

## APPENDIX A



*Groundbreaking by Design.*

**Project:** I-24 / KY 107 Interchange, Christian County  
Item Number 2-8702.00  
Abbreviated Interchange Justification Study  
KYTC/FHWA Project Team Meeting  
KYTC Conference Room 503  
11:00 AM, September 30, 2013

**Purpose:** Project Team Meeting #1 and Coordination Meeting with FHWA

**Place:** Kentucky Transportation Cabinet Central Office  
Conference Room 503

**Meeting Date:** September 30, 2013

**Time:** 11:00 AM

**Prepared By:** Annette Coffey

**In Attendance:**

Kevin McClearn	District 2 - CDE
Nick Hall	District 2 - Planning
John Rudd	District 2 - Project Development
Jason Orange	District 2 Planning
Steve Ross	Central Office Division of Planning
Mikael Pelfrey	Central Office Division of Planning
Shane McKenzie	Central Office Division of Planning
Daniel Hulker	Central Office Division of Planning
Ryan Tenges	FHWA
Michael Loyselle	FHWA
Taylor Kelly	Qk4
Tom Springer	Qk4
Annette Coffey	Qk4
Bruce Siria	Qk4

Shane McKenzie began the meeting with opening remarks, and then the team introduced themselves. During the introductions, Kevin McClearn stated that there is a lot of local support from the county leadership for this project, as various communities cannot access I-24. This has been expressed over the years and by them during the planning for the Breathitt Parkway extension that was open in 2011. It was also noted that I-24 was open to traffic in 1970.

Following introductions, Annette Coffey facilitated the meeting, beginning with an overview of the project area, and identifying the larger setting that could be affected by the proposed I-24/KY 107 interchange. Qk4 evaluated I-24 from KY 117 interchange (west of KY 107) to the Breathitt Parkway interchange (east of KY 107); KY 107 from near Memory Lane to KY 117; and KY 117 from I-24 to KY 107.

**Meeting Purpose:**

The goal of the meeting is to provide an overview to and get input from the Project Team and the Federal Highway Administration (FHWA) for the proposed KY I-24/KY 107 interchange project. The project is located in southern Christian County. Qk4 is providing an abbreviated Interchange Justification Study (IJS) to identify any major operational issues, if any, with the proposed interchange. The major issues to be addressed are safety, traffic operations, spacing, signage, design, cost estimates, environmental impacts. In the current Highway Plan, the only task identified is this interchange study. Qk4 was to essentially:

- determine whether current spacing would allow for an interchange at KY 107,
- examine what type of interchange would be required,
- develop approximate costs and impacts,
- identify the major environmental considerations,
- work with KYTC to determine what traffic volumes the proposed interchange would generate and what impact the traffic would have on I-24.

**Existing Conditions:**

Per the KYTC Highway Inventory System data, KY 107 has nine-foot lanes, but is a flat, gently rolling, rural secondary road with essentially two sight distance issues. One is located at the proposed interchange location, the other 2000 feet south of KY 345 and the proposed I-24/KY 107 interchange. Mr. McClearn believes that due to maintenance and overlays, KY 107 may be a little wider than nine feet today. The shoulders are from 3 to 5 feet. Qk4 will verify this information in the field before the final report is submitted and prior to the local officials meeting. KY 117 is a similar-type roadway. There were no existing plans for KY 117, however; the horizontal alignment appears acceptable, and there is just one location where the vertical alignment appears it may be an issue. I-24 does not have any deficiencies.

KY 107 reconstruction is identified as two needed projects on the Unscheduled Needs List (02 024 D0107 7.00 and 8.00), however they are not in the 2012 Highway Plan. KY 107 from KY 117 in Herndon to I-24 was estimated in 2007 to cost \$8.6 million. From I-24 to US 68B in Hopkinsville, the Project Identification Form identifies a Total Cost Estimate of \$23.2 million (estimated in 2006) for KY 107 reconstruction. The proposed interchange project (I-24/KY 107 interchange) also shows as #25 in the 2013 District Transportation Plan for District 2.

**Purpose and Need:**

The Purpose and Need is to improve interstate access in southern Christian County including the communities of Lafayette, Bennettstown, Herndon, Beverly and the southwest side of Hopkinsville. There is commuter traffic in southern Christian County that would benefit with improved access to Fort Campbell, Oak Grove, and Clarksville and Nashville, Tennessee. Another key element is the desire for improved access for emergency response personnel.

**Safety:**

Safety analysis, which is required by Policy Point 3, was conducted for the last three years (2009 to 2011). A map of years 2010 to 2012 crashes was provided in the presentation. The Breathitt Parkway interchange with I-24 was opened to traffic in March of 2011, therefore, only nine months of crash information was included in the calculations of Critical Rate Factors. At present the new Build Up data for the year 2012 is not yet available. Overall, there have been some crashes, but there are no sections with a critically high crash rate on any of the study area roads. On I-24, many crashes are deer strikes, and the other predominate type of crash are single vehicle crashes. After review of crash reports, at present, the only issue on I-24 is the merge movement from the Breathitt Parkway southbound to I-24 eastbound.

Mr. Tenges asked that we separate the crash data by year, so that we can identify which occurred before and after the Breathitt Parkway interchange. He would be interested to know the crash patterns before and after.

Ms. Coffey noted that currently there is a sight distance issue on KY 107 at the bridge over I-24. There is a crest vertical curve with a 4% and 3.95% approach grades. This issue would have to be corrected with the construction of an interchange at KY 107. The cost estimates presented do not include correcting this issue but will be updated. Because it appears the KY 107 bridge over I-24 has been recently rehabilitated, Qk4 plans to utilize the existing KY 107 bridge for the interchange, and will estimate improving the sight distance on KY 107 so there is adequate sight distance for the ramps.

The proposed typical section for KY 107 and KY 117 would be 11-foot lanes six-foot paved shoulders. Mr. Loyselle recommended that the improvements on KY 107 in the interchange area be taken north to Memory Lane. Additionally, the LOS analysis should include the intersections of Memory Lane to the north and KY 345 Road to the south.

Mr. Kelly presented any deficiencies at the current interchanges with the potential area of influence (KY 117 and Breathitt Parkway (ETB)). He stated that these are minor deficiencies and some could be handled with minor striping or design exceptions.

- **I-24/ETB Parkway**
  - SB ETB to EB I-24 flyover – 35 mph urban design speed (informational only)
  - EB I-24 to NB ETB
    - Plans show a taper of 180' with deceleration of 520'. For 70 mph to 35 mph should have a 250 taper and 490' decel length
- **I-24/KY 117 – existing plans incomplete**
  - WB I-24 exit ramp
    - 150' from gore to the P.C. of the first curve. Current standards should be 200'
  - EB I-24 entrance ramp
    - The gore of 6' and 12' is not standard
  - EB I-24 exit ramp
    - 150' from gore to the P.C. of the first curve. Current standards should be 200'
    - Horizontal curves based on 10% max super table current is 8% - design exception
    - Vertical sight distance for the crest curve closest to KY 117 has sight distance of 359'. Because of the transition from 50 mph to a stop condition at KY 117 this can likely be considered acceptable. AASHTO Green Book says 425' for 50 mph and 360' for 45 mph.

**Signage:**

All current signs are side-mounted on posts. FHWA would like two-mile and one-mile signs for the proposed interchange. FHWA agreed that the existing signs on I-24 identifying the Breathitt Parkway interchange could be utilized and the KY 107 interchange message added to those existing signs.

**Traffic:**

Qk4 provided an overview of traffic information from HIS. KYTC is providing current and future year build and no build traffic for this project. The traffic forecasts are still under development. I-24 carries over 30,000 (2011 computer estimate from KYTC's Highway Inventory System (HIS)) vehicles per day (vpd), KY 107 carried in 2011 2,120 vpd north KY 345 and about 937 vpd south of KY 345. FHWA requested to review the traffic data when it is available. Of particular concern is the difference in traffic, between the No Build and Build alternatives, between the two interchange (Breathitt

and KY 107) on I-24. It was noted in the presentation that the SB Breathitt parkway to the I-24 WB movement was projected 90 for the Directional Design Hour Volume (DDHV). Mr. Hulker stated that the recently counted traffic volume is approximately 100/day, therefore, that projected volume of 90 vehicles per hour may be even lower. These low volumes will most likely not result in a conflict for this section of I-24 with the proposed interchange.

KY 117 is about eight miles from the proposed KY 107 interchange, which is really too far to be affected by the proposed project. Therefore, FHWA suggested that the traffic analysis study area on KY 117 could be reduced to approximately mid-way between KY 107 and I-24 (near KY 695). The reasoning was, it can be assumed the traffic is much the same from KY 645 to I-24 as it would be from KY 695 to KY 107. However, FHWA said that it would still be desirable to show how much traffic is being diverted from the KY 117 interchange. It was also suggested by FHWA to use the data from the Breathitt Parkway IJS for this study to reduce efforts if possible. This approach, including the reduced study area, would meet the goal of addressing one interchange west and east of the proposed interchange. (FHWA requested a copy of the Breathitt Parkway/I-24 Interchange Justification Study and they were provided one following the meeting)

Mr. Loyselle said that FHWA will be mostly concerned with the weaving analysis on the interstate, and if auxiliary lanes are warranted. Qk4 will provide the capacity analysis when traffic is made available. It was discussed that the auxiliary lane would be very costly for the low volume of traffic. If auxiliary lanes are warranted, Qk4 will provide planning-level cost estimates for the auxiliary lane. Based on the preliminary analysis the ramp spacing meets AASHTO Green Book criteria. It was also noted that the distance between points at which the ramps merge is at least 2400 feet.

Mr. McClearn noted that due to the locations of the major destinations--Nashville, St. Louis, Hopkinsville and Fort Campbell--and the existing road network and interchange locations--US 68/KY 80, Breathitt Parkway, US 41A, and I-24--the volumes at the proposed I-24/KY 107 interchange would be low on opening day, and remain low through 2040. This interchange would not attract traffic to/from these major destinations and existing access points. The interchange would serve the local citizens.

Mr. Hulker explained that the statewide model will be used for this project. Christian County's model is due for an update and would not be ready for use for this project. He added that for current year, preliminary findings are that the model is showing an addition of 1,000 vpd on I-24 between KY 107 and the Breathitt Parkway. Only about 700 vpd would be added to I-24 west of KY 107. He added that the future year would not be much different, but it will be based on how the area is planned to grow.

#### **Spacing:**

The interchange spacing measured from crossroad to crossroad (KY 107 to Breathitt Parkway) is 6700 feet. The critical ramp spacing (gore to gore) is from southbound Breathitt Parkway to westbound I-24 and the proposed westbound exit ramp at KY 107 which is 4400 feet. The eastbound entrance ramp at KY 107 and the I-24 eastbound exit ramp to the Breathitt Parkway are spaced 6900 feet apart.

Mr. Kelly noted that the AASHTO recommended guideline is three-mile interchange spacing in rural areas. The data presented showed that with the anticipated low volumes there would be no adverse effect from the traffic to I-24. Therefore, Qk4 posed the question, would the low-volumes and lack of impact warrant a variance from the three-mile spacing guidance? KYTC needed direction from FHWA on this issue. Mr. Tenges noted that based on an internal discussion at FHWA about this project, prior to today's meeting, the interchange three-mile spacing would not be an issue with this project. **The lack of adverse effect in operations between the ramps, including the merge/diverge/weave analysis is the major issue, and FHWA will give that the most consideration.** Ms. Coffey noted that we did not

want to meet with the local officials without understanding that FHWA will allow for flexibility in regard to the spacing requirements.

**Policy Points Discussion:**

Regarding Policy Point #1, improving the existing roads, Qk4 looked at improving KY 117, KY 107, and any changes that would be necessary to the new Breathitt / I-24 interchange. In summary, the costs and impacts of these alternatives would exceed the estimated cost of the proposed interchange project.

Regarding Policy Points 1, 3 and 7, Mr. Loyselle suggested limiting the area of influence on KY 117 to KY 645 if there is no difference in the traffic north of that point. However, he did suggest that KY 107 from I-24 to Hopkinsville be addressed in some manner due to the draft purpose and need being access to southwest Hopkinsville. His concern was providing an interchange and traffic having a narrow road to travel to Hopkinsville using KY 107. Again, the lane width will be measured in the field, because Mr. McClearn believes roadway width to have 11-foot lanes. Mr. Loyselle stated that FHWA would not tie KY 107 improvements to FHWA's approval of the KY107/I-24 proposed interchange project.

**Cost Estimates:**

The current overall cost estimate for the diamond interchange at KY 107 is \$10.4M, including right of way and utilities (not including any fiber optic lines). The utility estimates are based on known utilities, existing plans, and preliminary contacts with utility companies. The utility phase estimates include a wastewater pump station, water and sewer lines, and overhead utilities. The right of way phase was estimated utilizing Property Valuation Administrator parcel information and approximate right of way takings using KYTC's digital elevation models. Prior to the local officials meeting, Qk4 will modify the preliminary cost estimates for the I-24/KY 107 interchange to reflect raising KY 107 to address the sight distance issue at the bridge.

**Environmental Overview:**

An overview of major impacts has been conducted as part of this study. Environmental (NEPA) approval will be necessary if the project is advanced. The only known "showstopper" environmental concern is the potential historic bungalow house in the southeast quadrant. Also, based on preliminary information, environmental justice could be an issue for both minorities and poverty. Mr. McClearn also expressed concern of low income and community concerns in the interchange area. Prime farmlands and karst issues area also likely and will need to be addressed as the project progresses. With the sight distance issues, these impacts will be re-visited.

**Future Steps:**

The future steps to complete the preliminary IJS are:

- Stakeholders Meeting
- Preliminary Signing Plan
- Documentation of the Abbreviated IJS

The meeting adjourned at approximately 1:00 PM.

**Post Meeting with KYTC**

Qk4 met briefly with KYTC following the meeting with FHWA. KYTC stated that based on the initial work to date by Qk4, and this meeting with FHWA, our next step would be to meet with local officials to present this information. The focus will also be to gain their input into the purpose and need for the project. Mr. Hall stated that he would look for dates that would work for everyone. Each KYTC attendee was given a flash drive of the presentation.



**TRANSPORTATION CABINET**

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

**Steven L. Beshear**  
Governor

**Michael W. Hancock, P.E.**  
Secretary

October 3, 2013

**\*\*\*Please see attached spreadsheet for recipients of this letter\*\*\***

**SUBJECT:** KY 107 at I-24 Interchange Justification Study (IJS)  
Christian County  
Local Officials / Stakeholders Meeting

Dear :

The Kentucky Transportation Cabinet (KYTC) would like to invite you to participate in a Local Officials/Stakeholders meeting to discuss the *KY 107 at I-24 Interchange Justification Study (IJS)*. The meeting will be held on **Wednesday, October 30, 2013 and will begin promptly at 10:00 a.m.** We will meet at:

**The Pennyrile Area Development District Office  
300 Hammond Drive  
Hopkinsville, KY 42240**

The Kentucky Transportation Cabinet, along with its consultant Qk4, has assembled a project team to evaluate and study the feasibility of an interchange for KY 107 and I-24 to increase access and/or mobility (see enclosed study area map). This study is currently in the initial data-gathering stage.

This meeting will consist of local elected officials and other stakeholders. The purpose is to provide a local perspective on transportation issues in the area. We ask that you identify specific issues and concerns associated with the study area that can include traffic congestion and operation, safety, network connectivity, mobility, access, and signage.



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October 3, 2013

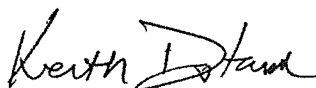
Page 2

This IJS will include a study process to propose potential alternative improvement options, develop practical solutions with related cost estimates, and a final report.

We appreciate your attendance and contribution to this project. Please have your comments, questions, or requests prepared for the meeting and we look forward to meeting with you. If you cannot attend, please send a representative from your office on your behalf.

For additional information please contact Nick Hall at KYTC, District 2 by phone at (270) 824-7080 or by e-mail at [nick.hall@ky.gov](mailto:nick.hall@ky.gov). Please address all written correspondence to Keith Dotson, Acting Director, Division of Planning, Kentucky Transportation Cabinet, 200 Mero Street, 5<sup>th</sup> Floor, Frankfort, KY 40622 and include a return address on such correspondence.

Sincerely,

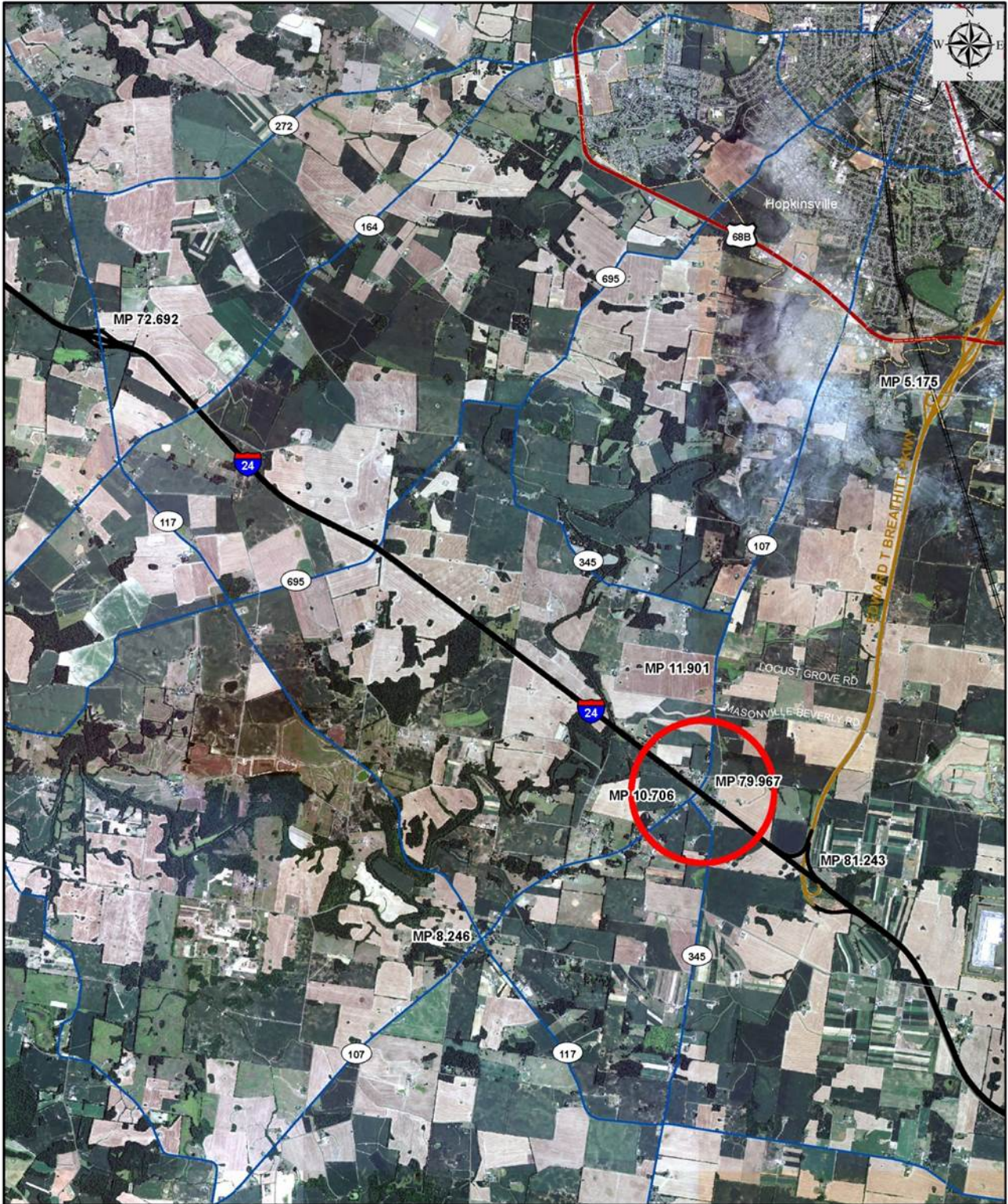



Keith Dotson  
Acting Director  
Assistant Director  
Division of Planning

KD/SM/BC

c: Ryan Tenges, FHWA  
Michael Loyselle, FHWA  
Annette Coffey, Qk4  
Kevin McClearn  
John Rudd  
Brad Houck  
Nick Hall  
Jason Orange  
David Martin





 Proposed Interchange



**Study Area**  
 Proposed KY 107/I-24 Interchange  
 Christian County, KY  
 Item No. 2-8702.00



Mailing Title	Letter Title	First Name	Last Name	Title	Organization	Address1	Address2	City	State	Zip
Hon.	Hon.	Steve	Tribble	Judge/ Executive	Christian County Fiscal Court	515 Weber Street		Hopkinsville	KY	42240
Hon.	Hon.	Dan	Kemp	Mayor	City of Hopkinsville	P.O. Box 707		Hopkinsville	KY	42240
Mr.	Mr.	Carter	Hendricks	President/CEO	Hopkinsville Chamber of Commerce	2800 Ft. Campbell Blvd		Hopkinsville	KY	42240
Mr.	Mr.	Craig	Morris	Regional Planning Coordinator	Pennyrile ADD	300 Hammond Drive		Hopkinsville	KY	42240
Mr.	Mr.	Steve	Bourne	Director	Community and Development Services	P.O. Box 1125		Hopkinsville	KY	42240
Mr.	Mr.	Chuck	Chambers	Road Supervisor	Christian County Road Department	515 Weber Street		Hopkinsville	KY	42240
Mr.	Mr.	Livy	Leavell	Sheriff	Christian County	216 West 7th Street		Hopkinsville	KY	42240
Mr.	Mr.	Tom	Jones	District 4 Magistrate	Christian County Fiscal Court	302 Deepwood Drive		Hopkinsville	KY	42240
Mr.	Mr.	Mike	Brumley	Transportation Director	Christian County Public Schools	200 Glass Ave		Hopkinsville	KY	42240
Mr.	Mr.	Randy	Graham	Director	Christian County Emergency Management	521 Weber Street		Hopkinsville	KY	42240
Mr.	Mr.	Wally	Crowe		Fort Campbell	Public Works MasterPlans	Building 865	Fort Campbel	KY	42223
Mr.	Mr.	Chris	Brown	Fort Campbell Community Planner	Plans, Programs and Training Office	234 Oklahoma Ave		Fort Campbel	KY	42223-5371
Mr.	Mr.	John	Mahre			P.O. Box 1161		Hopkinsville	KY	42241-1161

# AGENDA

**I-24 / KY 107 Interchange, Christian County  
Abbreviated Interchange Justification Study  
Stakeholders' Meeting  
Pennyrile Area Development District  
10:00 AM Local Time, October 30, 2013**

- I. Introductions
- II. Purpose of the Meeting
- III. Scope of Work and Project Schedule
- IV. Purpose of the Study
- V. FHWA Interstate Access Guide Policy Point 3
- VI. Overview of the Project Area
- VII. Purpose and Need Discussion
- VIII. Work to Date
  - a. Issues
    - i. Spacing
    - ii. Signing
    - iii. Urban vs. Rural
    - iv. Communities
  - b. Safety Analysis
  - c. Environmental Overview of Major Issues
- IX. Initial Build Alternative Concepts
  - a. Project Costs
  - b. Potential Impacts of Diamond Interchange
- X. Traffic Forecast Status
- XI. Remaining Steps



*Groundbreaking by Design.*



*Groundbreaking by Design.*

**Project:** I-24 / KY 107 Interchange, Christian County  
Item Number 2-8702.00  
Abbreviated Interchange Justification Study  
Stakeholders' Meeting

**Purpose:** Gain Stakeholder Input into the Project Purpose and Need

**Place:** Pennyrile Area Development District  
Conference Room

**Meeting Date:** October 30, 2013

**Time:** 10:00 AM CDT

**Prepared By:** Annette Coffey

**In Attendance:**

Lori Harper	Pennyrile ADD/Chamber of Commerce
Livy Leavell, Jr.	Christian County Sheriff
Steve Bourne	Community and Development Services
Carter Hendricks	Chamber of Commerce
Dan Kemp	City of Hopkinsville
Craig Morris	Pennyrile ADD
Wally Crow	Ft. Campbell, KY
Tom Jones	County Government
Kevin McClearn	District 2 - CDE
Nick Hall	District 2 - Planning
Jason Orange	District 2 Planning
Steve Ross	Central Office Division of Planning
Mikael Pelfrey	Central Office Division of Planning
Shane McKenzie	Central Office Division of Planning
Daniel Hulker	Central Office Division of Planning
Taylor Kelly	Qk4
Annette Coffey	Qk4
Bruce Siria	Qk4

Nick Hall gave opening remarks stating that Qk4 was hired by the Kentucky Transportation Cabinet to study the feasibility of a new I-24 interchange with KY 107 in Christian County for which we would like their input. The main purpose of this meeting is to garner input into the purpose and need for this project. Each participant introduced themselves along with their role in the community (see above Attendees). Kevin McClearn stated that the Purpose and Need is critical for any project however, especially critical to the Federal Highway Administration (FHWA) when exploring a new interchange on the interstate system. This has been expressed over the years by FHWA during the planning for the Breathitt Parkway extension that was open in 2011, and also in our Project Team Meeting for this project.

### **Meeting Purpose:**

Ms. Coffey, Qk4 Project Manager, briefly went over the agenda for the meeting, and reiterated the purpose of this meeting which is “to obtain local stakeholders’ input on the Purpose and Need of this project so that this information can be used in the decision making process. This project is in the current highway plan as Item Number 2-8702.00 for a planning study only, and Qk4 received their notice to begin work July 11, 2013. She explained that this project has been separated into two phases. The first phase would address: Purpose and Need, initial interchange concepts, operations and safety, and an abbreviated Environmental Overview. Future work would be negotiated if an interchange appears feasible.

The purpose of this phase of the study is to address the following:

- Would spacing work for an interchange at KY 107?
- What type of interchange would fit?
- What would the approximate costs and impacts?
- What would be the major environmental considerations?
- What traffic would the interchange generate?

### **Purpose and Need Discussion:**

Following a description of the project area included in the study, existing traffic counts, and planned projects in the area (see presentation), a brief education of purpose and need was given to the group. In summary, a purpose and need

- sets the foundation for future decisions;
- is the yardstick we measure alternatives against;
- serves as a logic check;
- explains to public and decision makers “why;”
- helps determine if the project should move forward or not;
- justifies the expenditure of funds and impacts;
- is developed with input from the stakeholders; and
- most importantly it does not include a solution.

Stakeholders provided input into what they saw as the purpose of this project:

- Sheriff Leavell stated that it is a matter of public safety. It would provide a quicker response time for emergency vehicles such as the Herndon fire department (I-24 is part of their responsibility) and mutual aid from other departments in the county to access I-24 locations that require backtracking presently (e.g. west of the I-24/Breathitt Parkway interchange). He added, “the quicker we can respond the safer we can have things.” It gives the area one more avenue to respond to situations. A fatality the previous day at the Breathitt Parkway interchange on ramp coming from Cadiz toward Hopkinsville was used as an example of this need for emergency response.
- Herndon volunteer fire department response time would be cut in half.
- Safety – provides access for first responders to I-24

- Would open the area for economic development, there is residential development along KY 345 currently
- Southern Christian County is where the growth is occurring. This interchange will spur development.
- Exit 81 does not provide needed access to and from the south because it is not a full interchange
- This proposed interchange may provide additional access for Ft. Campbell. However, Mr. Crow a contractor for Ft Campbell stated his personal opinion that he does not see Ft. Campbell traffic along KY 107 increasing with a new interchange at KY 107. He will ask Ft. Campbell to provide official comments to the Project Team.

**Additional Stakeholders' Comments:**

Following the discussion of the purpose and need for the project, stakeholders expressed additional items germane to the project.

- Median crossovers are needed along I-24 for emergency crossover access due to crashes
- There was concern for residences close to the interchange and how the project would affect them.
- Drainage is another issue, water does not move in this area. Memory Lane, when it rains, fills up like a lake.
- South of I-24, KY 107 is narrow and has a lot of farm equipment on it. If the proposed interchange is built then KY 107 would need to be improved to Ft. Campbell. There are also problems with two four-way stops if the roadway was improved.
- Access to Ft. Campbell from KY 345 is closed, however, there remains a gate open at KY 107. All of their large delivery trucks and vehicles must use US 41A to access the post.
- Amish buggies travel KY 107 in the project area. They also travel through the interchange area and over to the Northwest quadrant of the interchange to go to church in peoples' homes.
- At KY 345 there seems to be a safety line of sight issue. Speeding over the crest is worse if you are going 65 and is a concern for Amish buggies travelling the road.
- On south Beverly Road there is an old grocery store that "Edgar Cayce's father ran. There is also a South Liberty Christian Church where Edgar Cayce went to church. William Turner who lives there knows the history. These should be areas of concern.
- Improvements to KY 107 all the way to Ft. Campbell should be studied. As stated before, Mr. Crow a contractor for Ft Campbell stated his personal opinion that he does not see Ft. Campbell traffic along KY 107 increasing with a new interchange at KY 107.

Ms. Coffey said that Qk4 will take the information from this discussion and develop a Purpose and Need statement for this project that will be incorporated into the study process. Mr. McClearn believed that safety/emergency access will be the strongest argument providing access to the interstate and Herndon for first responders.

**KY 107/I-24 Interchange Discussion:**

Following the Purpose and Need discussion, Ms. Coffey discussed what work had been done for this study so far. In summary, Qk4 has studied a diamond interchange at KY 107, and also improvements to KY 117 as

an alternative to a new interchange. It appears that a diamond interchange will exceed minimum criteria for ramp spacing.

**Safety:**

FHWA has stated that the less than three mile spacing criteria will be acceptable to them as long as I-24 and the areas where the interchanges interact will operate at an acceptable level of service (LOS, explained as a report card to the stakeholders). FHWA did have a concern that if the purpose of the project is to provide access to southwest Hopkinsville that KY 107 should be improved to the US 68 Bypass. The mayor said that KY 107 needs to be improved to Herndon also, perhaps as a separate project. An initial cost estimate for providing an interchange at KY 107 was \$8.5M. If KY 107 is to be improved to US 68 Bypass with widened 12-lanes and 6-foot shoulders, that would add over \$7.3 million more to the cost.

Another topic that must be addressed is the signing of an interchange with its close proximity to the Breathitt Parkway/Pennyryle Parkway. FHWA has conveyed that KYTC can provide two messages on one sign, and that will be acceptable.

The KTC Crash Buildup analysis was conducted for the years 2009 to 2011 (the latest years for which KTC crash analysis data was available). A map of years 2010 to 2012 crashes from KSP crash data was provided in the presentation. The Breathitt Parkway interchange with I-24 was opened to traffic in March of 2011, therefore, only nine months of crash information was included in the calculations of Critical Rate Factors. At present the new Build Up data for the year 2012 is not yet available. Overall, there have been some crashes, but there are no sections with a critically high crash rate on any of the study area roads. On I-24, many crashes are deer strikes, and the other predominate type of crash are single vehicle crashes. After review of crash reports, at present, the only issue on I-24 is the merge movement from the Breathitt Parkway southbound to I-24 eastbound.

An overview of major impacts has been conducted as part of this study. Environmental (NEPA) approval will be necessary if the project is advanced. The only known "showstopper" environmental concern is the potential historic bungalow house in the southeast quadrant. Also, based on preliminary information, environmental justice could be an issue for both minorities and poverty. The entire stakeholders' group, KYTC, and the consultant expressed concern of the community impacts of Beverly in the interchange area. Prime farmlands and karst issues area also likely and will need to be addressed as the project progresses. The Herndon Volunteer Fire Chief lives in the house closest to the interchange. There was also a question regarding the impacts to the houses on KY 345. The initial analysis appears to have minimal impact in that area.

**Traffic Operations:**

At the time of the meeting, a full traffic analysis had not been performed, because the traffic forecasts were still being developed, however, initial forecasts show that a new interchange will generate 1,000 vehicles per day (vpd) to and from the east, and 150 vpd to and from the west. These numbers would grow to 1,300 vpd and 210 vpd, respectively by the year 2040. Mr. McClearn explained that the low number is due to most people in Hopkinsville travelling west would use US 68/80, others to the east would use the Breathitt Parkway and I-24. Therefore, this interchange would not generate a considerable amount of traffic. Mr.

Hulker stated that the design year volumes were based on the projected growth rate for the area and a 1% growth rate of traffic was used for the proposed interchange.

**Miscellaneous and Closing:**

There was a question as to whether relocating KY 107 to the west of the development at Beverly and farther away from the I-24/Breathitt Parkway interchange was considered. It was not a part of this study, and would add to the cost.

In closing, Ms. Coffey said that the next steps were to provide a draft report to KYTC following the receipt of traffic forecasts. The question was raised if a recommendation will be made in this initial study. Mr. McClearn answered by saying, the study will present the facts, but will not make recommendations because there is still additional work to be accomplished. The decision points for further advancement of this project will be whether funding is included in future KYTC Highway Plans and completion of the required environmental document. The next step would be to take this information and see if it is a candidate for the next highway plan. A very best case scenario would be the project would be at least three to four years away. The stakeholders conveyed that if KYTC feels this project is not going to advance, that they want to “get behind another project.” Everyone was thanked for their participation and the meeting adjourned at approximately 11:30 a.m.