

I-471 AT KY 8 INTERCHANGE MODIFICATION PROJECT

Frequently Asked Questions

In order to better understand the Project process and schedule, the Kentucky Transportation Cabinet (KYTC) and its Project Team developed the following "Frequently Asked Questions" (FAQs).

The Questions are divided into four general categories:

1. **General Project Questions**
2. **Design Issues**
3. **Recent Actions by the Kentucky Transportation Cabinet**
4. **Environmental Issues**

In addition, the pull-down menu areas of the **471PROJECT.ORG** web-site also include a number of folders containing details about the Project. *Project Information*, for example, contains descriptions of the Project process, its history, and current news. *Public Information* includes meeting recaps of the actions taken by the Project Team and its partners, the Interchange Advisory team and the Section 106 Review Consulting Parties.

You are encouraged to submit any questions about the Project by sending an e-mail to us at **471PROJECT.ORG** or by writing to :

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Thank you for your interest in participating in the Public Involvement Process for the Project. We hope you will check the web-site for regular updates and for meeting announcements.

GENERAL PROJECT QUESTIONS

Q. What is the Purpose of the I-471 at KY 8 Interchange Modification Project?

- A. Evidence gathered by regional, state, and local agencies indicates that there is a safety problem with the movement of southbound I-471 traffic on the Daniel Carter Beard Bridge as a result of traffic slowdowns and congestion at the exit ramps to KY 8, Dave Cowens Dr. The problems result in a high rate of crashes on the Bridge.

The following Purpose and Need statement was developed to drive project efforts at a solution:

Purpose and Need Statement: To improve safety and reduce traffic delay at the I-471 / KY 8 Interchange in Kentucky by correcting deficiencies that cause or contribute to I-

471 southbound exit ramp queues that occur on the Daniel Carter Beard Bridge over the Ohio River.

The Purpose and Need statement is required by the Federal Highway Administration (FHWA). FHWA works in collaboration with KYTC to provide oversight and approve funding for the Project.

Q. Who is leading the Project?

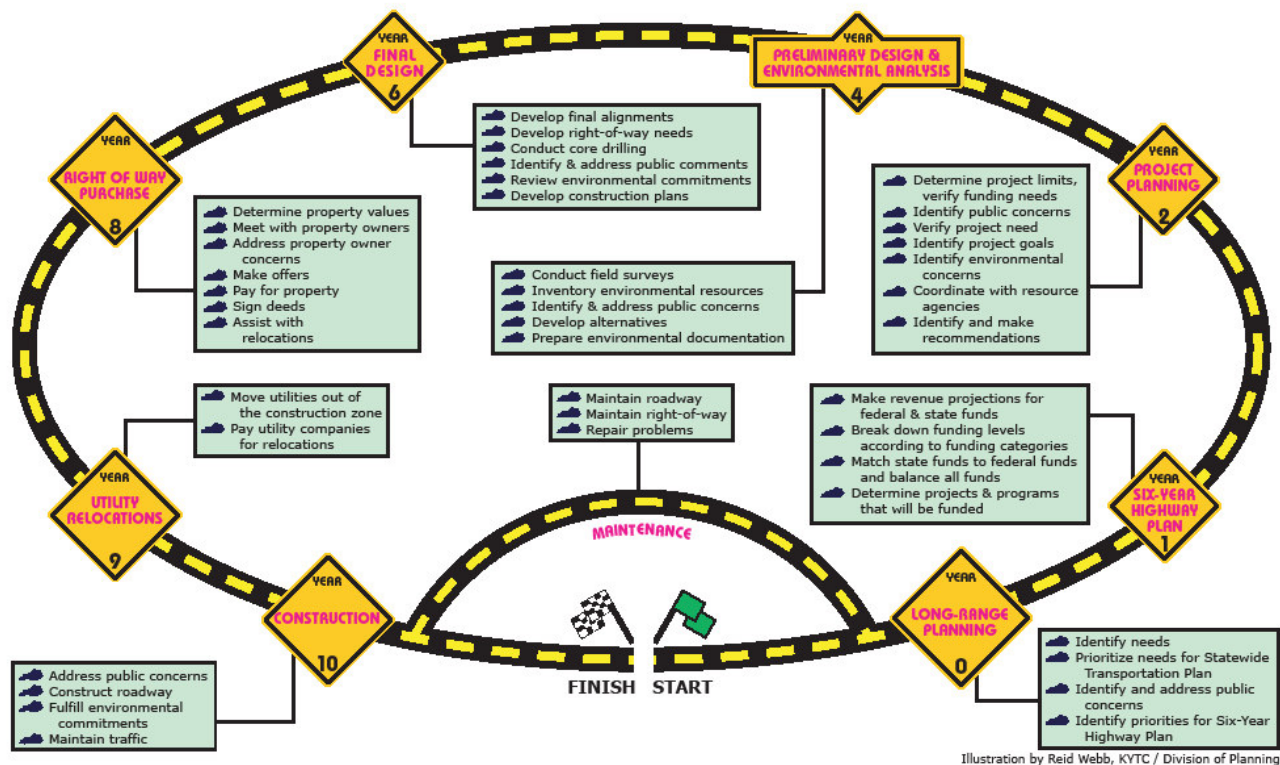
- A. KYTC is a state-level administrative agency acting on behalf of the U.S. Department of Transportation Federal Highway Administration (FHWA). The charge of the Agencies is to provide mobility and access for people, goods, and services through a network of highways and roads.

The Cabinet is assisted by consulting engineers who develop and test the Project plans under the guidance of, and in collaboration with, KYTC and FHWA. A list of Project Personnel appears under the web-site menu "About Us."

Q. What is the timeline for completing the I-471 at KY 8 Interchange Modification Project?

- A. Generally, such planned Highway projects are completed in about 6 years, putting construction of this Project between 2012 and 2014. This period may be affected by the extent of modifications required and the complexity of the modification designs.

The design process, involving developing and examining designs to determine their effectiveness in handling traffic forecast for 25-30 years in the future, takes about two years. This includes design evaluation and an Environmental Assessment that determines the potential for impacts to the human and natural settings where the Project is taking place. Right of Way acquisition for property required for Project implementation usually requires up to two years for negotiations and residential and commercial relocations. After the right of way phase is complete, all above and underground utilities must be relocated out of the Project path without major disruptions of existing service to remaining residences or businesses. Coordination with Utility Companies and implementation of relocation plans takes about a year, perhaps longer depending on the Project setting. Construction, again depending on the extent and complexity of designs, takes at least a year and perhaps longer. Utility relocation and Project construction are generally performed between the months of March and December with time taken off during winter months due to uncertain and inclement weather conditions.



The Diagram above shows the full transportation planning and facility implementation process. The I-471 at KY 8 Interchange Modification Project is already in Year 4 "Preliminary Design and Environmental Analysis."

A Project Development Progress Chart specific for this Project has also been developed which charts the Project process and time schedule. The Chart is updated according to steps or phases completed and is distributed at all Meetings.

DESIGN ISSUES

Q. How Are Modification Alternatives Developed?

A. First, the existing roadway network and traffic counts are subjected to a computer modeling process showing how the system and traffic operate. Then modification alternatives are developed to address the problems noted for the existing system. The modification alternatives are then subjected to computer modeling except with traffic volume forecasts for 25-30 years in the future. These forecasts are based on population and demographic projections, area development projections, and other data forecasts. The modification alternatives and traffic movements are assessed for speed and safety and a Level of Service is assigned, reflecting the Modifications' success.

In the I-471 at KY 8 modification alternatives, the Project Team is also inviting an Interchange Advisory Committee and Section 106 Review Consulting Parties to help with development of the design. Community representation helps guide the Design Team in identifying localized problems and the most beneficial solutions.

Q. Can A Two-Lane Exit Ramp at KY 8 be Used at the KY 8/Exit 5/Park Avenue Ramp?

- A. AASHTO guidelines for the construction of two-lane exits states that "To satisfy lane-balance needs (i.e. maintaining the same of number of lanes after an exit as on the exit approach without dropping a lane for the exit) and not to reduce the basic number of through lanes, it is usually appropriate to add an auxiliary lane ("...the portion of the roadway adjoining the traveled way for ...turning...weaving... and other purposes supplementary to through-traffic movement.) upstream from the exit. A distance of approximately 450 meters (1500 feet) is recommended to develop the full capacity of a two-lane exit." (A Policy on Geometric Design of Highways and Street, Fourth Edition, 2001, American Association of State Highway and Transportation Officials)

There is not sufficient distance on the Daniel Carter Beard Bridge to accommodate a 1500-foot additional lane upstream from the KY 8 exit ramp at Park Ave.

Q. If a single-lane exit is the only option, can the ramp be designed to split into two separate exit ramps to two different locations?

- A. Provided there is sufficient length on the single-lane ramp for drivers to react to directions (right lane to Bellevue, left lane to Newport, for example) and to slow their vehicles to a safe speed for turning or stopping, it is possible to split an exit lane to two separate lanes. The configuration of the existing I-471 at KY 8 Interchange allows for consideration of a split ramp as demonstrated in Alternative designs 2b and 5d.

The effect will be that the exit ramp will have to be widened and routed parallel to Providence Way. Due to the constricted existing right of way and its adjacency to Providence Way, widening for a split ramp may require encroachment onto Providence Way with the potential of also having to take some structures to accommodate the widening. Routing the ramp will be the result of design with effects from slowing speeds and sight distances dictating how the ramp must be routed to maintain safety. That is, adequate distance must be provided to allow motorists to slow down, see the split point, make their lane choice, and negotiate the turns safely.

RECENT ACTIONS TAKEN BY THE KENTUCKY TRANSPORTATION CABINET

KYTC District Traffic Engineers have taken several measure intended to address current congestion problems associated with the I-471 at KY 8 Interchange. The following questions and answers describe the actions.

Q. What are some of the actions taken by KYTC to address problems of safety at the I-471 at KY 8 Interchange?

- A. The District Office of Construction designed and installed an additional left turn lane from the Park Ave. ramp intersection with KY 8 for west-bound turns.

Timing changes were also made to the traffic signal at the Park Ave. ramp/KY 8 intersection. Signal timing was modified for the weekday and weekend evening peak times to provide more green time for vehicles to clear the Park Ave to KY 8 intersection. Greater green time for these eastbound and westbound turning movements will clear the intersection to prevent traffic back ups onto the Beard Bridge exit lane.

Additionally, vehicle detection loops – which trip stoplight cycles according to the presence or absence of vehicles – were placed on six side streets intersecting KY 8 from Berry Avenue in Bellevue to Dayton.

The Cabinet will assess the effects of these changes before planning any others. Additional change would be more of the long-term variety (such as a re being examined by the I-471 at KY 8 Interchange Modification Project design team).

Q. *Have the signals along KY 8 been optimized? (i.e. coordinated and synchronized to work together through the KY 8 corridor)*

- A. All of the signals along KY 8 have not been optimized. Traffic engineers were waiting to see whether the changes made to the Park Ave. ramp (timing, turn lane) took care of traffic backing up onto the Interstate. District 6 Cabinet officials have not heard of any backups or major problems since the changes were made, and therefore have not changed to timing on the other signals along KY 8.

Q. *Has the existing ramp actuator been reconnected?*

- A. Vehicle detection loops coming off the ramp at the stop bars have been installed and are connected.

Q. *Have conditions been observed indicating a need that warrants the installation of a second actuator?*

- A. The vehicle preemption loop that was previously located near the Interstate was not reconnected. The new timing would not be helped by the preemption loop.

ENVIRONMENTAL ISSUES

Q. *What is the Environmental Assessment?*

- A. The Environmental Assessment (EA) is a document containing descriptions of Project actions, the Project's potential for impacts to the human and natural environment, and details of the preferred Alternative recommended for implementation. The EA is a required part of the National Environmental Policy Act and must be improved by FHWA before federal monies for the Project can be released.

The EA examines seven factors of the environment:

1. Air quality

2. Noise levels
3. Aquatic and terrestrial habitat, including threatened and endangered species
4. Socioeconomic conditions
5. Historic resources
6. Archaeological resources
7. Hazardous materials and underground storage tanks.

These assessments are used to help Project designs avoid or minimize potential impacts. Where impacts can not be avoided, the EA contains descriptions of the mitigation that will be used to relieve those impacts: noise barriers are an example of mitigation.