05	SPENCER	KY 44/US 60	-	-	SIGNAL REBUILD AT KY 44 @ KY 55 IN SPENCER COUNTY AND AT US 60 @ TIN PIN LANE IN JEFFERSON COUNTY, KY.		\$330,000	\$330,000	05-00926	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	089 - ROADWAY SAFETY-M&P
05	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN JEFFERSON, HENRY, OLDHAM, AND SPENCER COUNTIES IN DISTRICT 5.		-\$2,701	-\$2,701	05-00928	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
05	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN JEFFERSON, HENRY, OLDHAM, AND SPENCER COUNTIES IN DISTRICT 5.		\$300,000	\$300,000	05-00928	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	LC 089 - ROADWAY SAFETY-M&P
06	BOONE	VARIOUS	-	-	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON VARIOUS ROUTES IN BOONE, CAMPBELL AND KENTON COUNTIES IN DISTRICT 6. (2016BOP)		\$24,910	\$24,910	06-00934	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUDNS TO COVER THE LOW BID PLUS 10 % FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
06	BRACKEN	KY 22	0.000	4.387	MINOR SHOULDER WIDENING FROM THE PENDLETON/BRACKEN COUNTY LINE (MP 0.00) TO KY 10 (MP 4.387) IN BRACKEN COUNTY.		\$27,416	\$27,416	06-00935	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
06	BRACKEN	KY 22	0.000	4.387	MINOR SHOULDER WIDENING FROM THE PENDLETON/BRACKEN COUNTY LINE (MP 0.00) TO KY 10 (MP 4.387) IN BRACKEN COUNTY.		\$475,365	\$475,365	06-00935	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LETTING.	LC 089 - ROADWAY SAFETY-M&P
06	CAMPBELL	KY 10	4.420	13.600	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 10 IN CAMPBELL COUNTY. 2012BOP		\$1,470,000	\$1,470,000	06-09006	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	LC 089 - ROADWAY SAFETY-M&P
06	CAMPBELL	KY 10	4.420	13.600	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 10 IN CAMPBELL COUNTY. 2012BOP		\$379,493	\$379,493	06-09006	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
06	CAMPBELL	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN CAMPBELL, KENTON AND HARRISON COUNTIES.		\$264,000	\$264,000	06-00936	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	LC 089 - ROADWAY SAFETY-M&P
06	CAMPBELL	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN CAMPBELL, KENTON AND HARRISON COUNTIES.		-\$110,347	-\$110,347	06-00936	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
06	GRANT	US 25	15.987	22.490	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 25 BEGINNING AT MP 15.987 AND ENDING AT MP 22.490 IN GRANT COUNTY. (2016BOP)		\$250,000	\$250,000	06-09015	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT.	TJ 090 - ROADWAY SFTY-CAPITA
06	KENTON	KY 1829	1.700	2.250	CORRECT DROP OFFS, IMPROVE DITCHING, REMOVE TREES IN CLEAR ZONE AND INSTALL HFS FROM MP 1.7 TO MP 2.25 ON KY 1829 IN KENTON COUNTY.		\$100,000	\$100,000	06-09016	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT.	LC 089 - ROADWAY SAFETY-M&P
06	PENDLETON	KY 17	-	-	CORRECT SUPERELEVATION IN CURVES, REMOVE TREES IN CLEAR ZONE, DITCHING/SHOULDERING, AND EXTEND CULVERT (MP 8.06) ON KY 17 FROM KY 467 TO KY 491. (2014BOP)		\$530,357	\$530,357	06-09011	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
07	BOYLE	KY 3366	0.000	2.055	INSTALLATION OF TRAFFIC SHEET SIGNS ON KY 3366 IN BOYLE COUNTY.		\$30,000	\$30,000	07-00949	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING.	LC 089 - ROADWAY SAFETY-M&P
07	FAYETTE	US 25	11.170	11.620	ACCESS MANAGEMENT AND OFFSET TURN LANES ON US 25 FROM KY 4 (NEW CIRCLE RD) TO CS 3853 (SHRINERS LN).		\$15,000	\$15,000	07-09002	THIS MOD. PROVIDES ADDITIONAL DESIGN FUNDS.	089 - ROADWAY SAFETY-M&P
07	FAYETTE	KY 4	4.740	0.000	REPLACE TURNDOWN END TREATMENTS AND UPGRADE GUARDRAIL ALONG INNER LOOP OF NEW CIRCLE ROAD FROM NICHOLASVILLE ROAD TO NORTH EAST OF RICHMOND ROAD.		\$619,300	\$619,300	07-00937	SCHEDULED FOR THE OCT. 28, 2016 LETTING.	089 - ROADWAY SAFETY-M&P
07	FAYETTE	KY 4	4.740	0.000	REPLACE TURNDOWN END TREATMENTS AND UPGRADE GUARDRAIL ALONG INNER LOOP OF NEW CIRCLE ROAD FROM NICHOLASVILLE ROAD TO NORTH EAST OF RICHMOND ROAD.		\$78,983	\$78,983	07-00937	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% ENGINEERING.	089 - ROADWAY SAFETY-M&P
07	FAYETTE	KY 4	0.000	4.740	REPLACE TURNDOWN END TREATMENTS ON KY 4 IN THE CARDINAL DIRECTION FROM US 27 TO 0.618 MILES SOUTH OF US 60.		\$585,384	\$585,384	07-00935	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
07	FAYETTE	KY 4	4.740	0.000	REPLACE TURNDOWN END TREATMENTS ON KY 4 IN THE NON-CARDINAL DIRECTION FROM US 25 TO US 27.		\$953,303	\$953,303	07-00938	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 5% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
07	JESSAMINE	KY 1268	10.665	10.775	INSTALL GUARDRAIL ALONG GLASS MILL ROAD (KY 1268) FROM 0.176 MILES NORTH OF LONE OAK LANE (MP 10.665) TO 0.123 MILES SOUTH OF FIG LANE (MP 10.775).		\$18,150	\$18,150	07-00946	TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
07	JESSAMINE	KY 1268	10.665	10.775	INSTALL GUARDRAIL ALONG GLASS MILL ROAD (KY 1268) FROM 0.176 MILES NORTH OF LONE OAK LANE (MP 10.665) TO 0.123 MILES SOUTH OF FIG LANE (MP 10.775).		\$6,090	\$6,090	07-00946	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% FOR ENGINEERING	090 - ROADWAY SFTY-CAPITA
07	MADISON	US 25	5.976	12.027	MINOR SHOULDER WIDENING ON US 25 FROM MP 5.976 TO MP 12.027 IN MADISON COUNTY.		\$71	\$71	07-00945	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
07	MADISON	US 25	5.976	12.027	MINOR SHOULDER WIDENING ON US 25 FROM MP 5.976 TO MP 12.027 IN MADISON COUNTY.		\$570,000	\$570,000	07-00945	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	LC 089 - ROADWAY SAFETY-M&P

07	MONTGOMERY	KY 11	0.510	0.582	INSTALL GUARDRAIL ALONG KY 11 FROM 0.071 MILES NORTH OF KY 3363 (MP 0.510) TO 0.582 MILES SOUTH OF BARNETT ROAD (MP 0.582).													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 20% FOR ENGINEERING	090 - ROADWAY SFTY-CAPITA
07	MONTGOMERY	KY 11	0.510	0.582	INSTALL GUARDRAIL ALONG KY 11 FROM 0.071 MILES NORTH OF KY 3363 (MP 0.510) TO 0.582 MILES SOUTH OF BARNETT ROAD (MP 0.582).													TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
07	SCOTT	US 460	0.000	6.830	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 460 FROM FRANKLIN-SCOTT CO. LINE EXTENDING EAST TO (MP 6.830) 0.063 MI EAST OF CANE RUN RD IN SCOTT COUNTY, KY. (2014BOP)													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING. LC	089 - ROADWAY SAFETY-M&P
07	SCOTT	US 460	0.000	6.830	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 460 FROM FRANKLIN-SCOTT CO. LINE EXTENDING EAST TO (MP 6.830) 0.063 MI EAST OF CANE RUN RD IN SCOTT COUNTY, KY. (2014BOP)													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
07	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 7. (2016BOP)													THIS AUTHORIZATION PROVIDES FEDERAL (HSIP) CONSTRUCTION FUNDING FOR THE PROJECT. TJ	089 - ROADWAY SAFETY-M&P
07	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 7. (2016BOP)													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
07	WOODFORD	KY 33	3.017	11.686	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 33 BEGINNING AT MP 3.017 AND ENDING AT MP 11.686 IN WOODFORD COUNTY. (2016BOP)													THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
08	ADAIR	KY 55X	-	-	SIGNAL REBUILD AT KY 55X AND REED STREET.													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
08	ADAIR	KY 55X	-	-	SIGNAL REBUILD AT KY 55X AND REED STREET.													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
08	CASEY	US 127	6.266	13.844	REPLACE TURNDOWN END TREATMENTS ON US 127 FROM KY 501 (MP 6.266) TO KY 70 (MP 13.844).													THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #1 (\$9,094.70), ASPHALT SEAL AGGREGATE, ASPHALT SEAL COAT, GUARDRAIL.	089 - ROADWAY SAFETY-M&P
08	CASEY	KY 70	18.531	21.422	RESHAPE AND SURFACE SHOULDERS, CORRECT DRAINAGE AND INSTALL GUARDRAIL ALONG KY 70 FROM DOE CREEK ROAD (MP 18.531) EXTENDING EAST TO KY 198 (MP 21.422).													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING	089 - ROADWAY SAFETY-M&P
08	CASEY	KY 70	18.531	21.422	RESHAPE AND SURFACE SHOULDERS, CORRECT DRAINAGE AND INSTALL GUARDRAIL ALONG KY 70 FROM DOE CREEK ROAD (MP 18.531) EXTENDING EAST TO KY 198 (MP 21.422).													TO BE LET TO CONTRACT AS A GROUP WITH FDO5 SURFACING FUNDS.	089 - ROADWAY SAFETY-M&P
08	CASEY	US 127	-	-	SIGNAL REBUILD AT US 127 AND KY 70/KY 70X.													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER INSTALL ITEMS COST.	089 - ROADWAY SAFETY-M&P
08	CASEY	US 127	-	-	SIGNAL REBUILD AT US 127 AND KY 70/KY 70X.													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
08	CASEY	US 127	-	-	SIGNAL REBUILD AT US 127 AND KY 70/KY 70X.													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
08	CLINTON	US 127	10.860	11.257	INSTALL OFFSET RIGHT TURN LANES AT THE INTERSECTION OF US 127 AT KY 90 AND KY 734.													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
08	PULASKI	KY 39	3.535	12.809	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 39 BEGINNING AT MP 3.535 AND ENDING AT MP 12.809 IN PULASKI COUNTY. (2016BOP)													THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
08	RUSSELL	KY 76	7.000	7.700	REALIGN THE INTERSECTION OF KY 76 AND KY 80 (MP 7.0-7.7) IN RUSSELL COUNTY LOCATED IN DISTRICT 8.													THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS AND AUTHORIZES INITIAL R/W AND UTILITY FUNDS FOR THE PROJECT. •FUTURE CONSTRUCTION FUNDING TO BE AUTHORIZED WITH HSIP FUNDS• TJ	090 - ROADWAY SFTY-CAPITA
08	RUSSELL	KY 379	10.876	20.348	MINOR SHOULDER WIDENING ON KY 379 FROM KY 55 (MP 10.876) TO US 127 (MP 20.348) IN RUSSELL COUNTY.													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
08	RUSSELL	KY 379	10.876	20.348	MINOR SHOULDER WIDENING ON KY 379 FROM KY 55 (MP 10.876) TO US 127 (MP 20.348) IN RUSSELL COUNTY.													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING. LC	089 - ROADWAY SAFETY-M&P
08	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 8.													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING. LC	089 - ROADWAY SAFETY-M&P
08	VARIOUS	VARIOUS	-	-	HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 8.													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING	089 - ROADWAY SAFETY-M&P
09	BATH	KY 36	1.004	5.441	SAFETY IMPROVEMENTS: ELIMINATE VERTICAL HEADWALLS AND TYPE 7 END TREATMENTS ON KY 36 FROM MAIN ST (MP 1.004) TO LOCUST RD (MP 5.441). (2012BOP)													THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
09	BATH	US 60	4.980	6.429	INSTALL GUARDRAIL ALONG US 60 FROM 700 FEET WEST OF NORTH STEPS ROAD (MP 4.980), EXTENDING EAST TO 175 FEET WEST OF MANDY AVENUE (MP 6.429)													THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% ENGINEERING. CONTRACT INCLUDES FE02 FUNDS FOR BRIDGE DECK RESTORATION & WATERPROOFING NOT AUTHORIZED ON THIS TC-10.	090 - ROADWAY SFTY-CAPITA

09	BATH	KY 36	8.000	11.847	SHOULDERING AND DRAINAGE STRUCTURES ON KY 36 FROM MP 8.00 TO MP 11.847 IN BATH COUNTY.	\$506,500		\$506,500	09-00941	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
09	BOYD	KY 3294	-	-	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 3294.	\$20,700		\$20,700	09-00924	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #2 (\$5,700), CHANNEL LINING AND STATE FORCE ACTIVITIES.	089 - ROADWAY SAFETY-M&P
09	BOYD	KY 168	-	-	SIGNAL REBUILD AT KY 168 @ 29TH STREET IN BOYD COUNTY, KY.	\$63,175		\$63,175	09-00937	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUDNS TO COVER THE LOW BID PLUS 10% FORENGINEERING.	089 - ROADWAY SAFETY-M&P
09	BOYD	KY 168	-	-	SIGNAL REBUILD AT KY 168 @ 29TH STREET IN BOYD COUNTY, KY.	\$42,000		\$42,000	09-00937	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #1 (\$27,098.00) MAST ARM POLES AND \$15,000 FOR ITEMS PROVIDED BY THE CABINET.	089 - ROADWAY SAFETY-M&P
09	CARTER	I-64	161.000	180.100	161.00) TO 0.7 MILE WEST OF THE CARTER/BOYD COUNTY LINE (MP 180.10).	\$979,320		\$979,320	09-09001	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
09	CARTER	I 64	148.665	158.965	CABLE MEDIAN BARRIER INSTALLATION ON I 64 FROM MP 148.665 TO MP 158.965 IN CARTER COUNTY. (2016BOP)	\$20,000	\$20,000		09-09006	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
09	CARTER	I 64	148.665	158.965	CABLE MEDIAN BARRIER INSTALLATION ON I 64 FROM MP 148.665 TO MP 158.965 IN CARTER COUNTY. (2016BOP)	\$1,958,950		\$1,958,950	09-09006	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
09	CARTER	KY 1	0.000	5.777	MINOR SHOULDER WIDENING ON KY 1 FROM THE LAWRENCE/CARTER COUNTY LINE TO 0.077 MI NORTH OF DAVY RUN RD IN CARTER COUNTY.	\$68,925		\$68,925	09-00942	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
09	CARTER	KY 1	0.000	5.777	MINOR SHOULDER WIDENING ON KY 1 FROM THE LAWRENCE/CARTER COUNTY LINE TO 0.077 MI NORTH OF DAVY RUN RD IN CARTER COUNTY.	\$530,000		\$530,000	09-00942	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING. LC	089 - ROADWAY SAFETY-M&P
09	FLEMING	KY 165	4.314	4.751	4.314) TO 0.001 MILE NORTH OF DEER LICK ROAD (MP 4.751).	\$82,500		\$82,500	09-00943	TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
09	FLEMING	KY 165	4.314	4.751	4.314) TO 0.001 MILE NORTH OF DEER LICK ROAD (MP 4.751).	-\$9,084		-\$9,084	09-00943	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING	090 - ROADWAY SFTY-CAPITA
09	GREENUP	KY 2	13.203	17.190	MP 17.190 IN GREENUP COUNTY. (2016BOP)	\$250,000	\$250,000		09-09004	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
09	LEWIS	KY 8	14.689	14.988	14.988 IN LEWIS COUNTY.	\$43,000		\$43,000	09-00940	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
09	MASON	KY 10	7.165	7.577	7.165) TO 0.062 MILE EAST OFBULL FORK ROAD (MP 7.577).	-\$17,080		-\$17,080	09-00944	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING	090 - ROADWAY SFTY-CAPITA
09	MASON	KY 10	7.165	7.577	7.165) TO 0.062 MILE EAST OFBULL FORK ROAD (MP 7.577).	\$60,500		\$60,500	09-00944	TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
09	NICHOLAS	KY 1455	0.000	2.365	EXTENDING NORTH TO US 68 (MP 2.365).	\$570,000		\$570,000	09-00939	SCHEDULED FOR THE OCT. 28, 2016 LETTING	090 - ROADWAY SFTY-CAPITA
09	NICHOLAS	KY 1455	0.000	2.365	EXTENDING NORTH TO US 68 (MP 2.365).	\$498,191		\$498,191	09-00939	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING. (FD05 AND FD52)	090 - ROADWAY SFTY-CAPITA
09	ROWAN	KY 32	8.545	13.645	VETERANS LN (CR-1009) AT (MP 13.645) IN ROWAN COUNTY. (2016BOP)	\$10,000	\$10,000		09-09003	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR ENVIRONMENTAL WORK. LC	090 - ROADWAY SFTY-CAPITA
09	ROWAN	I 64	137.231	148.665	CABLE MEDIAN BARRIER INSTALLATION ON I-64 FROM MP 137.231 TO MP 148.665 IN ROWAN COUNTY. (2016BOP)	\$2,262,228		\$2,262,228	09-09005	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
09	ROWAN	I 64	137.231	148.665	CABLE MEDIAN BARRIER INSTALLATION ON I-64 FROM MP 137.231 TO MP 148.665 IN ROWAN COUNTY. (2016BOP)	\$20,000		\$20,000	09-09005	THIS AUTHORIZATION PROVIDES INITIAL DESIGN FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
09	ROWAN	KY 3318	1.198	4.233	1.198) TO 0.003 MILE SOUTH OF BEARSKIN HOLLOW ROAD MP (4.233).	\$149,000		\$149,000	09-00945	TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
10	BREATHITT	KY 15	8.976	9.376	BREATHITT COUNTY, KY. (2016BOP)	\$10,000	\$10,000		10-09006	THIS MOD. PROVIDES ADDITIONAL DESIGN FUNDS (SAF) FOR THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
10	BREATHITT	KY 15	8.976	9.376	BREATHITT COUNTY, KY. (2016BOP)	\$255,000		\$255,000	10-09006	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	090 - ROADWAY SFTY-CAPITA
10	BREATHITT	KY 52 KY 82	-	-	REPLACE TURNDOWN AND OTHER TARGETED END TREATMENTS AT VARIOUS LOCATIONS ON KY 52 IN BREATHITT, ESTILL, AND LEE COUNTIES, AND KY 82 IN POWELL COUNTY.	-\$34,645		-\$34,645	10-00937	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
10	BREATHITT	KY 52 KY 82	-	-	REPLACE TURNDOWN AND OTHER TARGETED END TREATMENTS AT VARIOUS LOCATIONS ON KY 52 IN BREATHITT, ESTILL, AND LEE COUNTIES, AND KY 82 IN POWELL COUNTY.	\$432,000		\$432,000	10-00937	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
10	ESTILL	KY 52	6.548	6.948	COUNTY, KY. (2016BOP)	\$110,000		\$110,000	10-09007	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	090 - ROADWAY SFTY-CAPITA
10	ESTILL	KY 52	6.548	6.948	COUNTY, KY. (2016BOP)	\$5,000	\$5,000		10-09007	THIS MOD. PROVIDES ADDITIONAL DESIGN FUNDS (SAF) FOR THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA

10	LEE	KY 399	2.159	4.959	MINOR SHOULDER WIDENING ON KY 399 FROM KY 587 (MP 2.159) TO 0.073 MI N OF BARGER LANE (MP 4.959) IN LEE COUNTY.	\$119,844		\$119,844	10-00936	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
10	LEE	KY 399	2.159	4.959	MINOR SHOULDER WIDENING ON KY 399 FROM KY 587 (MP 2.159) TO 0.073 MI N OF BARGER LANE (MP 4.959) IN LEE COUNTY.	\$515,000		\$515,000	10-00936	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	089 - ROADWAY SAFETY-M&P
10	MORGAN	KY 772	4.800	4.900	INTERSECTION AND SIGHT DISTANCE IMPROVEMENTS ON KY 772 AT KY 985 INTERSECTION (MP 4.8 - 4.9). (2014BOP)	\$6,000		\$6,000	10-00929	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #1 (\$18,258.96) CRUSHED AGGREGATE AND TRAFFIC BOUND BASE.	089 - ROADWAY SAFETY-M&P
10	PERRY	KY 80	-	-	INTERSECTION IMPROVEMENTS AT KY 80 AND JUSTICE DRIVE (CR 1863) INTERSECTION AT HAZARD, KENTUCKY IN PERRY COUNTY. (2012BOP)	\$304,309		\$304,309	10-00925	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING	090 - ROADWAY SFTY-CAPITA
10	PERRY	KY 451	-	-	INTERSECTION IMPROVEMENTS AT KY 451 AND ELM/LIBERTY STREET IN PERRY COUNTY LOCATED IN DISTRICT 10.	\$53,489		\$53,489	10-00931	THIS MOD. ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	
10	PERRY	KY 3349			WIDEN ASPHALT SHOULDERS ON KY 3349 IN PERRY COUNTY. (2016BOP)	\$815,953		\$815,953	10-00935	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	089 - ROADWAY SAFETY-M&P
10	PERRY	KY 15/KY 451	11.750	11.950	INTERSECTION IMPROVEMENTS AT KY 15 (MP 11.75-11.95) AND KY 451C IN PERRY COUNTY, KY.	\$52,000		\$52,000	10-00934	THIS MODIFICATION AUTHORIZES ADDITIONAL \$52,000 FOR THE TOTAL CONSTRUCTION COST OF \$225,000 WHICH INCLUDES \$37,000 FOR INSTALL ITEMS.	089 - ROADWAY SAFETY-M&P
10	PERRY	KY 15/KY 451	11.750	11.950	INTERSECTION IMPROVEMENTS AT KY 15 (MP 11.75-11.95) AND KY 451C IN PERRY COUNTY, KY.	\$173,000		\$173,000	10-00934	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 11	20.971	25.039	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM KY 15 (MP 20.971) TO THE POWELL-MONTGOMERY CO. LINE (MP 25.039) IN POWELL COUNTY, KY. (2014BOP)	\$41,059		\$41,059	10-09004	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 11	20.971	25.039	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM KY 15 (MP 20.971) TO THE POWELL-MONTGOMERY CO. LINE (MP 25.039) IN POWELL COUNTY, KY. (2014BOP)	\$1,745,000		\$1,745,000	10-09004	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 11	0.000	3.598	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM POWELL-WOLFE COUNTY LINE (MP 0.0) TO KY 15 (MP 3.598) IN POWELL COUNTY. (2016BOP)	\$1,700,000		\$1,700,000	10-09005	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	090 - ROADWAY SFTY-CAPITA
10	POWELL	KY 11	14.791	15.191	INTERSECTION IMPROVEMENTS AT KY 11 (MP 14.791-15.191) AND AIRPORT RD/WHITE AVE IN POWELL COUNTY, KY. (2016BOP)	\$15,000	\$15,000		10-09008	THIS AUTHORIZATION PROVIDES INITIAL RIGHT OF WAY FUNDS FOR THE PROJECT.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 11	14.791	15.191	INTERSECTION IMPROVEMENTS AT KY 11 (MP 14.791-15.191) AND AIRPORT RD/WHITE AVE IN POWELL COUNTY, KY. (2016BOP)	\$25,000	\$25,000		10-09008	THIS MOD. PROVIDES ADDITIONAL DESIGN FUNDS (SAF) FOR THE PROJECT.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 15/KY 11	-	-	INTERSECTION IMPROVEMENTS AT KY 15 AND KY 11 IN POWELL COUNTY LOCATED IN DISTRICT 10. (2014BOP)	\$15,000	\$15,000		10-00932	THIS MODIFICATION PROVIDES ADDITIONAL RIGHT OF WAY FUNDS FOR THE PROJECT.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 15/KY 11	-	-	INTERSECTION IMPROVEMENTS AT KY 15 AND KY 11 IN POWELL COUNTY LOCATED IN DISTRICT 10. (2014BOP)	\$10,000	\$10,000		10-00932	THIS MODIFICATION PROVIDES ADDITIONAL RIGHT OF WAY FUNDS TO COVER COMMISSIONERS AWARD.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 1057	0.824	4.976	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1057 BEGINNING AT MP 0.824 AND ENDING AT MP 4.976 IN POWELL COUNTY. (2016BOP)	\$60,000	\$60,000		10-09009	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT.	090 - ROADWAY SFTY-CAPITA
10	POWELL	KY 1057	0.824	4.976	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1057 BEGINNING AT MP 0.824 AND ENDING AT MP 4.976 IN POWELL COUNTY. (2016BOP)	\$45,000	\$45,000		10-09009	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT.	090 - ROADWAY SFTY-CAPITA
10	POWELL	KY 9000	35.200	35.800	INSTALLATION OF HFS ON THE EASTBOUND LANES OF KY 9000 (MOUNTAIN PARKWAY) FROM MP 35.2 TO MP 35.8 IN POWELL COUNTY.	-\$59,292		-\$59,292	10-00938	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
10	POWELL	KY 9000	35.200	35.800	INSTALLATION OF HFS ON THE EASTBOUND LANES OF KY 9000 (MOUNTAIN PARKWAY) FROM MP 35.2 TO MP 35.8 IN POWELL COUNTY.	\$217,000		\$217,000	10-00938	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	089 - ROADWAY SAFETY-M&P
11	BELL	US 119	0.000	15.900	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON US 119 FROM US 25E TO THE BELL/HARLAN COUNTY LINE. (2014BOP)	\$608,618		\$608,618	11-00953	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
11	BELL	US 119	0.000	15.900	REPLACE TURNDOWN AND OTHER DEFICIENT END TREATMENTS ON US 119 FROM US 25E TO THE BELL/HARLAN COUNTY LINE. (2014BOP)	\$83,000		\$83,000	11-00953	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	089 - ROADWAY SAFETY-M&P
11	CLAY	US 421	8.128	14.049	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 421 FROM KY 873 (MP 8.128) TO WADE HACKER RD (CR-1183) AT (MP 14.049) IN CLAY COUNTY. (2016BOP)	\$1,450,000		\$1,450,000	11-09006	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	090 - ROADWAY SFTY-CAPITA
11	CLAY	US 421	8.128	14.049	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 421 FROM KY 873 (MP 8.128) TO WADE HACKER RD (CR-1183) AT (MP 14.049) IN CLAY COUNTY. (2016BOP)	\$329,756		\$329,756	11-09006	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
11	KNOX	KY 1304	0.000	6.100	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1304 FROM US 25E TO KY 11. (2014BOP)	\$1,701,000		\$1,701,000	11-09003	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING.	089 - ROADWAY SAFETY-M&P
11	KNOX	KY 1304	0.000	6.100	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1304 FROM US 25E TO KY 11. (2014BOP)	\$322,962		\$322,962	11-09003	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
11	KNOX	KY 229	8.127	8.288	INSTALL GUARDRAIL ALONG KY 229 FROM 0.011 MILE NORTH OF KY 1304 (MP 8.127) TO 0.172 MILE NORTH OF KY 1304 (MP 8.288)	\$45,100		\$45,100	11-00959	TO BE LET TO CONTRACT	090 - ROADWAY SFTY-CAPITA

11	LAUREL	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	\$125,000		\$125,000	11-09005	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS FOR THE PROJECT. LC	090 - ROADWAY SFTY-CAPITA
11	LAUREL	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	\$495,000		\$495,000	11-09005.20	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE LETTING. LC	090 - ROADWAY SFTY-CAPITA
11	LAUREL	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	\$524,000		\$524,000	11-09005.10	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	090 - ROADWAY SFTY-CAPITA
11	LAUREL	VARIOUS	-	-	INTERSECTION IMPROVEMENTS AT VARIOUS LOCATIONS IN LAUREL, KNOX, & BELL COUNTIES LOCATED IN DISTRICT 11.	-\$10,093		-\$10,093	11-09005.10	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
11	LAUREL	KY 3094	-	-	SHOULDER TRENCHING ON KY 3094 FROM US 25 TO KY 490.	\$205,859		\$205,859	11-00954	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% ENGINEERING.	089 - ROADWAY SAFETY-M&P
11	LAUREL	KY 3094	-	-	SHOULDER TRENCHING ON KY 3094 FROM US 25 TO KY 490.	\$534,000		\$534,000	11-00954	THIS MODIFICATION CORRECTS PREVIOUSLY AUTHORIZED FUNDING BETWEEN THE FD52 FUNDS (\$585,905) AND THE FD05 FUNDS (\$153,954). LPI	089 - ROADWAY SAFETY-M&P
11	LAUREL	US 25	-	-	SIGNAL REBUILD AT US 25 AND SOUTH LAUREL HIGH SCHOOL.	\$100,000		\$100,000	11-00955	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
11	LAUREL	KY 80	6.000	10.000	EXTEND TURN LANES AND ADD ACCELERATION LANE ON KY 80 BETWEEN MP 6.00 AND MP 10.00.	\$5,933		\$5,933	11-00957	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
11	LAUREL	KY 80	6.000	10.000	EXTEND TURN LANES AND ADD ACCELERATION LANE ON KY 80 BETWEEN MP 6.00 AND MP 10.00.	\$270,000		\$270,000	11-00957	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
11	WHITLEY	US 25W	16.380	24.861	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 25W BEGINNING AT MP 16.380 AND ENDING AT MP 24.861 IN WHITLEY COUNTY. (2016BOP)	\$75,000	\$75,000		11-09007	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA
11	WHITLEY	KY 296	-	-	SIGNAL REBUILD AT KY 296 AND KY 2386 IN WHITLEY COUNTY.	\$42,047		\$42,047	11-00956	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
11	WHITLEY	KY 296	-	-	SIGNAL REBUILD AT KY 296 AND KY 2386 IN WHITLEY COUNTY.	\$100,000		\$100,000	11-00956	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
11	WHITLEY	KY 92	10.460	16.615	MINOR SHOULDER WIDENING ON KY 92 FROM MP 10.46 TO MP 16.615 IN WHITLEY COUNTY.	\$760,943		\$760,943	11-00958	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
11	WHITLEY	KY 92	10.460	16.615	MINOR SHOULDER WIDENING ON KY 92 FROM MP 10.46 TO MP 16.615 IN WHITLEY COUNTY.	\$259,403		\$259,403	11-00958	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
12	FLOYD	KY 979	0.000	0.250	CURVE REVISION ON KY 979 FROM KY 122 (MP 0.00) TO CR 1184 (MP 0.25). (2012BOP)	\$150,000	\$150,000		12-00939.01	THIS MODIFICATION PROVIDES ADDITIONAL UTILITY FUNDS FOR THE PROJECT. LC	089 - ROADWAY SAFETY-M&P
12	FLOYD	KY 2030	6.000	7.530	INSTALL GUARDRAIL ALONG KY 2030 FROM 0.170 MILE EAST OF GRANT AKERS CEMETERY ROAD (MP 6.000) TO 0.360 MILE WEST OF COUNTRY OAKS ROAD (MP 7.530).	-\$24,321		-\$24,321	12-00960	THIS MOD. RELEASES \$24,321 TO REFLECT THE LOW BID PLUS 10% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
12	FLOYD	KY 2030	6.000	7.530	INSTALL GUARDRAIL ALONG KY 2030 FROM 0.170 MILE EAST OF GRANT AKERS CEMETERY ROAD (MP 6.000) TO 0.360 MILE WEST OF COUNTRY OAKS ROAD (MP 7.530).	\$165,000		\$165,000	12-00960	TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
12	JOHNSON	KY 40	-	-	SIGNAL REBUILD AT KY 40 @ KY 1428 IN JOHNSON COUNTY, KY.	\$65,756		\$65,756	12-00956	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
12	KNOTT	KY 3391	3.203	3.438	1161 FEET NORTH OF MEMORY LANE (MP 3.438). TO	\$34,100		\$34,100	12-00963	TO BELET TO CONTRACT.	
12	LAWRENCE	KY 1	12.800	14.100	MINOR SHOULDER WIDENING ON KY 1 FROM MP 12.8 TO MP 14.1 IN LAWRENCE COUNTY.	\$202,382		\$202,382	12-00958	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
12	LAWRENCE	KY 1	12.800	14.100	MINOR SHOULDER WIDENING ON KY 1 FROM MP 12.8 TO MP 14.1 IN LAWRENCE COUNTY.	\$33,031		\$33,031	12-00958	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
12	LAWRENCE	KY 32	14.630	16.920	MINOR SHOULDER WIDENING ON KY 32 FROM MP 14.63 TO MP 16.92 IN LAWRENCE COUNTY.	-\$48,437		-\$48,437	12-00959	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 15% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
12	LAWRENCE	KY 32	14.630	16.920	MINOR SHOULDER WIDENING ON KY 32 FROM MP 14.63 TO MP 16.92 IN LAWRENCE COUNTY.	\$354,369		\$354,369	12-00959	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET. LC	089 - ROADWAY SAFETY-M&P
12	MARTIN	KY 292	18.973	19.469	0.279 MILE NORTH OF WHITE ROAD (MP 19.469). TO	-\$19,811		-\$19,811	12-00961	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
12	MARTIN	KY 292	18.973	19.469	0.279 MILE NORTH OF WHITE ROAD (MP 19.469). TO	\$77,000		\$77,000	12-00961	TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
12	PIKE	KY 194	22.000	29.210	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 194 BEGINNING AT MP 22.000 AND ENDING AT MP 29.210 IN PIKE COUNTY. (2016BOP)	\$125,000	\$125,000		12-09003	THIS AUTHORIZATION PROVIDES FEDERAL HSIP FUNDING FOR THE DESIGN PHASE OF THE PROJECT. TJ	090 - ROADWAY SFTY-CAPITA

99	MARTIN	KY 1714	8.927	9.692	8.927)	INSTALL GUARDRAIL ALONG KY 1714 FROM 0.392 MILE NORTH OF DAVIS BRANCH ROAD (MP TO BUCKS BRANCH ROAD (MP 9.692).	\$82,500		\$82,500	12-00962	TO BE LET TO CONTRACT.	090 - ROADWAY SFTY-CAPITA
99	MARTIN	KY 1714	8.927	9.692	8.927)	INSTALL GUARDRAIL ALONG KY 1714 FROM 0.392 MILE NORTH OF DAVIS BRANCH ROAD (MP TO BUCKS BRANCH ROAD (MP 9.692).	-\$20,416		-\$20,416	12-00962	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	090 - ROADWAY SFTY-CAPITA
99	VARIOUS	-	-	-		PURCHASE FLORESCENT YELLOW SIGN SHEETING FOR HORIZONTAL ALIGNMENT WARNING SIGNS.	\$500,000		\$500,000	99-00913	THIS MOD. PROVIDES ADDITIONAL FUNDS TO CONTINUE THESE ACTIVITIES.	090 SAFETY
99	VARIOUS	-	-	-		STATEWIDE INTERSECTION SIGNAL REBUILDS.	\$30,000	\$30,000		99-09000	THIS MODIFICATION PROVIDES ADDITIONAL DESIGN FUNDS TO COVER THE FINAL INVOICE. LC	089 - ROADWAY SAFETY-M&P
99	VARIOUS	VARIOUS	-	-		STATEWIDE REPLACEMENT OF RAISED PAVEMENT MARKERS ON VARIOUS ROUTES IN DISTRICTS 4, 6, 7, 9, 10 AND 11. (2014BOP)	\$31,000		\$31,000	99-00916	THIS MOD. PROVIDES ADDITIONAL CONSTRUCTION FUNDS TO COVER CHANGE ORDER #2 (\$27,300) INLAID PAVEMENT MARKERS.	089 - ROADWAY SAFETY-M&P
99	VARIOUS	VARIOUS	-	-		STATEWIDE PAVEMENT MARKER CONTRACTS.	\$3,036,000		\$3,036,000	99-00922	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE ESTIMATE PRIOR TO THE LETTING. LC	089 - ROADWAY SAFETY-M&P
99	VARIOUS	VARIOUS	-	-		STATEWIDE PAVEMENT MARKER CONTRACTS.	-\$352,375		-\$352,375	99-00922	THIS MODIFICATION ADJUSTS PREVIOUSLY AUTHORIZED CONSTRUCTION FUNDS TO COVER THE LOW BID PLUS 10% FOR ENGINEERING.	089 - ROADWAY SAFETY-M&P
99	VARIOUS	-	-	-		DATA COLLECTION TO FACILITATE IMPROVING THE RAILROAD CROSSING INVENTORY.	\$100,000		\$100,000	-	DATA COLLECTION AND INVENTORY IMPROVEMENTS TO BE ACCOMPLISHED BY STATE FORCES. THIS MOD. PROVIDES ADDITIONAL FUNDS TO CONTINUE THESE ACTIVITIES.	090 - SAFETY
							\$58,212,375	\$2,457,000	\$455,000	\$1,380,000	\$53,920,375	

CHAPTER 16

Quality Assurance

RESPONSIBLE UNIT

Division of Highway Design
Quality Assurance Branch

PURPOSE AND SCOPE

The purpose of the Quality Assurance Branch is to ensure that federal guidelines are met and to improve Kentucky Transportation Cabinet's (KYTC) design deliverables and its policy, processes and procedures. There are three programs within the QAB designed to reach these objectives: Value Engineering (VE), Constructability Review, and Post-Construction (PC) Review.

The KYTC **Value Engineering (VE)** program was established in 1995 as an independent review process to examine potential ways to improve a project's design or reduce its cost. The current federal transportation law, titled Moving Ahead for Progress in the 21st Century (MAP-21), now specifies that all roadway projects on the NHS that have a total phase cost exceeding \$50 million and bridge projects exceeding \$40 million will require a VE study when there are any federal funds used for the project. The "total phase cost" of a project is that which is estimated for planning, environmental, design, right-of-way, utility relocation, and construction. Recommendations developed in a VE study are shared with the project development team to consider for implementation. In addition, the VE program may be used to address other projects that may be used to review processes, standards and/or specifications.

The **Constructability Review** program assists Project Managers by examining projects for errors, omissions, and issues related to the constructability of a project. Currently much of a project review focuses on two "red-flags" – Maintenance of Traffic (MOTs) and horizontal/vertical alignments for roadways and structures. Along with these two topics, QAB is currently compiling an annual check list comprised of other "red-flag" issues that frequently reoccur during the plan review process. The follow-up action is to present these findings at various conferences and meetings. These presentations facilitate discussions on items that need to be addressed.

The **Post-Construction Review (PCR)** program was established to identify issues that arise in the construction phase that could have been avoided or improved during the design phase. Typically, projects that exceed \$1 million dollars (state and federally funded) in construction cost and have been open to the public for approximately one year are reviewed.

Each year, QAB staff identifies potential projects for the PCR program, with assistance from the District Project Development staff in July and August. PCR meetings are then held between the months of August and April. Consultants, Contractors, Federal Highway Administration (FHWA) and KYTC Personnel are invited to participate. Prior to the meeting, invitees are provided information such as documented change orders to review. During these meetings, it is discussed how each project progressed and what the major issues were. The attendees participate as a team to identify collective solutions for the relevant issues. After the meeting, a draft Fact Sheet for each project is created and sent back to the participants for review. Once finalized, the Fact Sheet is distributed among KYTC staff, FHWA and the American Council for Engineering Companies of KY (ACEC-KY).

CHAPTER 16

Quality Assurance

RESPONSIBLE UNIT

Division of Highway Design
Quality Assurance Branch

PURPOSE AND SCOPE (continued)

Data collected from each of the three programs are entered into the **Lessons Learned** database. The collection of data may also substantiate follow-up meetings or contacting those KYTC staff who can make decisions to improve, change, or revise the design process to improve overall quality and cost savings of future projects.

PROPOSED ACTIVITIES (Annually)

- Conduct Constructability Reviews to improve quality of designs and enhance efficiency of work flow during the construction phase.
There were 52 Constructability Reviews by QAB staff.
- Continue to develop and update policy and procedures for all aspects of each program.
Received approval of VE monitoring process
Implemented regular monitoring process for VE recommendations
- Conduct mandated Value Engineering studies to meet federal guidelines.
Conducted one VE study, per federal requirements.
Compiled data for FHWA annual VE program survey.
- Conduct Post-Construction Reviews for each district. Collect data for the 3 program datasets to include in the Lessons Learned GIS geodatabase.
21 CR reviews conducted in 11 of 12 districts.
22 Data entered into database and fact sheets issued.
- Provide technical assistance from the programs to identify, evaluate and prioritize needs for improvements and coordinate those recommendations within the Cabinet through the collection and analysis of data.
Participated in the Work Zone Traffic Control Committee reviews.
- Educate KYTC staff and others on topics identified through the various reviews and analysis of the Lessons Learned data.
15 Elevated Issues identified and investigated.
- Educate KYTC staff and others by developing and publishing the Quality Matters newsletter, containing content about findings from the reviews or design innovations.
Two issues were published.
- Educate KYTC staff and others by developing and publishing Tech Briefs, each focused on a single, important topic identified through the reviews.
ADA Tech Brief development continued.
- Train in-house and consultant personnel on findings for the betterment of designs and design processes. *N/A*

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Quality Assurance

RESPONSIBLE UNIT

Division of Highway Design
Quality Assurance Branch

PROPOSED ACTIVITIES (Annually) (continued)

- Ensure consistency and quality of design products delivered by KYTC.
Developed prequalification categories related to utility design, coordination, and inspection.
Reviewed prequalification applications from consultant firms for the following categories:
 - Advanced Traffic Engineering Design and Modeling
 - Rural Roadway Design
 - Urban Roadway Design
 - Surveying
 - Photogrammetry
 - Water and Sewer Design
 - Gas Design
 - Electric Design
 - Communications Design
 - Utility Coordination
 - Utility Construction Inspection
- Measure and document performance of plan submittals to Division of Highway Design
This task was measured by QAB for two months and then transferred to another branch.
- Oversee outsourced activities.

PRODUCTS

- VE Studies
1 study completed and report issued
- VE Punch Lists
1 punch list issued.
Followed up with project managers on all VE recommendations in which final decisions had not yet been reached or implemented. Documented all findings.
- VE Project Database
Database updated.
- VECP Database
Database updated
- Constructability Review Database
All data entered from reviews
Functionality enhanced
- Constructability Project Review Reports
52 reports including marked-up plans issued to project managers statewide.
- Post-Construction Review Fact Sheets
Fact sheets developed and sent out to district staff for 21 reviews.
- Post-Construction Review Database
Database updated

CHAPTER 16

Quality Assurance

RESPONSIBLE UNIT

Division of Highway Design
Quality Assurance Branch

PRODUCTS (continued)

- Quality Matters Newsletter
Created 2 issues (Winter 2017, Spring 2017) and distributed statewide to consultants, academia, federal, and state employees.
Added issues to website for future access.
- Tech Brief Publication
Not yet complete
- Lessons Learned Geodatabase
Migrated away from geodatabase to standard databases for greater ability to search by category and topic.
- Lessons Learned Mapping
NA
- Annual Reports from all Programs
FHWA FFY16 VE Annual Report
FHWA FY17 Work Program Accomplishments
Annual report to the Director (all programs)
- Special Studies
NA

DISTRIBUTION OF ESTIMATED COST FOR 2016-2017

	2016-2017	Expended	Percent Expended
PERSONNEL	\$360,000	\$410,498	114%
OTHER	\$140,000	\$537	1%
TOTAL	\$500,000	\$411,034	82%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

- \$140,000 to outsource but not limited to the following: Publishing newsletter and briefs, Value Engineering Training, SAVE International Membership fees, SAVE International Annual Conferences, AASHTO VE Committee Conferences, Transportation Research Board (TRB) attendance, VE studies that are state funded, participation in TRB committees, American Society for Quality (ASQ) membership and attendance to meetings, research or assistance related to Quality Assurance and Quality Control, research projects initiated by QAB.

Note: FHWA will be notified in advance when the Quality Assurance Branch needs to utilize the funds.