

I-65 New Interchange Feasibility Study

Southern Warren County, Kentucky



EXECUTIVE SUMMARY

The I-65 New Interchange Feasibility Study was initiated by the Kentucky Transportation Cabinet (KYTC) and the Bowling Green-Warren County Metropolitan Planning Organization (MPO) to explore the need for additional connectivity on I-65 in the southern portion of Warren County. This study evaluated three potential new interchange location options, including connection improvement scenarios. Additionally, two periods of public outreach were conducted. The three

potential new interchange locations included the areas around the existing overpasses at Carter Sims Road, KY 242 (Richpond Road) and KY 240 (Woodburn – Allen Springs Road) and their potential connections that extended from US 31W (Nashville Road) to the west and KY 622 (Plano Road) to the east. The study resulted in a recommendation for a new interchange location and action items for moving forward with the recommendation.

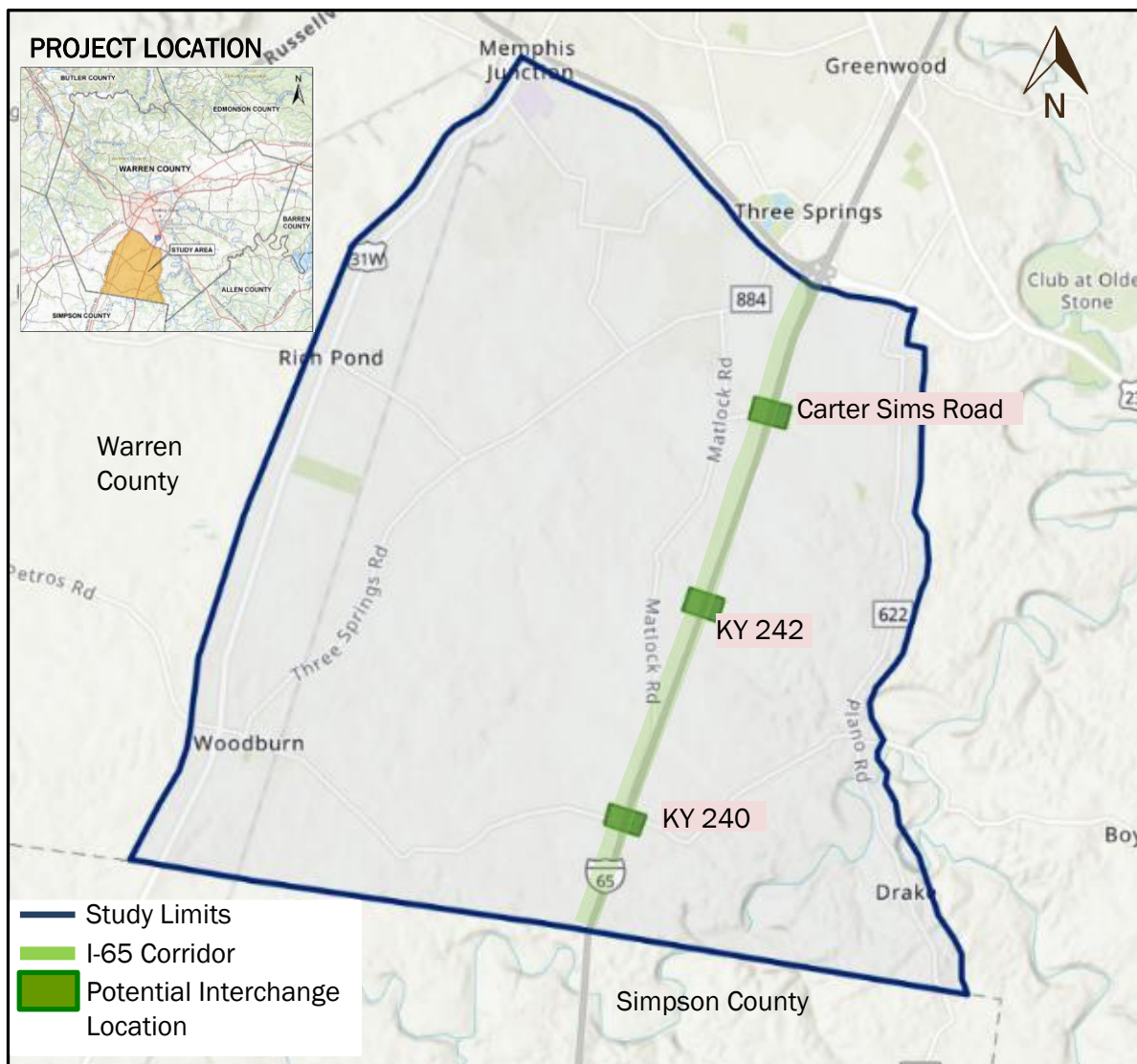


Figure ES - 1: Project Study Area

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Introduction. Projects concerning a potential interchange located on I-65 at either KY 240, KY 242, or in the vicinity of Carter Sims Road as part of the possible Southwest Parkway concept have been included in the MPO's Metropolitan Transportation Plan since the MPO was created after the 2000 Census and have been on the Unscheduled Needs List for Warren County since the early 1990's. Several other projects in Southern Warren County during the last 12 years supported this study, with two studies (the Elrod Road Interchange Feasibility Study¹ and the KY 622 Plano Road Study²) recommending that an interchange along I-65 in this area be investigated. A more detailed background on this project is included in Section 1: Introduction.

Study Area Profile. The first step in the study was to develop a profile of the area characteristics in terms of traffic, safety, roadway conditions, environmental conditions, growth and land use patterns, and geotechnical conditions. Although the study showed only moderate traffic growth and safety concerns, the existing roadway characteristics include narrow lanes and shoulders. Environmental concerns were limited in the study area and included historical properties, wetlands and areas with potential for threatened and endangered species. No geotechnical concerns were found that would prohibit construction of an interchange at any of the proposed locations, but karst terrain is present around all three potential new interchange locations. A review of growth and land use patterns indicated that much of the area around the Carter Sims location was zoned residential. At the KY 242 location option, the area is residential and agricultural but significant agricultural properties

are anticipated to become residential (subdivisions) or commercial properties. Around the southernmost location option at KY 240, the area is mostly agricultural and expected to remain so. Currently, a new interchange in the northern portion of the study area at I-165 and Elrod Road has been designed but no construction money has been obligated for the project. Its construction would mostly impact the Carter Sims Road area. The Southwest Parkway from US 68 to I-65 is a proposed corridor in the upper portion of the study area. No detailed studies have been completed on the portion of the corridor from US 31W to I-65, however, it is most likely to impact both the Carter Sims Road area and the KY 242 area. The final step in the Study Area Profile was the development of a draft purpose and need statement. Information about the study area characteristics is included in Section 2: Study Area Profile.

Community Engagement - Phase 1. Local officials, stakeholders, and the public were given an opportunity in early September 2020 to attend an online public meeting to discuss the study area's existing conditions and allowed an opportunity for attendees to ask questions and provide comments. Following the meeting, the public was offered the opportunity to complete an online survey. Over 100 people attended the meeting and 283 surveys were completed. A website was also created using ESRI's Story Map to provide an opportunity for the public to learn more about the project. A more in-depth discussion of these outreach tools and responses are included in Section 3: Community Engagement - Phase 1.

¹ <https://transportation.ky.gov/Planning/Planning%20Studies%20and%20Reports/Elrod%20-%20Planning%20Study%20Report.pdf>

² https://www.warrenpc.org/wp-content/uploads/2018/07/Plano-Road-Corridor-Study_FINAL.pdf

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Development of Interchange Options. Once the study team was aware of any potential concerns or issues in the study area, the next steps involved the development of potential connection points from I-65 at or near the proposed overpasses to US 31W and KY 622. This included any necessary improvements or connections that may be needed on adjacent roadways for the interchange connection.

At the Carter Sims Road location, it was determined that existing infrastructure required that the location

of the proposed new interchange be considered south of the existing overpass. This led to the development of two potential scenarios for this option. At KY 242, interchange options were considered at the existing overpass, as well as locations either north or south of the overpass. Four scenarios were developed for this option. At the KY 240 location, it was determined that the existing overpass location would be preferable for a new interchange location and two scenarios were developed for this option. The interchange location

options are included in Figure ES - 2. Furthermore, the study addressed mobility for all users to include accommodations for bicycle traffic such as a wide shoulder. Ultimately, the study determined the costs and benefits of each scenario for the three interchange location options. Each of the options also included a scenario of a connector roadway with a new crossing for the CSX railroad. The connector scenarios are shown in blue in Figure ES - 2.

A matrix was prepared which compared each of the scenarios against the purpose and need of the project and presented the estimated costs of each scenario. A detailed description of each of the options and scenarios are included in Section 4: Development of Interchange Options.

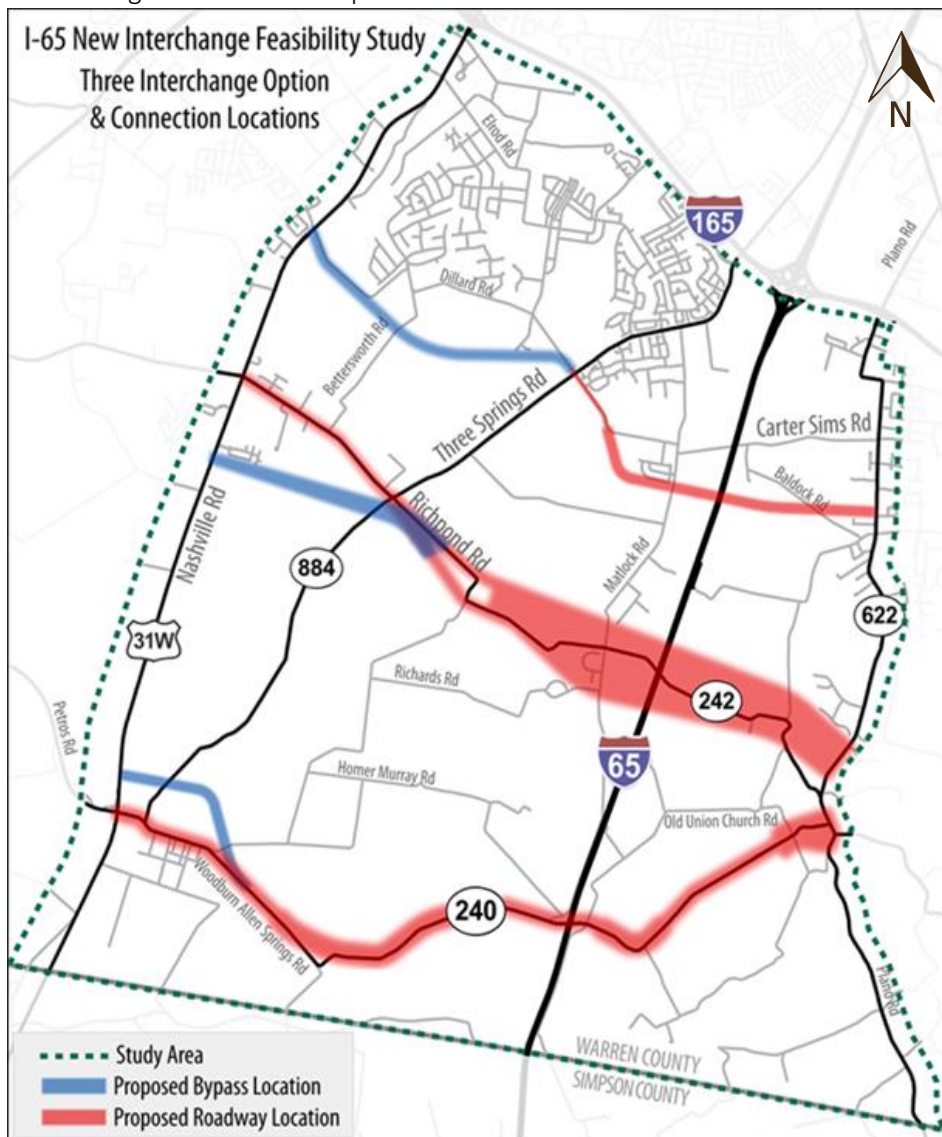


Figure ES - 2: Interchange Options

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Figure ES - 3: Recommendation

Community Engagement - Phase 2. In March of 2021, the Stakeholders and Public were again engaged to provide comments and feedback on the scenarios. Similar to Phase 1, online meetings were held in which a presentation was given followed by an opportunity for participants to submit questions and provide comments. During the second public engagement phase the community was also given an opportunity to attend a Virtual Town Hall (VTH). Opened just prior to the public meeting date through early April, the VTH gave attendees a chance to watch a presentation, review detailed exhibits, and take the online survey. Over 700 people attended the VTH over a two-week period. Section 5: Community Engagement - Phase 2 provides more details on the VTH, survey, and other engagement tools used in this phase of the project.

Recommendation: At the conclusion of Community Engagement Phase 2 survey responses, emails from the public, and comments from the online stakeholders and public meetings were reviewed in detail. The general consensus was that the public substantially supported an interchange at KY 242 and KY 240 over an interchange near Carter Sims Road. The comments were also used to update the evaluation matrix. As illustrated in Figure ES - 3, the KY 242 interchange location option and its connection improvements were recommended to move forward into project development and delivery in order to provide greater and more immediate relief to Southern Warren County. However, the KY 240 interchange location option and its connection improvements were also feasible. This location might be considered a project of regional importance in the future and be considered for project development and delivery when development and growth warrant. The costs associated with the recommendations are shown in Table ES - 1. A full discussion of this decision is in Section 6: Recommendation.

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Table ES - 1 – Costs of Recommendations

PHASE	Alternate Scenarios*					
	KY 242 Richpond Road Widen Existing Overpass	KY 242 Richpond Road Widen Existing Overpass w/ Connector	KY 242 Richpond Road New Overpass	KY 242 Richpond Road New Overpass w/ Connector	KY 240 Woodburn Allen Springs Road	KY 240 Woodburn Allen Springs Road w/ Connector
Engineering and Design	\$7,600,000	\$8,400,000	\$9,000,000	\$10,000,000	\$7,600,000	\$9,000,000
Right of Way (ROW)	\$5,400,000	\$5,800,000	\$8,000,000	\$8,300,000	\$4,600,000	\$5,600,000
Utilities Relocation	\$2,600,000	\$1,300,000	\$1,600,000	\$800,000	\$3,300,000	\$2,100,000
Construction	\$22,100,000	\$26,400,000	\$26,300,000	\$30,700,000	\$22,400,000	\$28,000,000
Total Costs	\$37,700,000	\$41,900,000	\$44,900,000	\$49,800,000	\$37,900,000	\$44,700,000

* The termini for all scenarios include improvements to the existing roadways from US 31 W (Nashville Road) to KY 622 (Plano Road) unless otherwise noted.

Next Steps: After the conclusion of this feasibility study, the next step in the process will be to secure funding for the preliminary design and further environmental studies for the recommended interchange location option. Although the Recommendation section provides details on the preferred location option for a new interchange, the final portion of this report, Section 7: Next Steps, addresses steps that KYTC and the MPO may take to increase the feasibility and cost-effectiveness of the recommended interchange option. See Table ES – 2 below for further steps that are needed to move the recommended interchange location into the project development and delivery phases.

Table ES - 2 - Next Steps

Agency	Project #	Action Item
MPO & KYTC	MTP ID: 60 CHAF ID: IP20150074 (MTP)	Within the MTP (Metropolitan Transportation Plan) and CHAF*, update description/costs of project: “NEW Improve access with a new interchange on I-65 at KY-242.” Support this project’s consideration within SHIFT* and eventual inclusion into KYTC’s Highway Plan and the MPO’s Transportation Improvement Program (TIP). Reference to the Southwest Parkway should be added to this project description.
MPO & KYTC	MTP ID: 67 CHAF ID: IP20070133 (MTP)	Within the MTP and CHAF, update description/costs of project: “Improve access with a new interchange on I-65 at KY 240.”
MPO & KYTC	MTP ID: 67 CHAF ID: IP20070133 (MTP)	Within the MTP and CHAF retain, update description/costs and combine the following project with MTP item 03 114 A0065 42.00: “Improve access with a new interchange on I-65 at KY 240”.
MPO	N/A	Develop a corridor preservation plan to support an interchange at KY 242 and its associated connection improvements.
MPO	N/A	Update land use plan to support an interchange at KY 242.
MPO & KYTC	N/A	Update elected officials on study recommendation.

* Continuous Highways Analysis Framework (CHAF), is an application used by KYTC and other transportation agencies including the MPO, to collect, track and analyze identified transportation needs. CHAF also provides a means to sponsor, score and rank projects as part of the Strategic Highway Investment Formula for Tomorrow (SHIFT).