



TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.transportation.ky.gov/

Steven L. Beshear
Governor

Michael W. Hancock, P.E.
Secretary

September 29, 2015

Mr. Thomas Nelson
Division Administrator
Federal Highway Administration
330 West Broadway
Frankfort KY 40601

Dear Mr. Nelson:

Enclosed are three copies of the Annual Performance and Expenditure Report for the June 16, 2014, through June 15, 2015 (Fiscal Year 2015) Planning Work Program Project SP-0015 (001) of the Kentucky Transportation Cabinet. If you have any questions, please contact me at 564-7183.

Sincerely,

A handwritten signature in blue ink, appearing to read "John Moore".

John Moore, P.E.
Director
Division of Planning

JM/NH

Enclosures



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



**ANNUAL PERFORMANCE AND
EXPENDITURE REPORT
FOR
FISCAL YEAR 2015 ANNUAL WORK PROGRAM
PROJECT SP 0015 (001)
JUNE 16, 2014 THROUGH JUNE 15, 2015**

SEPTEMBER 2015

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, 2014 through June 15, 2015 (Fiscal Year 2015).

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 Statewide Transportation Plan. The Division made great efforts to aid the Cabinet and our MPO partners in making sure our required documents and processes were compliant with SAFETEA-LU and the associated revised regulations promulgated in 23 CFR 450. 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 made great strides in the implementation of the Data Needs Analysis (DNA) scoping study process for the Six Year Plan Projects. The Division developed and implemented the District Transportation Plan (DTP) process resulting in the first DTP.

All these activities occurred while the Division of Planning continued to collect necessary data, manage and report the data as required, respond for 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 2015 Work Program. Expenditures are summarized in the document showing the initial budget, expenditures, and percentages of expenditures.

FY 2015
SPR CHAPTER FUNDING SUMMARY

<u>CHAPTER AND TITLE</u>		<u>BUDGETED</u>	<u>EXPENDED</u>
1	SPR Work Program	\$32,900	\$3,841
2	Personnel Training	\$350,700	\$67,210
3	Traffic and Equipment Management	\$2,875,500	\$1,906,495
4	Roadway Systems	\$629,200	\$505,953
5	Cartography	\$471,400	\$275,805
6	Highway Information System	\$1,812,900	\$1,361,336
7	Strategic Corridor Planning	\$2,005,200	\$1,835,977
8	Statewide Transportation Planning	\$1,177,800	\$1,317,419
9	Metropolitan Planning Organizations	\$564,000	\$334,100
10	Performance Measures and Congestion/Mobility Analysis	\$217,700	\$316,085
11	Air Quality	\$74,900	\$64,429
12	Multimodal Transportation	\$318,800	\$265,043
13	Traffic Data Forecasting	\$589,200	\$498,280
14	Bicycle and Pedestrian Program	<u>\$134,700</u>	<u>\$120,462</u>
	Planning Total	\$11,254,900	\$8,872,435
	Percent Expended		79%
15	Highway Safety Improvement Program	\$500,000	\$405,990
16	Value Engineering and Quality Assurance	<u>\$500,000</u>	<u>\$231,641</u>
	Other Items Total \$1,000,000.00	\$1,000,000	\$637,631
	Percent Expended		64%
	TOTAL	\$12,254,900	\$9,510,066
	Percent Expended		78%

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 2014-2015

- 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 2014 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 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$32,900	\$3,841	1%
OTHER			
TOTAL	\$32,900	\$3,841	1%

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 2014-2015

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 3 PAGES FOR 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 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$315,700	\$43,252	14%
OTHER	\$35,000	\$23,958	68%
TOTAL	\$350,700	\$67,210	19%

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
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Training Events	1	2	3	4	5	6	7	8	9	10	11	12	13	14
PEEK			X											
TMG			X										X	
TRADAS			X							X			X	
Adobe Illustrator					X								X	
Microstation				A	A	A	X							
HPMS						A							X	
Business Objects Training						A	A	A		X		X	X	
SQL Training						A				A			X	
Visual Basic (macros)						A				X			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	A	
KYTC Traffic Engineering Design							X	X	X				X	X
Public Involvement							X	X	X			X	X	X
Road Safety Audit Training							X		X			X		A
Highway Safety Manual Training							X		X					X
Purpose and Needs Statement Training							X							
NEPA							X	X	X					
GIS						A	X	X		X	X	X	X	X
Microsimulation							X						X	

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
	Administration of FHWA Planning and Research Grants									X			X	X
Planning for Operations									X	X	X	X		X
Congestion Management and Reliability									X	X	X	X	X	
Transportation and Land Use									X			X	X	
Climate Change									X		X			
STAQS											X			
MOVES											X			
TransCAD/Modeling									X				X	
Census Training					X			X	X	X	X		X	
Training ofr State Bike/Ped Coordinator														X
Air Quality Conformity									X		X			

X =Planned to attend but did not

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 acquisition, distribution, operation, maintenance, and repair of all equipment used at traffic data acquisition stations. The Equipment Section performs site design, 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 performs quality control for, and processes and maintains data collected from data acquisition stations located statewide. The Data Section generates 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 2014-2015

- Maintain, update, analyze, provide quality assurance, and make available data from approximately 15,000 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.
- Download, process, and analyze data for every day of the year from approximately 100 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. Reports were generated and sent to FHWA monthly. 100% Complete.
- With the KYTC District Offices, collect and process vehicle volume data from approximately 5,100 short-duration, portable-machine, coverage and ramp counts. Received approximately 4,575 counts of approximately 5,225 assigned from District Offices for short-duration counts in calendar year 2014. Assigned approximately 4,900 short-duration counts to Districts in calendar year 2015. 88% Complete

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

- With KYTC District Offices, collect and process vehicle volume data from approximately 500 short-duration, portable-machine, local-road, bridge counts. **Approximately 34 short duration local road bridge counts were performed in calendar year 2014.**
- 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 can vary significantly from year to year with the average being approximately 100 total, each of which typically includes multiple volume and turning movement counts. **Approximately 80 special counts (100% of those received) were reviewed, assigned, processed, analyzed and distributed in calendar year 2014.**
- Concurrent with coverage, interstate, ATR, WIM, and ramp counts, collect and process vehicle classification data from approximately 1,400 stations, which complies with the FHWA, *Traffic Monitoring Guide* recommendation of 25%-30%. **Vehicle classification data was collected and processed from approximately 880 stations (~19 %) in calendar year 2014.**
- Submit monthly reports of hourly ATR records to FHWA. **Automatic Traffic Recorder (ATR) data was submitted to FHWA monthly 100% Complete.**
- 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 2014. 100% Complete**
- Update in-house databases to include any new stations or roadway alignment changes. Correct beginning and ending mile points to better represent traffic generators. **All in-house databases were updated in a timely manner as needed. 100% Complete**
- Continue to grow and maintain the WIM data program to collect, process, analyze, and submit quarterly, one-week, WIM data at permanent WIM stations to FHWA. Periodically calibrate WIM data collection equipment in order to assure quality data. **WIM data is collected daily from approximately 30 traffic data collection stations and is 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) are still hindering complete quality assurance capabilities. We are working with Oklahoma State University to develop complete quality assurance 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.
- Review proper operation and coverage of ATR sites. Install additional stations as necessary. **Review of functional classifications and geographic locations of all ATR sites was performed 100% Complete**

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
Traffic and Equipment Management Branch

- 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, data collection applications for smart phones, radar speed detectors, inductive loop installation materials, wireless inductive sensors, and bridge WIM systems. Purchased modems and antennae, 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. 100% Complete
- Administer contract 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 7 ATR stations totaling in excess of \$120,000 were assigned to the electrical contractors.
- Track upcoming highway projects and produce plans and specifications for new and replacement traffic sensor installations for submittal into construction and pavement rehabilitation contracts. Approximately 35 sets (100% of requested) of plans and specifications including approximately 60 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 30 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 165 individual traffic counts. Processed and provided quality assurance of all submitted counts
- Provide traffic count technician training and support. Individual traffic count technician training and support was provided throughout the year as requested.

PRODUCTS

- Volume and classification data from ATRs. Data was retrieved for a minimum of six months from 62 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.

CHAPTER 3

Traffic and Equipment Management

RESPONSIBLE UNIT

Division of Planning
 Traffic and Equipment Management Branch

PRODUCTS (continued)

- 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. 100% complete. 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 working with Oklahoma State University to develop complete quality assurance 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.
- Volume and classification data from short-duration machine counts. Received approximately 4,575 counts of approximately 5,225 assigned (48 %) from District Offices for short-duration counts in calendar year 2014. Assigned approximately 4,900 short-duration counts to Districts in calendar year 2014. Of 165 interstate sites, completed data collection from approximately 216 (76%); were unable to collect data from remaining stations due to construction in the vicinity and/or malfunctioning sensors. Approximately 34 short duration local road bridge counts were performed.
- Volume and classification data from special counts Approximately 80 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 2014.
- Databases containing count station and count data information Database information for count station and count data was updated as needed. With Information Technology personnel, completed development of a new, more robust, user-friendly database and interactive map for count station information.
- Accurate local DVMT data for FHWA reporting through HPMS. Accurate local DVMT data for FHWA was reported through HPMS.

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$2,470,500	\$1,733,734	70%
OTHER	\$405,000	\$172,761	43%
TOTAL	\$2,875,500	\$1,906,495	66%

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.
- \$400,000 for count station maintenance through district maintenance contracts.
- \$150,000 WIM Installation Maintenance, Calibration, and Collection.
- \$50,000 Research and Studies
- \$500,000 Interstate and Arterial Loop and Piezo Install

Other

- \$100,000 for purchase of new Traffic Data Collection Equipment
- \$400,000 for Piezos, Road Tube, and counting 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 2014-2015

- 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 open to traffic dates are changed as well as updating the Project Tracker Database with current information. 100% Complete**
- Adapt project design plans and use GIS software to generate maps for resolving issues of roadway system and ownership designations and for use by other branches. **Utilizing ArcMap and/or MicroStation DGN files to create question maps from imported project design plan sheets and/or shapefiles for all upcoming projects for comments from the Systems group and District Offices regarding ownership and system designations. Subsequently question maps were converted into an Official Order Map. 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. Also backup documentation is keep. 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**
- Review the Functional Classification of roadways and consult with Data Management branch and others as appropriate to ensure the system reflects roadways of significance and correlates with the SPRS and the electronic base map coverage. **Met with Data Management staff on each road project prior to it being put into H.I. S. and reviewed as each respective project opened and the official orders were completed. Also, reviewed whenever a request by the Districts for a classification change becomes necessary. 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 – Reports generated from H.I.S. /EXOR and posted as needed, typically quarterly 100% Complete**
- Review revisions to the SPRS to discover any modifications made necessary to other systems such as functional classification, NHS, or NN classifications. **None required. 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. 100% Complete**

CHAPTER 4

Roadway Systems

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- 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. **Follow-ups on some that had been overlooked in the past year. 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. **Frontage roads reviews. These require that the District (for KYTC) address certain criteria from the Federal-Aid Policy Guide 23 CFR 620B. Mailed letters to Districts and FHWA approval. 100% Complete**
- 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 – completed three in Spring 2015 for US127 in Albany and two for I-69 designation (one of the I-69 addressed the Pennyrile Parkway from the Western Kentucky Parkway/I-69 interchange to Henderson and the other addressed the Purchase Parkway from Fulton to I-24 South of Calvert City) .Application for relocation of US 60 in Owensboro 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 Table" to Department of Local Government (DLG) on May 15, 2015. Copy to Office of Budgets and Fiscal Management August 8, 2015 100% Complete**
- Publish Kentucky's Official Coal Haul Highway System Report as required by KRS 177.977 and KRS 42.455. **The Coal Haul Report and supporting maps were published to the website in late July 2015. Website updated for Coal Haul. 100% 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. **Updated the Extended Weight data and send to HIS at the end of July 2015. Official Order updates for the Secretary's signature and it was distributed by early November 2014 amended in March 2015 to include I-69. 100% Complete**
- Review and coordinate right-of-way information between the Highway District planning 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. **Nearly twenty Official Orders described approximately 21 miles being transferred to local governments. Also reviewed 12 covered bridges and transferred 4 to the Department of Parks. 100% Complete**

CHAPTER 4

Roadway Systems

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Compile and provide GASB information on total mileage and estimate value of state roads removed from the SPRS for the previous fiscal year to the Office of Budget and Fiscal Management. **GASB report was mailed Budget and Fiscal Management mid July. 100% Complete**

PRODUCTS

- Official Order Changes to the State Primary Road System **42 Official Orders 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 back out on the web upon Districts requests. 100% Complete**
- GIS map files incorporating project design files for decision-making and use by other Branches **Maps prepared for each Official Order. Incorporated project design files into GIS map documents to create decision-making maps for Official Orders. 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 643 Coal Haul forms in December 2014 and 594 Coal Haul forms in June 2015. Made several Coal Haul Updates. 100% Complete**
- Inform FHWA of modification of functional classification **Data Management is reporting this information**
- Request to FHWA for modification of National Truck Network (NN) or Official Order Change to State Designated National Truck Network **Add segments of I-69 (formerly the Wendell H. Ford Western Kentucky Parkway) 100% Complete**
- Request to FHWA for modification of National Highway System **Delete former US 460 (Pike County) from NHS and add New US 460 from US 23 at Yeager, pass just north of Elkhorn City, and cross into Virginia just north of Breaks Interstate Park – approximately 16.1 miles. 100% Complete**
- Request to FHWA for permission to relinquish interstate frontage road to local government **Gordon Lane – Shelby County (I-64) - Williams Road – Boone County (I-274) 100% Complete**

CHAPTER 4

Roadway Systems

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$604,200	\$505,402	84%
OTHER	\$25,000	\$551.00	2%
TOTAL	\$629,200	\$505,953	80%

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 2014-2015

- Provide electronic mapping for all city, county, district, state, and special-purpose cartographic products. Over 95 County Maps, SPRS, and Functional Classification Maps were updated and exported on the internet. About 67 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 to the internet. 19 District maps. 100% Complete
- Maintain and publish electronic formats of cartographic products for display on the Internet. Web pages updated regularly. Over 334 SPRS/Functional Maps. Posted Planning study, 201 Report Documents for SPAC placed on Web. Updated 179 Traffic Count Maps. Created new DNA Study Page. Updated your turn page and image slider on planning page. 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 over 500 coal haul reports and 1,100 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 and the Top 30 Unscheduled Project List. Created numerous exhibits and posters for KYTC's Your Turn Project. Created 11 Bridge maps for District D6, Several State Maps for Modal & Modal Freight brochure. Shaded relief map of SE Kentucky. 100% Complete
- Provide mapping and graphic assistance to other Divisions and Departments as requested. Create 17 County Coal Haul Maps, 1 Statewide Coal Haul Map. State Active Rail lines Map. Provided 2015 KREDA map to the Economic Development Cabinet. Updated Legislator maps (House & Senate). 21 Official Highway Map files updated for 2015 Highway Map. Georeferenced 2015 Highway Map. Map 21 Project – at least 16 maps not including several revisions. Updated the National Highway Map and created a new Functional Classification Code. There were several maps prepared for Multimodal Freight Transportation. Somerset US 27 traffic light map. 100% Complete
- Develop and provide to outside entities digital maps as requested Responded to nearly 3,150 map sales request/emails – mailed out 26,063 maps. Created 3 County Road Reference maps. Frankfort Bike Event Map. Provided highway updates to Rand McNally and AAA. Map Sales generated \$743 100% Complete
- Develop and provide geographic information systems (GIS) files locating non-roadway modes of transportation. Map 21 Associated shapefiles. 100% Complete

CHAPTER 5

Cartography

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

PRODUCTS

- Official Highway Map Contract obtained for 2015 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 95 times -Updated city maps 67 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
Economic Development KREDA State Map
National Highway System (NHS)
MAP 21
State Active Rail
FHWA Urbanized Areas
County Reference Map
- Cabinet and Planning Project Exhibit Maps/Displays 100% Complete
Special large 2015 Highway Map You Are Here with enlarged
Legislator maps, then updated for new elections and leadership
Provide highway updates to Rand McNally, AAA
Special Kentucky map for Kentucky Arts Council w/ event locations
Frankfort Bike Event
Populated Areas by County
- 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 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$366,400	\$186,092	51%
OTHER	\$105,000	\$89,713	85%
TOTAL	\$471,400	\$275,805	59%

CHAPTER 5

Cartography

RESPONSIBLE UNIT

Division of Planning
Transportation Systems Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$50,000 for highway map outsourced production assistance.

Other

- \$100,000 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 analyzes data collected by the Cabinet's Photo Vans and performs on-site data collection activities.

PROPOSED ACTIVITIES FOR 2014-2015

- Determine 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. **Helped determine appropriate sources and uses of Cabinet data for screening methods. Added new HIS data storage type to maintain up-to-date route network location of Unscheduled Projects. Developed HIS data extraction procedures used for Highway Plan project scoring. 100% Complete**
- Work with the Office of Information Technology (OIT) to upgrade the HIS database to the next release of "Highways by EXOR" and deploy to other data owners within the Cabinet. **Worked with OIT to test HIS database upgrades and fixes to confirm product reliability and functionality prior to installation. Deployed to other data owners. 100% Complete**
- Work with OIT to assist with database upgrades that include links, functionality, and data exchange with other division databases. **Worked with TED and GIS Branches in OIT for reporting, mapping, and sharing of HIS data within the Cabinet – 100% complete. Ongoing development of a link between HIS/TED and the Division of Maintenance's OMS/PMS databases (Bentley Systems contract). 90% Complete**
- Assist with implementation of new Traffic System database including links, functionality, and data exchange between HIS and the new database. **Completed 2014 HPMS submittal using traffic data stored in TRADAS database. Continued to assist with functionality improvements. 100% Complete**
- Assist with implementation of the photo van imaging system for data collection purposes. This will include providing up to date route network for photo location accuracy and data extraction oversight. **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

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- 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, and Motor Carriers, as well as the Office of Rural and Municipal Aid. 100% Complete
- Coordinate with other divisions concerning asset management needs of HIS and TED and the needs of other divisions for their data that is stored in HIS. Generated 108 maps for resolving road ownership and highway data questions caused by road construction impacts. Improved communication with Division of Maintenance regarding bridge locations. Updated metadata in HIS to communicate information about data collection and usage to customers 100% complete
- Improve processes and procedures to review, edit, and update Cabinet's base map and HIS database. Performed thorough review of HIS data types and implemented new database rules and checks to improve data accuracy during data loading and maintenance. New data types added to HIS to contain information about Unscheduled Project locations for project prioritization efforts. 100% Complete
- Assist with testing, training, report migration, and enhancements with HIS. Worked with Bentley Systems to implement report migration to the new TIG tool and enhancements for surface type data. Tested and trained users on new tool and enhancements. 100% Complete
- Assist in the development and maintenance of a Cabinet GIS and maintain database network for Kentucky's public highway system. Updated centerline locations and attributes impacted by 153 state road projects. Processed 5,082 local road centerline location and attribute changes in 83 counties. 100% Complete
- Update the existing highway network with newly acquired road centerline data collected from CAD design file extraction, GPS collection methods, and the Division of Maintenance Photo Van. Update and verify roadway mileage and highway systems data for use in maintaining and generating data driven maps. Used CAD design files to update new state road centerlines, mileages, and inventory on pace with project openings for 153 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
- Improve and update roadway characteristic, HPMS, Performance Measure, and analysis data through Division of Maintenance Photo Van data collection project. HIS regularly updated with more complete and accurate Photo Van road data that drives these processes. Performed major review and update of Horizontal Curve, Widening Obstacles, and Widening Potential. 100% Complete
- Perform office reviews to verify 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
- Provide up-to-date route network, DMI, roadway characteristics and system information through various programs. 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
- Process and submit annual HPMS submittal. HPMS submitted on June 15 (1,896 sample sections). Gathered and processed data from other areas of the Cabinet. 100% Complete

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Work with Bentley Systems to improve HPMS submittal production methods. Developed an HPMS data extract using Bentley's TIG tool. Plan to replace previous method with the TIG method for June 2016. 95% Complete
- Update HIS and related database systems with Functional Classification changes generated through statewide Adjusted Urban Area Boundary review. Updated 2,487 centerline miles from rural to urban. Updated corresponding Functional Classification and HPMS TOPS sections. Included these changes in HPMS submittal. 100% Complete
- Regularly review Functional Classification in cooperation with Highway Districts and MPO's. Review Functional Classification change requests from Highway Districts and other external entities. Performed in-depth review of Northern Kentucky urban area with OKI and Highway District 6. Scheduled in-depth reviews with all other MPO's to occur during FY16. Processed four Classification change requests. 100% Complete
- Coordinate changes to the NHS and Strategic Highway Network following proper procedure for approval from FHWA and the Department Of Defense. Coordinated two changes to NHS. Provided discrepancies to FHWA HQ following a statewide comparison of KYTC and FHWA NHS data. Waiting for response. 50% Complete
- Utilize HPMS to update Rating Indices, Capacity, and Volume/Service Flow ratio in the HIS database. Updated using existing procedures, but continued working with the Kentucky Transportation Center (KTC) to re-develop these processes using the 2010 Capacity Manual. 85% Complete
- Use HIS to measure highway system performance and assist with analyses of the Unscheduled Projects List. Added new HIS data storage type to maintain up-to-date route network location of Unscheduled Projects. Developed HIS data extraction procedures to measure highway system performance and analyze the project list – 100% complete
- Maintain currency of HPMS software and perform changes required by federal legislation, regulations, policies, and/or guidelines, as needed to the HPMS. Used web-based HPMS 8.0 (maintained by FHWA) 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
- Investigate results of HPMS each year and analyze changes in processes to improve output of report. Sample panel updated to ensure sample adequacy. Continued working with Bentley Systems to modernize data extraction process for HPMS using TIG – 95% complete
- Assist in processing and reporting of the FHWA 536 report. Report submitted – 100% complete

PRODUCTS

- Routines to extract better road information from the GPS files (i.e. vertical grade, horizontal curve) Used CAD design files to obtain horizontal curve data for newly constructed alignments. Continue working with Division of Maintenance to transfer vertical grade and horizontal curve information from Photo Van collection to HIS. 40% Complete
- Queries and routines for quality control of the database concerning asset items and road information Reviewed Quality Assurance report weekly and parameter-based inquiry (PBI) results monthly. Analyzed TIG queries to check additional validations. 100% Complete

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

PRODUCTS (continued)

- Database and GIS application troubleshooting when errors take place **Participated in regular conference calls with Bentley Systems to discuss HIS database issues and errors. Implemented fixes and enhancements to correct issues. 100% Complete**
- Database and GIS upgrades **Tested HIS database upgrades to confirm product reliability and functionality prior to installation. 100% Complete**
- Other agency information loaded or linked to HIS database **Developed new communication channels with MPOs, LFUCG, Louisville Metro, and UK to collaborate on road inventory and centerline information. Ongoing development of a link between HIS/TED and the Division of Maintenance's OMS/PMS databases (Bentley Systems contract). 90% Complete**
- New roadway centerlines obtained through GPS technology and CAD design files and updates to both the GIS layers and HIS database **Updated centerline locations and attributes impacted by 153 state road projects. Processed 5,082 local road centerline location and attribute changes in 83 counties. 100% Complete**
- New roadway inventory either through field collection or extracted from CAD design files to update the GIS layers and HIS database **Updated new state and local road inventory for 153 state road projects. Collected inventory for local roads newly added to the Functional Classification system. 100% Complete**
- New roadway inventory extracted through Photo Van software **Extracted new % Passing, Widening Obstacles, and Widening Potential inventory from Photo Van software and added to HIS. 100% Complete**
- Existing roadway characteristic inventory QC checks from Photo Van pictures **Compared existing inventory to current Photo Van pictures and updated HIS as needed. 100% Complete**
- Transportation Enterprise Database (TED) updates for Cabinet-wide consumption of data. **HIS data extracted weekly and provided to TED for Cabinet-wide consumption. 100% Complete**
- Cabinet wide Asset Management updates and route locations to update other divisions' data
- FHWA 536 Report **Report submitted. 100% Complete**
- Provide Certification of Public Road Mileage by June 1 **Submitted June 1 (79,728 centerline miles). 100% Complete**
- HPMS submittal due by June 15 **Submitted June 15 (1,896 sample sections). 100% Complete**
- Reports created concerning information about transportation network stored in HIS database **Numerous customer requests for reports processed efficiently and timely. 100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$1,462,900	\$1,356,736	93%
OTHER	\$350,000	\$4,600	1%
TOTAL	\$1,812,900	\$1,361,336	75%

CHAPTER 6

Highway Information System

RESPONSIBLE UNIT

Division of Planning
Data Management Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$200,000 for database development and enhancement projects
- \$100,000 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
- \$50,000 for special Local Road data collection projects
- \$75,000 for production of the 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
- \$50,000 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 2014-2015

- Continue to develop and update policy and procedures for evaluating corridor level needs. **This task is on-going. We continue to evaluate the policy and procedures for each study, placing emphasis on practical solutions. 100% Complete**
- Conduct corridor, scoping, programming, small urban area, data needs analyses (DNA), and other studies. **For a list of active studies and percent complete, please see the PRODUCTS below or view the attached spreadsheet.**
- 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. **Many 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 2015 fourth quarter, KYTC had 9 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 on-going. Every two years District Transportation Plans are developed 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

Nineteen studies were completed during the period of July 1, 2014 to June 30, 2015. All were completed by consultants. The completed studies are as follows:

- I-71 Corridor Study, Jefferson to Boone Co.'s – 99-394.00 – July 2014
- KY 1286/KY 998 Scoping Study, McCracken Co. – 1-153.00 – September 2014
- Danville Small Urban Area Study, Boyle Co. – N/A – September 2014 (SPR)
- I-65 Interchange Justification Study, Bullitt Co. – 5-527.00 – October 2014
- Princeton Small Urban Area Study, Caldwell Co. – N/A – November 2014 (SPR)
- KY 30 Scoping Study, Breathitt & Owsley Co.'s – N/A – December 2014 (SPR)
- US 60 Traffic Study, Franklin Co. – 5-275.00 – December 2014 (Partial SPR)
- KY 1931 Scoping Study, Jefferson Co. – 5-480.00 – December 2014
- I-66/I-65 & I-69 Spurs, Henderson, Daviess, Ohio, Butler, and Warren Co.'s – 2-85.00 – January 2015
- KY 107/I-24 Interchange Justification Study, Christian Co. – 2-8702.00 – February 2015
- Mountain Parkway to I-75 Corridor Study, Clark, Estill, Madison, and Powell Co.'s – N/A – February 2015 (SPR)
- KY 194/KY 632 Corridor Study, Pike Co. – N/A – February 2015 (SPR)
- I-265 Programming Study, Jefferson Co. – N/A – March 2015 (SPR)
- Bluegrass Crossings Business Centre Scoping Study, Ohio Co. – N/A – April 2015 (SPR)
- US 68 Scoping Study, Green & Metcalfe Co.'s – 3-203.00 – April 2015
- US 231 Scoping Study, Warren Co. – 3-8702.00 – April 2015
- Paducah MegaPark Access Road Scoping Study, McCracken Co. – 1-8702.00 – April 2015
- Pennyryle Parkway Improvements, Christian & Hopkins Co.'s – N/A – May 2015 (SPR)
- Oxmoor Farms Feasibility Study, Jefferson Co. – 5-528.00 – May 2015

Studies begun in FY 2015 but not completed are as follows:

<u>County(ies)</u>	<u>Route</u>	<u>Item No.</u>	<u>% Complete</u>
Knox/Laurel	KY 3041	11-190.00	95%
Henderson	US 41	N/A	51%
Nelson/Washington	US 150	4-396.00	50%
Lewis/Rowan	KY 59/KY 344/KY 377	9-231.00	24%
Warren	US 31W	N/A	63%
Hancock	KY 69	2-8708.00	37%
Larue/Hardin	Hodgenville to I-65	4-8505.00	20%

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

PRODUCTS (continued)

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, 26 projects have been worked on during the past fiscal year, with 19 being completed, and 7 others in various stages of completion. With the start of the new fiscal year, additional projects will soon begin. Please refer to the table at the end of this document to see a list of active projects and details including completion percentages for FY 2015.

- Data Needs Analysis (DNA) Studies
DNA studies are completed for projects in the Highway Plan to be advertised for Consultant services, prior to the Advertisement. 17 DNA studies have been completed by District and Central Office Planners since the beginning of the fiscal year. These studies include projects identified by Item No.'s 2-310.00, 2-237.00, 2-8812.00, 3-8821.00, 3-8855.00, 3-8853.00, 4-8801.00, 9-8811.00, 9-8813.00, 9-193.00, 9-8507.00, 9-8802.00, 10-8802.00, 10-8804.00, 11-8855.00, 11-8864.00, and 12-199.00.
- Priorities for Highway Plan Programming which are sustainable and fundable.

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$1,985,200	\$1,831,990	92%
OTHER	\$20,000	\$3,987	20%
TOTAL	\$2,005,200	\$1,835,977	92%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$2,000,000 to outsource for Research and/or Planning Studies. FHWA will be notified when planning studies utilizing SPR funds are initiated.

Other

- \$20,000 Other Operational Cost
For items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter.

PLEASE SEE ATTACHED PAGE FOR A LIST AND DETAILS OF ACTIVE STUDIES!

PROJECT I.D.	ITEM NO.	COUNTY(S)	CONTRACT NO.	TYPE OF WORK	District Project Manager	Central Office Co-Project Manager	Consultant	NTP Date	Contract/L.A. Amount	Funds Expended in FY 2015 ¹	Total Funds Expended ¹	Overrun?	Schedule met?	Approximate % Complete (via billing)	Were needs for this corridor/SUA identified, evaluated, and prioritized?	FY 15 SPR Work Program Funds	Were there contract revisions?
KY 3041	11-190.00	KNOX, LAUREL	Agree. No. 201334	SCOPING STUDY	Chappell	Higdon	Stantec	1/31/2013	\$323,161.00	\$34,609.53	\$307,002.95	No	No	95%	In progress	No	Yes
US 41	N/A	HENDERSON	LA No. 2, Agree. No. 201466	TRAFFIC AND ACCESS MANAGEMENT STUDY	N. Hall	McKenzie	Stantec	2/27/2015	\$99,910.00	\$51,275.56	\$51,275.56	No	Yes	51%	In progress	No	No
US 150	4-396.00	NELSON, WASHINGTON	Agree. No. 2015-03-5	SCOPING STUDY	C. Allen	Vaughan	Palmer	2/5/2015	\$150,076.00	\$0.00	\$0.00	No	Yes	0%	In progress - approx. 50% complete although consultant has not submitted an invoice	No	No
KY 59/KY 344/KY 377	9-231.00	LEWIS, ROWAN	Agree. No. 2015-03-3	SCOPING STUDY	Callahan	Mills	Qk4	2/5/2015	\$507,180.00	\$122,646.15	\$122,646.15	No	Yes	24%	In progress	No	No
US 31W/KY 446	N/A	WARREN	LA No. 3, Agree. No. 201465	SCOPING STUDY	J. Moore	McKenzie	Qk4	1/22/2015	\$249,520.00	\$158,409.62	\$158,409.62	No	Yes	63%	In progress	Yes	No
KY 69	2-8708.00	HANCOCK	LA No. 3, Agree. No. 201466	SCOPING STUDY	N. Hall	McKenzie	Stantec	3/4/2015	\$197,958.00	\$0.00	\$0.00	No	Yes	0%	In progress - invoices totaling 37% were processed in early July	No	No
HODGENVILLE TO I-65	4-8505.00	LARUE, HARDIN	LA No. 4, Agree. No. 201467	SCOPING STUDY	K. Young	Vaughan	Parsons Brinckerhoff	4/23/2015	\$194,979.19	\$38,995.83	\$38,995.83	No	Yes	20%	In progress	No	No
¹ In-house studies using SPR funds do not have have a tracking mechanism for funding that identifies charges to individual studies.																	

PROJECT I.D.	ITEM NO.	COUNTY(S)	PROJECT DESCRIPTION	TYPE OF WORK	Project Manager	Backup Manager	Consultant	COMPLETION DATE
EB 9004	N/A	CHRISTIAN, HOPKINS	PENNYRILE PARKWAY IMPROVEMENTS	CORRIDOR STUDY	N. Hall	McKenzie	Qk4 Parsons	May-15
OXMOOR FARMS CONNECTOR ACCESS ROAD TO MEGAPARK	5-528.00	JEFFERSON	FEASIBILITY STUDY FOR CONNECTOR ROUTES KY 305 ACCESS ROAD TO MEGAPARK	FEASIBILITY STUDY	T. Hall	Pelfrey	Brinckerhoff	May-15
US 231 SCOTTSVILLE ROAD	1-8702.00	MCCRACKEN	US 231 SCOPING & TRAFFIC OPERATIONS STUDY	SCOPING STUDY	Herring	Higdon	Stantec	April-15
	3-8702.00	WARREN	US 68 IMPROVEMENTS FROM CUMERLAND PARKWAY TO KY 61/KY 3535	SCOPING STUDY	D. Hendersc	McKenzie	CDM Smith	April-15
US 68 BLUEGRASS CROSSINGS BUSINESS CENTRE	3-203.00	METCALFE, GREEN	ACCESS ROAD OFF US 231	SCOPING STUDY	J. Moore/C. Allen	Gutti	Stantec	April-15
I-265	N/A	OHIO	I-65 TO NEW OHIO RIVER BRIDGES	SCOPING STUDY	N. Hall	McKenzie	CDM Smith Parsons	April-15
KY 194/KY 632	N/A	JEFFERSON	IMPROVEMENTS FROM US 119 TO PHELPS	PROGRAMMING STUDY	Hickerson	Pelfrey	Brinckerhoff	March-15
	N/A	PIKE CLARK, ESTILL, MADISON, POWELL	MOUNTAIN PARKWAY TO I-75 INTERCHANGE	SCOPING STUDY	Westfall	Pelfrey	Qk4	February-15
KY 82/KY 89/KY 499/KY 52	N/A		JUSTIFICATION STUDY	CORRIDOR STUDY INTERCHANGE	Blackburn/ R. Turner	Gutti	Parsons Brinckerhoff	February-15
KY 107/I-24	2-8702.00	CHRISTIAN HENDERSON, DAVIESS, OHIO, BUTLER, WARREN	SPURS (AUDUBON, NATCHER) & CONNECTOR (US 60)	JUSTIFICATION STUDY	N. Hall	McKenzie	Qk4	February-15
I-66/I-65 & I-69 SPURS	2-85.00			CORRIDOR STUDY	N. Hall	Pelfrey	Palmer	January-15
KY 1931	5-480.00	JEFFERSON, OLDDHAM, HENRY, TRIMBLE, CARROLL, GALLATIN, BOONE	KY 1931 MANSLICK ROAD	SCOPING STUDY	Downs	Pelfrey	CDM Smith	December-14
I-71 CORRIDOR STUDY	99-394.00		I-71 CORRIDOR IMPROVEMENTS TRAFFIC STUDY FROM US 460 TO I-64	CORRIDOR STUDY	Yeager	Pelfrey	Qk4 Parsons	December-14
US 60	5-275.00	FRANKLIN	KY 30 CORRIDOR IMPROVEMENTS FROM BOONEVILLE TO JACKSON	SCOPING STUDY	T. Hall	Pelfrey	Brinckerhoff	December-14
KY 30	N/A	OWSLEY, BREATHITT	SMALL URBAN AREA STUDY	SCOPING STUDY SMALL URBAN AREA STUDY	Blackburn	Gutti	CDM Smith	December-14
PRINCETON	N/A	CALDWELL			N. Hall	McKenzie	CDM Smith	November-14
I-65 INTERCHANGE	5-527.00	BULLITT	FEASIBILITY STUDY FOR INTERCHANGE BETWEEN EXIT 112 AND EXIT 116	FEASIBILITY STUDY SMALL URBAN AREA STUDY	T. Hall	Pelfrey	Qk4 Parsons	October-14
DANVILLE	N/A	BOYLE	STUDY		Blair	Gutti	Brinckerhoff	September-14
KY 1286/KY 998	1-153.00	MCCRACKEN	KY 1286/KY 998 UPGRADES	SCOPING STUDY	Herring	Higdon	CDM Smith	September-14

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 Statewide Transportation Plan (STP) as needed and ensures that the STP and STP Program are MAP-21 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 2014-2015

- Review, address comments from public review period and finalize 2014 Long Range Statewide Transportation Plan (LRSTP) document. 100% Complete with the final release of the LRSTP in November 2014. This included a final LRSTP public notice mailing to over 900 transportation stakeholders to include associated state and federal agencies as well as immediate posting on our KYTC main website at <http://transportation.ky.gov> and on the Your Turn Website at <http://yourturn.transportation.ky.gov>.
- Coordinate the marketing of the public outreach efforts regarding the review and survey during the public release of the draft LRSTP with the ADDs, MPOs and HDOs. The LRSTP public review comments were addressed by August 2014 and the final release of the LRSTP Public Involvement Notebook was made available to the public and placed on KYTC Your Turn Website at <http://yourturn.transportation.ky.gov> in June 2015. 100% Complete
- Review and update Public Participation Plan. 100% Complete with ongoing review and development.
- Develop and implement processes as needed to ensure MAP-21 compliance. 100% Complete with ongoing review and development. Goals have been updated in accordance with MAP-21 guidance as noted in LRSTP. Prioritization schedule has been revised and released, with ongoing development of procedures.
- Coordinate with other transportation modes, land use, environmental, and other resource agencies. Coordinated with Office for Civil Rights & Small Business Development to ensure compliance with Title VI requirements via site visits and training at Statewide Transportation Planning meetings. Continuing coordination with Environmental to ensure Planning level socioeconomic studies are in compliance. Also, completed the LRSTP public coordination efforts to include a final notice mailing to over 900 transportation stakeholders to include state and federal resource agencies. 100% Complete.
- Enhance the statewide transportation planning process by including data collection and analysis, public involvement, and coordination. Facilitated the collection of bicycle/pedestrian data, Major Traffic Generators, Major Freight Users through ADDs for the purpose of including multi-modal considerations earlier in the project development process. 100% Complete

CHAPTER 8

Statewide Transportation Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Identify, evaluate, and prioritize transportation projects through data analysis and public involvement. Facilitate the development of PIF data for use in scoring process to be used as component in development of the Recommended Highway Plan. Assisted with the development of scoring and reporting information for use as a component in development of the Recommended Highway Plan. 100% Complete
- Recommend sustainable and fundable projects through performance based planning. Worked to develop Performance-Based Planning and Programming (PBPP) processes to identify projects for the Recommended Highway Plan. 100% 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), and the District Transportation Plan containing the Unscheduled Projects List (UPL) List. Performed extensive Quality control on PIF database information including routes, mile points, descriptions, etc. Worked with developers to enhance PIF database as currently developed and proposed top-to-bottom upgrades to better handle continuously changing procedures. 100% Complete
- Coordinate with other Divisions, Districts, and Agencies and incorporate applicable plans as necessary to ensure compliance with new authorization or MAP-21 extension compliance. Worked cooperatively with ADD, MPO, and HDO planners to identify transportation related issues on both a local and regional scale in an effort to better determine quality data driven needs as part of our prioritization efforts for the District Transportation Plan as a resource in the development of the Recommended Highway Plan. 100% Complete.
- Coordinate and oversee the ADD Regional Transportation Program. Coordinate and assist the Highway District Offices as they develop the District Transportation Plan. Revised and forwarded new ADD contracts for signatures. Provided ADDs guidance on deliverables, addressed Regional Transportation Committees, attended Regional Transportation Committees both as an observer and presenter, processed invoices, and facilitated ADD Planner Assessments. Coordinated between ADD's and HDO's on the development and presentation of District Transportation Plans. 100% Complete
- Provide guidance and review of Environmental Justice reports for quality and consistency. Continuing coordination with Environmental to ensure Planning level socioeconomic studies are in compliance. 100% Complete

PRODUCTS

- Long Range Statewide Transportation Plan: The final LRSTP was released to the public in November 2014, and the associated LRSTP Public Involvement Notebook was completed and made available to the public in June 2015. They were referenced on the KYTC main website at <http://transportation.ky.gov> with link for public availability on the Your Turn Website at <http://yourturn.transportation.ky.gov>. 100% Complete

CHAPTER 8

Statewide Transportation Planning

RESPONSIBLE UNIT

Division of Planning
Strategic Planning Branch

PRODUCTS (continued)

- **Unscheduled Needs List database: 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. Worked with Kentucky Transportation Cabinet Division of Planning, Data Management branch to develop PIF and mapping products for use with District Transportation Plan and Prioritization processes. Consulted with developers on finalizing upgrades to further increase efficiency. 100% Complete**
- **Annual Work Programs and Contracts for 15 Area Development Districts: Completed revisions for FY14 work program and forwarded for signatures. Clarified ADD deliverables and their due dates, and reviewed deliverables for completeness. 100% Complete**
- **Statewide Transportation Planning Meetings: Held STP, ADD, HDO Planner or equivalent meetings. 100% Complete**
- **Individual ADD Planner Assessments: Tracking deliverables and attending/presenting at meetings as necessary for use in evaluation. Released checklist to ADD planners for verification, and solicited feedback from HDO planners for potential use in said assessments. 100% Complete**
- **Public Participation Plan Update: 100% Complete with ongoing review and development**
- **District Transportation Plan (biannually) containing the Unscheduled Projects List: Development of the District Transportation Plan (DTP) is underway while prioritization was completed as part of the DTP by the ADD, MPO, and HDO level in the spring and summer of 2015. 100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$1,152,800	\$1,275,187	111%
OTHER	\$25,000	\$42,232	169%
TOTAL	\$1,177,800	1,317,419	112%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$150,000 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 2014-2015

- Promote planning processes in each MPO area that are consistent with current Federal regulations. *Worked continuously with MPOs to promote consistency of planning processes with Federal regulations. Updated MPO planning boundaries to be consistent with Census 2010 urbanized areas. Developed recommended provisions to include in metropolitan planning agreements to be consistent with MAP-21 requirements. 100% Complete*
- Provide technical assistance, oversight and review of MPO activities, programs, documents, models and tools. *Provided technical assistance, oversight, and review of MPO activities, programs, documents, models, and tools as needed. Attended certification reviews for the Louisville and Lexington MPOs. 100% Complete*
- Represent the Cabinet at technical, policy, and other committee meetings. *Participated in technical and policy committee meetings at each of the nine MPOs throughout FY 2015. 100% Complete*
- Draft and administer contracts with MPOs and Local Public Agencies (LPAs), providing oversight for Federal funds *Administered contracts with nine MPOs, plus Louisville Metro Government, for planning activities during FY 2015. Drafted contracts for planning activities to be undertaken in FY 2016. 100% Complete*
- Encourage consistency between local, regional and state plans and programs and across various modes of transportation. *Worked continuously with MPOs to ensure consistency of TIPs and MTPs with planned KYTC projects and coordinated with MPOs in the development of relevant District Transportation Plans. Gave presentations on Comprehensive Plans and Transit-Oriented Development at Evansville MPO meetings and Statewide Transportation Planning meetings. 100% Complete*
- Work with the MPOs, Highway District Offices (HDOs), other agencies, and representatives of various modes of transportation to collect data, identify needs and funding sources, complete Project Identification Forms (PIFs) and evaluate and rank projects. *Worked with various agencies to collect data, identify needs and funding sources, complete PIFs, and evaluate and rank projects as needed. 100% Complete*
- Conduct regular Statewide Transportation Planning meetings including discussions on current metropolitan planning issues. *Participated in Statewide Transportation Planning Meetings in July, October, January, and April. 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 2014-2015 (continued)

- Coordinate with MPOs and other agencies on air quality issues. Participated in Interagency Consultation activities in areas subject to air quality conformity and maintained knowledge of existing and proposed air quality regulations. Special attention was given to processes in the Huntington-Ashland-Ironton area due to the recent merging of the Ashland MPO and the Huntington MPO. 100% Complete

PRODUCTS

- Compliant and consistent Transportation Improvement Programs (TIPs), Metropolitan Transportation Plans (MTPs) and other documents. Current TIPs and MTPs are in place for all nine MPOs. 100% Complete
- A Statewide Transportation Improvement Program (STIP) that is consistent with the MPOs' TIPs. The 2015-2018 STIP is now in effect. 100% Complete
- Contracts with MPOs and LPAs to carry out planning activities in the urbanized areas. All FY 2016 contracts for Base PL activities are in place. Two dedicated-STP contracts were delayed beyond the start of FY 2016: The Louisville Metro Bike and Pedestrian Program and the KYOVA Surface Transportation Program Planning Activities. 90% Complete
- Statewide Transportation Planning meetings. Participated in Statewide Transportation Planning Meetings in July, October, January, and April. 100% Complete
- Special studies as needed. Provided assistance and guidance for special studies as needed. 100% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$539,000	\$324,957	60%
OTHER	\$25,000	\$9,143	37%
TOTAL	\$564,000	\$334,100	59%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$50,000 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 Moving Ahead for Progress in the 21st Century (MAP-21) requires the each state identify state-level performance measures for various performance management areas related to safety, pavements, bridges, freight, emissions, performance, and congestion. In the future the state level performance measures will be considered in the national level standards by the United States Department of Transportation (U.S. DOT). The Planning Team will focus on the emission, freight and highway congestion performance measures.

Performance-based planning involves the use of data to direct project selection decisions. Such measures can provide a more objective framework to evaluate KYTC's progress towards such performance standards.

PROPOSED ACTIVITIES FOR 2014-2015

The Division of Planning is tasked with determining performance measures for the following:

Freight

- Annual Hours of Truck Delay (AHTD) - Travel time above a KYTC-defined, congestion threshold in units of vehicle-hours of delay for Trucks on the Interstate Highway System. Truck Reliability Index (RI₈₀) - The ratio of the 80th percentile truck travel time to the KYTC-determined threshold travel time for trucks on the Interstate Highway System. **MMUT recommends that RI be applied on a corridor basis. Method of associating TMC RI to a corridor still being researched. 100% Complete**

System Performance

- Annual Hours of Delay (AHD) - Travel time above a KYTC-defined, congestion threshold in units of vehicle -hours of delay on all Interstate Highways as well as National Highway System (NHS) corridors excluding Interstate Highways. **Awaiting System Performance rule making. Delay can be reported single vehicle or all vehicles 100% Complete**
- Reliability Index (RI₈₀) - The ratio of the 80th percentile travel time to the KYTC-determined threshold travel time for all vehicles on Interstate Highways as well as National Highway System (NHS) corridors excluding Interstate Highways. **MMUT recommends that RI be applied on a corridor basis. Method of associating TMC RI to a corridor still being researched. 100% Complete**

Congestion Mitigation and Air Quality (CMAQ)

- Criteria Pollutant Emissions - Daily kilograms of on-road, mobile source criteria air pollutants (VOC, NO_x, PM, CO) reduced by the latest annual program of CMAQ projects. **No data received from Office of Local Programs to estimate Performance Measures. 100% Complete**
- Annual Hours of Delay (AHD) - Travel time above a KYTC-defined, congestion threshold in units of vehicle-hours of delay reduced by the latest annual program of CMAQ projects. **Awaiting System Performance rule making. No data received from Office of Local Programs to estimate Performance Measures. 100% Complete**

Process Analysis

- Establish KYTC definitions for reference speeds/travel times for various roadway classifications **Three definitions are under review. Awaiting System Performance rule making 100% Complete.**

PROPOSED ACTIVITIES FOR 2014-2015 (continued)Process Analysis (continued)

Conflate and develop queryable GIS database for 2011 & 2012 NavteQ non-factored speed data by link statewide. The University of Kentucky compiled a performance measures for each of three different reference speed definitions and a database to select desired coverages. 100% Complete

- Acquire, evaluate, and develop analysis tool of monthly NPMRDS non-factored travel time data for available NHS statewide. Currently employing Oracle as a data warehouse for the NPMRDS. Scripts have been developed to generate customized reference speeds for each weekday hour for any TMC requested. HADOOP approved but not yet acquired. 100% Complete
- Analyze monthly NPMRDS data and develop travel time indices based for all available TMC segments, based on the defined reference speed/travel times for that segment. Completed a test using roads with data in Carter County. Used the test to develop potential processes to apply on a statewide basis. 100% Complete
- Identify and choose, based on the real data, representative periods to determine KYTC free-flow speeds. Testing four different time periods. Awaiting System Performance rule making. 100% Complete
- Develop a KYTC-defined, congestion threshold. TTP's were applied to interstates and parkway TMCs in an effort to visualize bottlenecks and problem areas. Awaiting the System Performance rulemaking to establish the magnitude to be highlighted 100% Complete
- Define approach and data sources to estimate vehicle hours traveled and vehicle miles traveled for all roads and all traffic on the NHS with data. Using available data for TMC roads in Carter County, a process has been developed to work around the need of uni-directional volume and class data. 100% Complete
- Define and aggregate TMC data into corridor segments for all roads on the NHS with data. Created a GIS map associating HIS referencing to the HERE TMC segments. Count Stations are assigned to each TMC to provide a source of volume and class data. 100% Complete
- Establish Daily, AM Peak, PM Peak, and Off-peak threshold speeds for each segment. Through an Oracle script developed by KYTC, reference speeds can be developed for any period of a day. Thresholds are awaiting the system performance rule making to determine magnitude thresholds will highlight. 100% Complete
- Develop methodologies for calculating segment and statewide AHTD, Freight RI_{80} , AHD, and System RI_{80} Methodologies have been drafted to develop measures on a statewide basis, including Reliability at the segment level. However, corridor and statewide RI_{80} , methodologies are currently under study. 100% Complete
- Propose annual Performance Measure targets for AHTD, Freight RI_{80} , AHD, and System RI_{80} Awaiting System Performance rule making. 100% Complete
- Evaluate transportation model output to assist TMAs with populations of over 1 million population. TMAs were part of the KTC data study and analysis. Each provided input to the final data sets made available. 100% Complete
- Refine the mobility component of the Adequacy Rating System using new performance measures. Assist planners and designers in using mobility measures in studies and projects. Awaiting System Performance rule making. 100% Complete

CHAPTER 10

Performance Measures and Congestion/Mobility Analysis

RESPONSIBLE UNIT

Division of Planning

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Fund participation in the Texas Transportation Institute's (TTI) pooled-funded Urban Mobility Study. There are several elements of research that affect measuring mobility, working with travel time data, and MAP-21 Performance Measures. **Contributed budgeted funds to the continuance of the Urban Mobility Study. Attended the annual pooled fund meeting held in Boston, MA. 100% Complete**

PRODUCTS

- Maps and database of mobility measures on all highway segments for Performance Based Planning. **100% Complete**
 - **Provided six Speed Profiles to District 7**
 - **Morehead to Vanceburg Corridor Speed Profiles**
 - **KY-446/US31W Corridor**
 - **Chenoweth Corridor Speed Profiles**
- Maps and database of mobility measures on interstates, and other NHS road segments for MAP-21 Performance Measures **100% Complete**
 - **Developed an Oracle database to house and query NPMRDS**
 - **Created a TMC/Count Station cross reference for Interstate and NHS routes**
- Calculate Preliminary MAP-21 Performance Measures for:
 - AHD and all traffic RI_{80} , by corridor segment and statewide average for all NHS segments excluding interstates.
 - **Drafted methodologies to develop statewide measures, including Reliability at the segment level.**
 - **Awaiting further study to develop corridor and statewide RI_{80} , methodologies 100% Complete**
 - AHTD and Freight RI_{80} , by corridor segment and statewide average for interstates.
 - **Drafted methodologies to develop statewide measures, including Reliability at the segment level.**
 - **Awaiting further study to develop corridor and statewide RI_{80} , methodologies 100% Complete**

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$202,700	\$315,092	155%
OTHER	\$15,000	\$993	7%
TOTAL	\$217,700	\$316,085	145%

CHAPTER 10

Performance Measures and Congestion/Mobility Analysis

RESPONSIBLE UNIT

Division of Planning

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$40,000 KTC Contract - Completion of 2012 Travel Time Data Study **100% Complete**
- \$190,000 Purchase and Analysis of 2013 & 2014 link level data. **Initiated PL-27 with KTC 100% Complete**

Other

- \$5,000 Other Operational Costs for items such as travel, mileage, equipment and other cost directly associated to the completion of this work chapter. **100% Complete**
- \$10,000 TTI Urban Mobility Study (pooled-fund study) **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.

PROPOSED ACTIVITIES FOR 2014-2015

- Perform Regional Air Quality (AQ) Conformity Analysis for metropolitan and rural areas as needed. *Worked with KIPDA, OKI, and other areas as needed to help with conformity analysis 100% Complete*
- Monitor AQ data submissions to other agencies – State, federal, local, research, and academic. Provide Kentucky transportation related data to 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 budgets for the development of the attainment demonstration and maintenance for SIPs, SIP amendments, and budget adjustments. *Reviewed AQ conformity analysis reports that came out from State, Federal, and Local agencies. Watched data closely to make sure that it was the most current and up-to-date data available at the time of submittal. Finished a DAQ request for transportation related data, required for a MOVES run for the whole state and NKY. 100% Complete*
- Work with KYTC-IT to develop annual Kentucky VIN/Fleet registration age/type distribution data for use with MOVES. *Received the 2014 VIN/Fleet data which is currently out for review to LMAPCD, KIPDA, and OKI. .100% Complete*
- Prepare Cabinet responses for citizen/agency inquires. Preparing letters of response for the Governor/Secretary/Director. *Drafted 5 letters for the director's response to requests for Louisville and NKY for amendments to the TIPs or MTPs. Worked on Ozone comments for the Secretary and currently working on NHTSA comments for the Division. 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 NAAQS for the 8-hour ozone and PM_{2.5} standards, EPA's current emissions model, air quality regulations, and implementation guidance. Inform KYTC staff, KYTC management, public officials, and the general public about air quality, conformity analysis, federal guidelines, and on new developments with greenhouse gas/climate change requirements. Disseminate information about the 8-hour ozone and PM_{2.5} standards and designation process and on new developments with greenhouse gas requirements. *EPA finalized nonattainment areas for the 2012 PM_{2.5} standard in December 2014. EPA proposed to release the new ozone standard in October 2015. Ozone comment period ended in March. EPA released their new MOVES2014 model last year. The 1997 Ozone NAAQS for Transportation Conformity Purposes has been revoked. Kept Branch Manager and/or the Director apprised of any situation changes or new material coming down from EPA or FHWA. 100% Complete*

CHAPTER 11

Air Quality

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Air Quality Team

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Attend necessary meetings and conferences to stay abreast of the AQ issues. Attended webinars and other meetings for training purposes for new MOVES2014 model hosted by EPA and FHWA. Attended other FHWA, TRB webinars and meetings deemed acceptable and relatable to AQ. 100% Complete
- AQ Website development. Maintain appropriate active web-links. Developed plans with Branch to update the AQ Website in regards to PM_{2.5} and Ozone information, which will include maps and links as new information is received. 100% Complete
- Develop and maintain a KYTC AQ Email distribution list for AQ information. My lists are updated. 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. Active in conference calls regarding amendment changes from KIPDA, OKI, other areas, and FHWA. 100% Complete
- Assist with new programs as required by MAP-21, CAAA, and authorization. At the director's request, comments were made regarding the CMAQ weighting factor related to PM_{2.5} for the FHWA CMAQ application process. 100% Complete
- Develop and maintain KY rideshare and park-n-ride database of locations. Update the database as needed. 100% Complete
- Maintain literacy in MOVES_2014 AQ model. This includes performing the current emissions model run for ozone and PM_{2.5} regional conformity analyses for the Louisville, NKY, Ashland, and Christian County areas as well as other newly designated areas. Have detailed knowledge on how to run MOVES_2014 and post-processing of the data in MySQL. Have only completed test/training runs with the model as no actual run has been needed. Taught Daniel Burgin in DEA the basics of the MOVES2014 model to help familiarize him with the model before traveling to his own MOVES2014 training out of state. 100% Complete
- Coordinate special AQ/MOVES training when needed. Trained myself with the new MOVES2014 model and also assisted Daniel Burgin from DEA to get him ready for his training with the model. 100% Complete
- Provide support to the Office of Local Government and local agencies for Congestions Management and Air Quality (CMAQ) related issues, as requested. Assist District Offices with the preparation of CMAQ applications including emission calculations and documentation. Modal branch will play just a small role when dealing with CMAQ performance measures, but still awaiting to hear more information from FHWA on what those will be. One applicant sought help with his application and was referred to the district as is protocol since requests have to come from district offices. At the director's request, comments were made regarding the CMAQ weighting factor related to PM_{2.5} for the FHWA CMAQ application process. 100% Complete

CHAPTER 11

Air Quality Conformity Analysis

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Air Quality Team

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Maintain a working knowledge of emerging issues and best practices, such as diesel emissions reduction strategies and Cabinet Green Initiatives. Work with the freight team to address pertinent AQ issues including diesel retrofits on locomotives and emission reduction best practices at rail yards and ports. EPA and the White House have moved forward with their guidelines for increased CAFE standards by 2025. Currently up-to-date on issues that involve diesel retrofitting and greenhouse gases. 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. Working on Traffic Forecasts. Learning about Ashland TDM when time allows. 100% Complete

PRODUCTS

- Ozone and PM_{2.5} regional conformity analysis as required 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, GHG/CC as requested. 100% Complete
- VIN/Fleet data for use with MOVES. 100% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$67,900	\$64,303	95%
OTHER	\$7,000	\$126	1%
TOTAL	\$74,900	\$64,429	86%

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
- \$2,000 staff training for the MOVES 2014 Model provided by EPA/FHWA.

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 system in Kentucky. The programs addressed in this chapter are public riverports, railroads, freight, and ferryboats. The team will administer and have oversight/support of ferry operations, Ferryboat Formula Funds (FBP), KSRA, KRI, and other federal or state multimodal contracts. The team serves as staff support for the Water Transportation Advisory Board.

PROPOSED ACTIVITIES FOR 2014-2015

Public Riverports

- Maintain Kentucky's guidelines for Kentucky Riverport Improvement (KRI) grant applications, as defined by current budget bill. Review any KRI grant applications received. **KYTC's guidelines for public riverport applications were improved based on lessons learned from FY 14 round of projects and KYTC Audit's Review. Ten applications were submitted and nine received funding. 100% Complete**
- Provide staff support for the Water Transportation Advisory Board. **KYTC provided staff support at the September, October, and June meetings and process applications approved by the Board and submitted to the Secretary's Office for approval. 100% Complete**
- Plan and host Riverport Meeting as needed. **The public riverports were present for riverport discussions during the meetings of the Water Transportation Advisory Board. KYTC conducted site visits to open public riverports. A separate riverport meeting was unnecessary. 100% Complete**
- Interface with the public riverports in the state by responding to information requests and serving as a member of the Kentucky Association of Riverports. **KYTC staff attended Kentucky Association of Riverports meetings. 100% Complete**
- Actively participate as a member on the AASHTO Standing Committee on Water Transportation (SCOWT). **KYTC attended SCOWT conference calls. 100% Complete**
- Conduct annual on-site visits of active public riverports in the state. **Site visits were conducted at all active public riverports. 100% Complete**
- Update the Waterways Plan as needed. **The Waterways Plan was not updated. KYTC is collecting input from riverports, KBT, and reference materials for the next Waterways Plan. A full update is planned for 2016. 100% Complete**

Railroads

- Oversee Kentucky Shortline Railroad Assistance projects including contract administration, project tracking, and project inspection. **KYTC staff continues to administer the grant including advertising fund availability, processing applications, administering contracts, approving invoices, and construction inspection. 100% Complete**

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Work with Division of Right of Way (or assigned Division) to administer KY Rail Crossing Improvement (KRCI) projects and update the program guidance as defined by the current budget bill. Review any KRCI grant applications received. **KYTC's guidelines for public railroad crossing reconstructions were updated to reflect the 80/20 match requirement. KTC provided research on ways to prioritize projects and to improve crossing construction guidance. Input was sought from all shortline railroads owned or operated in KY. Five applications were submitted for improvements at 39 locations. 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. Rail maps may be used by KYTC for roadway planning and project development. **Worked with all active railroads within the state to obtain GIS layers of all railroad track and railroad yards owned within Kentucky. Compiled GIS layers into statewide mainline layer. A statewide layer of all rail type centerlines is available. 100% Complete**
- Update the 2002 Kentucky Statewide Rail Plan to meet current requirements, including the Passenger Rail Investment and Improvement Act (PRIIA) of 2008. **The 2014 Rail Plan was completed and published online. 100% Complete**
- Participate in various rail studies and research with KYTC involvement. **KYTC worked with the University of Kentucky to develop rail crossing reconstruction guidelines and procedures to prioritize rail crossing projects. 100% Complete**
- Collect railroad annual reports and rail accident/incident reports as directed in 603 KAR 7:090. **KYTC staff sent letters to all operating railroads within Kentucky requesting annual reports. Reports were received from all Kentucky railroads and trackage statistics compiled for use in the Rail Plan. Rail accident/incident reports are submitted to KYTC by the railroads and they are distributed to the Division of Right of Way and Utilities as required. 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. **KYTC participated in SCORT, AREMA, and ASLRRA conference calls and webinars when available. KYTC attends meetings of Kentucky Operation Lifesaver when invited. KYTC contracted with Operation Lifesaver for printed educational materials. 100% Complete**
- Monitor, track, and distribute information about railroad line abandonments in Kentucky. **KYTC received no rail abandonment notices in this fiscal year. 100% Complete**
- Respond to public inquiries on passenger and freight rail issues. **KYTC staff has responded to numerous letters, phone calls, and emails for information about rail issues. 100% Complete**

Freight

- Provide technical assistance and disseminate information to MPOs, ADDs, HDOs, and project teams regarding freight movement, planning, and safety. **KYTC regularly reviews industry publications and news articles and forwards relevant information to the MPOs and ADDs. KYTC staff attends and presents at Statewide Transportation Planning meetings. 100% Complete**

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Evaluate, receive, and update freight data from MPOs, ADDs, and HDOs as needed. There were no complete updates to the Major Freight Generators or Major Traffic Generators scheduled for FY 2015 but some MPOs, ADDs, and HDOs submitted revision information. 100% Complete
- Participate in regional freight planning efforts. KYTC attended meetings and conference calls of Mid-America Freight Coalition (MAFC) Institute for Trade and Transportation Studies (ITTS) and exchanged regional freight planning ideas. KYTC reviewed the surrounding states' freight networks for connectivity to KY's freight network. 100% Complete
- Continue involvement with Mid-America Freight Coalition (MAFC), Institute for Trade and Transportation Studies (ITTS), and National Cooperative Highway Research Program (NCHRP). KYTC attended meetings and conference calls of Mid-America Freight Coalition (MAFC) Institute for Trade and Transportation Studies (ITTS) and exchanged regional freight planning ideas. KYTC reviewed the surrounding states' freight networks for connectivity to KY's freight network. 100% Complete
- Visit intermodal sites and communicate with rail, water, and road modes to identify freight-related needs and concerns involving highways. KYTC staff conducted site visit trips that included railroads, riverports, intermodal facilities, and ferry operations. 100% Complete
- Continue developing relationships with Economic Development to identify and promote intermodal freight needs. KYTC hosted Economic Development staff at meetings of the Water Transportation Advisory board. KYTC continues to seek input from Economic Development GIS staff for the Freight and Rail Plans and base data for freight generating locations. 100% Complete
- Research, prepare, and populate information for FHWA Intermodal Connector Assessment Tool (ICAT). Some research has been accomplished but no data has been completed. Part of the Rail Plan and Freight Plan comment periods included requests for input regarding Intermodal Connectors. (50% Complete/Ongoing)
- Update the State Freight Plan. KYTC and the consultant have produced a draft of the Freight Plan. KYTC hosted a Freight Workshop for industry input for the Freight Plan. 50% Complete
- Prepare draft procedure and analysis for MAP-21 Freight Performance Measures. KYTC has attended several webinars regarding Freight Performance Measures and developed a Freight Network to analyze performance. KYTC downloads HERE data monthly to review, conflate, and search for complete network coverage. KYTC is awaiting finalized MAP-21 Freight Performance Measures. 50% Complete

Ferryboats

- Coordinate the Kentucky Ferryboat Program. KYTC staff provides ongoing oversight on the operation of 7 state funded ferries and is responsible for the contracting and invoicing of these ferries. 100% Complete

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Share information concerning Ferryboat Formula Fund (FBP) program and administer remaining FBD funds. Plan and host the Ferryboat Meeting as needed. Information concerning the Ferryboat Formula Fund Grant Program was shared with the ferryboat authorities at site visits and via emails. Requests for FBD funds were received from 2 ferries and 1 more plans to submit a request in the coming months. KYTC reviewed and recommended to FHWA both received requests. Both projects have been completed. 100% Complete
- Conduct annual on-site visits of Kentucky Ferryboat Operations. KYTC visited 6 of the ferries and interfaced monthly with all of the ferryboat operations. 100% Complete
- Work with Ferry Authorities to develop fiscally constrained plans for FBP funds. KYTC has reached out to Ferry Authorities on multiple occasions to assist in the development of plans but the ferry authorities are not interested or cannot afford it at this time. 50% Complete
- In accordance with the FY 15/16 budget, assist with development of state ferryboat licensure requirements. KYTC researched ferryboat licensure on the state and federal levels across the US. Development of statewide licensure program is ongoing. US Coast Guard has provided Valley View Ferry with a location specific waiver for their current pilots. 100% Complete

PRODUCTS

- Kentucky Riverport Improvement project/contract administration. Ten projects were approved for funding. 100% Complete
- Updated Statewide Rail Plan 100% Complete
- Updated Statewide Freight Plan Draft is in development 50% Complete
- Updated Statewide Waterways Plan 10% Complete
- Updated railroad GIS database and maps for KYTC and public purposes 100% Complete
- Annual Rail Report 100% Complete
- Working ferryboat operations, contracts, site inspections, and invoice review/approval 85% Complete (eligible FBP pending from 4 ferries)
- ICAT documentation 50% Complete
- FBP awards administered 100% Complete
- Conduct annual Waterways meeting as needed 100% Complete
- Invoices for Kentucky Shortline Railroad Assistance Program 100% Complete
- Contracts and guidance for Kentucky Rail Crossing Improvement Program 100% Complete
- Updated website, meeting minutes, agendas, logistics, and guidance for Water Transportation Advisory Board 100% Complete

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$273,800	\$263,414	96%
OTHER	\$45,800	\$1,629	3%
TOTAL	\$318,800	\$265,043	83%

CHAPTER 12

Multimodal Freight Transportation

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

Outsourcing

- \$150,000 Waterways Plan Update **0%**

Other

- \$25,000 Mid America Freight Coalition, an MAASHTO subcommittee paid as a pooled fund study **100% Complete**
- \$39,800 Institute for Trade and Transportation Studies, a SAASHTO subcommittee paid as a pooled fund study. **Prepaid in fiscal year 2012 0%**
- \$5,000 Operation Lifesaver - Educational Material (School Children) **0% Not requested in FY**
- \$15,000 Other Operational Cost- For items such as travel, mileage, equipment, and other costs directly associated to the completion of this work chapter **100% Complete**
- Tombigbee Waterway Dues are paid through Regional Planning (EA51 General Fund \$50,000) **100% Complete**

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 maintains traffic trends, provide current and projected traffic volume estimates for planning, project development, operations, and other purposes. They update and maintain local, regional, and statewide traffic models (KySTMv10). They collect, process, and assemble data for determining route location or relocation, selecting among alternate routes, or as input into KySTMv10.

PROPOSED ACTIVITIES FOR 2014-2015

Traffic Forecasting- Reports, Studies, and Analysis

- Prepare traffic estimates for planning studies, design projects, road user costs, maintenance, and other purposes, as requested and/or needed. **Received 62 traffic forecast requests and 63 completed. 100% Complete**
- Administer statewide traffic forecasting contracts. Provide quality review for traffic projections prepared by the MPOs' and Project Development consultants. **Administered one Forecasting Letter Agreement. Provided quality review for 2 forecasting projects prepared by Districts as part of their design contract and 5 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. **Database maintained and a copy made available to other users within the Division of Planning. Provided a monthly status report to all District and Design end users of forecasts. 100% Complete**
- Maintain the traffic forecasting web page as a tool for other users. Develops database to track model use 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 outputs. **Provided factors for HPMS in May 2015. 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). **Updated traffic requirements to Hwy Design Pavement Team. 100% Complete**

CHAPTER 13

Traffic Data Forecasting
Statewide Traffic Model

RESPONSIBLE UNIT

Division of Planning
Multimodal Programs Branch
Forecasting and Modeling Team

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

Modeling- Reports, Studies, and Analysis

- Administer statewide modeling contracts. Provide quality review for models prepared by the MPOs' and Project Development consultants. **Completed 3, initiated 2, and oversaw 4 other letter agreement projects. 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 other users and offices. **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 other users. **Web pages were reviewed and updates proposed. 100% Complete**
- Obtain vehicle registration, employment, and HERE data for use in Travel Demand Models. Research other data sources available. **Acquired 2014 vehicle registration and 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. 100% Complete**
- Participate in Caliper workshops held at adjacent states, foster a peer exchange with such agencies regarding statewide model and regional models. **No workshop sessions were available during the year. 100% Complete**
- Create city, county, multi-county, regional models as needed for Project Development. **Two modeling projects were initiated and three modeling projects completed. The 3 MPO modeling projects continued from the previous year. KYTC reviewed three consultants with SPAC to develop ADTs for PIF projects. Established a new standard model for Time-of-Day and special Freight generation. 100% Complete**
- Conduct studies to better calibrate and validate models. Extend peer review of large MPO models and coordinate model updates as needed for small MPO models. **Participated in a TMIP peer review of VDOT's Statewide Model and the OKI model's use for a Ohio River Bridge replacement study. Member of NCHRP 8-94 which is studying how to "right size" a model for a given set of parameters. 100% Complete**
- Identify areas needing an area-wide model. Further standardize the interface and formats used in macro level models. **For 2 MPO models, coordinated and expanded the standardization of interface, format, and content as well as distinct two class truck assignment, Time-of-Day segmentation, and include boundary counties. 100% Complete**

CHAPTER 13

Traffic Data Forecasting
 Statewide Traffic Models

RESPONSIBLE UNIT

Division of Planning
 Multimodal Programs Branch
 Forecasting and Modeling Team

PRODUCTS

- Project, Corridor, Road User Cost Reports or other traffic forecasts **100% Complete**
- District Office coordination regarding models and forecasts **Reviewed forecasts included in Design contracts for Districts 9 and 12 and Central Office Planning Studies 100% Complete**
- Travel Time Analysis for models **Completed an analysis of 2012 Link Level speed data statewide. 100% Complete**
- Traffic forecast factors for HPMS **100% Complete**
- Updated tools for consultants and District (e.g. ESAL Calculator; look-up tables) **100% Complete**
- Various sized Travel Demand Models such as, but not be limited to the following: **100% Complete**
 - Daviess, Warren, & Hardin multi-county, MPO area models
 - Reviewed two micro-simulation models used in separate planning studies
 - Continued validation and calibration of new and existing models

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$554,200	\$497,339	90%
OTHER	\$35,000	\$941	2%
TOTAL	\$589,200	\$498,280	85%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES**Outsourcing**

- \$300,000 for County-Wide Traffic models (outsource) **100% Complete**
- \$15,000 TransCAD & TransModeler Workshops -For items such as travel, mileage, registration, and other costs directly associated with attending Caliper training sponsored by adjacent State Transportation Agencies and sponsoring an advanced TransCAD workshop **100% Complete**

Other

- \$10,000 Other Operational Cost - For items such as travel, mileage, meeting registration, and membership fees. **100% Complete**
- \$15,000 For items such as equipment and software for a data logger-**Developed spreadsheet 100% Complete**
- \$16,000 VISSIM license for PTV Micro-Simulation Software-**Purchased an AA4 license 100% Complete**

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PURPOSE AND SCOPE

The team coordinates the Kentucky Bicycle and Pedestrian Program, continue developing a statewide bikeway & pedestrian system, and work within the Transportation and other Cabinets. They work to expand active transportation opportunities in Kentucky by providing assistance to state and local governments and other groups, as requested. The responsibility of the Kentucky Pedestrian and Bicycle Coordinator is to prepare, assist, and promote bicycle and pedestrian programs throughout the state as well as to work with project teams to recommend opportunities for bicycle-pedestrian facilities inclusive of proposed highway projects. The Bicycle and Pedestrian Coordinator also acts as secretariat for the Kentucky Bicycle and Bikeway Commission.

The Bicycle and Pedestrian team coordinates with the Cabinet for Tourism, Arts and Heritage, the Governor's Office of Local Development, as well as the Cabinet for Health and Family Services to promote pedestrian and bicycle travel, as well as recreational trails and Adventure Tourism programs to promote livability and economic growth through biking and walking.

The KYTC Office of Local Programs coordinates with several programs that support and encourage active transportation. The team will coordinate with them, regarding Scenic Byways, the Transportation Alternatives Program (TAP), the Recreational Trail Programs (RTP), and CMAQ programs.

PROPOSED ACTIVITIES FOR 2014-2015

Planning

- Assist local governments in the development of master plans, plans for local bicycle and pedestrian network facilities. The program team suggests using bikeability and walkability audits to review/select the appropriate areas for project inclusion, connectivity, facility type, and plan of action. **The team recorded updates for bicycle and pedestrian master plan data from the yearly ADD Office work program survey. This information shall be shared on the KYTC Bike-Walk web site for future consideration planning needs. The team worked with 18 different cities on creating and or improving their bicycle and pedestrian planning, documents, and maps.**
100% Complete
- The team assists local governments and other KY cabinets with technical advice that will aide in the development of bike-ped facility plans and coordinating studies associated with these plans. **The team has worked with 18 local governments to provide guidance and specific requirements needed for bicycle and pedestrian facilities and related signage that are being planned and or constructed. 100% Complete**

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- The team will work with the KY Office of Highway Safety and the KY Pedestrian Action Safety Committee on ways to improved highway safety for all roadway users; in particular with pedestrian issues. The team participates in the KYTC Strategic Safety Plan implementation, participate in FHWA Pedestrian Fatality Focus Study for selected cities in Kentucky, and the team attends several national pedestrian safety focus group phone conferences. **The team has worked with the Office of Highway Safety on 2 pedestrian safety programs in Louisville, worked with the FHWA to conduct a bike/ped assessment in Frankfort, and has also attended several of the national pedestrian safety focus phone conferences.**
- Revise and update the USBR and statewide bike tours system as needed. The list of future USBR routes to be reviewed includes USBR 21, 23, 25, and 35. The team will work with the DOT's of Indiana, Illinois, Tennessee, and additional private groups for future reviews. The current review and recommendations for the signing USBR 76 will be done. This process includes coordination with the Office of Adventure Tourism and Office of Local Governments for the signage needs associated with the USBR system in KY. **The team provided the data and resources to have way finding signage funded and installed for the USBR 76 (Trans America). This information was provided to the Office of Adventure Tourism. Adventure Tourism has agreed to be the coordinator of this final task associated with USBR 76. All USBR's that are also named as in-state bike routes have been placed on the Bike/Walk web site. The remaining USBR's may be reviewed by private individuals or groups associated with bicycling and or tourism. These activities will be coordinated with our staff. 100% Complete**
- Review, revise, and update the Kentucky Bicycle and Pedestrian Plan and the Kentucky Pedestrian and Bicycle Travel Policy, as needed. **The team constantly reviews the bicycle and pedestrian travel policy. We share the content on our web site, we refer to this during project meetings with bike/ped consideration, and we use this during the provided training and guidance on bike/ped master planning. 100% Complete**

Engineering and Projects

- Answer requests concerning planning and design guidelines regarding pedestrian and bicycle facilities. The team will provide reviews of bicycle and pedestrian projects/facilities with KYTC's HDO and CO Divisions, ADDs, MPOs, and local government. The team will review for compliance with local bike/ped plans where appropriate. The team coordinates with the District Offices to review/recommend possible pedestrian/bicycle facility inclusions with the road projects. **The team has started providing bicycle and pedestrian consideration reviews with traffic forecast reports (65 reports). The team also reviews 'Share the Road' sign request and encroachment applications that include bike/ped facilities (13 cities and or counties). The coordinator has been included as a member of 17 roadway project teams to better consider bike/ped accommodations. 100% Complete**

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- 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. The team is working with the Division of Maintenance and District office planners to develop a better way of introducing, reviewing, and scheduling any pavement striping changes. **The team reviewed all 12 HDO resurfacing lists and made recommendations for possible bike/ped considerations. Future work will include elements in Highway Safety, Design, and Construction.**
- Review Share the Road sign requests for applicability and proper system placement. Develop/update in coordination with HDO, Maintenance, Traffic Operations, Design, and Planning Offices the Share the Road sign procedures for review, placement, and maintenance; using the official form (TC 59-101). **The team has reviewed and or recommended Share the Road signs in 13 counties for FY 2014. The request and recommendations are all shared with and discussed with the regional HDO, central office permitting staff, and the local governments. 100% Complete**
- Provide and assist with implementation of the Lane Reconfiguration Guide to KYTC District Maintenance and Traffic staff. Update as need with their input. Meet with each District office and provide the design standards for active transportation considerations by providing alternative lane usage within existing R/W. Also add updated design drawings and design choices to the guide. **The team continues to work with each HDO and central office staff to better consider bike/ped accommodations. The team has worked with the Central Office Highway Design staff to have the AASHTO Bicycle and Pedestrian Facility Guides officially adopted for design considerations. The team coordinated the Rumble Strip/Stripe Committee meetings this year and developed updated standard drawings showing the gap patterns for rumbles in shoulders of 4' or wider. The bike/ped team brings examples of new or updated design standards each time we meet with the HDO staff for projects meetings. The team also provides resources and specs for recommendations made during the pedestrian & bicyclists consideration portion of the Modal Forecast reviews. 100% Complete**
- The team will meet with the Division of Design to review and update all materials associated with standard bike/ped designs and also make sure all design and new constructions teams have the 2012 AASHTO Development of Bicycle Facilities Guide available for review. The Bike/Ped team will work with the Design Team to have the most current AASHTO Bicycle and pedestrian Facility Guides officially adopted within the KYTC Design standard drawing manual. **The AASHTO guides will be officially adopted with the next revision of the KYTC Design Standards (drawings, specs, and procedures). The design specs for ADA curb ramps and tactile domes have already been revised and the sepia drawings are available on the KYTC Office of Design web site. The ADA and new rumble strip/stripe (in shoulders over 4' wide) drawings will be included this year (fall of 2015). 100% Complete**

RESPONSIBLE UNIT

Division of Planning
 Modal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- GIS applications- Develop and maintain a GIS of bicycle and pedestrian network facilities and plans statewide. Document linkage between the local and regional network facilities. The team coordinates updates and share GIS information for bike/ped facilities/projects whenever possible with local governments, regional transportation authorities, and the local Highway District Offices. The team has been working with all 15 ADD Offices to collect the current inventory of bike/ped facilities for approximately two (2) cities per ADD each year. To date we have collected data from 66 cities. This collection effort is a part of the regular ADD and KYTC work program. 100% Complete
- Obtain federal, state, local, or private funds available to the Cabinet for bicycle and pedestrian related projects. The team has helped secure several federal grants for pedestrian safety in the City of Louisville. The team has also partnered with the State Health Department to secure grants from the Center for Disease Control (CDC) to improve or create pedestrian action plans (master plans and projects). The FY2105 mini grants were awarded to 11 cities. The team continues to improve relations and procedures with the Office of Local Programs and the Office of Local Government (the TAP and RTP funding programs). 100% Complete

Education & Enforcement

- Provide technical training that includes pedestrian and bicycle design to planners, designers, local governments, and other KYTC staff statewide. Provide the design and construction standards to each District Office and additional information that is included in the 2012 AASHTO Bicycle Facility Guide. The team will encouraged all District Offices to obtain, use and adopt the most current AASHTO guides for bicycle (2012) and pedestrian (1999) design. The team has created (with guidance from the HDO's) several draft documents to better explain, create, and report bike/ped projects from the local government's point of view. These documents include: step-by-step process for a road diet (and the criteria for what roads within the state are good candidates), a step by step guide for bike/ped project studies (all steps in the process that mimics the process in which highways are develop, designed, studied, and constructed, and a step-by-step guide for roadway signage associated with bicycling (STR, way finding, and route marking).
- Provide training to HDO, ADD, MPO, and local staffs on how to conduct a walkability and bikeability audits as requested. Facilitate public education of non-motorized modes of transportation, as opportunity arises. The team conducts bike/ped presentations and training workshops throughout the state ADD transportation subcommittees, city council meetings, Small Urban Research Studies, and local safety events. The bike/ped team coordinated with the State Health Department to conduct walkability audits in two cities as part of a statewide pedestrian training workshop; Paducah and Morehead. These audits were conducted by local advocates, health department employees, and city staff. The team provides walkability and bike ability surveys at all MPO and ADD regional transportation meetings. These checklists surveys are also made available on our web site under the resources page. 100% Complete

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- The team will work with the Office of Highway Safety's Bicycle and Pedestrian Education Coordinator and local law enforcement to promote education and enforcement of pedestrian and bicycle laws. Provide information brochures and prepare a presentation at the annual Life Savers Conference. Print and distribute the informational brochure for both cycling and pedestrians laws, regulations, and guidance. The team was provided a booth at this year's Life Savers Conference in which we displayed educational material for both walking and bicycling. The team helped organize the City of Louisville pedestrian safety presentation session. The team provides educational materials to several police departments for their national night out program (public safety awareness with kids). The team has coordinated with the KY State Police and the Eastern Kentucky University College of Criminal Justice to develop a curriculum for bicycle and pedestrian safety and awareness of the current laws and regulations. 100% Complete
 - Respond to citizens' need for information, maps, bike routes, walking trails, availability of funds for projects, as requested. The team responds to emails, calls, and letters requesting travel maps, preferred bicycle routes, and request for bicycle and pedestrian facility funding throughout the year. We provide links to instate and US Bike Routes via our web site, contact information for the bicycle clubs in the area they might be riding, and resource information for funding bike/ped projects (we had 29 such request for FY 2015). 100% Complete
 - Develop and maintain a clearinghouse of information concerning active transportation - research, methods, and criteria to CO Divisions, ADDs, MPOs, and local government. The team works with the Office of Local Government and the Federal Highways Office. The team updates the bike/walk web site with updates and revisions of laws, policies, resources, safety material, local planning documents, technical resources, KBBC information, and update to the bike route information. 100% Complete
 - Maintain the www.bikewalk.ky.gov website. 100% Complete
- Kentucky Bicycle and Bikeways Commission (KBBC)**
- Coordinate staff and plan quarterly KBBC meetings. The KBBC had 4 regularly scheduled video/web cast meetings for the FY 2015 and one in person business meeting. The business meeting was held at Green Bo State Park. The bike/ped team coordinates all travel arrangements and provides administrative assistance with travel reimbursement. 100% Complete
 - Prepare agenda before each KBBC meeting and minutes after each KBBC meeting. Agendas are prepared, posted on the web site, sent to the public information contacts, and associated meeting notes added for each agenda. The KBBC uses a web based video link for future meetings (Go to Meetings). Agendas, notes, and associated materials are posted on the bike/walk web site. The team coordinates meeting times, locations, and provides resource materials for all meetings. 100% Complete

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

PROPOSED ACTIVITIES FOR 2014-2015 (continued)

- Assist KBBC on communications and technical matters. The bike/ped updates the information notebook for new KBBC members. The notebook contains contact information, ethics statements, current KRS and KAR's associated with the KBBC and the bike/ped program, the last 12 months of KBBC agendas with meeting notes, video location information, and associated forms for travel/reimbursement and travel policy. The bike/ped team also coordinates all email and phone call inquiries for the KBBC. The bike/ped team provided the book to one new member of the commission (Joe Bowen). The team provided all assistance for travel reimbursement for regularly scheduled meeting as well as the yearly in-person business meeting. The team responded to over 400 emails for the FY 2015 related to KBBC affairs.
100% Complete
- Assist in facilitating the Paula Nye Education Grant program. The team receives the new grant applications, the 6 month reports for current applicants, and keeps accounting records for all funds used for the awarded programs. The team submits documentation to the Secretary's office of the KBBC recommended Paula Nye Grant awardees. The team received 14 application for the Paula Nye memorial Education grant for the FY 2015 (2014 awarded grants). 12 programs were awarded funding. The final KBBC recommendations are provided to the Secretary's Office via a reporting memo. The team sends reminder emails to all organizations per their required reporting requirements. The team receives, scans, and documents all accounting and status reports for each awarded program. This information is located in one central document and is share quarterly or as needed. 100% Complete

PRODUCTS

- Local pedestrian and bicycle project or master plan resources, as needed.
- Provide a clearing house/tool box of bike/ped resources and related items for the creation or improvement of local projects or master plans.
- Updated bicycle and pedestrian brochures and promotional materials.
- Provide pedestrian and bicycle technical training courses and material as appropriate.
- Walkability/Bikeability Audits.
- Quarterly and Annual KBBC meetings.
- NYE Grant status reports.

CHAPTER 14

Pedestrian and Bicycle Program

RESPONSIBLE UNIT

Division of Planning
Modal Programs Branch

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$97,200	\$118,044	121%
OTHER	\$37,500	\$2,418	6%
TOTAL	\$134,700	\$120,462	89%

Other

- \$10,000 Pedestrian and bicycle training course instruction with site field visits
- \$2,500 for attendance of national conference
- \$10,000 for Kentucky Bicycle and Bikeway Commission meetings.
- \$5,000 for Bicycle and Pedestrian Brochures
- \$5,000 for Bicycle and Pedestrian Promotional Items (bike lights, reflectors, pedometers)
- \$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 2014-2015

- 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 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$500,000	\$403,833	81%
OTHER		\$2,157	
TOTAL	\$500,000	\$405,990	81%

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

District	County	Project Name	Route	BMP	EMP	Category	Description	Program	Calc Total Cost	Letting Date	Design Cost	R/W Cost	Utility Cost	Construction Cost
01	018 Calloway	Calloway KY 280	KY 280	0	9.209	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 280 FROM KY 94 EAST OF MURRAY (MP 0.000), SOUTHEAST TO KY 1536 (MP 9.209).	2015	\$ 1,422,300	12/12/2014	\$ -	\$ -	\$ -	\$ 1,422,300
01	028 Crittenden	Crittenden Various	Various			HFS	STATEWIDE IMPLEMENTATION OF HFS ON VARIOUS ROUTES IN CRITTENDEN AND DAVIESS COUNTIES IN DISTRICTS 1 AND 2	2015	\$ 129,841	6/26/2015	\$ -	\$ -	\$ -	\$ 129,841
01	073 McCracken	McCracken I-24	I-24	1.5	18	Cable Median Bar	INSTALL CABLE MEDIAN BARRIER ON I-24 FROM A POINT 1.5 MILES EAST OF THE ILLINOIS/KENTUCKY STATE LINE (MP 1.500) IN MCCRACKEN COUNTY TO 1.1 MILES EAST OF KY 787 (MP 17.92) IN MARSHALL COUNTY.	2015	\$ 13,802		\$ -	\$ -	\$ -	\$ 13,802
01	073 McCracken	McCracken KY 1954	KY 1954	0	3.03	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1954 FROM KY 348 TO 0.085 MI SOUTH OF KY 3075. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
01	121 Various	District 1 Various	Various			Horizontal Alignm	INSTALLATION OF HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 1	2015	\$ 466,570	1/30/2015	\$ -	\$ -	\$ -	\$ 466,570
02	024 Christian	Christian I-24	I-24	85.5	93.373	Cable Median Bar	INSTALL CABLE MEDIAN BARRIER ON I-24 FROM A POINT 0.108 MI WEST OF THE US 41A OVERPASS TO THE KENTUCKY/TENNESSEE STATE LINE.	2015	\$ 102,362		\$ -	\$ -	\$ -	\$ 102,362
02	030 Daviess	Daviess KY 2127	KY 2127	0	5.76	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 2127 FROM KY 1207 WEST OF HANDYVILLE (MP 0.000), NORTH TO KEELER ROAD (MP 5.762).	2015	\$ 1,033,160		\$ -	\$ -	\$ -	\$ 1,033,160
02	051 Henderson	Henderson KY 351	KY 351	4.7	5.432	RD Corridor	SAFETY IMPROVEMENTS ON KY-351 INCLUDING HORIZONTAL AND VERTICAL REALIGNMENT, SHOULDER WIDENING AND GUARDRAIL INSTALLATION APPROX. 1.0 MILE WEST OF JCT. KY-1078 IN ZION.	2015	\$ 1,780,000		\$ -	\$ -	\$ 280,000	\$ 1,500,000
02	092 Ohio	Ohio KY 54	KY 54	0	6.017	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 54 FROM THE DAVIESS/OHIO COUNTY LINE TO KY 69. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
02	121 Various	District 2 Various	Various			Horizontal Alignm	INSTALL HORIZONTAL ALIGNMENT SIGNING ON VARIOUS ROUTES IN DISTRICT 2.	2015	\$ 450,000		\$ -	\$ -	\$ -	\$ 450,000
03	005 Barren	Barren US 68	US 68	9.52	9.68	Other	CONSTRUCT A TURN LANE ON US 68 FROM MP 9.52 TO MP 9.68 BETWEEN NORTH COOPER LANE AND GLASGOW OUTER LOOP.	2015	\$ 202,493		\$ -	\$ -	\$ -	\$ 202,493
03	071 Logan	Logan KY 100	KY 100	0	9.077	LD-R	DITCHING AND SHOULDERING, EXTEND CROSS DRAINS AND REMOVE HEADWALLS ON KY 100 FROM US 68 AT RUSSELLVILLE TO LOCUST GROVE ROAD NEAR THE SIMPSON COUNTY LINE.	2015	\$ 18,000		\$ -	\$ -	\$ -	\$ 18,000
03	107 Simpson	Simpson KY 100	KY 100	0	8.375	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 100 FROM LOGAN-SIMPSON CO. LINE TO ALLEN ROAD (MP 8.375) IN SIMPSON COUNTY, KY. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
03	114 Warren	Warren Various	Various			HFS	STATEWIDE IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN WARREN AND GRAYSON COUNTIES IN DISTRICTS 3 AND 4. (2014BOP)	2015	\$ 571,975		\$ -	\$ -	\$ -	\$ 571,975
04	044 Green	Green KY 61	KY 61	20.642	20.893	FE06 Match	INSTALL GUARDRAIL ALONG KY 61 FROM 0.461 MILES NORTH OF JONES SCHOOL ROAD (MP 20.642) TO 0.191 MILES SOUTH OF JONES CEMETERY ROAD (MP 20.893).	2015	\$ 79,925		\$ -	\$ -	\$ -	\$ 79,925
04	047 Hardin	Hardin US 31W	US 31W	19.704	21.143	LRMP	SAFETY IMPROVEMENTS: MAST ARMS, SUPPLEMENTAL HEADS, REFLECTIVE BACKPLATES, AND ILLUMINATED STREET NAME SIGNS TO 8 INTERSECTIONS ON US 31W FROM WALMART DR (MP 19.704) TO PINE VALLEY DR (MP 21.143). (2012BOP)	2015	\$ 388,363	12/12/2014	\$ -	\$ -	\$ -	\$ 388,363
04	047 Hardin	Hardin KY 1600	KY 1600	3.315	8.528	RD Corridor	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)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
04	082 Meade	Meade KY 1638	KY 1638	0	4.264	LRMP	SAFETY IMPROVEMENTS: ADD 4' SHOULDER ON KY 1638 FROM KY 448 (MP 0.000) TO ROCK HAVEN RD (MP 4.264).	2015	\$ 698,832	6/24/2014	\$ -	\$ -	\$ -	\$ 698,832
04	090 Nelson	Nelson KY 49	KY 49	7	7.795	LRMP	IMPROVE CURVE SUPERELEVATION, EMBANKMENT, SHOULDERING AND GUARDRAIL REPLACEMENT ON KY 49 FROM 0.44 MILE NORTH OF HUTCHINS LANE (MP 7.39) TO 0.39 MILE SOUTH OF GILKEY RUN ROAD (MP 7.95).	2015	\$ 399,029	11/21/2014	\$ -	\$ -	\$ -	\$ 399,029
04	090 Nelson	Nelson KY 162	KY 162	0	8.157	LRMP	REMOVE ROADSIDE HAZARDS, EXTEND PIPES AND SOFTEN SHOULDER SLOPES ON KY 162 FROM US 62 (MP 0.000) TO KY 48 (MP 8.157)	2015	\$ 43,123		\$ -	\$ -	\$ -	\$ 43,123
04	109 Taylor	Taylor KY 55	KY 55	0	6.193	NHS G/R Ets	REPLACE TURNDOWN END TREATMENTS ON KY 55 FROM ADAIR COUNTY LINE (MP 0.000) TO JOHNSON ROAD (MP 6.193).	2015	\$ 747,503	8/22/2014	\$ -	\$ -	\$ -	\$ 747,503
05	015 Bullitt	Bullitt KY 44	KY 44	0	9.285	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 44 FROM THE JEFFERSON COUNTY LINE (MP 0.000), EAST TO RAYMOND ROAD (MP 9.285) WEST OF SHEPHERDSVILLE.	2015	\$ 1,437,500	2/20/2015	\$ -	\$ -	\$ -	\$ 1,437,500
05	015 Bullitt	Bullitt KY 480	KY 480	3.292	11.723	RD Corridor	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)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
05	056 Jefferson	Jefferson KY 155	KY 155	11.35	11.45	Intersection	SAFETY IMPROVEMENTS AT THE INTERSECTION OF KY 155 (TAYLORSVILLE RD) AND KY 1747 (HURSTBOURNE PKWY) IN JEFFERSON COUNTY. (2014BOP)	2015	\$ 95,000		\$ 95,000	\$ -	\$ -	\$ -
05	056 Jefferson	Jefferson Various	Various			HFS	STATEWIDE IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN FRANKLIN, HENRY AND JEFFERSON COUNTIES IN DISTRICT 5. (2014BOP)	2015	\$ 853,082		\$ -	\$ -	\$ -	\$ 853,082
05	093 Oldham	Oldham I-71	I-71	22.55	24.727	Cable Median Bar	INSTALL CABLE MEDIAN BARRIER ON I-71 IN OLDHAM COUNTY FROM 0.722 MI NE OF KY53 (MP 22.55) TO 0.33 MILE NORTHEAST OF KY 153 IN HENRY COUNTY.	2015	\$ 610,118	9/26/2014	\$ -	\$ -	\$ -	\$ 610,118
05	112 Trimble	Trimble KY 625	KY 625	6.574	6.68	FE06 Match	INSTALL GUARDRAIL ALONG KY 625 FROM 0.365 MILES NORTH OF KY 1838 (MP 6.574), EXTENDING NORTH TO 0.471 MILES NORTH OF KY 1838 (MP 6.680)	2015	\$ 2,832		\$ -	\$ -	\$ -	\$ 2,832
06	008 Boone	Boone I-71	I-71	69.9	77	Cable Median Bar	INSTALL CABLE MEDIAN BARRIER ON I-71 IN BOONE COUNTY BEGINNING AT GALLATIN COUNTY LINE (MP 69.9) TO 0.37 MI NE OF I-71/I-75 OVERPASS (MP 77.0). (2012BOP)	2015	\$ 1,099,571	9/26/2014	\$ -	\$ -	\$ -	\$ 1,099,571
06	008 Boone	Boone I-75	I 75	0	0	HFS	DIAMOND GRINDING, SHOULDERING AND DITCHING ON I-75 SOUTHBOUND RAMP AT KY 842 (HOUSTON ROAD).	2015	\$ 385,000	2/20/2015	\$ -	\$ -	\$ -	\$ 385,000
06	008 Boone	Boone US 42	US 42	0	5.665	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 42 FROM THE GALLATIN/BOONE COUNTY LINE TO KY 338. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
06	008 Boone	Boone US 42	US 42	0	2.236	HFS	PAVEMENT RESURFACING AND SHOULDERING ON US 42 BEGINNING AT THE GALLATIN COUNTY LINE (MP 0.00) AND ENDING AT MUD LICK CREEK BRIDGE (MP 2.236).	2015	\$ 56,000		\$ -	\$ -	\$ -	\$ 56,000
06	019 Campbell	Campbell KY 2345	KY 2345	2.05	2.35	RD Corridor	PAVEMENT REPAIRS ON KY 2345 FROM 0.041 MILE NORTH OF WESLEY DRIVE (MP 2.050) TO 0.183 MILE NORTH OF SENTINAL DRIVE (MP 2.350).	2015	\$ 127,773		\$ -	\$ -	\$ -	\$ 127,773
06	021 Carroll	Carroll I-71	I-71	38.808	50.8	Cable Median Bar	INSTALL CABLE MEDIAN BARRIER ON I-71 IN CARROLL COUNTY BEGINNING AT THE TRIMBLE COUNTY LINE (MP 38.808) TO 0.151 MI NE OF GHENT-EAGLE RD (MP 50.80). (2012BOP)	2015	\$ 1,790,208	9/26/2014	\$ -	\$ -	\$ -	\$ 1,790,208
06	021 Carroll	Carroll KY 36/277	KY 36 / 277			Other	CONSTRUCT/INSTALL SAFETY IMPROVEMENTS ON VARIOUS ROUTES IN BOONE, KENTON, CAMPBELL, OWEN, CARROLL AND GALLATIN COUNTIES.	2015	\$ 67,000		\$ -	\$ -	\$ -	\$ 67,000
06	039 Gallatin	Gallatin I-71 SB	I 71 SB	63.5	63.7	HFS	APPLICATION OF HIGH FRICTION SURFACE ON I-71 SOUTHBOUND FROM 0.027 MI SOUTH OF KY 3002 OVERPASS TO 0.173 MI NORTH OF KY 3002 OVERPASS.	2015	\$ 25,043		\$ -	\$ -	\$ -	\$ 25,043
06	059 Kenton	Kenton KY 1486	KY 1486	2.59	2.595	Intersection	IMPROVE INTERSECTION OF KY 1486 (MP 2.590) AND KY 2047, APPLICATION OF HIGH FRICTION SURFACE, SIGHT DISTANCE, DRAINAGE STRUCTURE IMPROVEMENT, DITCHING, SIGNING AND PAVEMENT MARKINGS. (2012BOP)	2015	\$ 194,928		\$ -	\$ 45,000	\$ 5,000	\$ 144,928
06	059 Kenton	Kenton KY 1303	KY 1303	0.562	0.842	HFS	PAVEMENT RESURFACING AND SHOULDERING ON KY 1303 BEGINNING AT TIMBER LANE (MP 0.562) AND ENDING AT BECH GROVE DRIVE (MP 0.842).	2015	\$ 12,000		\$ -	\$ -	\$ -	\$ 12,000
06	059 Kenton	Kenton I-275	I 275			HFS	APPLICATION OF HIGH FRICTION SURFACE ON I-275 RAMP FROM KY 16 NB TO I-275 EB.	2015	\$ 1,179		\$ -	\$ -	\$ -	\$ 1,179

06	096 Pendleton	Pendleton KY 17	KY 17	6.934	8.74	LRMP	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)	2015	\$ 75,000	\$ 75,000	\$ -	\$ -	\$ -	\$ -
06	121 Various	Kenton & Grant Variou	Various			HFS	IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN KENTON AND GRANT COUNTIES IN DISTRICT 6.	2015	\$ 198,257	\$ -	\$ -	\$ -	\$ -	\$ 198,257
07	009 Bourbon	Bourbon US 460	US 460	10.363	12.129	LRMP	IMPROVE SUPERELEVATION AND ADD EMBANKMENT AND SHOULDER ON US 460 FROM KY 537 (MP 10.363) TO MP 12.129.	2015	\$ 310,430	8/22/2014	\$ -	\$ -	\$ -	\$ 310,430
07	025 Clark	Clark US 60	US 60	14.563	15.603	LRMP	EXTEND CULVERT, REPAIR LANDSLIDE, ADD EMBANKMENT, UPGRADE GUARDRAIL, IMPROVE SUPERELEVATION, AND CLEAR VEGETATION ON US 60 FROM 0.478 MI WEST OF DYKES LN. (MP 14.563) TO GOOSE CREEK ROAD (MP 15.613).	2015	\$ 142,364		\$ -	\$ -	\$ -	\$ 142,364
07	034 Fayette	Fayette Various	Various			Other	CONSTRUCT/INSTALL ITEMS TO MINIMIZE LANE DEPARTURE INCIDENTS ON VARIOUS ROUTES IN FAYETTE, BOURBON AND GARRARD COUNTIES.	2015	\$ 169,898		\$ -	\$ -	\$ -	\$ 169,898
07	034 Fayette	Fayette US 25	US 25	10.8	11.725	LRMP	ACCESS MANAGEMENT AND OFFSET TURN LANES ON US 25 FROM KY 4 (NEW CIRCLE RD) TO CS 3853 (SHRINERS LN). (2014BOP)	2015	\$ 50,000		\$ 50,000	\$ -	\$ -	\$ -
07	057 Jessamine	Jessamine KY 3374/23	KY 3374/2338			Signing	SIGN INSTALLATION ON KY 3374 IN JESSAMINE COUNTY AND KY 2338 IN MADISON COUNTY.	2015	\$ 43,120		\$ -	\$ -	\$ -	\$ 43,120
07	076 Madison	Madison KY 52	KY 52	4.15	4.854	HFS	PAVEMENT RESURFACING AND SHOULDERING ON KY 52 BEGINNING 0.05 MILES EAST OF SILVER CREEK BRIDGE (MP 4.2) AND ENDING AT PEYNTONTOWN ROAD (MP 4.854).	2015	\$ 60,000		\$ -	\$ -	\$ -	\$ 60,000
07	084 Mercer	Mercer US 68	US 68	12.503	20.058	RD Corridor		2015	\$ 2,535,861	11/21/2014	\$ -	\$ -	\$ -	\$ 2,535,861
07	084 Mercer	Mercer US 68	US 68	12	21	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON US 68.	2015	\$ (314,139)		\$ -	\$ -	\$ -	\$ (314,139)
07	087 Montgomery	Montgomery US 460	US 460	0	7.32	Signing	INSTALLATION OF TRAFFIC SHEET SIGNS ON US 460 IN MONTGOMERY COUNTY. (2014BOP)	2015	\$ 50,000		\$ -	\$ -	\$ -	\$ 50,000
07	105 Scott	Scott US 460	US 460	0	6.83	LRMP	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)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
07	120 Woodford	Woodford KY 1964	KY 1964	3.505	6.187	LRMP	IMPROVE SHOULDER DROPOFFS, REMOVE ROADSIDE HAZARDS, AND UPDATE GUARDRAIL END TREATMENTS ON KY 1964 FROM KY 1965 TO SCOTTS FERRY ROAD (CR 1215).	2015	\$ 223,942	11/21/2014	\$ -	\$ -	\$ -	\$ 223,942
07	121 Various	District 7 Various	Various			HFS	IMPLEMENTATION OF HIGH FRICTION SURFACE ON VARIOUS ROUTES IN CLARK, FAYETTE, GARRARD, AND MONTGOMERY COUNTIES IN DISTRICT 7.	2015	\$ 532,345		\$ -	\$ -	\$ -	\$ 532,345
08	023 Casey	Casey US 127	US 127	14.74	18.946	NHS G/R ETs	REPLACE TURNDOWN END TREATMENTS ON US 127 FROM KY 2314 (MP 14.74) TO KY 1552 (MP 18.946).	2015	\$ 510,000	2/20/2015	\$ -	\$ -	\$ -	\$ 510,000
08	023 Casey	Casey US 127	US 127	18.946	23.715	NHS G/R ETs	REPLACE TURNDOWN END TREATMENTS ON US 127 FORM KY 1552 TO LINCOLN COUNTY LINE.	2015	\$ 435,022		\$ -	\$ -	\$ -	\$ 435,022
08	100 Pulaski	Pulaski KY 70	KY 70	3.55	13.814	LRMP	IMPROVE SUPERELEVATION, UPGRADE GR, SHOULDERING, CULVERT EXTENSION AND REMOVE ROADSIDE HAZARDS ON KY 70 FROM MP 7.7 TO MP 8.1.	2015	\$ 606,730		\$ -	\$ -	\$ -	\$ 606,730
08	100 Pulaski	Pulaski KY 790	KY 790	0	5.551	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 790 FROM WAYNE-PULASKI COUNTY LINE (MP 0.000) TO KY 90 (MP 5.551) IN PULASKI COUNTY, KY. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
08	100 Pulaski	Pulaski KY 790	KY 790	4.1	4.6	LRMP	IMPROVE SUPER ELEVATION, SIGHT DISTANCE, RE-GRADE DITCH AND ADD ENTRANCE PIPE TO UTILITY TRAILER LOCATION ON KY 790 FROM JUST N OF JACKSBORO RD (MP 4.1) TO WOODLAND GROVE DR. (MP 4.6). (2014BOP)	2015	\$ 15,000		\$ 15,000	\$ -	\$ -	\$ -
08	104 Russell	Russell KY 76	KY 76	3.6	3.805	LRMP	IMPROVE SUPERELEVATION, TWO SIDE ROAD APPROACHES, AND REGRADE DITCH ON KY 76 FROM 0.12 MI SOUTH OF HARRISTOWN RD (MP 3.600) TO GLEN DR (MP 3.805). (2012BOP)	2015	\$ 147,686					\$ 147,686
08	121 Various	Pulaski & Whitley Various				High Friction Surf	Implementation of High Friction Surface on various routes in Pulaski and Whitley County	2015	\$ 143,548		\$ -	\$ -	\$ -	\$ 143,548
09	006 Bath	Bath KY 36	KY 36	1.004	5.441	LRMP	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)	2015	\$ 15,000		\$ 15,000	\$ -	\$ -	\$ -
09	010 Boyd	Boyd KY 3294	KY 3294	1.416	6.811	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 3294.	2015	\$ 39,627		\$ -	\$ -	\$ -	\$ 39,627
09	022 Carter	Carter KY 9	KY 9	0	18.262	NHS G/R-ET	THIS AUTHORIZATION PROVIDES CONSTRUCTION FUNDS BASED ON THE CURRENT ESTIMATE PRIOR TO THE PROJECT BEING LET.	2015	\$ 747,326	10/24/2014	\$ -	\$ -	\$ -	\$ 747,326
09	022 Carter	Carter I-64	I 64	161	180.1	Cable Median Bar	INSTALLATION OF A CABLE MEDIAN BARRIER ON I-64 FROM THE TYGRATS CREEK BRIDGE (MP 161.00) TO 0.7 MILE WEST OF THE CARTER/BOYD COUNTY LINE (MP 180.10).	2015	\$ 2,550,000		\$ 50,000	\$ -	\$ -	\$ 2,500,000
09	045 Greenup	Greenup KY 10	KY 10	0	12.844	NHS G/R-ET	REPLACE TURNDOWN END TREATMENTS ON KY 10 FROM LEWIS COUNTY LINE (MP 0.000) TO OHIO STATE LINE (MP 12.844).	2015	\$ 606,808	10/24/2014	\$ -	\$ -	\$ -	\$ 606,808
09	068 Lewis	Lewis KY 10	KY 10	0	19.83	NHS G/R-ET	REPLACE TURNDOWN END TREATMENTS ON KY 10 FROM KY 9 (MP 6.788) TO GREENUP COUNTY LINE (MP 19.834).	2015	\$ 943,985	10/24/2014	\$ -	\$ -	\$ -	\$ 943,985
09	068 Lewis	Lewis KY 9	KY 9	0	31.218	NHS G/R-ET	REPLACE TURNDOWN END TREATMENTS ON KY 9 FROM GREENUP COUNTY LINE (MP 0.000) TO MASON COUNTY LINE (MP 31.218).	2015	\$ 1,277,460	11/21/2014	\$ -	\$ -	\$ -	\$ 1,277,460
09	081 Mason	Mason KY 9	KY 9	0	19.541	NHS G/R-ET	REPLACE TURNDOWN END TREATMENTS ON KY 9 FROM LEWIS COUNTY LINE TO BRACKEN COUNTY LINE.	2015	\$ 1,244,872	12/12/2014	\$ -	\$ -	\$ -	\$ 1,244,872
09	103 Rowan	Rowan KY 158	KY 158	0	2.766	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 158 FROM THE FLEMING/ROWAN COUNTY LINE TO KY 32. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -
09	121 Various	District 9 Various	Various			Horizontal Allgnm	INSTALLATION OF ENHANCED CURVE SIGNAGE ON VARIOUS ROUTES IN DISTRICT 9. (2014BOP)	2015	\$ 579,162	9/26/2014	\$ -	\$ -	\$ -	\$ 579,162
09	121 Various	District 9 Various	Various			Horizontal Allgnm	INSTALLATION OF ENHANCED CURVE SIGNAGE ON VARIOUS ROUTES IN DISTRICT 9. (2014BOP)	2015	\$ 579,162		\$ -	\$ -	\$ -	\$ 579,162
10	033 Estill	Estill KY 52	KY 52	1.992	2.3	LRMP	SAFETY IMPROVEMENTS: INSTALL TURN LANES AND IMPROVE CLEAR ZONE ON KY 52 FROM 0.196 MI EAST OF CR 1366 (MP 1.992) TO 0.013 MI EAST OF KY 1353 (MP 2.300).	2015	\$ 470,741	9/26/2014	\$ -	\$ -	\$ -	\$ 470,741
10	033 Estill	Estill KY 52	KY 52	5.415	5.84	LRMP	INSTALL LEFT TURN LANE AND INSTALL SRS ON KY 52 FROM MP 5.415 TO MP 5.840.	2015	\$ 90,893		\$ -	\$ -	\$ -	\$ 90,893
10	065 Lee	Lee KY 52	KY 52			Other	CONSTRUCT SIDEWALKS, CURB AND GUTTER ON KY 52 FROM DOWNTOWN BEATTYVILLE TOWARD IRVINE. (14CCN)	2015	\$ 100,000		\$ 100,000	\$ -	\$ -	\$ -
10	077 Magoffin	Magoffin KY 114/ US 4	KY 114/ US 4	0	4.7	NHS G/R ETs	REPLACE TURNDOWN END TREATMENTS ON KY 114 IN MAGOFFIN COUNTY FROM (MP 0.00) TO (MP 4.70) AND ON US 460 IN MAGOFFIN FROM (MP 3.621) TO (MP 7.362) AND ON US 460 IN MORGAN COUNTY FROM (MP 18.787) TO (MP 24.079).	2015	\$ 121,219		\$ -	\$ -	\$ -	\$ 121,219
10	088 Morgan	Morgan US 460	US 460	16.25	16.9	LRMP	SAFETY IMPROVEMENTS: RESURFACE TO CHANGE TYP SECT FROM 10' SHOULDER ON ONE SIDE AND NO SHOULDER ON OTHER TO 4' SHOULDER ON BOTH SIDES, IMPROVE SIGHT DISTANCE FOR MULTIPLE ENTRANCES ON US 460 FROM 0.044 MI W OF CS 1014 TO 0.05 MI W OF RIVER RD. PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 772 FROM US 460 TO KY 519.	2015	\$ 443,600	2/20/2015	\$ -	\$ -	\$ -	\$ 443,600
10	088 Morgan	Morgan KY 772	KY 772	0	11.334	RD Corridor		2015	\$ 1,505,000	2/20/2015	\$ 15,000	\$ -	\$ -	\$ 1,490,000
10	088 Morgan	Morgan KY 772	KY 772	4.8	4.9	LRMP	INTERSECTION AND SIGHT DISTANCE IMPROVEMENTS ON KY 772 AT KY 985 INTERSECTION (MP 4.8 - 4.9). (2014BOP)	2015	\$ 50,000		\$ 50,000	\$ -	\$ -	\$ -
10	097 Perry	Perry KY 550	KY 550	0.774	1.182	LRMP	SAFETY IMPROVEMENTS: INSTALL 2' SHOULDER WITH RUMBLE STRIPS, INCREASE STORAGE CAPACITY IN RIGHT TURN LN, INCREASE SIGHT DISTANCE AND INSTALL NEW RIGHT TURN LN ON KY 550 FROM 0.266 MI E OF CS 1224 (MP 0.774) TO 0.112 MI E OF CR1006 (MP 1.182).	2015	\$ 471,500			\$ 15,000	\$ 20,000	\$ 436,500

10	097 Perry	Perry KY 80	KY 80	8.54	8.545	Intersection	INTERSECTION IMPROVEMENTS AT KY 80 AND JUSTICE DRIVE (CR 1863) INTERSECTION AT HAZARD, KENTUCKY IN PERRY COUNTY. (2012BOP)	2015	\$ 100,000		\$ -	\$ 100,000	\$ -		
10	097 Perry	Perry KY 451	KY 451	13.706	13.778	FE06 Match	INSTALL GUARDRAIL ON KY 451 BEGINNING JUST W OF TINCAMP LANE (MP 13.706), SOUTHWEST TO (MP 13.778). (2014BOP)	2015	\$ 12,548		\$ -	\$ -	\$ -	\$ -	12,548
10	099 Powell	Powell KY 11	KY 11	20.971	25.039	RD Corridor	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)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -	-
10	121 Various	District 10 Various	Various			Horizontal Allgnm	INSTALLATION OF ENHANCED CURVE SIGNAGE ON VARIOUS ROUTES IN DISTRICT 10. (2014BOP)	2015	\$ 576,724	9/26/2014	\$ -	\$ -	\$ -	\$ -	576,724
11	007 Bell	Bell KY 2402	KY 2402	0.029	0.05	LRMP	RESURFACE WITH SKID RESISTANT AGGREGATE OR HIGH FRICTION SURFACE ON KY 3472 FROM 0.100 MILE EAST OF US 421 (MP 0.1) TO 0.044 MILE WEST OF KY 3479 (MP 0.5).	2015	\$ 15,841		\$ -	\$ -	\$ -	\$ -	15,841
11	026 Clay	Clay KY 11	KY 11	8.89	26.62	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 11 FROM US 421(MP 8.89) EXTENDING NE TO THE OWSLEY CO. LINE (MP 26.62) IN CLAY COUNTY, KY. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -	-
11	026 Clay	Clay KY 3472	KY 3472	0.1	0.5	LRMP	RESURFACE WITH SKID RESISTANT AGGREGATE OR HIGH FRICTION SURFACE ON KY 3472 FROM 0.100 MILE EAST OF US 421 (MP 0.1) TO 0.044 MILE WEST OF KY 3479 (MP 0.5).	2015	\$ 23,142		\$ -	\$ -	\$ -	\$ -	23,142
11	048 Harlan	Harlan US 421	US 421	17.7	18.1	LRMP	CURVE IMPROVEMENTS AND IMPROVE SIGHT DISTANCE ON US 421 FROM MP 17.7 TO MP 18.1.	2015	\$ 338,102	12/12/2014	\$ -	\$ -	\$ -	\$ -	338,102
11	048 Harlan	Harlan US 421	US 421	20.4	20.9	LRMP	Widen 2 curves	2015	\$ 376,816	12/12/2014	\$ -	\$ -	\$ -	\$ -	376,816
11	061 Knox	Knox Ky 1304	KY 1304	0	6.11	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 1304 FROM US 25E TO KY 11. (2014BOP)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -	-
11	061 Knox	Knox KY 3439	KY 3439	0	0.9	LRMP	IMPROVE SAFETY NEAR INTERSECTION OF US 25E AND KY 3439 BY PROVIDING SIDEWALKS TO AN AREA FREQUENTED BY PEDESTRIANS. (MP 0.0-MP 0.9)	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -	-
11	063 Laurel	Laurel KY 80	KY 80	10.143	10.588	LRMP	CONSTRUCT RIGHT TURN LANE ON KY 80 FROM CALVARY COURT (MP 10.143) TO I-75 SOUTHBOUND ON RAMP (MP 10.588) AT LONDON.	2015	\$ 380,642		\$ -	\$ -	\$ -	\$ -	380,642
11	063 Laurel	Laurel KY 80	KY 80	0	0.2	NHS-ET	REPLACE GUARDRAIL END TREATMENTS ON KY 80 FROM THE ROCKCASTLE COUNTY LINE (MP 0.000), EAST TO 0.2 MILE WEST OF HICKORY ROAD (MP 4.200).	2015	\$ 76,646		\$ -	\$ -	\$ -	\$ -	76,646
11	063 Laurel	Laurel KY 363	KY 363	9.185	9.19	Intersections	CONSTRUCT A ROUNDABOUT ON KY 363 AT KY 1006 NEAR KY 192 AT SUL OF LONDON.	2015	\$ 814,657		\$ -	\$ -	\$ -	\$ -	814,657
11	118 Whitley	Whitley US 25W	US 25W	25.768	26.168	LRMP	LOWER EXISTING CURVE GRADE TO INCREASE INTERSECTION SIGHT DISTANCE ON US 25W FROM 0.05 MI SOUTH OF SPRUCE CREEK RD EXTENDING NORTH TO 0.05 MI NORTH OF SPRUCE CREEK RD. (2014BOP)	2015	\$ 25,000		\$ -	\$ -	\$ 25,000	\$ -	-
12	036 Floyd	Floyd KY 1929	KY 1929	4.069	4.225	FE06 Match	INSTALL GUARDRAIL ON KY 1929 FROM 0.404 MILE NORTH OF GEARHART LANE (MP 4.069) TO 0.560 MILE NORTH OF GEARHART LANE (MP 4.225).	2015	\$ 25,000		\$ -	\$ -	\$ -	\$ -	25,000
12	036 Floyd	Floyd KY 979	KY 979	0	15.43	RD Corridor	PERFORM LOW COST SAFETY IMPROVEMENTS ON KY 979 FROM KY 122 AT HI HAT (MP 0.000) TO 0.5 MILE NORTH OF PARSONS BRANCH ROAD (MP 15.430).	2015	\$ 3,582,308		\$ -	\$ -	\$ -	\$ -	3,582,308
12	036 Floyd	Floyd KY 979	KY 979	0	0.25	RD Corridor	CURVE REVISION ON KY 979 FROM KY 122 (MP 0.00) TO CR 1184 (MP 0.25). (2012BOP)	2015	\$ 65,000		\$ 65,000	\$ -	\$ -	\$ -	-
12	060 Knott	Knott KY 160	KY 160			RD Corridor	Perform Low Cost Safety Improvements on KY 160 From Ky 15 to KY 899	2015	\$ 250,000		\$ 250,000	\$ -	\$ -	\$ -	-
12	067 Letcher	Letcher KY 7	KY 7	15.968	16.61	FE06	INSTALL GUARDRAIL ALONG ISOM-DEANE ROAD (KY 7) FROM DANIELS DRIVE (MP 15.968) EXTENDING NORTH TO 960 FT NORTH OF LYDIA LANE (MP 16.610). (2014BOP)	2015	\$ 61,160		\$ -	\$ -	\$ -	\$ -	61,160
12	080 Martin	Martin KY 292	KY 292	15.976	16.12	FE06 Match	INSTALL GUARDRAIL ALONG KY 292 FROM 0.369 MILES NORTH OF WARFIELD ELEMENTARY ROAD (MP 15.976) EXTENDING NORTHERLY 0.144 MILE TO (MP 16.120).	2015	\$ 20,000		\$ -	\$ -	\$ -	\$ -	20,000
12	080 Martin	Martin KY 292	KY 292	18.411	18.585	FE06 Match	INSTALL GUARDRAIL ALONG WARFIELD-LOUISA ROAD (KY 292) FROM 950 FT SOUTH OF AUDREY ST (MP 18.411) EXTENDING NORTH TO 30FT SOUTH OF AUDREY ST (MP 18.585). (2014BOP)	2015	\$ 31,075		\$ -	\$ -	\$ -	\$ -	31,075
12	080 Martin	Martin KY 1439	KY 1439	3.273	3.612	FE06 Match	INSTALL GUARDRAIL ALONG KY 1439 FROM 1.344 MI NORTH OF ANDY'S LANE (MP 3.273) EXTENDING NORTH TO 1.200 MI SOUTH OF MIDDLE FORK OF WOLF ROAD (MP 3.612). (2014BOP)	2015	\$ 44,880		\$ -	\$ -	\$ -	\$ -	44,880
12	098 Pike	Pike KY 1469	KY 1469	10.17	11.221	FE06 Match	INSTALL GUARDRAIL ALONG KY 1469 FROM 0.20 MILES EAST OF TACKETT BRANCH ROAD (MP 10.170) TO 430 FEET WEST OF KY 610 (MP 11.221).	2015	\$ 118,000		\$ -	\$ -	\$ -	\$ -	118,000
12	098 Pike	Pike KY 1469	KY 1469	4.99	5.251	FE06 Match	INSTALL GUARDRAIL ALONG KY 1469 FROM 65 FEET WEST OF LONG FORK OF SHELBY CREEK BRIDGE (MP 4.990) TO MARSHALLS BRANCH BRIDGE (MP 5.251)	2015	\$ 76,878		\$ -	\$ -	\$ -	\$ -	76,878
12	098 Pike	Pike US 460	US 460	24.95	25.275	LRMP	REPLACE CULVERT ON US 460 FROM JUST WEST OF SOUTH RIVER ROAD CONNECTOR (MP 24.950) EAST TO 370 FEET WEST OF THE VIRGINIA STATE LINE (MP 25.275).	2015	\$ 123,748		\$ -	\$ -	\$ -	\$ -	123,748
Statewide	121 Various	Various				Non Highway	Traffic Incident Management Training	2015	\$ 137,559		\$ 137,559	\$ -	\$ -	\$ -	-
Statewide	121 Various	Various				Non Highway	Implementation of the FY 2016 Statewide Planning funds for HSIP Projects	2015	\$ 500,000		\$ 500,000	\$ -	\$ -	\$ -	-
Statewide	121 Various	Districts 1,2,3,5,8 & 12 Various				Roadway Departu	Statewide replacement of raised pavement markers on various routes in districts 1, 2, 3, 5, 8 & 12.	2015	\$ 4,050,000		\$ -	\$ -	\$ -	\$ -	4,050,000
Statewide	121 Various	Districts 1,2,3,5,8 & 12 Various				Roadway Departu	Statewide striping of various routes in Districts 1, 2, 3, 5, 8 & 12.	2015	\$ 200,000		\$ -	\$ -	\$ -	\$ -	200,000
Statewide	121 Various	Districts 4,6,7,9,10 & 11 Various				Roadway Departu	Statewide replacment of raised pavment markers on various routes in districts 4, 6, 7, 9, 10. & 11	2015	\$ 3,164,700		\$ -	\$ -	\$ -	\$ -	3,164,700
Statewide	121 Various	Various				Intersections	Statewide intersection rebuilds	2015	\$ 360,000		\$ 360,000	\$ -	\$ -	\$ -	-
Statewide	121 Various	Various				SCR FY 14-15	SAFETY CIRCUIT RIDER PROGRAM ADMINISTERED BY THE UNIVERSITY OF KENTUCKY TO ASSESS SAFETY ISSUES AND RECOMMEND LOW COST IMPROVEMENTS WITH AN EMPHASIS ON TWO-LANE RURAL ROADS.	2015	\$ 413,800		\$ 413,800	\$ -	\$ -	\$ -	-
Statewide	121 Various	Various				KTC Technical Assi	DEVELOPMENT OF A MODEL TO ESTIMATE AVERAGE DAILY TRAFFIC (ADT) ON LOCAL ROADS ACROSS THE STATE.	2015	\$ 75,000		\$ 75,000	\$ -	\$ -	\$ -	-
Statewide	121 Various	Various				Transportation Sa	Transportation Safety Academy	2015	\$ 200,000		\$ 200,000	\$ -	\$ -	\$ -	-
Statewide	121 Various	Various				HIGHWAY SAFETY	EVALUATION AND IMPLEMENTATION OF HIGHWAY SAFETY MANUAL METHODOLOGIES.	2015	\$ 200,000		\$ 200,000	\$ -	\$ -	\$ -	-
Statewide	121 Various	Various				HIGHWAY SAFETY	FUNDING FOR CONTINUATION OF PROGRAMATIC HIGHWAY SAFETY ACTIVITIES BY THE OFFICE OF HIGHWAY SAFETY.	2015	\$ 2,000,000		\$ 2,000,000	\$ -	\$ -	\$ -	-
Statewide	121 Various	Various				INNOVATIVE INTE	INNOVATIVE INTERSECTIONS-INVESTIGATION AND EVALUATION OF ROUNDABOUTS TO ASSESS THEIR OPERATIONAL AND SAFETY EFFECTIVENESS AND IDENTIFY OTHER INNOVATIVE INTERSECTION DESIGNS.	2015	\$ 215,000		\$ 215,000	\$ -	\$ -	\$ -	-
									\$ 54,980,157		\$ 8,131,359	\$ 160,000	\$ 330,000	\$ -	46,358,798

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 and other findings at the Annual ACEC/FHWA/KYTC Partnering Conference and other venues. The attendees are usually roadway and structure designers in the state of Kentucky gathering. Furthermore, 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).

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PURPOSE AND SCOPE (continued)

Data collected from each of the three programs are entered into the **Lessons Learned** GIS geodatabase. 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 154 total (33 structures) Constructability Reviews completed by QAB staff.
- Continue to develop and update policy and procedures for all aspects of each program.
*Changes were made to the Highway Design Manual to reflect QAB's programs.
Developed new procedures for annually tracking the implementation of approved VE recommendations.*
- Conduct mandated Value Engineering studies to meet federal guidelines.
There were three VE studies completed. The data for the federal annual VE report was also compiled for FHWA.
- Conduct VE Mod 1 and overview training for KYTC staff and design consultants, as needed.
*No VE training was needed or requested during this time.
Staff attended AASHTO Value Engineering Conference.*
- Conduct Post-Construction Reviews in their prescribed cycle.
Due to reduced staff, no Post Construction Reviews were completed during this time. This program will resume in FY16.
- Collect data for the 3 program datasets to include in the Lessons Learned GIS geodatabase.
No updates.
- 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.
*Led the rewrite of the Access Management chapter of the Highway Design Manual.
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.
*The primary outlet for sharing of Lessons Learned has been through the Quality Matters Newsletter. There were 3 issues published.
Recreated the QAB website to make it easier to navigate and locate information.
Categorized newsletter articles by topic and created index.
Posted all past VE studies to the QAB website.
Participated in VECP process with Division of Construction.*

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Quality Assurance

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Division of Highway Design
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PROPOSED ACTIVITIES (Annually) (continued)

- Educate KYTC staff and others by developing and publishing Tech Briefs, each focused on a single, important topic identified through the reviews.
The first QAB Tech Brief was developed and published.
- Train in-house and consultant personnel on findings for the betterment of designs and design processes.
NA
- Ensure consistency and quality of design products delivered by KYTC.
Led the effort to begin measuring the performance of plan delivery for the construction letting schedule.
Led the effort to create new prequalification requirements for design of utilities.
- Oversee outsourced activities.
Reviewed prequalifications for Advanced Traffic Engineering Design & Modeling

PRODUCTS

- VE Studies
3 studies completed and reports issued.
- VE Punch Lists
All punch lists created and then reviewed with Project Development Manager to decide on implementation of recommendations.
- VE Project Database
Database updated (completed and future VE studies.)
- VECF Database
Database updated.
- Post-Construction Review Fact Sheets
N/A in FY15
- Post-Construction Review Database
N/A in FY15
- Constructability Review Reports
154 reports developed and distributed to project managers.
- Constructability Review Database
Creation of new database that can pull Highway Plan data and store findings from Reviews.
Developed performance reports.
- Quality Matters Newsletter
3 issues completed (Summer 2014, Fall 2014, Spring 2015)
- Tech Brief Publication
First issue published: Pedestrian Refuge Islands
- Lessons Learned Geodatabase
No updates

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Quality Assurance

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PRODUCTS (continued)

- Annual Reports from all Programs
FHWA FFY14 VE Annual Report
FHWA FY14 Annual Work Program Accomplishments
Semi-regular reporting on Constructability Review performance
- Special Studies
Continued research of sustainable infrastructure using the INVEST tool.
Participated on the Work Zone Traffic Control Committee.
Created a database to begin measuring the performance of plan delivery for the construction letting schedule.

DISTRIBUTION OF ESTIMATED COST FOR 2014-2015

	2014-2015	Expended	Percent Expended
PERSONNEL	\$500,000	\$231,449	46%
OTHER		\$192	
TOTAL	\$500,000	\$231,641	46%

ESTIMATED OUTSOURCING EXPENSES AND PURCHASES

- \$175,000 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.