DESIGN AND CONSTRUCTION JOINT MEMORANDUM

DESIGN MEMORANDUM NO. 04-08 CONSTRUCTION MEMORANDUM NO. 03-08

TO:

Chief District Engineers

Design Engineers
Active Consultants

FROM:

David E. Kratt, P.E. Sand Kant

Director

Division of Highway Design

FROM:

Greta Smith, P.E.

Director

Division of Construction

DATE:

November 26, 2008

SUBJECT:

Guidance for the Implementation of SAFETEA-LU

Subpart K to Title 23 CFR part 630 for Federal-Aid Highway Projects

Attached please find Guidance for the Implementation of SAFETEA-LU, Subpart K to Title 23 CFR part 630 for Federal-Aid Highway Projects. As can be seen from the guidance document, KYTC's Project Teams should address the various aspects of Subpart K as a component of the Traffic Management Plan (TMP) prepared for each project. It is the intent that this guidance be utilized in conjunction with the "Guidance for the Use of Uniformed Law Enforcement Officers in Highway Work Zones" recently released.

Please begin to address this item in the TMP no later than the February, 2009 project letting.

Any questions regarding this memo should be directed to the Division of Highway Design or Construction.

Attachments

Kentucky Transportation Cabinet Guidance for the Implementation of SAFETEA-LU, Subpart K to Title 23 CFR part 630 for Federal-Aid Highway Projects

Overview: As a means to decrease the likelihood of highway work zone fatalities and injuries to workers and road users by establishing minimum requirements and providing guidance for the use of positive protection devices between the work space and motorized traffic, installation and maintenance of temporary traffic control devices, and use of uniformed law enforcement officers during construction, utility, and maintenance operations, the Kentucky Transportation Cabinet (KYTC) establishes the following guidance for the implementation of SAFETEA-LU, Subpart K to Title 23 CFR part 630 for Federal-Aid Highway Projects. It is anticipated that this will be evaluated periodically and updated as necessary in the interest of effectiveness and efficiency.

The Kentucky Transportation Cabinet (KYTC) will address the implementation of the provisions set forth in SAFETEA-LU, Subpart K to Title 23 CFR part 630 for use in KYTC highway construction and maintenance work zones on a project by project basis. Documentation and any supplemental engineering studies needed to support why certain strategies, guidelines, and/or devices that are selected for use for a project shall be included in the Traffic Management Plan (TMP) developed by KYTC's Project Team. The Project Team is composed of representatives from KYTC's Project Development Branch, Project Preservation and Delivery Branch, Engineering Support Branch, and when appropriate, FHWA. The Project Team is referred to the Manual of Uniform Traffic Control Devices (MUTCD), the Kentucky Department of Highways Standard Drawings, the Kentucky Department of Highways Standard Specifications for Road And Bridge Construction, and AASHTO's Roadside Design Guide for additional guidance when preparing the TMP. Please refer to Appendix A for KYTC's latest "template" for use by the Project Team to assist with preparation of TMP. In general, the TMP should document the Project Team's plan for addressing the following areas of concern as per Subpart K:

- Positive Protection Devices
- Exposure Control Measures
- Traffic Control Measures-General
- Uniformed Law Enforcement Officers
- Work Vehicles and Equipment
- Payment for Traffic Control

Specific project conditions, such as duration of the construction or maintenance work zone, complexity of the work to be performed, and existing traffic speeds and volumes will be given due consideration by the Project Team when making the decisions regarding the Project approach for management of traffic and safety. In general, for work activities that will have a duration of 3 days or less or are mobile in nature, it may be applicable for the Project Team to consider this as a "short term" operation. For short term operations, the Project Team should evaluate the benefits derived versus the inherent risks to workers and the traveling public when making decisions concerning positive protection devices, exposure control measures, the use of uniformed law enforcement officers, and any other component of the TMP.

- a) Positive Protection Devices: For highway work zones, a number of conditions may indicate the need for or benefit of the use of positive protection devices. Positive Protection Devices are defined as devices that contain and/or redirect vehicles and meet the crashworthiness evaluation criteria contained in National Cooperative Highway Research Program (NCHRP) Report 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features, 1993, Transportation Research Board, National Research Council. Details regarding the specifications for the type of devices available for use and typical placement schemes are available in the Manual of Uniform Traffic Control Devices (MUTCD), the Kentucky Department of Highways Standard Drawings, and the Kentucky Department of Highways Standard Specifications for Road And Bridge Construction, and AASHTO's Roadside Design Guide. Positive protection devices in highway work zones are intended to minimize or reduce the risk of worker exposure to motorized traffic as well as to emphasize road user safety. Under conditions deemed short term or mobile in nature, the Project Team needs to evaluate the inherent risk involved with the placement of the more rigid barrier systems (such as temporary concrete barrier walls) with the use of more portable channelization devices combined with items such as "truck mounted attenuators" or other mobile crashworthy devices. Please see Appendix C for additional guidance regarding Positive Protection Devices.
- b) Exposure Control Measures: Exposure Control Measures are defined as traffic management strategies to avoid work zone crashes involving workers and motorized traffic by eliminating or reducing traffic through the work zone, or diverting traffic away from the work space. Exposure Control Measures shall be considered where appropriate to avoid or minimize worker exposure to motorized traffic and exposure of road users to work activities, while also providing adequate consideration to the potential impacts on mobility. A wide range of measures may be appropriate for use on individual projects, such as:
- (1) Full road closures:
- (2) Ramp closures;
- (3) Median crossovers:
- (4) Full or partial detours or diversions;
- (5) Protection of work zone setup and removal operations using rolling road blocks;
- (6) Performing work at night or during off-peak periods when traffic volumes are lower; and
- (7) Accelerated construction techniques.

The Project Team is referred to the Manual of Uniform Traffic Control Devices (MUTCD), the Kentucky Department of Highways Standard Drawings, and the Kentucky Department of Highways Standard Specifications for Road And Bridge Construction for additional guidance.

- c) <u>Traffic Control Measures-General</u>: Traffic Control Measures-General should encompass items which are not mutually exclusive and should be considered in combination when appropriate. This includes items such as work zone signing, pavement markings, channelization devices, arrow panels, and variable message signs. The Project Team is referred to the Manual of Uniform Traffic Control Devices (MUTCD), the Kentucky Department of Highways Standard Drawings, and the Kentucky Department of Highways Standard Specifications for Road And Bridge Construction for additional guidance regarding installation of and maintenance for such items. Please see Appendix D for additional guidance.
- d) <u>Uniformed Law Enforcement Officers</u>: KYTC released guidance concerning the use of Uniformed Law Enforcement Officers April 21, 2008. In general, the initial guidance advised the Project Teams to consider the use of Uniformed Law Enforcement Officers on a project by project basis. Specific project conditions should be examined to determine the need for or potential benefit of law enforcement. These include but are not limited to:
 - Frequent worker presence adjacent to high-speed traffic without positive protection devices
 - Traffic control setup or removal that presents significant risks to workers and road users
 - Complex or very short term changes in traffic patterns with significant potential for road user confusion or worker risk from traffic exposure
 - Night work operations that create substantial traffic safety risks for workers and road users
 - Existing traffic conditions and crash histories that indicate a potential for substantial safety and congestion impacts related to the work zone activity, and that may be mitigated by improved driver behavior and awareness of the work zone
 - Work zone operations that require brief stoppage of all traffic in one or both directions
 - High-speed roadways where unexpected or sudden traffic queuing is anticipated, especially if the queue forms a considerable distance in advance of the work zone or immediately adjacent to the work space
 - Other work site conditions where traffic presents a high risk for workers and road users, such that the risk may be reduced by improving road user behavior and awareness

Law Enforcement Officers that are used on projects should have received the appropriate work zone and mobility training. The guidance in this document is intended to supplement the previous directive (See Appendix B). When appropriate, Law Enforcement personnel should be asked to participate in the project team meetings when the Traffic Management Plans are formulated.

e) Work Vehicles and Equipment: KYTC Project Teams should address issues such as ingress and egress for work vehicles, equipment, and material deliveries as a component of the Traffic Management Plan (TMP) for each project. The Project Team should refer to the Manual of Uniform Traffic Control Devices (MUTCD), the Kentucky Department of Highways Standard Drawings, and the Kentucky Department of Highways Standard Specifications for Road And Bridge Construction for additional guidance.

f) Payment for Traffic Control: Payment for traffic control items shall be in accordance with Section 112 of the Kentucky Department of Highways Standard Specifications for Road And Bridge Construction. In general, payment for traffic control items not specifically covered in Section 112 shall be addressed in the TMP and Special Notes prepared for the project on a case by case basis. Please see Appendix E regarding current KYTC interagency agreements for use of State Police and Kentucky Vehicle Enforcement personnel during construction and maintenance projects.

Please refer to KYTC's Division of Highway Design's or Division of Construction's Webpages for a full copy of SAFETEA-LU, Subpart K to Title 23 CFR part 630 for Federal-Aid Highway Projects.

Appendix A KENTUCKY TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS TRAFFIC MANAGEMENT PLAN

County:	Item No.:
Federal Project No.:	
Project Description:	
and the second of the second o	
Roadway Classification: Urban	
☐ Local ☐ Collector	☐ Arterial ☐ Interstate
ADT (current) AM Peak Current	PM Peak Current % Trucks
Project Designation: Significant Oth	ner:
Traffic Control Plan Design:	
Taper and Diversion Design Speeds	
Minimum Lane Width	Minimum Shoulder Width
Minimum Bridge Width	
Minimum Radius	Maximum Grade
Minimum Taper Length	Minimum Intersection Level of Service
Existing Traffic Queue Lengths	Projected Traffic Queue Lengths
Comments:	

KENTUCKY TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS TRAFFIC MANAGEMENT PLAN

Discussion:

and the second of the second o			
1) Public Information Plan			
a) Prepare with assistance from			
and the second of the second of the second of			
b) Identify Trip Generators	Referenced	f) Railroad Involvement	Referenced
•		g) Address Pedestrians, Bikes	
c) Identify Types of Road Users	Referenced	Mass Transit	Referenced
		h) Address Timing, Frequency, Upd	ates,
d) Public Information Message	Referenced	Effectiveness of Plan	Referenced
e) Public Information Strategies		i) Police & Other	
to be used	Referenced	Emergency Services	Referenced

KENTUCKY TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS TRAFFIC MANAGEMENT PLAN

2) Temporary Traffic Control Plan (For Each Phase of Construction) Phase I			
Exposure Control Measures		Positive Protection Measures	
a) Is Road Closure Allowed Type:	Referenced	a) Address Drop Off Protection Criteria	Referenced
b) Detour Conditions	Referenced	b) Temporary Barrier Requirements	Referenced
c) Working Hour Restrictions	Referenced	c) Evaluation of Existing Guardrail Conditions	Referenced
d) Holiday or Special Event Work Restrictions	Referenced	d) Address Temporary Drainage	Referenced
e) Evaluation of Intersection LOS	Referenced	Uniformed Law Enforcement Officers	Referenced
f) Evaluation of Queue Lengths	Referenced	Payment for Traffic Control*	
g) Evaluation of User Costs and Incentives/Disincentives	Referenced	a) Method of Project Bidding	Referenced
h) Address Pedestrians, Bikes, Mass Transit	Referenced	b) Special Notes	Referenced
Work Vehicles and Equipment	Referenced	*Payment for traffic control items accordance with the Kentucky De Highways Standard Specifications f Bridge Construction	epartment of
Comments:			

KENTUCKY TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS TRAFFIC MANAGEMENT PLAN

2) Temporary Traffic Control Plan (For Each Phase of Construction) Phase			
Exposure Control Measures		Positive Protection Measures	
a) Is Road Closure Allowed Type:	Referenced	a) Address Drop Off Protection Criteria	Referenced
b) Detour Conditions	Referenced	b) Temporary Barrier Requirements	Referenced
c) Working Hour Restrictions	Referenced	c) Evaluation of Existing Guardrail Conditions	Referenced
d) Holiday or Special Event Work Restrictions	Referenced	d) Address Temporary Drainage	Referenced
e) Evaluation of Intersection LOS	Referenced	Uniformed Law Enforcement Officers	Referenced
f) Evaluation of Queue Lengths	Referenced	Payment for Traffic Control*	
g) Evaluation of User Costs and Incentives/Disincentives	Referenced	a) Method of Project Bidding	Referenced
h) Address Pedestrians, Bikes, Mass Transit	Referenced	b) Special Notes	Referenced
Work Vehicles and Equipment Referenced		*Payment for traffic control items accordance with the Kentucky De Highways Standard Specifications for Bridge Construction	epartment of
Comments:			

KENTUCKY TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS TRAFFIC MANAGEMENT PLAN

2) Temporary Traffic Control Plan (For Each Phase of Construct Phase			
est a constitution			
Exposure Control Measures		Positive Protection Measures	
a) Is Road Closure Allowed Type:	Referenced	a) Address Drop Off Protection Criteria	Referenced
b) Detour Conditions	Referenced	b) Temporary Barrier Requirements	Referenced
c) Working Hour Restrictions	Referenced	c) Evaluation of Existing Guardrail Conditions	Referenced
d) Holiday or Special Event Work Restrictions	Referenced	d) Address Temporary Drainage	Referenced
e) Evaluation of Intersection LOS	Referenced	Uniformed Law Enforcement Officers	Referenced
f) Evaluation of Queue Lengths	Referenced	Payment for Traffic Control*	
g) Evaluation of User Costs and Incentives/Disincentives	Referenced	a) Method of Project Bidding	Referenced
h) Address Pedestrians, Bikes, Mass Transit	Referenced	b) Special Notes	Referenced
Work Vehicles and Equipment	Referenced	*Payment for traffic control items shall be in accordance with the Kentucky Department of Highways Standard Specifications for Road and	
Comments:			

KENTUCKY TRANSPORTATION CABINET DEPARTMENT OF HIGHWAYS TRAFFIC MANAGEMENT PLAN

APPROVAL:

entration was the term of the contract of the	
Project Manager	Date
and the control of the second of the control of the	·
Project Delivery and Preservation Manager	Date
en Maria de Maria de Carte de La carte de	
Engineering Support Manager	Date
FHWA Representative	Date

Revisions to the TMP require review/approval by the signatories.

Appendix B

Kentucky Transportation Cabinet Guidance for the Use of Uniformed Law Enforcement Officers in Highway Work Zones

Overview: A number of conditions may indicate the need for or benefit of uniformed law enforcement in highway work zones. The presence of uniformed law enforcement officers and marked law enforcement vehicles in view of the motorized traffic on a highway project may have beneficial affects on driver behavior and alertness, thus helping to maintain appropriate speeds within the highway work zone.

Guidance: The Kentucky Transportation Cabinet (KYTC) will consider the use of uniformed law enforcement officers to assist in the maintenance of traffic for KYTC highway construction and maintenance work zones on a project by project basis. KYTC will address this consideration as a component of the Traffic Management Plan (TMP) prepared by KYTC's Project Team for each project. Specific project conditions, such as duration of the construction work zone, complexity of the construction work to be performed, and existing traffic speeds and volumes will be given due consideration by the Project Team when making the decision on whether to use uniformed law enforcement officers as a component of the Traffic Control Plan. In general, the officers shall be required to use a "marked" law enforcement vehicle when working within the construction work zone as a part of the maintenance of traffic operation approved by KYTC for the plan. Methods of payment for this service shall be determined by the Project Team.

The presence of law enforcement is not intended as a substitute for temporary traffic control devices as required per the Manual of Uniform Traffic Control Devices (MUTCD).

Appendix C

Kentucky Transportation Cabinet Supplemental Guidelines for Use of Positive Protection Devices

KYTC Project Teams should utilize the guidance contained in the Manual on Uniform Traffic Control Devices (MUTCD), the AASHTO Roadside Design Guide, as well as project characteristics and experience factors on similar projects to determine the appropriate need and type of Positive Protection Devices to be used for each project. The methodology for determination of the strategies and devices to be used shall be based on a project-specific approach. The types of measures and strategies to be used are not mutually exclusive, and should be considered in combination as appropriate based on characteristics and factors such as those listed below:

Project scope and duration	Anticipated traffic speeds through the work zone
Anticipated traffic volume	Vehicle mix
Type of work (as related to worker exposure and crash risks)	Distance between traffic and workers, and extent of worker exposure
Escape paths available for workers to avoid a vehicle intrusion into the work space	Time of day (e.g., night work)
Work area restrictions (including impact on worker exposure)	Consequences from/to road users resulting from roadway departure
Potential hazard to workers and road users presented by device itself and during device placement and removal	Geometrics that may increase crash risks (e.g., poor sight distance, sharp curves)
Access to/from work space	Roadway classification
Impacts on project cost and duration.	

Appendix D

Kentucky Transportation Cabinet Supplemental Guidelines for Traffic Control Measures-General

KYTC Project Teams should utilize the guidance contained in the Manual on Uniform Traffic Control Devices (MUTCD), the Kentucky Department of Highways Standard Drawings, the Kentucky Department of Highways Standard Specifications for Road And Bridge Construction, and experience factors on similar projects to address the general traffic control measures to be used for each project. The methodology for determination of the strategies and devices to be used shall be based on a project-specific approach. The types of measures and strategies to be used are not mutually exclusive, and should be considered in combination as appropriate based on characteristics and factors such as those listed below:

Effective, credible signing	Variable message signs
Arrow panels	Warning flags and lights on signs
Longitudinal and lateral buffer space	Trained flaggers and spotters
Enhanced flagger station setups	Intrusion alarms
Rumble strips	Pace or pilot vehicle
High quality work zone pavement markings and removal of misleading markings	Channelizing device spacing reduction
Longitudinal channelizing barricades	Law enforcement
Work zone speed management	Rolling Roadblocks
Worker training	Worker and work vehicle/equipment visibility
Public information and traveler information	Temporary traffic signals

Appendix E Memorandum of Agreement KYTC and Justice & Public Safety Highway Work Zone Safety



JUSTICE AND PUBLIC SAFETY CABINET

Ernie Fletcher Governor

125 Holmes Street Frankfort, Kentucky 40601 (502) 564-7554 Fax No. (502) 564-4840 BG Norman E. Arflack Secretary

MEMORANDUM

TO:

Bill Nighbert, Secretary Transportation Cabinet

FROM:

BG Norman Arflack, Secreta

Justice and Public Safety Cabin

DATE:

April 17, 2007

SUBJECT:

MOA for Highway Work Zone Safety

Attached for your review and signature is our proposed Memorandum of Agreement (MOA) for coordination of supporting requests for Highway Work Zone Safety issues. It is my intent to divide this work between KVE and KSP and ensure we can provide maximum support for coverage.

If there are questions or proposed changes please contact Michael Sebastian my Budget and Finance Director at 502-564-8225. Thank you for time and effort in coordinating this action



MEMORANDUM OF AGREEMENT Highway Work Zone Safety

This Memorandum of Agreement is entered into this ______ day of April, 2007, by and between (1) The Commonwealth of Kentucky, Transportation Cabinet ("KYTC"), a state government agency, with the address of: 200 Mero Street, Frankfort, KY 40622, and (2) The Commonwealth of Kentucky, Justice and Public Safety Cabinet ("JPSC)", a state government agency, with the address of: 125 Holmes Street, ^{2nd} Floor, Frankfort, KY 40601.

WITNESSETH:

WHEREAS, The Department of Kentucky Vehicle Enforcement (KVE) is a Department of the Justice and Public Safety Cabinet pursuant to KRS 15A.020;

WHEREAS, the Department of Kentucky State Police (KSP) is a Department of the Justice and Public Safety Cabinet pursuant to 15A.020;

WHEREAS, The Highway Work Zone Safety Fund is established under the Transportation Cabinet by KRS 189.394, and provides that all fines collected for speeding in a highway work zone shall be deposited into a separate trust and agency account within the Transportation Cabinet and shall be used exclusively to hire or pay for enhanced law enforcement of traffic laws within the highway zone; and

WHEREAS, the Justice and Public Safety Cabinet, through KSP and KVE has agreed to assist the Transportation Cabinet with the provision of enhanced law enforcement within highway work zones.

NOW, THEREFORE, in an effort to continue the efficient operation of the government of the Commonwealth of Kentucky and the proper enforcement of its motor vehicle regulations, the importance of which both parties acknowledge, the Transportation Cabinet and the Justice and Public Safety Cabinet, agree as follows:

SECTION 1 - OBLIGATIONS OF TRANSPORTATION

KYTC agrees, conditioned upon the timely performance by JPSC of its obligations, to undertake the following obligations:

- A. KYTC shall specify the number of hours, or dates and time-periods, that it is requesting services from JSPC in each work zone or maintenance project. KYTC acknowledges that JPSC will do this work on an overtime basis, and that coverage for all of the requested hours may not be available.
- B. KYTC shall take all necessary steps to pay JPSC, upon proper billing, for their enhanced law enforcement activities or traffic control assistance within the highway work zones or maintenance projects out of the Highway Work Zone Safety Fund and /or a specific highway project, based on monthly billings for such services from JPSC.

C. KYTC shall cooperate fully with JPSC in order to facilitate the obligations set out in this Memorandum.

SECTION 2 - OBLIGATIONS OF JPSC

- A. The JPSC will make every reasonable effort to schedule coverage for the hours requested by KYTC, subject to available resources. Nothing in this agreement shall be construed to require that officers work mandatory overtime.
- B. JPSC will provide a detailed invoice for billing which specifies the date, name, hours worked on enforcement, hours worked on traffic control, and county, road, and milepost location of the work zone for each shift worked. Along with the invoice, JPSC will also submit an officer's detailed activity log for each shift worked. This activity sheet shall be signed by the officer and a supervisor.

SECTION 3 - MUTUALITY OF OBLIGATIONS

- A. The parties agree that the obligations imposed upon the parties are for the benefit of the parties and that the timely performance of each and every obligation in accordance with this Memorandum is necessary. The failure of any party to fulfill its obligations under the Memorandum shall constitute a breach of the Memorandum, unless the fulfillment of such obligation is waived or modified by written agreement of the parties.
- B. Except as may otherwise be provided herein, the parties to this Memorandum shall be solely responsible for any costs incurred in fulfilling their obligations under this Memorandum, and no party shall have any claim against the other party for reimbursement of such costs, whether or not a party is in default.

SECTION 4 - TERM OF MEMORANDUM

- A. This Memorandum shall be effective upon the signature of both parties and shall terminate on June 30, 2008.
- B. This agreement may be terminated by any party at any time for cause, and may be terminated by any party without cause on thirty (30) days written notice.

MISCELLANEOUS PROVISIONS

A. This Memorandum may be signed by each party upon a separate copy, and in such case one counterpart of the Memorandum shall consist of a sufficient number of such copies to reflect the signature of each party hereto. This Memorandum may be executed in two (2) or more counterparts, each of which shall be deemed an original, and it shall not be necessary in making proof of this Memorandum or the terms and conditions hereof to produce or account for more than one of such counterparts.

- B. The Headings set forth in this Memorandum are for convenience or reference only, and the words contained therein shall in no way be held to explain, modify, amplify, or aid in the interpretation, construction, or meaning of the provisions of the Memorandum.
- C. The terms and conditions of this Memorandum shall be binding upon and shall inure to the benefit of the successors and assigns, respectively, of the parties. This provision shall not be construed to permit assignment by any party of any of its rights and duties under this Memorandum, which assignment shall be prohibited except with the prior written consent of all parties hereto.
- D. This Memorandum sets forth the entire understanding of the parties with respect to the subject matter hereof, supersedes all existing agreements among them concerning the subject matter hereof, and may be modified only by a written instrument duly executed by each of the parties hereto.
- E. Time is of the essence in the performance of each of the terms and conditions of this Memorandum.
- F. Neither party shall be liable in damages or have the right to terminate this Agreement for any delay or default in performing hereunder if such delay or default is caused by conditions beyond its control including, but not limited to Acts of God, Government restrictions, wars, insurrections and/or any other cause beyond the reasonable control of the party whose performance is affected.
- G. The parties agree that in any suit, action, or proceeding with respect to this Memorandum may only be brought in, as the case may be, the courts of the Commonwealth of Kentucky situated in Frankfort, Franklin County, Kentucky; or the United States District Court for the Eastern District of Kentucky, Frankfort Division.
- H. All notices, requests, demands, waivers, and other communications given as provided in, or required by, the Memorandum shall be addressed as follows:

If to Transportation:

Transportation Cabinet Office of the Secretary 200 Mero Street Frankfort, KY 40622

If to Justice:

Justice and Public Safety Cabinet Office of the Secretary

125 Holmes Street, Second Floor

Frankfort, KY 40601

IN WITNESS WHEREOF, the KYTC and JPSC have executed this Memorandum as of the date first above written and through their duly authorized agents and representatives.

TRANSPORTATION CABINET

Secretary

JUSTICE AND PUBLIC SAFETY CABINET

BO Norman E. Ari Sechetary

APPROVED AS TO FORM AND LEGALITY

Office of Legal Services

Kentucky Transportation Cabinet

Office of Legal Services

Justice and Public Safety Cabinet