



U.S. Department
of Transportation
**Federal Highway
Administration**

Kentucky Division

September 18, 2025

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In Reply Refer To:
HDA-KY

Mr. Jim Gray
Secretary
Kentucky Transportation Cabinet
200 Mero Street, 6th floor
Frankfort, KY 40622

Dear Secretary Gray:

The Federal Highway Administration (FHWA) Kentucky Division acknowledges receipt of the Kentucky Transportation Cabinet (KYTC) Environmental Assessment (EA) for the KY 3005 (Ring Road) Extension project in Hardin County, requesting approval.

All previous comments on this document have been addressed. Therefore, the EA is approved for distribution and public comment.

We request that KYTC proceed with direct distribution of the approved document to the resource agencies and other interested stakeholders. If you have any questions, please contact Ms. Camille Robinson, Acting Environmental & Planning Coordinator, at (202) 924-7479.

Sincerely,

Shundreka R. Givan

Shundreka R. Givan, AICP
Division Administrator

By email: (Brandy.Bihl@ky.gov)

Cc: Danny Peake KYTC, Division of Environmental Analysis

ENVIRONMENTAL ASSESSMENT

KY 3005 (RING ROAD) EXTENSION

HARDIN COUNTY, KENTUCKY

KYTC Item No. 4-198.00

The proposed highway project would extend KY 3005 (Ring Road), a 4-lane divided facility with partial access control, from its interchange with the Wendell H. Ford Western Kentucky Parkway (WKP), approximately 2.17 miles to a new interchange with Interstate 65 (I-65), and terminating at US 31W in Hardin County, Kentucky. A range of Build alternatives were analyzed to improve east-west system connectivity linking the north-south radial routes and the interstate network on the south side of Elizabethtown. The WKP, KY 1136 (New Glendale Road), I-65, and US 31W generally run north-south, with no direct east-west connection to this part of the county other than a network of indirect, rural, substandard county roads.

Submitted pursuant to 42 U.S.C. 4332(2)(c) by the Federal Highway Administration (FHWA) and Kentucky Transportation Cabinet (KYTC) Division of Environmental Analysis (DEA).



SEPTEMBER 2025



U.S. Department of Transportation
Federal Highway Administration



ADMINISTRATIVE ACTION:

ENVIRONMENTAL ASSESSMENT (EA)

KY 3005 (RING ROAD) EXTENSION

HARDIN COUNTY, KENTUCKY

KYTC Item No. 4-198

The proposed highway project would extend KY 3005 (Ring Road), a 4-lane divided facility with partial access control, from its interchange with the Wendell H. Ford Western Kentucky Parkway (WKP), approximately 2.17 miles to a new interchange with I-65, and terminating at US 31W in Hardin County, Kentucky, to improve east-west system connectivity between the radial routes and the interstate network on the south side of Elizabethtown.

Submitted pursuant to 42 U.S.C. 4332(2)(c) by the Federal Highway Administration (FHWA) and Kentucky Transportation Cabinet (KYTC) Division of Environmental Analysis (DEA).

Approved for Public Availability

Shundreka R. Givan 9/18/2025

Shundreka R. Givan, AICP

Date

FHWA Kentucky Division Administrator

Camille E. Robinson 9/17/2025

Recommended by Camille Robinson

Date

FHWA Planning & Environmental Coordinator, Acting

Daniel R. Peake 9/12/2025

Danny Peake

Date

KYTC DEA Director



U.S. Department of Transportation
Federal Highway Administration



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Acronyms

AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ACS	American Community Survey
APE	Area of Potential Effect
AST	Aboveground Storage Tank
BA	Biological Assessment
BGP	Bluegrass Parkway
BMP	Best Management Practices
CCRF	Critical Crash Rate Factor
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
dBA	Decibel A-Weighted
DEA	Division of Environmental Analysis
DES	Design Executive Summary
EA	Environmental Assessment
EDR	Environmental Data Resources
EIS	Environmental Impact Statement
EMS	Emergency Medical Services
EO	Executive Order
ESA	Endangered Species Act
EJ	Environmental Justice
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FONSI	Finding of No Significant Impact
FY	Fiscal Year
HH	Household
HIS	Highway Information System
IBCF	Imperiled Bat Conservation Fund
IH	Industrial Holdings
IJS	Interchange Justification Study
IPaC	Information Planning & Consultation
KDOW	Kentucky Division of Water
KHC	Kentucky Heritage Council
KPDES	Kentucky Pollutant Discharge Elimination System
KTC	Kentucky Transportation Center
KYTC	Kentucky Transportation Cabinet
LF	Linear Feet
LOS	Level of Service
LOSS	Level of Service of Safety
LWCF	Land and Water Conservation Fund
MOA	Memorandum of Agreement
MP	Milepoint

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MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan
MUP	Multi-Use Path
NAAQS	National Ambient Air Quality Standards
NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NHS	National Highway System
NOA	Notice of Availability
NO ₂	Nitrogen Dioxide
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PADD	Paducah Area Development District
PCB	Polychlorinated biphenyls
PM	Particulate Matter
REC	Recognized Environmental Condition
ROD	Record of Decision
SHIFT	Strategic Highway Investment Formula for Tomorrow
SHPO	State Historic Preservation Office
SOV	Single-occupancy vehicle
SPUI	Single-point Urban Interchange
SSA	Socioeconomic Study Area
STIP	Statewide Transportation Improvement Program
SWAPP	Source Water Area Protection Plan
TDM	Travel Demand Model
TDS	Total Dissolved Solids
TIP	Transportation Improvement Program
TNM	Traffic Noise Model
TWLTL	Two-way left-turn lane
USACE	US Army Corps of Engineers
USEPA	US Environmental Protection Agency
USDA	US Department of Agriculture
USDOT	US Department of Transportation
USFWS	US Fish and Wildlife Service
UST	Underground storage tank
VMT	Vehicle miles traveled
Vpd	Vehicles per day
WHPA	Wellhead Protection Area
WKP	Western Kentucky Parkway
WMA	Wildlife Management Area

1. KY 3005 (RING ROAD) EXTENSION PROJECT

The proposed KY 3005 (Ring Road) extension project is located on the south side of Elizabethtown in Hardin County, Kentucky. A range of Build alternatives to improve east-west system connectivity between the radial routes and the interstate network were evaluated, building on findings of the *1987 Planning Study*, more recent planning studies, and subsequent preliminary design efforts.

Following this introductory chapter, **Section 2** discusses the project purpose, **Section 3** describes the Build alternatives development process, **Section 4** summarizes the environmental setting and likely project impacts, and **Section 5** outlines public and agency involvement to date. **Section 6** contains a summary of the rest of the *Environmental Assessment* (EA), along with conclusions and identified commitments to mitigate adverse impacts. In accordance with the *National Environmental Policy Act* (NEPA) and KYTC policy, this document would be distributed for review and a public hearing would be held to solicit comments.

1.1 PROJECT AREA

Regionally, Elizabethtown and Hardin County are at the crossroads of I-65, the Martha L. Collins Bluegrass Parkway (BGP) to the east, and the WKP to the west. Elizabethtown is centered at the intersection of US 31W and US 62, has a grid pattern of local and state roads, several radial routes extending into the rural areas of the county, and a US 31W Bypass along the west side of the city. Ring Road is currently a circuitous route around the west side of Elizabethtown, beginning at US 62 in the north and ending immediately east of the WKP on the south side of Elizabethtown. Ring Road provides important east-west and north-south connections between the radial routes. The study area extends from the Ring Road/WKP interchange east to US 31W and includes I-65. The locations of Hardin County and the study area are shown on **Figure 1** and **Figure 2** (p. 2), respectively. Representative views of the rural study area are provided in **Figure 3** (p. 2).



Figure 1. Project Location Map

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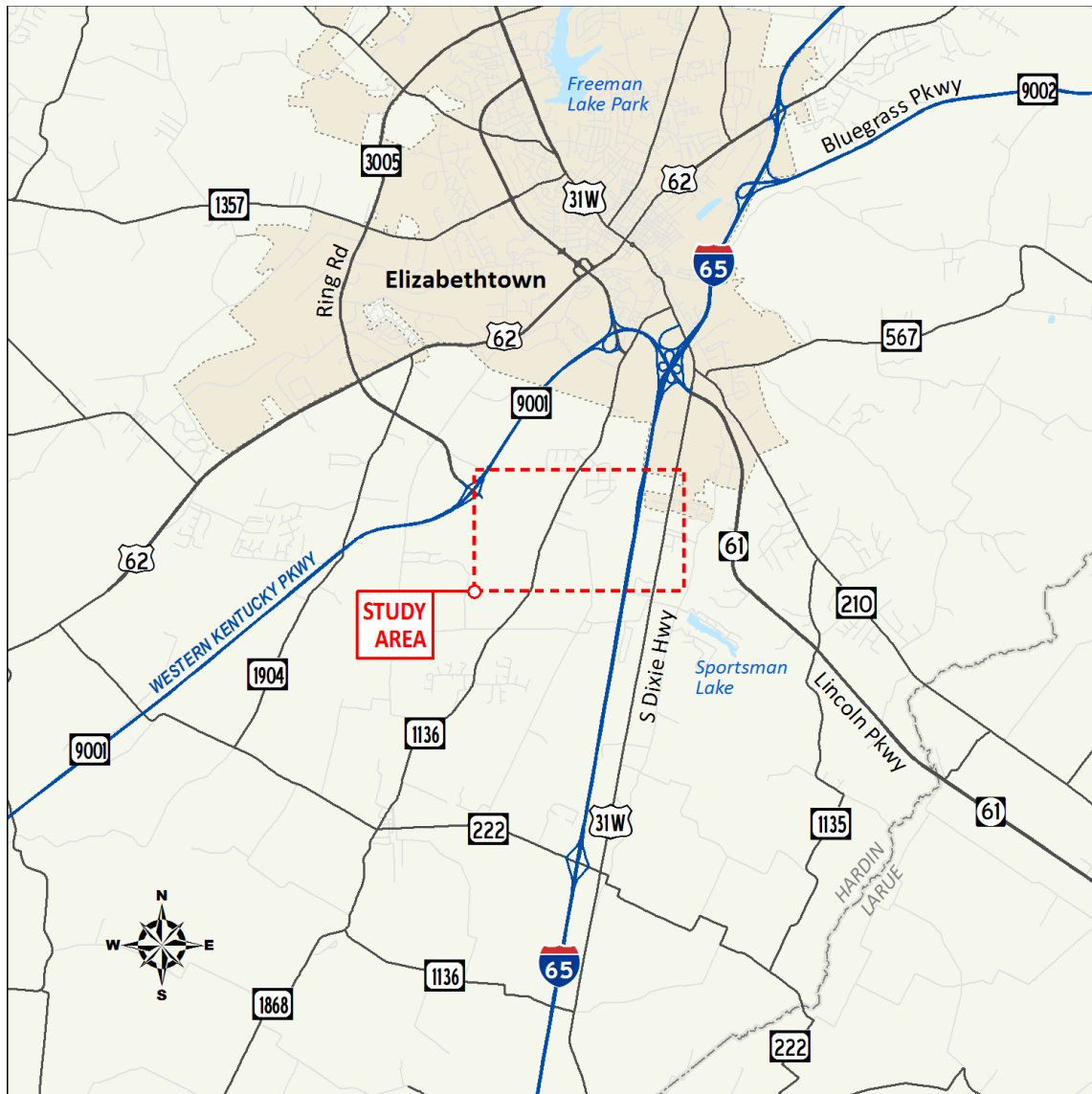


Figure 2. Project Study Area



Figure 3. Representative Views of Study Area

1.1.1 MAJOR ROADWAYS & TRANSPORTATION FACILITIES IN THE VICINITY

The state-maintained roadways in the study area are I-65, US 31W, the WKP, and KY 1136 (New Glendale Road). There are two county-maintained roadways in the study area: Overall-Phillips/Mud Splash Road and West Rhudes Creek Road, both of which are narrow, 2-lane roads with no shoulders. Data on the existing conditions in the study area were taken from the KYTC Highway Information System (HIS) database. Roadway functional classifications are shown in **Figure 4**. General roadway characteristics for the state-maintained roads include the following.

Existing **KY 3005 (Ring Road)**, for most of its length, is a 4-lane roadway with a center two-way, left-turn lane with a posted speed limit of 50 miles per hour (mph). The newest section of Ring Road, from US 62 east to the WKP, is a 4-lane roadway with a grass median. Access to Ring Road is partially controlled, with minimum 1,200-foot spacing between access points. Ring Road west of the WKP provides access to Central Hardin High School (at US 62/Ring Road) and the Elizabethtown Addington Airport northwest of the school. On the KYTC Functional Classification System, Ring Road is a Rural Minor Arterial, and on the state system it is State Primary (Other) road. Ring Road is currently a circuitous route around Elizabethtown from US 62 to the WKP. It provides important east-west and north-south connections between the radial routes. The 2020 average daily traffic (ADT) was around 6,900 vehicles per day (vpd) approaching the WKP terminus.

The following highways provide north-south connections along the proposed Ring Road extension:

KY 9001 (Wendell H. Ford Western Kentucky Parkway)

is a 4-lane divided, fully controlled-access highway that extends from west to east between Eddyville and Elizabethtown, an approximate distance of 138 miles. In the Elizabethtown area, it is an Urban Principal Arterial on the KYTC Functional Classification System. It has a divided section with four 12-foot-wide lanes, a 30-foot-wide depressed median, and 10-foot-wide paved shoulders. The posted speed limit is 70 mph. Recent 2023 traffic counts showed about 14,000 vpd using the parkway south of Ring Road and nearly 22,000 vpd north of Ring Road.

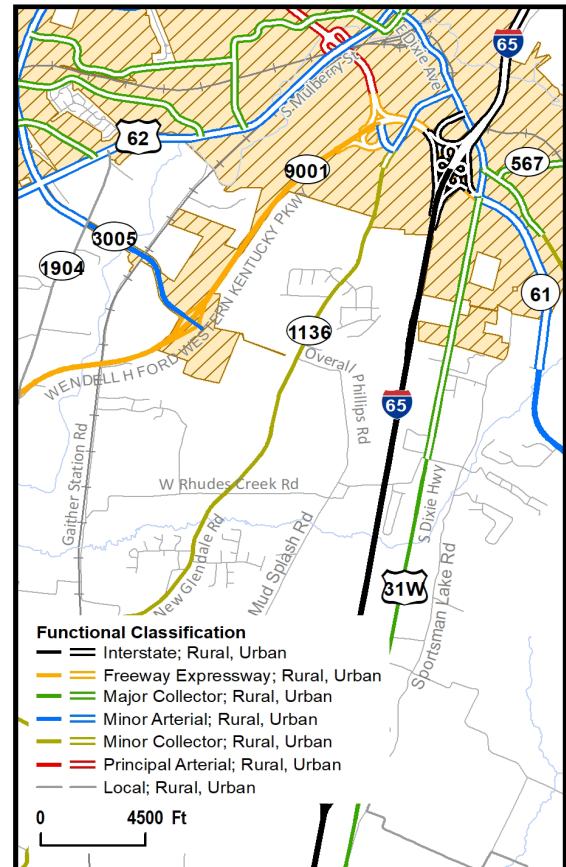


Figure 4. Roadways in Project Vicinity

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KY 1136 (New Glendale Road) is a 2-lane road that is a Rural Minor Collector on the KYTC Functional Classification System and a Rural Secondary Road on the state system. It has two 9-foot-wide lanes with minimal paved shoulders beyond. The posted speed limit is 55 mph; access is by permit. Recent 2023 counts show about 2,000 vpd on this stretch. In the project area, it is the main south-north road, approximately midway between and parallel to the WKP and I-65.

I-65 provides a 6-lane, 70 mph urban interstate highway through the project area. 2023 traffic counts show almost 54,000 vpd traveling on I-65 near the proposed interchange location. At present, there is a southbound Commercial Vehicle Enforcement weigh station at mile point (MP) 89. Selection of **Alternative 3** would create conflicting movements with the weigh station on ramp to I-65 and the future Ring Road exit ramps. Therefore, if **Alternative 3** is advanced, the current location of the southbound entrance ramp from the weigh station must be closed before the new interchange is open to traffic. The station has been due for rehabilitation and improvement since the late 1990s. It is presently programmed to be relocated south of the study area, between the Glendale and Sonora exits (KYTC Item No. 4-286.1). The 2024 Biennium budget in the KYTC Highway Plan for this project identified \$2 million in Design funds for the year 2025 and \$550,000 in Right-of-Way funds for the year 2026. The Construction funds are in the “out years” of 2028 through 2030. Although the new weigh station does not have to be built, the existing southbound entrance ramp from the weigh station must be closed before the proposed new interchange can open to traffic.

US 31W (Dixie Highway) in Hardin County is a major south-north corridor, and the area’s main connection between the major population centers of Elizabethtown and Radcliff/Fort Knox (northwest of Elizabethtown). US 31W extends south to north through the state, entering Hardin County south of Upton and heading 37.4 miles north before exiting the county and entering Jefferson County/Metro Louisville. In the study area, US 31W is a 2-lane road with 12-foot-wide driving lanes, 4-foot-wide shoulders, and a posted speed limit of 55 mph. Access is controlled by permit only. Recent 2023 counts show nearly 3,500 vpd on this stretch. US 31W is classified in KYTC’s Functional Classification System as a Rural Major Collector, and on the state system as a State Secondary roadway.

1.1.2 PROJECT HISTORY

In November 1987, KYTC published the *Ring Road Extension Study*, which provided information regarding the extension of Ring Road on the south side of Elizabethtown from US 62 to US 31W, with a new I-65 interchange.

KYTC Highway Plan. This initial corridor has been advanced in two independent sections: (1) from US 62 east to the WKP, and (2) from the WKP east to US 31W. The first section of independent utility of the corridor, from US 62 to the WKP (KYTC Items 4-7010.00 and .50) opened to traffic in September 2013. Once the WKP interchange was under construction, the second section of independent utility, from the WKP to US 31W, was added as Item No. 4-198.00 to the KYTC’s 2012 Highway Plan and has remained in the plan, as outlined in **Table 1** (p. 5).

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Table 1. Six-Year Highway Plan Fund Scheduling for Item 4-198

Six-Year Highway Plan	Phase	Estimate	Fiscal Year	Fund Type
<i>FY 2012-2016 Highway Plan¹</i>	D	\$ 1,500,000	2014	State
<i>FY 2014-2020 Highway Plan²</i>	R	\$ 2,760,000	2016	State
	U	\$ 1,690,000	2016	State
	C	\$30,000,000	2017	State
<i>FY 2016-2022 Highway Plan³</i>	U	\$ 1,190,000	2016	State
	C	\$29,700,000	2018	State
<i>FY 2018-2024 Highway Plan^{4*}</i>	U	\$ 1,100,000	NA	NA
	C	\$19,000,000	NA	NA
<i>FY 2020-2026 Highway Plan⁵</i>	U	\$ 1,560,000	2023	State
	C	\$21,380,000	2024	State
<i>FY 2022-2028 Highway Plan⁶</i>	R	\$ 4,000,000	2024	Federal
	U	\$ 2,000,000	2024	Federal
<i>FY 2024-2030 Highway Plan⁷</i>	R	\$ 9,100,000	2024	Federal
	U	\$ 2,000,000	2024	Federal
	C	\$ 36,100,000	2027	Federal

*SHIFT Identified Unfunded Priority Need

The initial Design funds of \$1,150,000 of state dollars were authorized June 10, 2012. An additional \$900,000 of state Design funds and \$5,880,000 state right-of-way funds were authorized September 30, 2015.⁸ The current highway plan has federal dollars for the right-of-way and utility phases estimated in the biennium starting in FY 2024.

MPO and TIP Plans. On July 26, 2012, the Radcliff/Elizabethtown Metropolitan Planning Organization (MPO) added the project to its 2009–2014 *Transportation Improvement Plan* (TIP) as Amendment #1, and its 2035 Metropolitan Transportation Plan (MTP) as Amendment #2. Although this project’s funding source was state rather than federal, such local endorsement is required by the Federal Highway Administration (FHWA) when a new access to an interstate highway is proposed. It has remained in their plan as a state-funded, regionally significant highway project until April 14, 2022. Amendment #2 amended the 2022–2026 *Transportation Improvement Program* (TIP) to move the project from a state-funded, regionally significant project to a federally funded highway project and adjusts the phases and funding as follows:⁹

¹ <https://transportation.ky.gov/Program-Management/Highway%20Plan/2012%20Highway%20Plan%20COMPLETE.pdf>

² <https://transportation.ky.gov/Program-Management/Highway%20Plan/2014%20Highway%20Plan%20COMPLETE.pdf>

³ <https://transportation.ky.gov/Program-Management/Highway%20Plan/2016HighwayPlanAll.pdf>

⁴ <https://transportation.ky.gov/Program-Management/Highway%20Plan/2018HighwayPlanAll.pdf>

⁵ <https://transportation.ky.gov/Program-Management/Pages/2020-Highway-Plan.aspx>

⁶ <https://transportation.ky.gov/Program-Management/Pages/2022-Enacted-Highway-Plan.aspx>

⁷ <https://transportation.ky.gov/Program-Management/Pages/2024-Enacted-Highway-Plan.aspx>

⁸ <https://pmttoolbox.kytc.ky.gov/>

⁹ https://radcliff-elizabethtown-mpo.org/wp-content/uploads/2022/09/Radcliff_EtownMPO_TIP_AMEND_2.pdf

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Table 2. Radcliff-Elizabethtown MPO TIP Funding

Transportation Improvement Program	Phase	Estimate	Fiscal Year	Fund Type
<i>FY 2022–2026 TIP</i>	D	\$ 1,227,800	2022	State
	R	\$ 4,000,000	2023	Federal
	U	\$ 2,000,000	2023	Federal
	C	\$26,500,000	2024	Federal

Local Plans. The local government agencies have planned for this extension as an important element of the transportation network, as explained further in **Section 2**. Of note, the 2021 MPO-sponsored *East Elizabethtown Connective Study*¹⁰ identified Item 4-198 as a “committed” project and then identified a future a long-term extension farther east from US 31W to KY 61 as both the next phase and the top “long-term” priority.

4-198 Engagement. During the current Preliminary Engineering and Environmental Documentation phase, KYTC has studied many possible combinations of alignments. June 6, 2013, KYTC met with Elizabethtown and Hardin County public officials during which participants to identify issues for consideration during the alternative selection process, problems to be corrected, and needs to be addressed by the project. Four public information meetings have also been held: November 14, 2013, June 24, 2014, September 22, 2014, and September 15, 2022.

- **November 2013**—The purpose of the first meeting was to inform the public of the planned project and to obtain input from the public regarding such issues as alignment options, potential benefits and impacts, known environmental constraints (sinkholes, cemeteries, historical/ archaeological resources, wetlands, etc.), and overall public concern about and sentiment for the project.
- **June 2014**—A second meeting was held to present and seek the public’s input regarding the preliminary set of alternative locations for the new road. It was explained that, since the first meeting, the KYTC project team had conducted some environmental and field survey work and reduced the study area to the northern portion of the original study area (i.e., north of West Rhudes Creek Road). The decision to look at alternatives only in the northern portion of the original study area was based on traffic and roadway engineering, cost estimates, and input received from the first public meeting. Information concerning Section 106 of the *National Historic Preservation Act* was available for anyone interested in requesting to be a Consulting Party to this process.
- **September 2014**—A third public meeting was held to present each of the alternatives and identify **Alternative 3** as the KYTC-recommended Preferred Alternative. Information on environmental impacts, cost, and past public input regarding all Build alternatives were presented. It was noted that construction would not begin until funding is available.

¹⁰ <https://radcliff-elizabethtown-mpo.org/wp-content/uploads/2021/09/EECS-Final-Report-16Sept2021.pdf>

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- September 15, 2022—Due to the eight-year delay in the project caused by a lack of funding, a public meeting was held to present the original four Build alternatives, gather feedback, answer questions, and address concerns. Since the September 2014 meeting, funding for the proposed extension and interchange had been included in the *2024–2030 Highway Plan* and construction has begun on the BlueOval/SK Battery Park to the south in Glendale. All four northern Build alternatives and designs considered for the intersection with KY 1136 were shared. The previously recommended **Alternative 3** was disclosed. It was noted that the project team is reconsidering all potential alternatives and the recommended alignment could change after reviewing updated costs, impacts, traffic forecasts, and public input. The information was presented both online and in-person.

Four Build alternatives and a No-Build Alternative are being evaluated. **Section 3.2** identifies the Build alternatives, which are shown on **Figure 6** (p. 12).

FHWA has authority and responsibility for approving access to the interstate network. Such approval is gained through the positive review of an *Interchange Justification Study* (IJS). FHWA requires an IJS for this project because an interchange with I-65 is proposed. In 2013 an IJS concluded that the proposed interchange would not have an adverse effect on the traffic operations on local roads or I-65. That 2013 IJS was “conditionally” approved pending the completion of the environmental process per the National Environmental Policy Act (NEPA). Environmental base studies were being prepared concurrently; however, the project was placed on hold in 2016 before an environmental document was completed. In a letter from the FHWA to the KYTC dated September 26, 2016 (**Appendix A**), FHWA recommended that KYTC prepare an EA for the proposed project in lieu of a Level-3 Category Exclusion¹¹.

In 2017 FHWA issued a new IJS Policy. Therefore, the 2013 IJS is no longer valid, and a new IJS has been developed that is compliant with the current 2017 policy. Furthermore, since approximately 10 years have passed since the original IJS was approved, KYTC in partnership with the MPO has updated the traffic and safety forecasts and analyses for this project. Of note, September 27, 2021, the Ford Motor Company announced the Ford BlueOvalSK Battery Park locating to Glendale, Kentucky, bringing 5,000 new jobs to the area to produce advanced lithium-ion batteries beginning in 2025.¹² While the traffic model in 2013 made assumptions on the number of jobs and when the site would be developed, the Radcliff-Elizabethtown MPO Travel Demand Model (TDM) has been updated to reflect current projections. The revised IJS, which must be approved by FHWA prior to construction, will confirm the interchange would not have an adverse effect on the transportation network.

¹¹ Per the 2015 KYTC CE Guidance Manual the scope and impacts of the project qualified for a Level-3 CE.
<https://transportation.ky.gov/EnvironmentalAnalysis/Environmental%20Resources/Categorical%20Exclusion%20Guidance%20Manual.pdf>

¹² <https://media.ford.com/content/fordmedia/fna/us/en/news/2021/09/27/ford-to-lead-americas-shift-to-electric-vehicles.html>

2. PURPOSE AND NEED

The Purpose and Need Statement establishes why the KYTC proposes to advance a transportation improvement and drives the decision-making process for analyses of alternatives, and selection of a preferred alignment.

The **Purpose** of the project is to improve east-west system connectivity between the radial routes and the interstate network on the south side of Elizabethtown.

The **Need** for the project is to improve system connectivity based on the existing and projected land uses and resulting traffic patterns in this part of the county, see **Figure 5** (p. 11).

At present, the WKP, KY 1136 (New Glendale Road), I-65, and US 31W generally run north-south, with no direct east-west connection in this portion of the county, other than a network of indirect, rural, substandard county roads.

- To the west, along US 62, is the main industrial complex for Hardin County and the region — the T.J. Patterson Industrial Park, which has many industries and thousands of employees, and is along Ring Road from US 62 west.¹³ The *Envision Elizabethtown 2040 Comprehensive Plan*¹⁴ and the resulting zoning ordinance has planned for the extension of this industrial area from US 62 east to the WKP, continuing to be centered on Ring Road. Bordering this industrial site are the Elizabethtown Addington Airport, Central Hardin High School, and other developments.
- To the south 3.5 miles is the single largest industrial holding in the state—the 1,500-acre Glendale Industrial Megasite.¹⁵ The site is zoned industrial, has sufficient utilities, and was recently acquired by Ford Motor Company, which plans to start production of advanced lithium-ion batteries by 2025 and is anticipated to bring 5,000 jobs to the area.¹⁶ Even after considering the recently reconstructed I-65/KY 222 interchange, existing highway infrastructure is insufficient to handle the size and scale of this industry. Ford broke ground on this development in 2022, construction is well underway, and the company has already started hiring employees—expected to be operational by 2025.¹⁷
- Within the immediate study area is a mix of residential subdivisions, rural residential homes, and small family farms. This area is zoned for more intense suburban residential subdivisions.

¹³ <https://eifky.org/wp-content/uploads/2018/06/Industrial-Park-Map-2018.pdf>

¹⁴ <https://elizabethtownky.org/planning-development-department/>

¹⁵ https://ced.ky.gov/Locating_Expanding/Megasite_Glendale

¹⁶ <https://media.ford.com/content/fordmedia/fna/us/en/news/2021/09/29/ford--sk-innovation-add-5-000-jobs-in-kentucky.html>

¹⁷ <https://media.ford.com/content/fordmedia/fna/us/en/news/2022/12/05/ford--sk-on-make-significant-construction-progress-at-blueoval-s.html>

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Traffic from these existing and future land uses creates both an immediate and a long-term need to improve the system connectivity, including interstate access, in this portion of the county. Since the 1987 *Ring Road Extension Study*, this proposed project has been included in the local city and county comprehensive plans. It is also currently in the MPO's long-range metropolitan plan to improve the roadway network and meet the existing and planned traffic needs in this portion of the Elizabethtown/Hardin County area.

Two **goals** have been identified by the local officials:

1. Improve connectivity between the east and west sides of Elizabethtown, including the T.J. Patterson Industrial Park and the Glendale Industrial Megasite.
2. Provide improved connectivity in the regional road network from I-65 south of Elizabethtown to the KY 313 extension north to Indiana. Toward this goal, the project would link I-65 via Ring Road to the Elizabethtown-to-Radcliff Connector (Patriot Parkway, KY 361), north 6.0 miles to KY 313, and north 17.0 miles to the Brandenburg Bypass, which includes an Ohio River crossing into Indiana. Making this regional connection would notably reduce the drive-time and use of inner-city roads by through traffic.

2.1 LOGICAL TERMINI

The proposed project's western terminus is the previously (2013) constructed KY 3005 (Ring Road) interchange with the WKP. That interchange is a diamond type design, with a "stub" to the east, to facilitate the proposed extension east to I-65 and US 31W. At present, traffic can only go to/from the west on Ring Road from the WKP. The proposed eastward extension of Ring Road from the WKP would terminate approximately 475 feet east of I-65 at US 31W. Both termini are on state maintained roads, and both termini would link travelers to the new interchange with I-65; thus, meeting the purpose and need for the project.

3. ALTERNATIVES CONSIDERED

As part of the proposed project, a series of potential alignment locations have been considered, culminating in **four detailed study alternatives** discussed herein, alongside the **No-Build** Alternative. They were developed through a two-step process—first looking north or south to see which corridor would better serve traffic, and then looking at detailed alignment options.

3.1 ALTERNATIVE DEVELOPMENT PROCESS

STEP 1 involved (1) projecting new road and interchange traffic within two general corridors—one to the south (closer to Glendale) and the other to the north (closer to Elizabethtown)—to determine in which corridor the new facilities would best serve traffic; and (2) comparing changes to I-65 that would occur with the new interchange located in either corridor. This process included three general milestones, each of which was coordinated with FHWA:

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- Agreement on a scope for the process (scope verification meeting with FHWA 10/16/2012).
- Traffic model development and analysis (project status meeting with FHWA 5/13/2013 and local stakeholders 6/7/2013).
- Project status meeting with FHWA 11/7/2013 and initial public meeting 11/14/2013—informing the public of the planned project and obtaining input on potential alignment locations.

The public meeting was held to introduce the project, listen to concerns, and receive input. A “blank map” of the larger study area (as shown in [Figure 5](#), p. 11), from Elizabethtown to Glendale, was shown without alignment options. Participants were asked to identify areas of concern and draw possible alignment options. Each alignment drawn fell within the northern portion of the study area.

After the traffic analysis and initial November 2013 public meeting, KYTC, and local stakeholders favored the northern corridor for the following reasons: the alignment is more in line with the initial (1987) *Ring Road Planning Study* and local land use and transportation plans, it is shorter in distance (2.2 vs. 3.0 miles), was preferred by the public, and has fewer environmental impacts. Therefore, the northern corridor (“Revised Study Area” in [Figure 5](#), p. 11) was recommended for advancement, with specific alignments to be studied during Step 2. The southern corridor was no longer considered.

STEP 2 involved the development and analysis of four Build alternatives, together with analysis of the No-Build Alternative, through the Preliminary Engineering and Environmental phase; and their presentation at public meetings June 24, 2014, September 22, 2014 and September 15, 2022. Following is a description of the alternatives.

3.2 ALTERNATIVES CONSIDERED

The **No-Build Alternative** and **Build Alternatives 1 (red), 2 (blue), 3 (green) and 4 (orange)** were considered, as shown in [Figure 6](#) and [Appendix B](#).

NO-BUILD ALTERNATIVE. With this alternative, KYTC would take no action to create a new roadway connection. No residential displacements, commercial impacts, or direct impacts to natural resources would occur with the No-Build Alternative. Overall, however, selection of the No-Build Alternative would not meet the purpose and need of the proposed project. Given Elizabethtown’s projected population growth and land uses planned and under development for the area, including two of the state’s largest industrial parks, the No-Build Alternative would be expected to result in progressively deteriorating conditions for safe, efficient, and economical (time and money) vehicular traffic movement in the Elizabethtown regional area.

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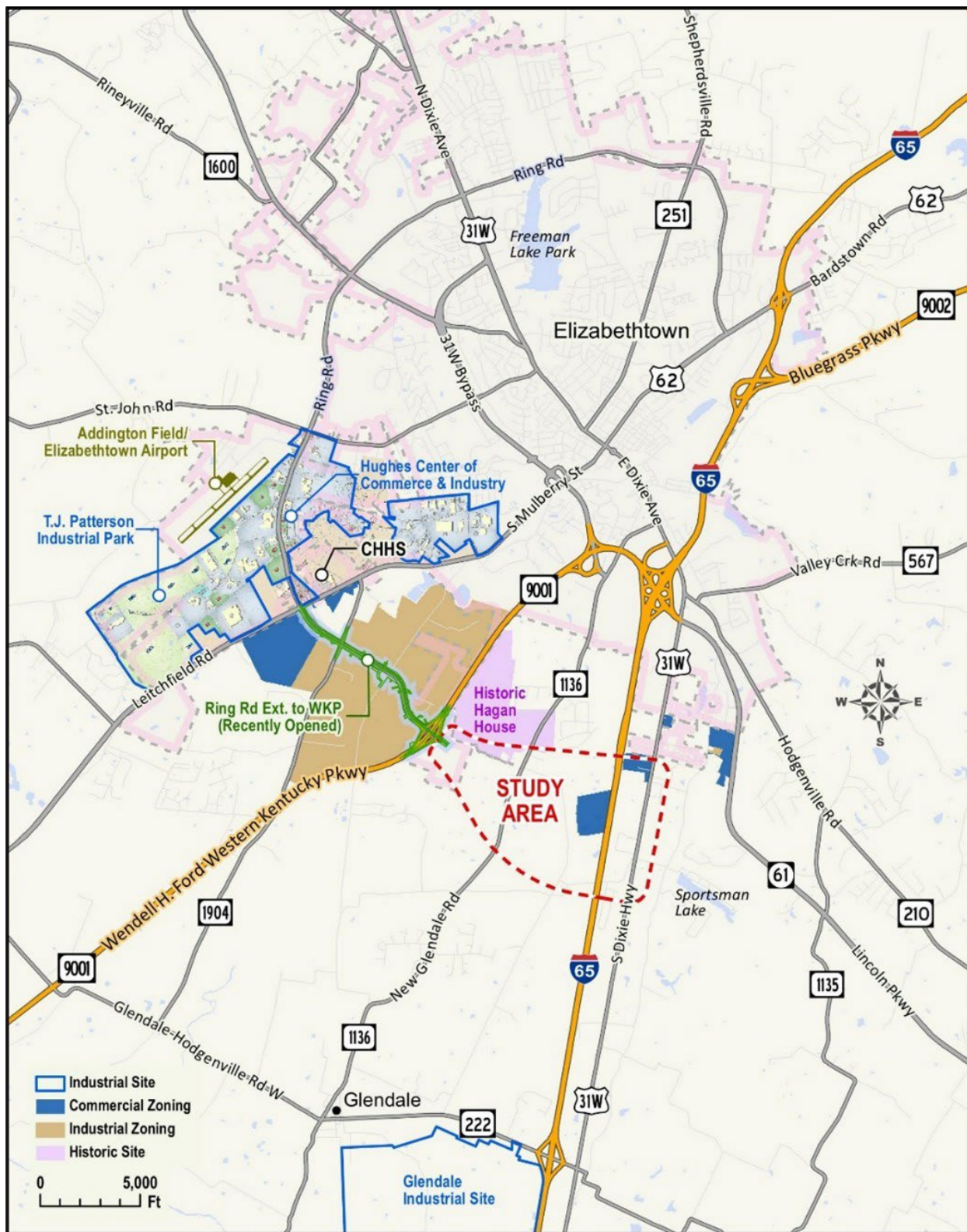


Figure 5. Land Uses in Project Study Area

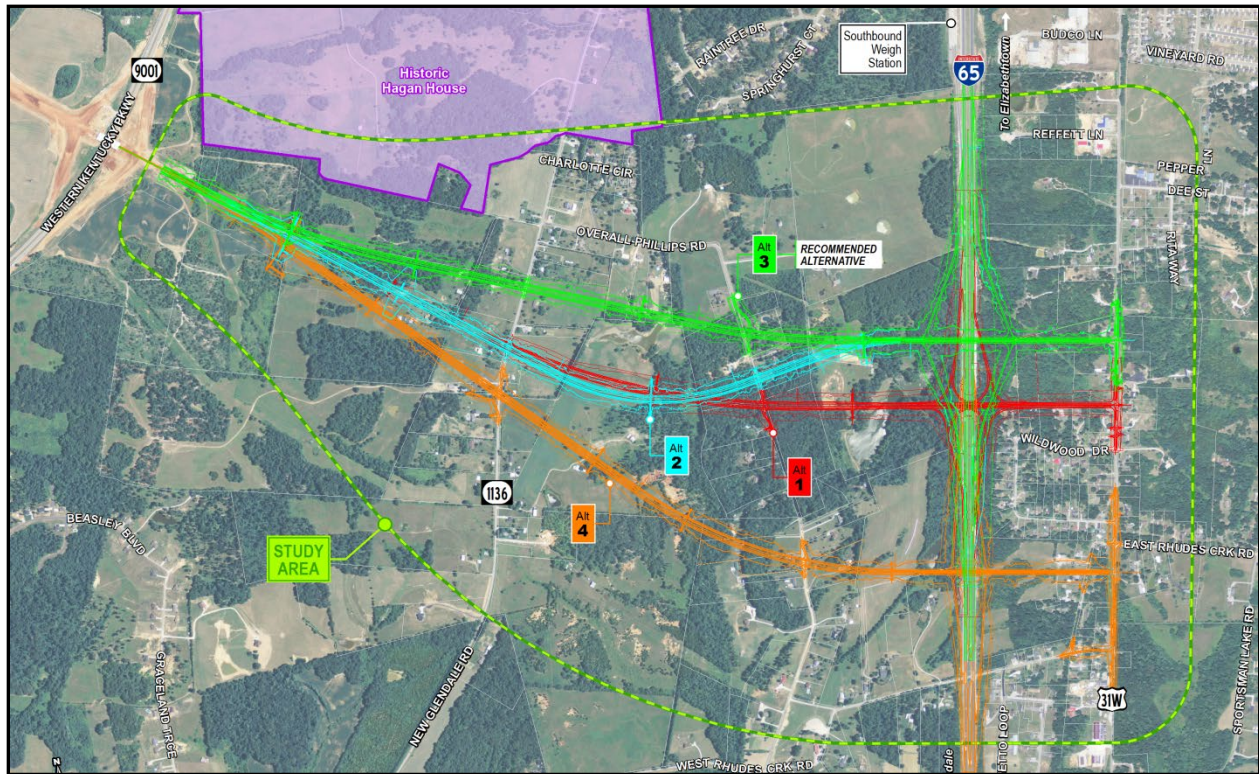


Figure 6. Build Alternatives Considered

BUILD ALTERNATIVES. Four Build alternatives were developed for further evaluation. The locations of the Build alternatives are illustrated on [Figure 6](#), p. 12. The western and eastern termini of all Build alternatives are WKP and US 31W, respectively. All of these alternatives include turn lanes on US 31W. The typical section is the same as that of the existing section of Ring Road—a 4-lane roadway with a depressed median and posted 55 mph speed limit. Approaching the proposed interchange with I-65, the typical section widens to 5 lanes with a flush median—a configuration that continues to the project’s terminus as it ties to US 31W. All alternatives begin at the same location on the WKP and head southeast, diverging onto separate alignments, as described:

- Alternative 1** and **Alternative 2** continue southeast, on shared alignment, to KY 1136 (New Glendale Road), where the alignments diverge. **Alternative 1** continues eastward, intersects Overall-Phillips Road, and continues to I-65, where a Single-Point Urban Interchange (SPUI) is proposed. The location of the interchange is south of that for **Alternatives 2 and 3**, and north of that for **Alternative 4**. A SPUI is the only practical interchange design for this alternative because of the proximity to Wildwood Drive subdivision. The SPUI’s small footprint would avoid several residential relocations and community impacts a traditional diamond would incur along the west side of the subdivision. The alternative terminates at its tie to US 31W just east of the interchange. **Alternative 1** is 2.23 miles in length and has a total estimated construction cost of \$32.3M.

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- **Alternative 2** between KY 1136 and Overall-Phillips Road swings northeast and transitions through a series of curves to share an alignment with **Alternative 3** in the eastern portion of the project. **Alternatives 2 and 3** share the same alignment and location of a proposed traditional diamond interchange at I-65. The interchange is farther north than that of the other Build alternatives. **Alternative 2** is 2.27 miles in length and has a total estimated cost of \$34.4M.
- **Alternative 3, the recommended Preferred Alternative**, is the northernmost and, at 2.17 miles in length, the shortest alternative. From its divergence from the other alternatives east of the western terminus, it heads slightly southeast to intersect KY 1136 and Overall-Phillips Road, then heads almost due east for approximately 200 feet before joining the alignment of **Alternative 2** to the proposed traditional diamond interchange at I-65 and shared terminus at the tie to US 31W. **Alternative 3** has a total estimated cost of \$33.6M.
- **Alternative 4** is the southernmost and longest alignment. From the four alternatives' shared west terminus, **Alternative 4** dips southwestward to intersect KY 1136 (New Glendale Road) and then Overall-Phillips Road. At Overall-Phillips Road the alignment turns almost due east to its proposed tight diamond interchange at I-65. The interchange would require widening the I-65 bridges over West Rhudes Creek Road for acceleration and deceleration of vehicles on I-65. The alternative terminates east of the interchange at the tie to US 31W and provides a connection between West Rhudes Creek Road and US 31W. **Alternative 4** is 2.4 miles in length and has a total estimated cost of \$38.2M.

Potential impacts from these four alternatives are compared in **Table 3** (p. 14) and discussed further in the remainder of this EA.

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Table 3. Potential Build Alternative Impacts

Potential Impacts	Alternatives				
	No-Build	Alt 1 (Red)	Alt 2 (Blue)	Alt 3 (Green) <i>Recommended Preferred</i>	Alt 4 (Orange)
Meets Purpose and Need	No	Yes			
General Description¹	Do Nothing	Central	Shares Red, Green	Farthest North	Farthest South
Length (miles)	N/A	2.23	2.27	2.17	2.40
Interchange Type	None	SPUI	Traditional Diamond		Tight Diamond
Right-of-Way (acres)	None	71	79		
Estimated Cost²	None	\$32.3	\$34.4	\$33.6	\$38.2
Relocations (total)⁶		6	6	8	24
Residential	None	6	5	8	23
Commercial		0	1 ³	0	1 ⁴
Public Support⁵ from...					
2014 Public Meeting	11	21	10	20 (18 of which live along this corridor)	19
2022 Public Meeting	0	3	6	47 (70% of all comments received in 2022)	12
Land Use Types (in acres)		137.6	140.4	152.4	140.6
Developed	None	20.6	19.7	26.2	32.2
Forested/Undeveloped		85.4	87.4	93.4	63.2
Agricultural/Hayfields		31.6	33.3	32.8	45.2
Agricultural-NRCS Rating⁵		103	108	104	115
Prime & Unique (acres)	None	7.4	9.0	0.6	15.1
Statewide & Local Important (acres)		28.1	32.6	29.7	20.2
Section 4(f) and 6(f) Impacts	None	None		None	None
Air Quality	None	No air quality standard exceedance predicted. Project in compliance with STIP, TIP, and all NAAQS.			
Approach/Exceed Noise Abatement Criteria (2014)	14	5	13	14 (2023 analysis identified only 11 sites)	10
Streams (linear feet, total)		5,871	7,243	5,906	5,349
Perennial	None	402	514	312	1,961
Intermittent		1,024	1,166	1,166	751
Ephemeral		4,445	5,563	4,428	263
Wetlands (acres)	None	0.76	0.73	0.29	1.38
Ponds (acres)	None	7.4	2.8	6.0	1.8
Public Water Supply	None	Cross Gaither Sta. WHPA; coordination with utility to continue.			
Karst	None	Potential			
Trees (acres)	None	71.02	72.8	77.1	44.1
Threatened & Endangered Species	None	Programmatic BO for IB & GB, Likely to Adversely Affect ⁷			
Historic Sites⁸	None	SHPO concurrence (05/25/2023) on No Effect Finding			
Archaeological Sites	None	N/A	N/A	SHPO concurrence (04/26/2023) on No Effect for all but one unsurveyed parcel—defer until after right-of-entry (SHPO concurrence 03/16/2023).	N/A
Potential HAZMAT Sites		None			1 ⁴

NOTES: ¹See Executive Summary, Figure ES-1 or Section 3.2, Figure 6. ²Estimated in 2022 dollars, millions, total cost (Design + Right-of-Way + Utilities + Construction). ³Woodshop. ⁴Weldshop. ⁵Number of written public comments supporting alt. See **Table 14** (p. 58). ⁶CPA Form 106 total rating points. ⁷Mitigate for Adverse Effects via mitigation payment. ⁸Historic Hagan House listed on National Register of Historic Places, "No Effect" Finding.

ABBREVIATIONS: SPUI=Single-point Urban Interchange. NRCS=Natural Resources Conservation Service. STIP=Statewide Transportation Improvement Program. TIP=Transportation Improvement Program. NAAQS=National Ambient Air Quality Standards. WHPA=Wellhead Protection Area. BO=Biological Opinion. IB=Indiana Bat. GB=Gray Bat. SHPO=State Historic Preservation Officer. HAZMAT=Hazardous Materials.

3.3 PREFERRED ALTERNATIVE

ALTERNATIVES SCREENING/SELECTION: As noted, the **No-Build Alternative** would not meet the purpose and need for the proposed project; therefore, it is not recommended for advancement. The reasons for not recommending **Build Alternatives 1, 2, and 4** are discussed below.

- **Alternatives 2 and 4** are not recommended for the following reasons:
 - **Alternative 2** received the least public support in the comments submitted following the public meetings (both in 2014 and 2022), and it had no engineering benefit over the other Build alternatives.
 - **Alternative 4** would:
 - Potentially require 23 residential relocations, 9 of which are tenant-occupied residences in Meadowview Estates.
 - Requires widening I-65 bridges over West Rhudes Creek Road for acceleration and deceleration of vehicles on I-65.
 - Impacts nearly two times the length of AT&T fiber-optic transmission line as the other three Build alternatives.
- **Alternatives 1 and 3** were then compared to determine which would be the recommended option. **Alternative 1** is not recommended for the following reasons:
 - **Alternative 1** would have the potential for several relocations in the Wildwood Drive Subdivision, and the SPUI design would be less desirable than the Traditional Diamond Interchange proposed for **Alternative 3**, based on the following:
 - Long-term maintenance costs would be greater with a SPUI than with a Traditional Diamond.
 - Traffic operations—which require a signal with the SPUI—are better managed with a Traditional Diamond.
 - The Traditional Diamond provides the ability to expand/reconstruct the interchange in the future if necessary.
 - The Traditional Diamond could accommodate future widening of I-65 to the outside if necessary.
 - The Traditional Diamond would have no retaining walls along I-65.
 - During incidents on I-65, re-routing high volumes of interstate traffic is better facilitated via a Traditional Diamond than a SPUI.
 - As noted above, a Traditional Diamond interchange with **Alternative 1** would incur more residential relocations and community impacts to Wildwood Drive subdivision than a SPUI and was, therefore, not considered a prudent option for **Alternative 1**.

PREFERRED ALTERNATIVE—ALTERNATIVE 3 was determined by the project team to be the alternative that would best address the purpose and needs for the project, as well as associated project goals, as identified in **Section 2**. Reasons for the identification of **Alternative 3** as the preferred alternative include the following:

- The alternative received more public support from potentially affected property owners than did the other alternatives; i.e., a review of public comments on the proposed alternatives showed support for **Alternative 3** came predominantly from individuals living within the study area. Specifically, individuals from four homes that would be relocated by **Alternative 3** identified this alternative as the preferred alignment. The 2022 public survey confirmed this as the favored alternative, with nearly 70% of survey respondents indicating it to be their preferred alignment.
- The alternative's Traditional Diamond Interchange is preferred because, when compared to the SPUI, it would have lower long-term maintenance costs, traffic operations are better managed, it provides the ability to expand/reconstruct the interchange in the future if necessary, it could accommodate future widening of I-65 to the outside if necessary, it would have no retaining walls along I-65, and during incidents on I-65, re-routing high volumes of interstate traffic would be better facilitated.
- East of the interchange, the proposed **Alternative 3** roadway section connecting US 31W and I-65 is farther from the Wildwood Drive subdivision than is the **Alternative 1** connecting road. **Alternative 3's** location would be a benefit because, unlike **Alternative 1**, its alignment would avoid residential relocations in the subdivision and would have preferable access spacing: **Alternative 1** would intersect US 31W approximately 400 feet north of the entrance to Wildwood Drive subdivision, whereas the **Alternative 3** intersection would be approximately 1,200 feet from that entrance.
- Maintenance of traffic during incidents on I-65 is best managed by the interchange proposed with **Alternative 3**, compared with **Alternative 1's** SPUI design.

The project team identified **Alternative 3** as the Preferred Alternative subject to public review. Final identification of a Selected Alternative would occur after the public review and comment period for this EA.

3.4 TRAFFIC

Alongside historic traffic volumes in the study area, traffic data was collected, and a traffic analysis was performed in accordance with KYTC guidelines in support of an Interchange Justification Study (IJS) to determine existing and forecasted traffic demand in the area for I-65, the Ring Road extension, and area roadways. The Hardin/Meade counties TransCAD TDM was used to project future volumes. The model is maintained by KYTC for the Radcliff/Elizabethtown MPO. Analyses were completed for the Existing, No-Build, and Build scenarios as discussed below. Atypical traffic patterns were observed in 2020 due to the covid-19 pandemic. Thus, more recent (2023) traffic updated hourly counts were conducted to ensure existing conditions and future projections were appropriately considered. Both historic trends over the last couple of decades and future population and employment projections were used to help contextualize growth assumptions.

3.4.1 TRAFFIC FORECAST AND CAPACITY

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Recent traffic counts were compiled and adjusted to reflect a consistent 2022 “Existing” traffic scenario, with 43,800 vpd on I-65, 6,900 vpd on existing Ring Road, and 20,000 vpd on WKP north of its Ring Road interchange.

Capacity and overall roadway function is often measured by level of service (LOS). Level of service is defined as a qualitative measure of operational conditions and the perception of these conditions by motorists. These conditions are usually defined in terms of factors such as speed and travel time, maneuverability, and delay. There are six levels of service, which are designated by the letters “A” through “F.” Level of service “A” represents the best operating conditions, while level of service “F” defines the worst.

In 2022, I-65 thru lanes between the WKP and KY 222 interchanges operate at LOS B during AM and PM peak hours, with a maximum volume/capacity (v/c) ratio of 0.44, associated with the southbound lanes during the PM peak hour. Merge and diverge areas at adjacent interchanges operates at LOS B or better during both peak hours.

Considering historic traffic growth rates, population projections, anticipated development, and regional model projections, 2045 No-Build ADTs were forecasted for study area routes as shown in [Figure 7](#) (p. 18). Likewise, 2045 Build ADTs (including the Preferred Alternative) are shown in [Figure 8](#) (p. 19). As shown in [Figure 9](#) (p. 20), the proposed project leads to small traffic increases for I-65, Ring Road, WKP, and KY 1136. US 31W and several ramps at the I-65/WKP interchange are projected to carry lower traffic volumes in the Build scenario.

As demonstrated throughout this IJS, the Build alternative would not have a “significant adverse impact on the safety and operation” of I-65 or the surrounding local street network. Proposed ramps, highway segments, and intersections provide adequate capacity to efficiently handle anticipated traffic volumes through the 2045 design year. Except for the diverge area to US 31W/WKP, all I-65 facility components operate at LOS C or better in both peak hours in the 2045 Build scenario. The I-65 southbound diverge movement to WKP operates at LOS D in the PM peak hour with the increase in mainline I-65 thru volumes though the off-ramp volume decreases compared to the No-Build scenario.

Likewise, the proposed Ring Road extension and its intersections provide adequate capacity to handle peak hour 2045 traffic volumes with free-flow conditions for Ring Road thru movements. All minor approaches are anticipated to operate at LOS D or better during both peak hours.

The Hardin/Meade counties’ regional TDM was used to quantify the county-level vehicle miles traveled (VMT) for the Existing (2020), Build (2045), and No-Build scenarios. As shown in [Table 4](#) (p. 20), the 2045 Build scenario is projected to provide a reduction of more than 500 VMT per day.

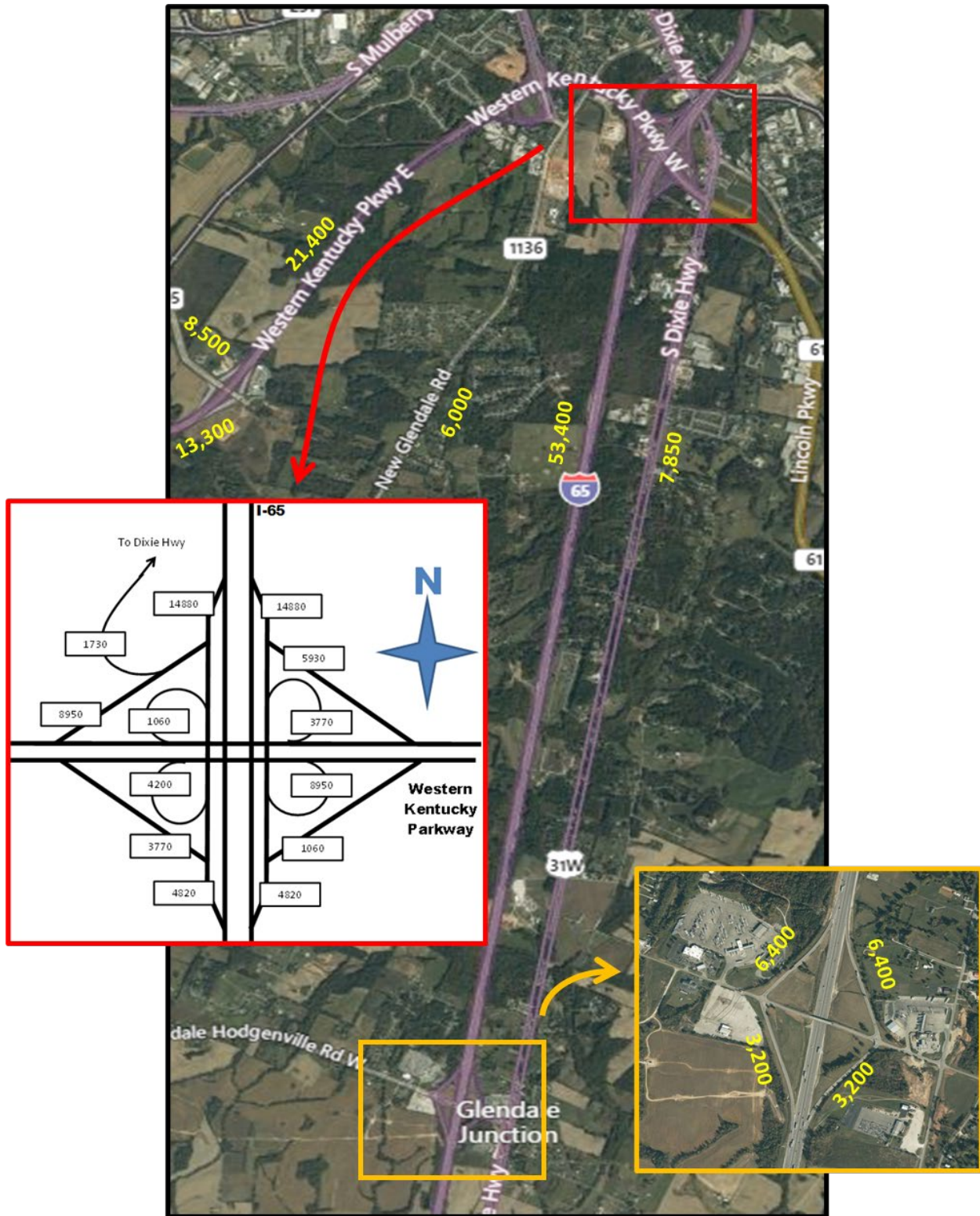


Figure 7: 2045 No-Build Average Daily Traffic

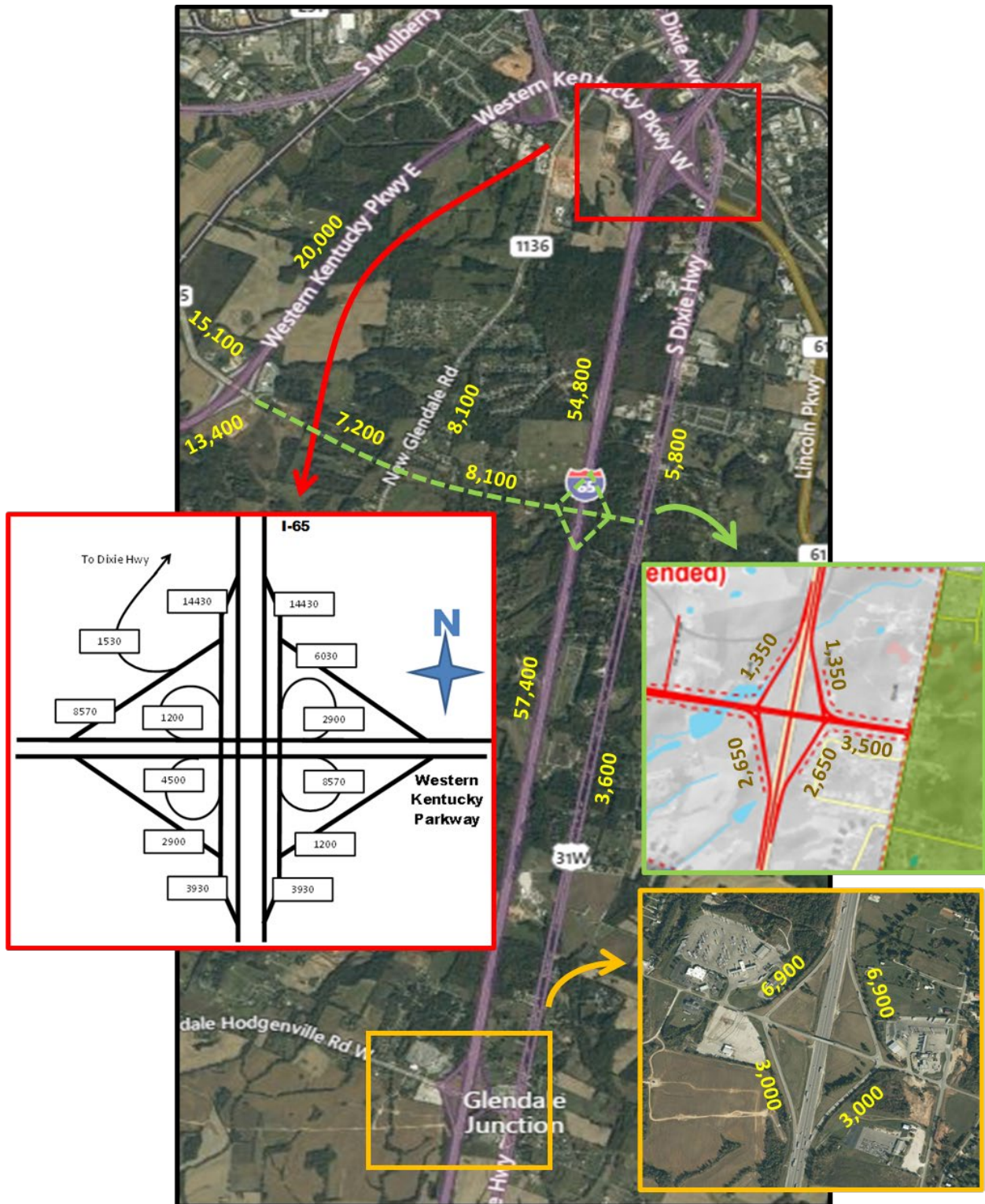


Figure 8: 2045 Build Average Daily Traffic

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Table 4. Hardin/Meade TDM Change in Countywide VMT

	Hardin County VMT	Change in VMT	% Change
2020 Existing	3,559,592	-	-
2045 No-Build	4,147,322	587,730	0.165112
2045 Build	4,146,789	-533	-0.000129

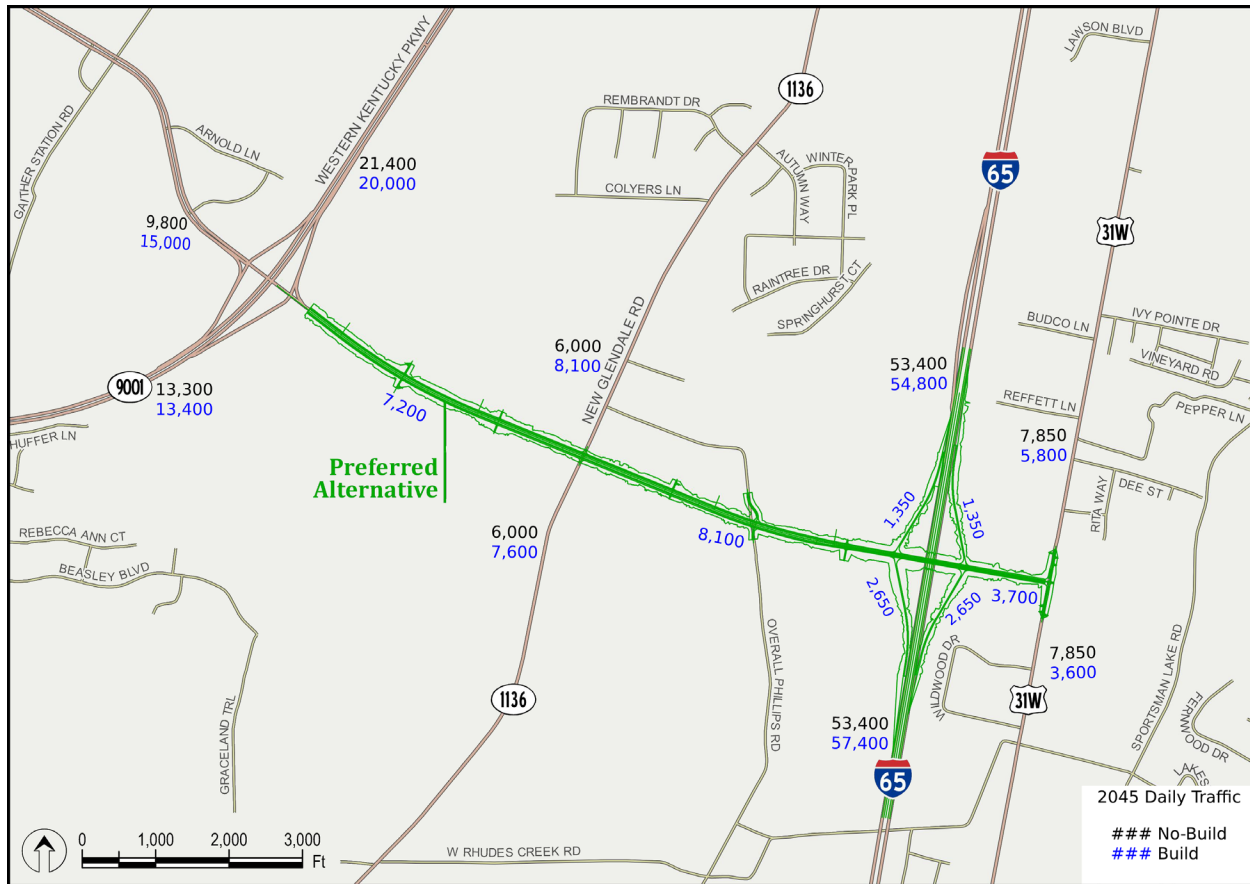


Figure 9. Comparison of 2045 No-Build vs. Build Daily Traffic

3.4.2 THE PROJECT AND MOTORING SAFETY

Also documented in the 2023 IJS, recent crash patterns were assessed to examine the influence of the proposed project on area safety. During 2019–2021, 25 crashes were reported along I-65 between MPs 88.3 and 89.8 including one fatality and five injury collisions. However, this represents a relatively small sample size (limited by recent construction) and overlaps with atypical traffic patterns resulting from the covid-19 pandemic.

Modeled safety analyses show a small increase in predicted crashes on I-65 near the proposed project for the Build option, as compared with the No Build option, at the location of the proposed new interchange. This is consistent with the introduction of additional conflict points and roadway lengths that an interchange inevitably creates. Because the interchange would be built to exceed interstate safety design standards, the 2045 Build model results show only a minor 1.5% increase in total crashes over a 20-year period compared to the No-Build model results. With the new interchange, the study segment of I-65 would remain below the expected crash rate (i.e., at LOSS 2) in the Build scenario.

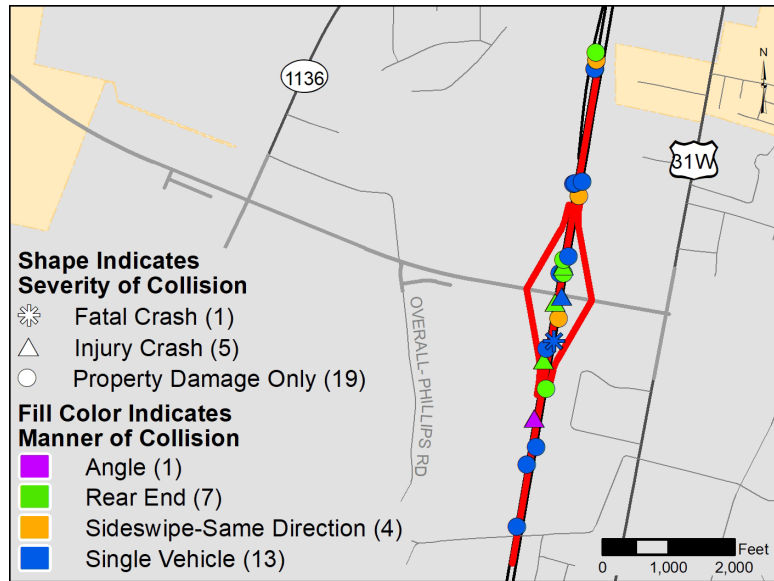


Figure 10: 2019-2021 Reported Crashes

3.4.3 BICYCLE & PEDESTRIAN FACILITIES

Policy changes implemented with KYTC's 2022 *Complete Streets, Roads, and Highway Policy* have been considered. This policy states that KYTC shall include appropriate facilities to meet the needs of all users of the transportation system as the Cabinet plans, builds, and constructs state and jurisdictional streets, roads, and highways. The objective of this policy is to design, build, and operate facilities that safely and comfortably accommodate all users of the roadways, benefitting people of all ages and abilities. To explore what facilities may be appropriate for this type of project, KYTC considered plans; facility type, character, and adjacent land use, and public demand.

- There are no existing bicycle or pedestrian facilities.
- There are no current facilities on existing adjacent sections of Ring Road or any of the connecting routes (WKP, New Glendale Road, Overall Phillips Road, I-65, or US 31W).
- The Radcliff/Elizabethtown MPO 2016 *Bicycle Facilities Study* identifies a multi-use path (MUP) along the entirety of Ring Road as a long-term goal.¹⁸ The 2019 *Pedestrian Plan* also identifies a multi-use path along the entirety of the Ring Road and a sidewalk from US 31W to US 62.¹⁹ These plans do not outline policy recommendations; however, they are resources for local units of government to consider implementing. Elizabethtown's *Envision 2040* plan identifies sidewalks

¹⁸ https://radcliff-elizabethtown-mpo.org/wp-content/uploads/2018/03/RadcliffEtownMPO_BicycleFacilitiesPlan_smaller.pdf

¹⁹ https://radcliff-elizabethtown-mpo.org/wp-content/uploads/2019/04/2019_PEDESTRIAN-PLAN.pdf

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along Ring Road as a moderate priority; however, the sub area plan does not include these facilities in its planning criteria and guidelines.

- Reviewing publicly available Strava heat maps (Figure 11) show minimal bicyclist and pedestrian demand in the vicinity of the study area. There is slightly more bicyclist activity along KY 1136, which is an identified, undeveloped corridor of U.S. Bicycle Route 35 - Ramblin' River Tour.²⁰

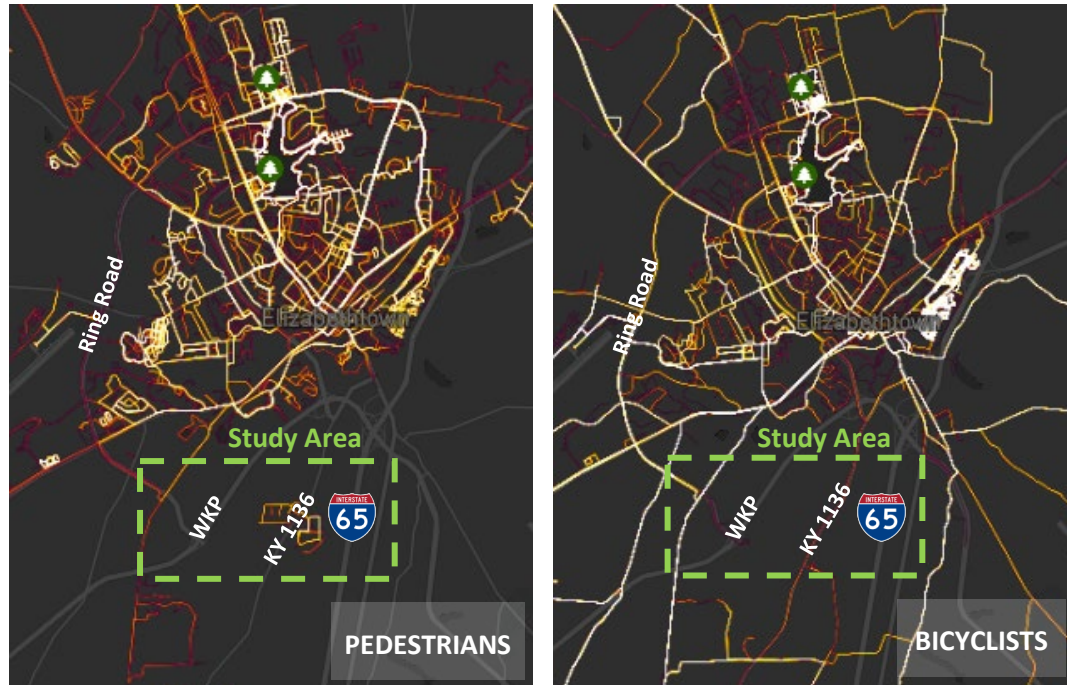


Figure 11. Pedestrian and Bicyclist Activity

- The recommended roadway section is rural with a posted 55 mph speed limit, and the corridor is not adjacent to existing residential, commercial, industrial, institutional, or public use areas.
- Through the public engagement process there was no public interest/demand for pedestrian or bicycle facilities.

After considering this information, no dedicated bicycle or pedestrian facilities are being recommended to be construction with the proposed facility. However, given the expected long-term growth in the area, and the MPO plan identifying a long-term goal of having a multi-use path along KY 3005, the KYTC will ensure there is adequate ROW void of major utilities and drainage, so a multi-use path can be installed when warranted. Wider 10-foot-paved shoulders associated with any Build alternative would provide a safer facility compared to the No- Build. Per KRS 189.570, where no sidewalk is available, pedestrians could utilize the 10-foot-wide shoulders.²¹ Per 601 KAR 14:020, bicyclists could utilize the highway travel lanes or shoulders.²²

²⁰ <https://transportation.ky.gov/BikeWalk/Documents/USBRs%20in%20Kentucky.pdf>

²¹ <https://apps.legislature.ky.gov/law/statutes/statute.aspx?id=6417>

²² <https://apps.legislature.ky.gov/law/kar/titles/601/014/020/>

4. AFFECTED ENVIRONMENT AND IMPACTS

Hardin County is in north central Kentucky (Figure 1, p. 1). The proposed project is in the east central section of the county and south of Elizabethtown (Figure 2, p. 2). Adjacent Kentucky counties are Jefferson, Bullitt, Nelson, Larue, Hart, Grayson, Breckinridge, and Meade.

Hardin County has a land area of approximately 616 square miles. It is situated within the Mississippian Plateau physiographic region of Kentucky. The topography of Hardin County consists of some karst terrain throughout the county, particularly in the east-central portion of the county.

Elizabethtown (2020 Census population of 30,179) is the 9th largest city in Kentucky and the county seat of Hardin County (2020 Census population of 110,702), the 6th largest county in the state. Elizabethtown is the county’s government and economic activity center. Located at the intersection of I-65, Bluegrass Parkway, and the WKP, the city is positioned for an increase in economic development.

The following sections provide descriptions of the existing environment and likely impacts associated with Build alternatives.

4.1 COMMUNITY RESOURCES AND IMPACTS

This section describes specific community resources in the project area: civic uses, churches, medical facilities, etc. Potential relocations for each Build alternative are also quantified.

Hardin County is part of the Elizabethtown-Radcliff/Fort Knox Metropolitan Statistical Area. Hardin County’s 2020 population of 110,702 ranked it 6th out of the state’s 120 counties. Table 5 (p. 23) presents the population data as reported by the U.S. Census Bureau for the years 1960 through 2020 for the Commonwealth of Kentucky and Hardin County. It also shows state and county population projections for the years 2030 and 2050, calculated by the Kentucky State Data Center, which are based on assumptions about future births, deaths, and in and out migration.²³ Between 2000 and 2020, the populations of Hardin County and the state have both been increasing. Kentucky State Data Center projections

Table 5: Population Trends and Projections

Date	Kentucky		Hardin County	
	Total	% Change	Total	% Change
1960	3,038,156	--	67,789	--
1970	3,218,706	6%	78,421	16%
1980	3,660,777	14%	88,917	1%
1990	3,685,296	1%	89,240	0%
2000	4,041,769	10%	94,174	6%
2010	4,339,367	7%	105,543	12%
2020	4,505,836	4%	110,702	5%
2030	4,614,150	2%	118,974	7%
2040	4,721,118	2%	125,394	5%
2050	4,785,233	1%	130,771	4%

Sources: U.S. Census Bureau, through to 2020; Kentucky State Data Center 2030-2050

²³ <http://ksdc.louisville.edu/data-downloads/projections/>

indicate that the jurisdictions would continue to increase in population over the next 20 years, although the rate of increase would vary. Population projections are not available below county level.

The Socioeconomic Study Area (SSA) population is predominantly white (92%) and slightly younger (14% persons aged 65+) than the state (16% persons aged 65+).

*Envision Elizabethtown 2040*²⁴ was adopted by Elizabethtown City Council in October 2020. It confirms the historic and projected growth trends, noting the city should still work to attract new residents and continue to build infrastructure and amenities that would support the growing population.

4.1.1 LOCATION OF EXISTING COMMUNITY RESOURCES

Key public services located in, near, or potentially affected by the proposed project are discussed here. With the exception of two churches, there are no public institutions/community facilities within the study area boundary. The majority of these types of facilities are in Elizabethtown, while some are west of the study area, along existing Ring Road and US 62 (see **Figure 5**, p. 11). The Hardin County Cooperative Extension Service office is located immediately west of the study area in the northwest quadrant of KY 3005 and WKP interchange, outside of the project footprint. The extension of Ring Road would provide an improved west-east roadway network that would benefit these institutions and community facilities by improving motoring safety, local access, and access to other opportunities/destinations within the region.

HEALTH CARE AND EMERGENCY SERVICES. The area's health care, emergency, and medical facilities are in Elizabethtown. Fire stations serving the project area are in Elizabethtown (5), Cecilia (2), and Glendale (3). Implementing the proposed extension of Ring Road to connect the WKP with I-65 and provide access to/from New Glendale Road and Overall-Phillips Road, which would increase the efficiency to these community services (*i.e.*, fire, emergency medical, ambulance, law enforcement, rescue squad, and public-school buses) and assist them in accomplishing their respective missions, including service to incidents on I-65.

CHURCHES, EDUCATIONAL FACILITIES, AND OTHER INSTITUTIONS. No schools are in the project corridor. Central Hardin High School is along US 62 north of Ring Road and west of the study area, and East Hardin Middle School is along KY 1136 north of the study area; neither would be directly impacted by the project. While changes in some school bus routes might occur as a result of the project, such changes would be discussed with the school system well in advance of when they actually take place so the school system can adjust routes in a timely manner.

No government buildings, non-profit organizations, or libraries are in the study area. One church is within the study area—the Heartland Freewill Baptist Church on US 31W at the northeast corner of the study area boundary. New Horizon Baptist Church is on West Rhudes Creek Road just south of the study area boundary. The Hardin County Cooperative Extension Service office is located immediately west of the

²⁴ <https://envisionetown.wordpress.com/>

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study area in the northwest quadrant of KY 3005 and WKP interchange. **Alternative 1** would potentially acquire some right-of-way from the Heartland church and relocate the entrance drive. The New Horizons church is not near the alternative alignments and would not be affected by the project.

PARKS AND RECREATIONAL FACILITIES. No public parks or recreational areas are located within or near the project study area.

SHOPPING AND BUSINESS DISTRICTS. No shopping or commercial districts are in the study area; however, T.J. Patterson Industrial Park is immediately west of the study area. As stated in **Section 2**, one of the goals of the extension project is to improve connectivity between the east and west side of Elizabethtown, which would benefit this industrial park.

CULTURAL/HISTORIC RESOURCES. According to the *Cultural Historic Determination of Eligibility Survey for the Proposed Ring Road (KY 3005) Extension* prepared for this project, the only site within the study area determined to be potentially eligible for listing in the National Register of Historic Places (NRHP) is the Hagan House and property (shown on **Figure 24**, p. 53). All Build alternatives avoid the site. In a letter dated 05/25/2023 the Kentucky State Historic Preservation Officer (SHPO) concurred the project would have No Effect to eligible historic resources.

PEDESTRIAN AND BICYCLE FACILITIES. No pedestrian or designated bicycle facilities are in place or planned within the project area. Although the proposed project does not provide dedicated bike lanes or paths along its length, travel on a new roadway meeting current design standards would improve west-east connectivity. In addition, the proposed 10-foot-wide paved shoulders would provide safer conditions for bicyclists and pedestrians compared to the existing conditions (narrow lanes, no-shoulders) on many of the roads in the vicinity.

4.1.2 RELOCATIONS & DISPLACEMENTS

Information about residential relocations and commercial/institutional displacements was gathered by field visits, letters to potentially relocated homeowners or renters, and by reviewing planning documents and mapping of the various alignment options. Potentially relocated residences include single-family dwellings that, for purposes of this report, are assumed to be owner occupied, and multi-family rental units. Ancillary building displacements (*i.e.*, barns, sheds, farm buildings, detached garages, etc.) would occur with the selection of any Build alternative and are not included in the estimated relocations. **Table 6** estimates the number of residential and business relocations by alternative.

Table 6: Right-of-Way and Relocation Estimates

Alternative	Residential Relocations	Owner/Renter Occupied Households	Commercial Displacements
ALT 1 (Red)	6	owner occupied	0
ALT 2 (Blue)	5	owner occupied	1
Alt 3 (Green) Preferred	8	owner occupied	0
ALT 4 (Orange)	23	14 owner occupied; 9 renter occupied	1

RESIDENTIAL RELOCATIONS. The Build alternatives would potentially require 5 to 23 residential relocations, depending on which alternative would be selected, as follows:

- **Alternative 1** would potentially relocate 6 single-family residences: 2 west of New Glendale Road (on shared alignment with **Alternative 2**), and 4 along the north side of Wildwood Drive subdivision.
- **Alternative 2** would potentially relocate 5 single-family residences: 2 west of New Glendale Road (on shared alignment with **Alternative 1**), 2 along the east side of Overall-Phillips Road, and 1 along the west side of US 31W.
- **Alternative 3** would potentially relocate 8 single-family residences: 3 east and 1 west of New Glendale Road, 3 along the east side of Overall-Phillips Road, and 1 along the west side of US 31W (on shared alignment with **Alternative 2**).
- **Alternative 4** would potentially relocate 23 residences that are either single-family or rental dwellings

Nineteen (19) would potentially relocate for the construction of the new route and interchange: 9 renter occupied units in the apartment complex of Meadowview Estates, including a fourplex, triplex, and duplex off the south side of West Rhudes Creek Road; and 10 single-family residences would also potentially relocate: 2 west and 1 east of New Glendale Road, 3 west and 1 east of Overall-Phillips Road, and 3 south of Wildwood Drive subdivision along the west side of US 31W.

Four (4) would potentially relocate, south of the alignment's terminus, in an area between West Rhudes Creek Road and US 31W, to accommodate the extension of West Rhudes Creek Road to US 31W. This extension is considered necessary because current plans would cul-de-sac West Rhudes Creek Road immediately south and north of the **Alternative 4** /US 31W intersection, thereby severing access to US 31W from West Rhudes Creek residents to the south. Without the new access, to reach US 31W these residents would have to travel over 1.0 mile west on West Rhudes Creek Road, then approximately 0.5 mile north on Overall-Phillips Road to access the new Ring Road, and then head eastward on new Ring Road for almost 2.0 miles to reach US 31W—a trip that now is approximately 0.2 mile in length.

Wildwood Drive subdivision, Meadowview Estates, and residences in a cluster between West Rhudes Creek Road and US 31W just north of Meadowview Estates could be considered to have community cohesion.

COMMERCIAL/INDUSTRIAL DISPLACEMENTS. One commercial displacement could occur with **Alternative 2** and one with **Alternative 4**. No commercial displacements would occur with Alternatives 1 or 3. **Alternative 2** could displace a woodworking/cabinetry shop in a building behind a residence on the same parcel. The presence of a residence and lateral lines for a septic system could negate the ability to construct a replacement structure on that property. The owner indicated this would result in the closing of the business. **Alternative 4** could displace a welding shop on a parcel adjacent to residential lots just south of Wildwood Drive subdivision. At the public meeting, the welding shop owner indicated the business could be relocated to another parcel he owns on the same road, just north of the business's existing location.

INSTITUTIONAL OR NON-PROFIT ORGANIZATIONS DISPLACEMENTS. No displacement of governmental, church, non-profit, or other institutional establishments is anticipated with the selection of a build alternative.

RELOCATION IMPACTS AND ASSISTANCE PROGRAM. To minimize the unavoidable effects of right-of-way acquisition and displacement of people, KYTC offers a Relocation Assistance Program in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended. Housing and relocation resources would be available to all residential and business relocatees without regard to race, creed, color, national origin, or economic status, as required by Title VI of the *Civil Rights Act* of 1964.

KYTC provides advance notification of impending right-of-way acquisition. Before acquiring right-of-way, all properties would be appraised on the basis of their fair market value. Owners of property to be acquired would be offered and paid fair market value for their property rights. No person lawfully occupying real property would be required to relocate without written notice of the intended vacation date; and no residential property occupant would be required to relocate until decent, safe, and sanitary replacement housing is made available. "Made available" means the relocatee has either obtained (and has the right of possession of) replacement housing on his/her own or KYTC has offered the relocatee decent, safe, and sanitary housing within his/her financial means and available for immediate occupancy. KYTC has several options available to locate replacement housing, including:

- Relocating individuals into housing for sale on the real estate market, locally, regionally, or elsewhere.
- Repositioning dwellings on their existing property so they are outside the right-of-way limits.
- New house construction by the existing landowners.
- Advertisements in local media requesting to purchase housing meeting specific requirements.

A review of the local housing market reveals an ample supply of comparable housing available at any one time. For example, on REALTOR.com, as of April 2023, there were more than 1,700 listings within a 50-mile radius of the project area, and about 90 in the Elizabethtown area. Of those in Elizabethtown, there were 14 listings from \$100,000–\$199,999; 19 listings from \$200,000–\$299,000; 23 listings from \$300,000–\$399,999, 21 from \$400,000–\$499,999; and 3 from \$500,000–\$599,999. It is likely the relocations for this project would be accomplished using normal relocation procedures. Last Resort Housing may be utilized if comparable replacement housing would not be available, or unavailable within the displacee's financial means, and the replacement payment exceeds the state legal limitation.

Under the Relocation Assistance Program, when right-of-way is acquired, at least one relocation specialist is assigned to the roadway project to execute the relocation assistance and payments program. The relocation specialist contacts each household to be relocated to ascertain individual needs and desires. The specialist also provides information, answers questions, and provides assistance in finding replacement property. Relocation services and payments are provided without regard to race, color, religion, sex, national origin, or economic status. All tenants and owner-occupant displacees receive an explanation regarding all options available to them, such as varying methods of claiming moving expenses

reimbursement; replacement housing rental, either private or publicly subsidized; replacement housing purchase; or moving owner-occupied housing to another location. Financial assistance would be available to eligible relocatees for the following:

- Reimbursing the relocatee for the actual reasonable costs of moving from homes, businesses, and farm operations acquired for a highway project.
- Making up the difference, if any, between the amount paid for the acquired dwelling and the cost of a comparable decent, safe, and sanitary dwelling available on the private market.
- Providing expenses reimbursement, such as legal fees and other eligible closing costs incurred in buying a replacement dwelling.
- Making payment for eligible increased interest costs resulting from having to acquire a higher interest rate mortgage.

A displaced tenant may be eligible to receive a payment to rent a replacement dwelling or room, or use as a down payment, including closing costs, on the purchase of a replacement dwelling. A brochure entitled "Your Benefits as a Highway Displacee under the Relocation Assistance Program" describes in detail the state assistance available and would be made available to interested person(s).²⁵

KYTC utilized state funds to initiate right-of-way relocations. Four (Parcels 6, 7, 14, 71) of the eight residential relocations have already occurred. One of the relocations utilized Last Resort Housing due to lack of comparable housing at the time of relocation.

4.2 SOCIOECONOMIC IMPACTS

On January 20, 2025, President Trump signed Executive Order (EO) 14148 --Initial Rescissions of Harmful Executive Orders and Actions and EO 14154 – Unleashing American Energy. The EOs revoked EO 14096 – Revitalizing Our Nation’s Commitment to Environmental Justice (EJ) for All (April 21, 2023). Subsequently on January 21, 2025, President Trump signed EO 14173 – Ending Illegal Discrimination and Restoring Merit-Based Opportunity. This EO revoked EO 12898 – Federal Actions to Address EJ in Minority Populations and Low-Income Populations (February 11, 1994). On February 25, 2025, the Council on Environmental Quality (CEQ) published an Interim Final Rule removing the CEQ’s NEPA implementing regulations, effective April 11, 2025 (90 Fed. Reg. 10610). As a result of these actions, all federal EJ requirements are revoked and no longer apply to the federal environmental review process. FHWA, FTA and FRA’s Joint NEPA regulations (23 CFR part 771) and the agencies Interim Final Guidance on “Section 139 Environmental Review Process: Efficient Environmental Reviews for Project Decisionmaking and One Federal Decision” (12/17/2024) do not require an EJ analysis. Accordingly, no analysis of EJ is included in this EA. Any purported EJ impacts will not be considered in the federal decision. Social, economic, and community impacts will continue to be disclosed where applicable in accordance with 23 CFR 771.

²⁵ Available online through the KYTC website at <https://transportation.ky.gov/RightofWay/AppraisalForms/Relocation%20Assistance%20Information%20Booklet.pdf>

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The project team reviewed census data, project mapping, field observations, and had discussions with local officials and with property owners and residents at public meetings. For reference, **Figure 12** shows the geographic boundaries of US Census areas discussed.

The census data analysis and field observations did not reveal the presence of pockets of minorities within the study area. The Socioeconomic Study Area (SSA) contains an extremely small minority population (**Table 7**); 92% of area residents are white, well above the statewide or countywide averages.

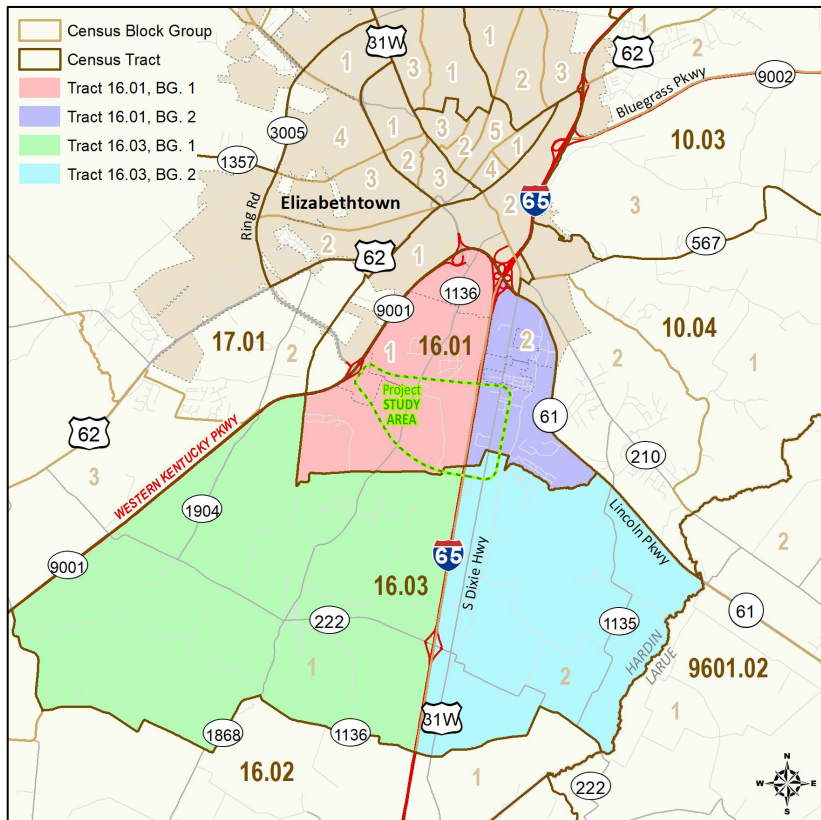


Figure 12. Census Geographies for Socioeconomic Study Area

Table 7: Population by Race

	Population	One Race						2+ Races	Hispanic/Latin o Origin
		White	Black/African American	American Indian/ Alaska Native	Asian	Native Hawaiian/ Other Pacific Islander	Other		
Kentucky	4,461,952	84%	8%	0%	2%	0%	0%	2%	4%
Hardin County	109,627	76%	12%	0%	2%	0%	0%	4%	6%
Tract 16.01	3,115	92%	5%	0%	0%	0%	0%	0%	3%
Block Group 1	757	95%	4%	0%	0%	0%	0%	0%	1%
Block Group 2	2,358	90%	6%	1%	0%	0%	0%	0%	3%
SSA	3,115	92%	5%	0%	0%	0%	0%	0%	3%

Source: 2020 ACS 5-year estimates, Table B03002

A summary of the Census's American Community Survey (ACS) estimates for per capita and household income data is presented in **Table 8**. Hardin County is slightly wealthier than the statewide average. However, both tract and block groups generally exceed county levels in each metric, with the one exception noted in red below.

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Table 8. Key Income Metrics

	Median HH Income	Per Capita Income	% Below Poverty
Kentucky	\$52,238	\$29,123	17%
Hardin County	\$57,101	\$30,779	12%
Tract 16.01	\$83,868	\$32,130	8%
Block Group 1	\$91,429	\$37,629	2%
Block Group 2	\$83,158	\$30,364	11%
SSA	\$87,294	\$33,997	8%

Source: 2020 ACS 5-year estimates, Table B19013, B19301, and C17002

KYTC used state funds to initiate the Right-of-Way acquisitions before completing NEPA in accordance with 23 CFR 710.501. As a part of this process, the KYTC District 4 right-of-way team prepared an *Acquisition State Relocation Report* June 21, 2016. This report was based on a review of conditions in the area and discussions about the project with the potential relocatees and local realtors. The report noted the following:

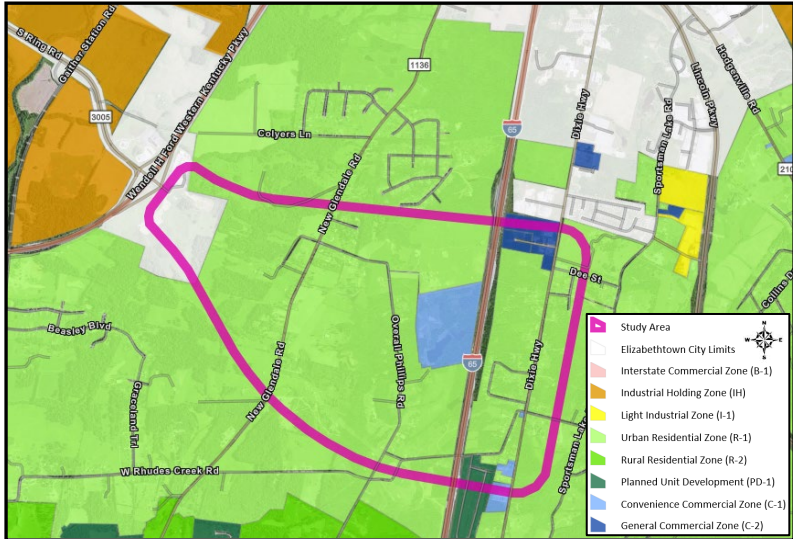
- Approximately 2 to 5 occupants per dwelling would be impacted.
- No minorities would be affected by the proposed project.
- None of the displacees would fall below low-income thresholds.
- Because persons with disabilities reside in 2 of the 8 residences, Last Resort Housing funds may be needed to modify replacement housing to meet their needs.
- An adequate number of houses are available in all relocatees' estimated price ranges. However, the size and current value of two residences and the limited availability of *comparable* housing may require use of Last Resort Housing funds to relocate residents of two of the properties.

The relocation team would assist the relocatees by offering advisory assistance, finding comparable replacement housing, contacting lending agencies, contacting approved moving contractors, and processing claims and payments for appeals. The acquisition and relocation program would be conducted in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended. The relocatees would be assisted in any way, within the law and its capabilities, to relocate adequate replacement housing with minimum disruption to the family unit. Relocation resources would be made available to all displacees without discrimination. No minorities or low-income persons were identified in the *Acquisition Relocation Stage Report*.

4.3 LAND USE

Except for Elizabethtown and Radcliff/Fort Knox (northwest of the project area), Hardin County land uses are predominantly agricultural and rural residential. The project study area borders the southern boundary of the Elizabethtown city limits; however, most of the land uses within or immediately surrounding the study area mirror those of the county—agricultural and rural residential.

Regarding land use zoning, images from the Hardin County Planning Commission's zoning maps (Figure 13



Source: <https://www.arcgis.com/home/webmap/viewer.html?useExisting=1>

Figure 13. Existing Land Use Zoning Map, Study Area

and Figure 14, p. 32) show much of the study area is currently zoned Urban Residential. A review of Elizabethtown's land use zoning map identified the white area west of the study area as zoned General Service Commercial.²⁶ Future land use maps indicate the western portion of the study area (from the WKP to KY 1136) is planned for industrial uses, and the eastern portion is anticipated to be an urban area.

4.3.1 EXISTING LAND USE

AGRICULTURAL. Agriculture, including timber production, is the predominant land use in Hardin County. According to the 2017 Census of Agriculture²⁷ (the latest census available), there are 1,305 farms in Hardin County, comprising 199,201 acres harvested (approximately 50% of the county's land area). The 2017 census reported that the average farm size in Hardin County was 153 acres (an approximate +2% change from the 2012 census).

RESIDENTIAL. Many single-family residences in the study area are on very large lots (two acres or more) that extend along both sides of Overall-Phillips Road and New Glendale Road. Some sites can be classified as rural-residential farms (row crops and/or livestock). There are also two named subdivisions—Wildwood Drive along US 31W and Meadowview Estates off West Rhudes Creek Road. Wildwood Drive subdivision is composed of single-family residences that are relatively closely spaced on narrow, deep lots averaging an acre in size; and Meadowview Estates has multi-family rental units (two-, three-, and fourplexes) on relatively square lots averaging an acre in size. This area of the county is zoned for more intense residential use. **Section 4.2.2** includes discussion of potential residential relocation impacts as a result of the project.

²⁶ <https://gis.elizabethtownky.org/apps/infomap/index.html?webmap=e1019a7f760a43babd7d51560a898320>

²⁷ https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Kentucky/cp21093.pdf

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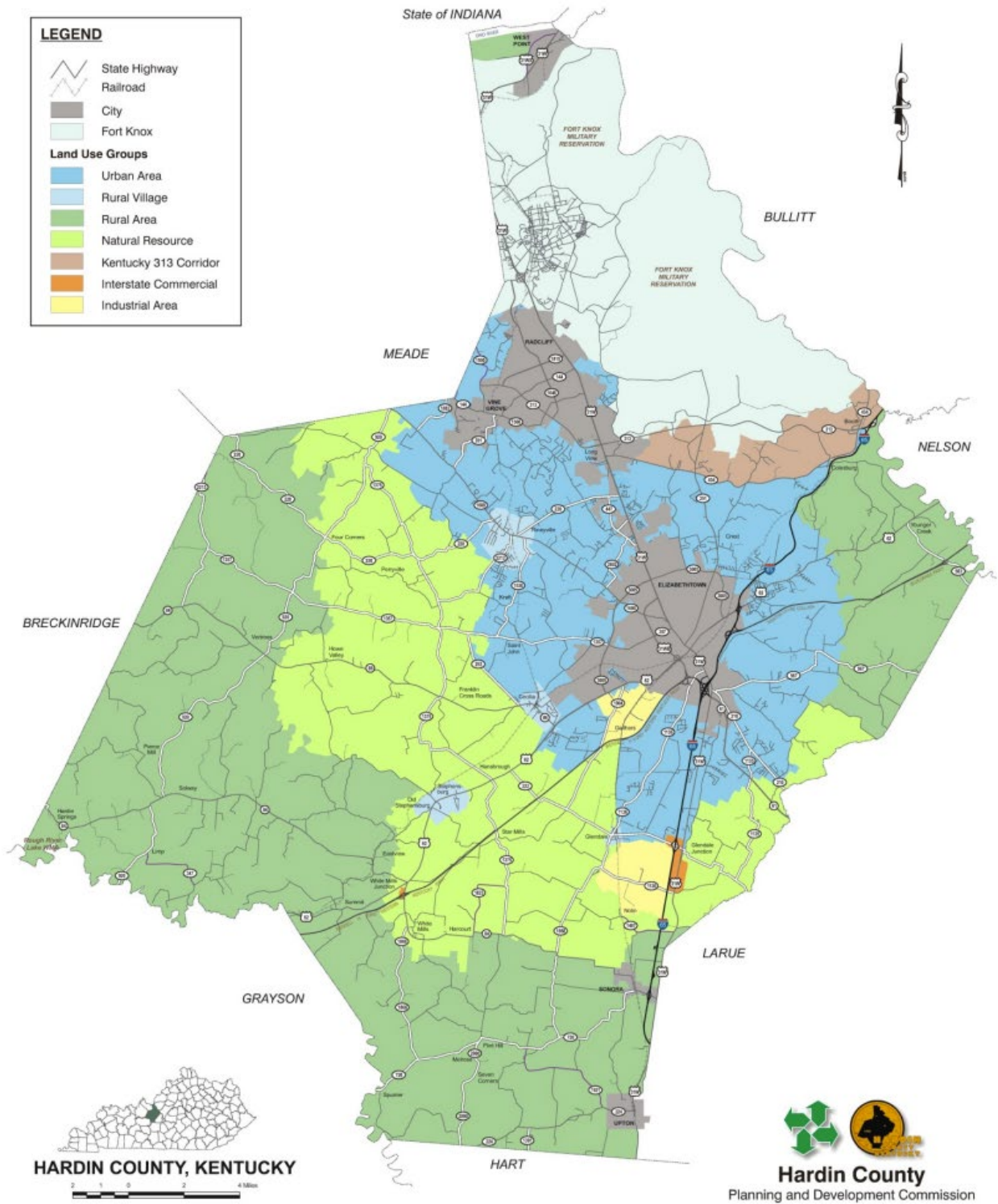


Figure 14. Future Land Use Zoning Map, Hardin County

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COMMERCIAL AND INDUSTRIAL. Most of the commercial and industrial activity in Hardin County, as well as all such activity in the study area, is in or near Elizabethtown. In the project corridor there are two owner-occupied commercial businesses (in residential zones)—a welding shop on West Rhudes Creek Road and a woodworking shop on a residential parcel on Overall-Phillips Road.

Within the project study area there is one large parcel is zoned Commercial (C-1), but the land use is a rural agricultural setting including a man-made pond about seven acres in size. The site is adjacent to the west side of I-65 and is the former Coke-a-Cola Bottling Plant retreat center (the Bottling Plant is no longer located in Hardin County and the site is under different ownership).

The dark blue area in the northeastern portion of the study area is zoned General Commercial (C-2) and is home to several businesses including, South Point Storage (self-storage facility), Frankie's Auto Care (auto repair shop), HHR Offroad (ATV repair shop), Sportsmans Rod and Gun (gunshop), Karbec (manufacturer), Stucki Roller Bearing (railroad equipment supplier), and A Stucki Company (manufacturer).

To the west of the project area, adjacent to the west side of WKP, the area is zoned for Industrial Holdings (IH)—a zoning element used by the Hardin County Planning and Zoning Department to preserve land for large-scale industrial and employment centers.

INSTITUTIONAL. No schools are in the study area. Central Hardin High School is in the northwest quadrant of US 62 and Ring Road, 2.0 miles west of the study area, and East Hardin Middle School is along KY 1136, approximately 1.6 miles north of the study area. No government buildings, non-profit organizations, or libraries are in the study area. One church is within the study area—the Heartland Freewill Baptist Church on US 31W at the northeast corner of the study area boundary. New Horizon Baptist Church is on West Rhudes Creek Road just south of the study area boundary. There are no institutional displacements as a result of the project.

RECREATIONAL. Publicly owned recreational facilities have protection under Section 4(f) of the U.S. Department of Transportation (USDOT) Act of 1966, 49 USC 303(c). Section 6(f) of the Land and Water Conservation Fund (LWCF) Act (36 CFR 59.3) requires that the conversion of lands or facilities acquired with LWCF monies under the State Assistance program be coordinated with the National Parks Service. No public parks or recreational areas are within the study area. No recreational Section 4(f) or Section 6(f) properties were identified.

PUBLIC WATER SUPPLY. The western portion of the proposed extension would bisect the Gaither Spring Wellhead Protection Area (WHPA), as shown in [Figure 15](#). The WHPA is regulated to protect waters supplying the public water system. This area includes sinkholes that direct stormwater into the groundwater system.

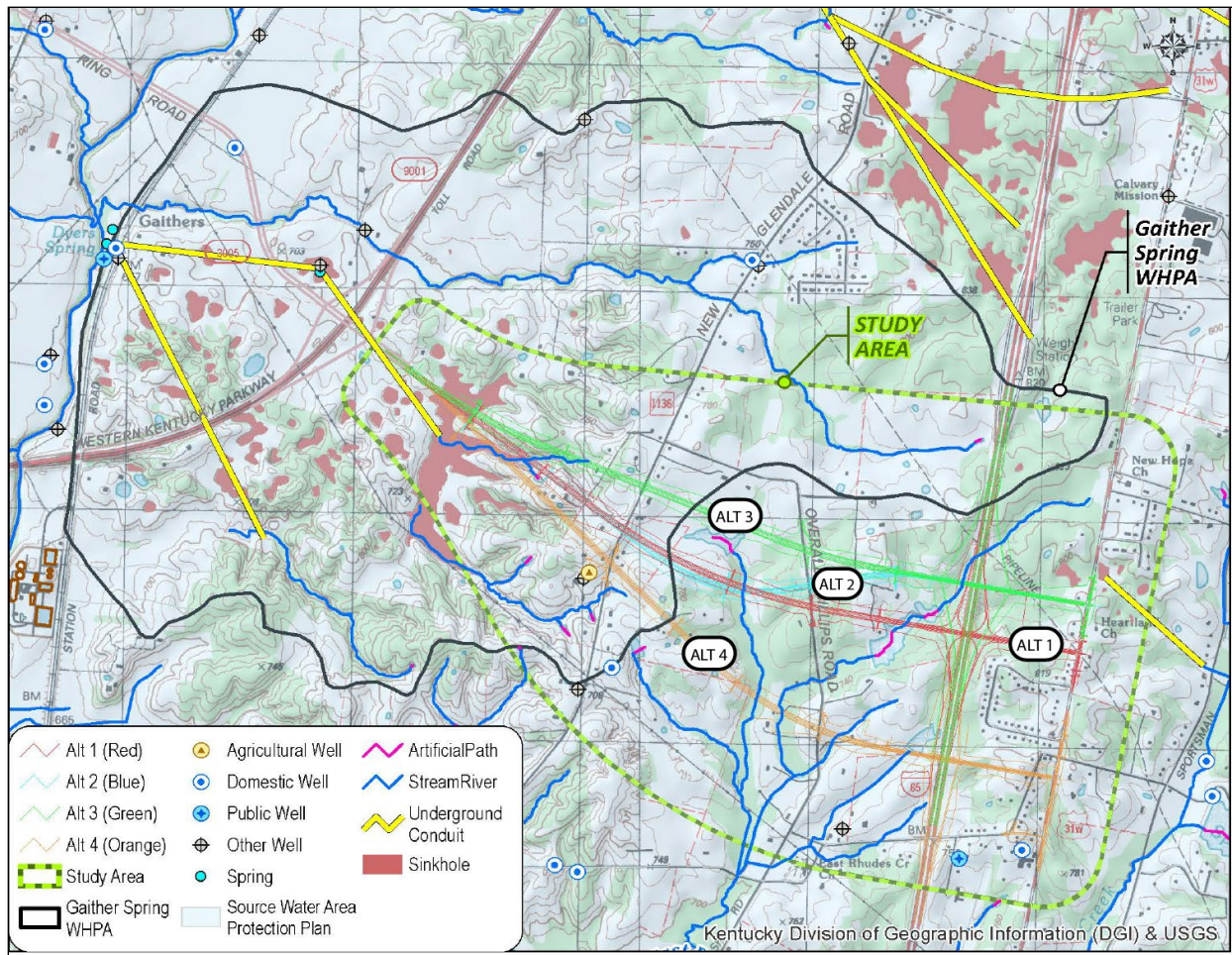


Figure 15. Project Area Water Supplies

To ensure protection of the system from contamination, the drainage pattern in this area would warrant consideration during design, construction, and operation of the roadway. See [Section 6](#) for KYTC commitments to protect the public water supply.

4.3.2 REGIONAL AND COMMUNITY PLANS

Since the 1987 *Ring Road Extension Study*, this proposed extension has been included in the local city and county comprehensive plans. The project is consistent with local and regional land use and transportation plans. Elizabethtown, Hardin County, and the Radcliff/Elizabethtown MPO have long-range plans that include the proposed Ring Road extension and new I-65 interchange, and KYTC has the extension project in its *Six-Year Highway Plan*:

- KYTC has included the new route in its *Six Year Highway Plan* (Item 4-198) to extend Ring Road from the WKP to I-65 since 2012. The most recent highway plan, FY 2024–2030, has the funds for the Right-of-Way and Utility phases planned for the biennium. [Table 9](#) shows planned funding.

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Table 9. FY 2024-2030 Highway Funds

County	Item No.	Route	Description	Funds	Phase	Year	Amount
Hardin	04-198.00	KY 3005	Extend Ring Road from The Western Kentucky Parkway to I-65.	STP2	R	2024	\$9.1 M
				STP2	U	2024	\$2.0 M
				STP2	C	2027	\$36.1 M
					Total		\$47.2 M

- July 26, 2012, the MPO added the “**Extension of Ring Road from the (WKP) to I-65**” to the 2009–2014 TIP as Amendment #1, and to the 2035 MTP as Amendment #2. The project is in the MPO’s long-range metropolitan plan to improve the roadway network and meet the existing and planned traffic needs in this portion of the Elizabethtown/Hardin County area. The project remained in the plan as a state-funded, regionally significant highway project until April 14, 2022. The 2022–2026 TIP was amended (Amendment #2) to move the project from a state-funded, regionally significant project to a federally funded highway project, and to adjust the estimated funding dollars and phases.

- The 2019 *Hardin County Comprehensive Plan* states:

*The **extension of Ring Road** (KY 3005) and interchange with Western Kentucky Parkway will provide new access to this planning area (the North Glendale Urban).... The recommended land use pattern in this area is predominantly urban residential.... Non-residential development opportunities will become available with the completion of the Ring Road extension.... Such uses should be Interchange or Convenience Commercial uses” (pp. 3-19, emphasis added).*

Regarding the referenced “non-residential...opportunities,” south of the study area in the southwest quadrant of KY 222 and I-65 is the single largest industrial site in the state—the 1,500-acre Glendale Industrial “Mega” Site (**Figure 16**, p. 36) that was being marketed for a single large industrial development. As noted above, the immediate study area is zoned for more intense residential subdivisions and just to the west side of the WKP the zoning is Industrial Holdings, which is a zoning element used by the Hardin County Planning and Zoning Department to preserve land for large-scale industrial and employment centers.

September 27, 2021, the Ford Motor Company announced the Ford BlueOvalSK Battery Park locating to Glendale, Kentucky, expected to bring 5,000 jobs to the area. Production of the advanced lithium-ion batteries will begin in 2025.²⁸

²⁸ <https://media.ford.com/content/fordmedia/fna/us/en/news/2021/09/27/ford-to-lead-americas-shift-to-electric-vehicles.html>

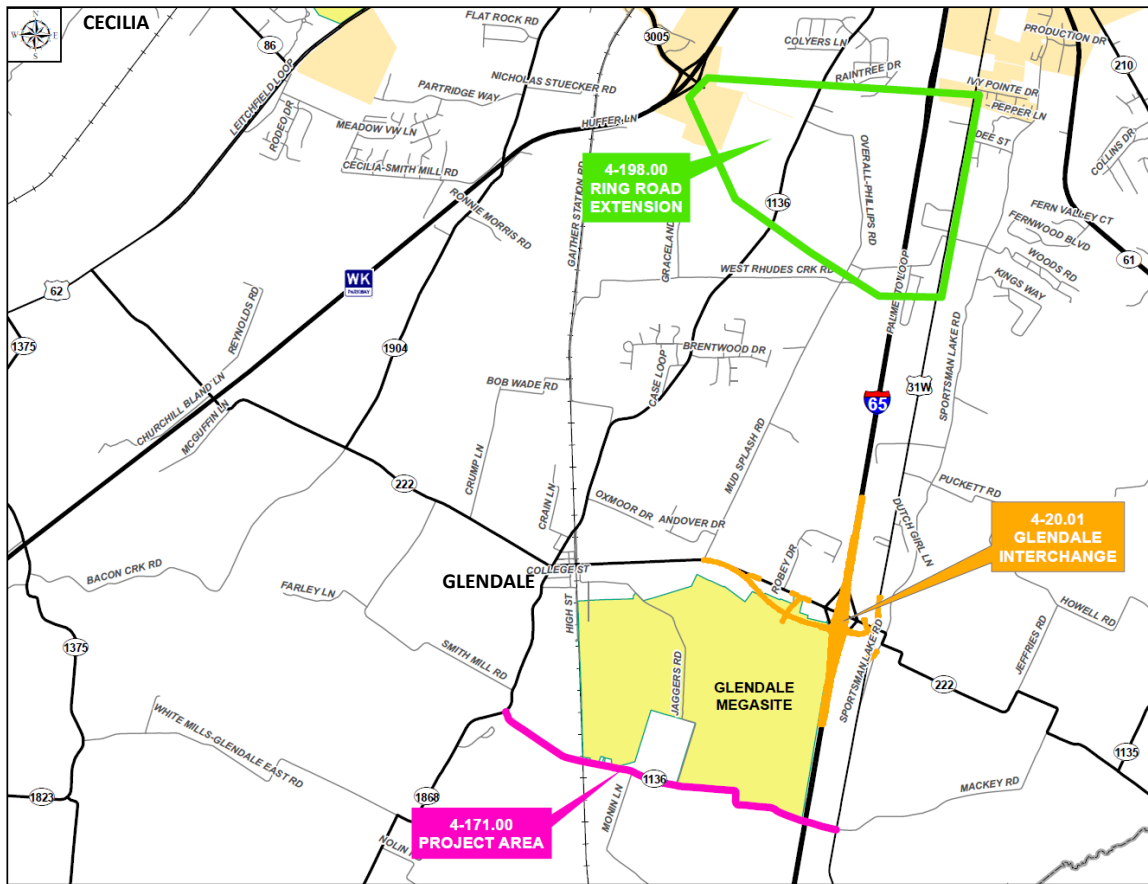


Figure 16. Ring Road Proximity to Glendale Megasite & Nearby Projects

Adjacent to the Glendale Megasite are two KYTC projects to improve the nearby I-65 interchange (4-20.1) and KY 1136 (4-171). The interchange project was recently constructed open to traffic Spring 2024 and the KY 1136 project is in the Right-of-Way and Utility phases.

- The 2020 *Elizabethtown Comprehensive Plan, Envision Elizabethtown 2040* identifies the Ring Road extension as one of its Transportation Goals and Objectives (p. 19) intended to improve system connectivity.

Regarding land use, this plan states:

The area between the Western Kentucky Parkway and I-65 is identified as Suburban Residential with limited areas of Regional Commercial or Industrial due to poor access (Figure 17, p. 37). If Ring Road is extended from the Western Kentucky Parkway to I-65, the recommended land uses in this area should be reconsidered.

Sub Area 12: Recommended Land Use Map

Currently, the area is primarily anticipated to be Suburban Residential, while zoning east of I-65 is recommended to be General Service, General Industrial, Heavy Industrial, and Regional Commercial. The plan later states that if the Ring Road extension is realized, then “land uses in this area should be studied in more detail prior to allowing more intense development to occur.”

The area along the previously extended section of Ring Road has already experienced industrial development and is recommended for further industrial development mixed with some Regional Commercial due to the rail line, interstate access, and visibility.

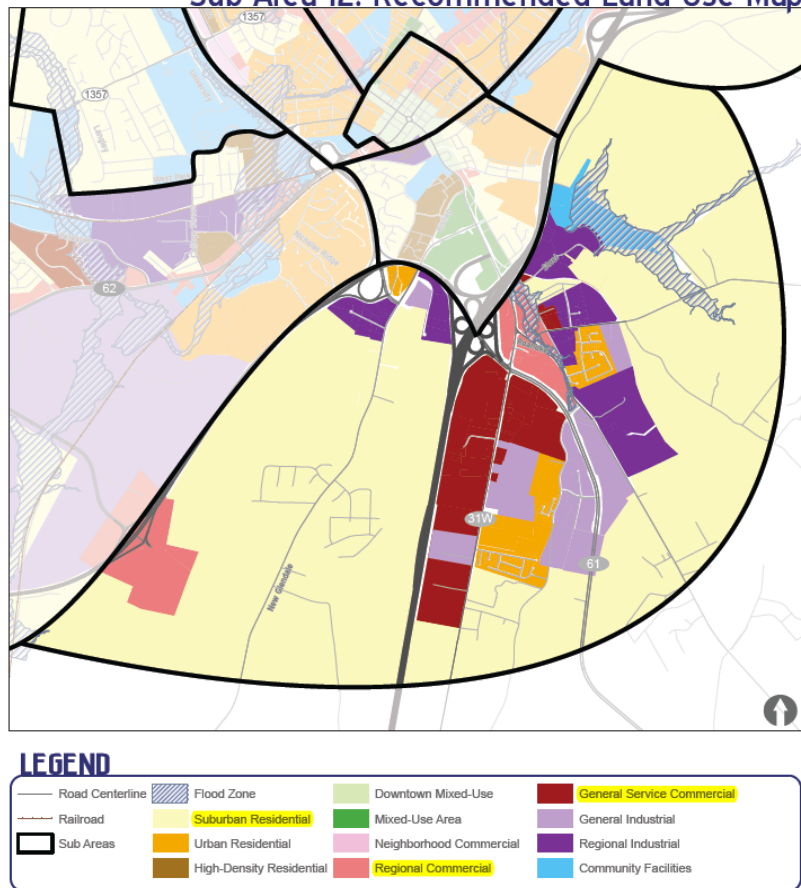


Figure 17. Elizabethtown 2040 Future Land Use Map

- Both the Radcliff/Elizabethtown MPO 2045 MTP and the 2022–2026 TIP Amendment #2, approved February 25, 2022, include this project.

4.3.3 IMPACTS TO LAND USE

The project study area borders the southern boundary of the Elizabethtown city limits; however, most of the land uses within or immediately surrounding the study area mirror those of the county. Apart from Elizabethtown, county land uses in the study area are predominantly agricultural and rural residential. Many of the single-family residences are on very large lots (two acres or more) that extend along both sides of Overall-Phillips Road and New Glendale Road. Some sites can be classified as rural-residential farms (row crops and/or livestock). There are also two named subdivisions—Wildwood Drive along US 31W and Meadowview Estates off West Rhudes Creek Road. In the project corridor, there are two commercial businesses in operation. Industrial sites, existing and planned, are primarily to the west and south of the study area. The western portion of the proposed extension would bisect the Gaither Spring Wellhead Protection Area (WHPA). The WHPA is regulated via a Source Water Protection Plan (SWPP) to protect waters supplying the public water system.

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Considering both positive and negative revenue impacts of the proposed project, the following issues were identified: tax revenue and a short-term construction income surge. Overall, the direct revenue impacts of this proposed project would be negligible.

POTENTIAL ADVERSE IMPACTS: Each Build alternative would cause the direct conversion of private taxable property to non-taxable government-owned right-of-way. The majority of land required is either open undeveloped, agricultural, or rural-residential. Constructing any proposed Build alternative would result in the permanent removal of some land and buildings from the tax rolls. The taxable land loss would result in an initial minimal tax revenue loss to Hardin County. Some farmers could experience a loss in income or land value due to the partial taking of farm holdings for right-of-way. The farmers may also realize a reduction in gross agricultural wealth (value of production) and gross farm income due to the removal of land from production for right-of-way.

The few small businesses along local roads that could experience a drop in traffic volumes as a result of construction of the Ring Road extension on new alignment could also experience revenue losses. Future land uses planned by Elizabethtown and Hardin County may be reassessed following the construction of a new roadway. However, Elizabethtown's *Envision 2040* plan notes the land use in the area should be further studied before allowing more intense development to occur. Further development could change the pastoral setting current area residents are accustomed to. It is the responsibility of the local governments to plan for and minimize impacts from any future non-residential development.

POTENTIAL BENEFITS: The short-term economic benefit of this proposed construction project would be expected to stimulate the local economy in terms of jobs, sales, income, government revenue and expenditures, and other variables.

Regarding long-term socioeconomic benefits, economic development planned for this section of the county is expected to benefit from improved access to be provided by the extension of Ring Road, which would offset losses by businesses affected by lower traffic volumes that could occur as some motorists divert to Ring Road. Among the goals of the project is improving connectivity between existing industrial areas such as the T.J. Patterson Industrial Park and Glendale Industrial Site (see [Section 2](#)).

New west-east access through the project area would improve freight accessibility, which would also lessen the transportation costs for businesses and industries in the area and the region. The improved transportation network would be expected to complement local efforts to encourage new employment opportunities and attract business to the area, as well as to enhance expansion efforts of existing industries in the Elizabethtown area.

The overall *beneficial* socioeconomic impacts of implementing a proposed Build alternative would be expected to outweigh the *negative* socioeconomic impacts. Each alternative would meet the purpose and need for the project, including providing an improved roadway constructed to current design and safety standards, thereby providing drivers an alternative to the circuitous local roads currently used to access I-65 and other points east, or the WKP and points west. Any of the proposed Build alternatives would provide improved access to the region's industries. Throughout the local area, a Build alternative would

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increase overall travel speed, reduce travel time, and thereby improve the economy of travel by lowering operating costs. Accessibility, response time, and safety for law enforcement, fire protection, EMS, and school buses would be improved. Long-term economic benefits associated with regional accessibility could offset revenues lost. It is expected that the effects to Hardin County's tax bases would be beneficial rather than adverse in the long term.

4.3.4 IMPACTS TO FARMLANDS

Formal consultation with the U.S. Department of Agriculture's Owensboro Office of the Natural Resources Conservation Service (NRCS) for compliance with the *Farmland Protection Policy Act of 1981* was completed (**Appendix C**). In accordance with state and federal regulations concerning farmland protection, the Farmland Conversion Impact Rating for Corridor Type Projects, Form CPA-106 was used to evaluate this project's effect on farmland. A scoring system is used to identify the relative value of farmland to be converted (0–100 points) and to assess the project corridor (based on 10 criteria ranging from 0–5 to 0–25 points). The relative value and corridor assessment points are combined to provide a total score per alternative. USDA recommends in 7 CFR 658.4(c)(3) that "sites receiving scores totaling 160 or more be given increasingly higher levels of consideration for protection." Since this project received scores of less than 160 points, the project's impact on farmland would not be adverse and the protection of this farmland should not override the need for the project. The evaluation results (Part VII, Form CPA-106) for Hardin County are shown in **Table 10** (p. 39).

Depending on the alternative, either 71 acres or 79 acres of right-of-way would be required, 7.4 to 15.1 acres of which are prime and unique farmland, and about 20.2 to 28.1 acres are statewide or local important farmland (**Table 10**, p. 39). The farmland in the project corridor is used for livestock grazing, limited crop cultivation (primarily corn and hay), and forest. No agricultural districts are in or near the project area.

Table 10. Potential Agricultural Impacts

Hardin County	Alt 1 (Red)	Alt 2 (Blue)	Alt 3 (Green) <i>Preferred</i>	Alt 4 (Orange)
Total Acres to be Converted (All Uses)	71	79	79	79
Acres of Prime and Unique Farmland	7.4	9.0	9.6	15.1
Acres of Statewide and Local Important Farmland	28.1	32.6	29.7	20.2
Total Farmland Rating Points from Form CPA-106, Part VII	103	108	104	115

The rural nature of the project area makes farmland impacts unavoidable with any Build alternative. However, as noted above, coordination with NRCS indicated impacts from the conversion of agricultural land to highway right-of-way would be minimal.

Loss of farmland for right-of-way, loss of access to farmland severed by the new road, or creation of an uneconomic remnant would be addressed during the right-of-way acquisition phase should a Build alternative be selected for construction. A relocation assistance specialist would be assigned to deal specifically with those farms affected to help resolve problems resulting from impacts to farms.

4.4 AIR QUALITY

Air quality management and protection responsibilities exist in federal, state, and local levels of government. The federal Clean Air Act is the primary statute that establishes ambient air quality standards and establishes regulatory authorities to enforce regulations designed to attain those standards. The US Environmental Protection Agency (USEPA) is responsible for implementation. The Kentucky Energy and Environment Cabinet's Division for Air Quality operates the air quality monitoring program, implements the permit program, and works with MPOs, Area Development Districts, and KYTC for transportation planning.

On January 20, 2025, President Trump signed EOs 14148 and 14154, which revoked EO 13990 – Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis (January 20, 2021) and EO 14008 – Tackling the Climate Crisis at Home and Abroad (January 27, 2021). Subsequently on January 29, 2025, Secretary Duffy signed a Memorandum for Secretarial Offices and Heads of Operating Administrations – Implementation of Executive Orders Addressing Energy, Climate Change, Diversity, and Gender. On February 25, 2025, the CEQ published an Interim Final Rule removing the CEQ's NEPA implementing regulations, effective April 11, 2025 (90 Fed. Reg. 10610). As a result of these actions, FHWA will not include greenhouse gas emissions and climate change analyses in the federal environmental review process. Any purported greenhouse gas emissions and climate change impacts will not be considered in the federal decision. Accordingly, no greenhouse gas emissions or climate change analyses are included in this EA.

4.4.1 NAAQS CONFORMITY

Hardin County is in attainment for all National Ambient Air Quality Standards (NAAQs) criteria pollutants monitored by the USEPA—carbon monoxide (CO), ozone, particulate matter (PM_{2.5} and PM₁₀), lead, nitrogen dioxide (NO₂), and sulphur dioxide.

- Based on the Kentucky CO Screening Criteria, this project does not meet the criteria requiring a project level analysis and would not produce a projected violation of the CO standard. The project does not propose any traffic signals, and the projected 2045 design year traffic is estimated to carry less than 10,000 vpd.
- The project is in an Ozone attainment area and is not a project-level concern.
- The project is in a PM_{2.5} attainment area and it is not a project-level concern. Therefore, the conformity procedures of 40 CFR 93 do not apply.
- All areas in Kentucky are in attainment for PM₁₀. Therefore, the conformity procedures of 40 CFR 93 do not apply.
- All areas in Kentucky are in attainment for NO₂.

In accordance with the Clean Air Act and NEPA, the air quality of transportation improvements in the area has been considered and is part of the appropriate conforming transportation plans. The project is included in the KYTC fiscal year (FY) 2021–2024 Statewide Transportation Improvement Program (STIP)

via administrative modification 2021.022.²⁹ It is also included Radcliff/Elizabethtown MPO's FY 2022–2023 Transportation Improvement Program (TIP) administrative modification #2.³⁰

4.4.2 MOBILE SOURCE AIR TOXIN EFFECTS

Regarding Mobile Source Air Toxics (MSAT) effects, according to 40 CFR 93.126 the project is considered Not Exempt. However, it has been determined to generate minimal air quality impacts for Clean Air Act criteria pollutants and has not been linked with any special MSAT concerns. The proposed project is not expected to have an adverse effect on air quality, thus, mitigation measures are not required.

Under all four Build alternatives for the 2045 design year, it is expected there would be reduced MSAT emissions in the immediate area of the project, relative to the No-Build Alternative, due to the reduced vehicle miles traveled associated with more direct routing (see [Table 4](#), p. 20), and USEPA's MSAT reduction programs.

USEPA regulations for vehicle engines and fuels would cause overall MSAT emissions to decline significantly over the next several decades. Based on regulations now in effect, an analysis of national trends with USEPA's MOVES3 model forecasts a combined reduction of over 76% in the total annual emissions rate for the priority MSAT from 2020 to 2060 while vehicle-miles of travel are projected to increase by 31% (*Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*, FHWA, January 18, 2023). This would both reduce the background level of MSAT as well as the possibility of even minor MSAT emissions from the project.

No meaningful impacts on air quality are anticipated to result from construction of the proposed project. The complete *Air Quality Analysis* is in [Appendix D](#).

4.5 NOISE

KYTC has developed policies over the years (2011, 2015 and 2020, with a 2022 Revision to the 2020 policy), consistent with FHWA guidelines, to determine the need, feasibility, and reasonableness of noise abatement measures, including barrier walls, for all major highway projects. FHWA, in 23 CFR Part 772, offers several measures for abating or eliminating highway noise impacts including traffic management measures, alteration of horizontal and vertical alignments, acquisition of property, construction of noise barriers, and noise insulation of public use or non-profit institutional structures.

In 2014, and again in 2023, an analysis was conducted for the proposed project to determine highway-generated noise impacts associated with the proposed project, summarized in [Appendix E](#). FHWA defines noise thresholds for abatement for different property types, such as residential areas, parks, churches, and schools. Specialized software creates a model of the study area, building in highways, traffic, noise-sensitive receptors, terrain, vegetation, and other elements that influence the noise environment.

²⁹ <https://transportation.ky.gov/Program-Management/Documents/STIP%20MOD%202021.022.pdf>

³⁰ https://radcliff-elizabethtown-mpo.org/wp-content/uploads/2021/12/REMPO_TIP_AdmMod2.pdf

4.5.1 2014 ORIGINAL NOISE ANALYSIS

In October 2014, a qualified traffic noise subject matter expert measured existing sound levels at eight representative locations throughout the study area as mapped in **Figure 18**.

These measurements were used to calibrate the model, estimating noise levels for 53 receptors. Existing noise levels, measured in A-weighted

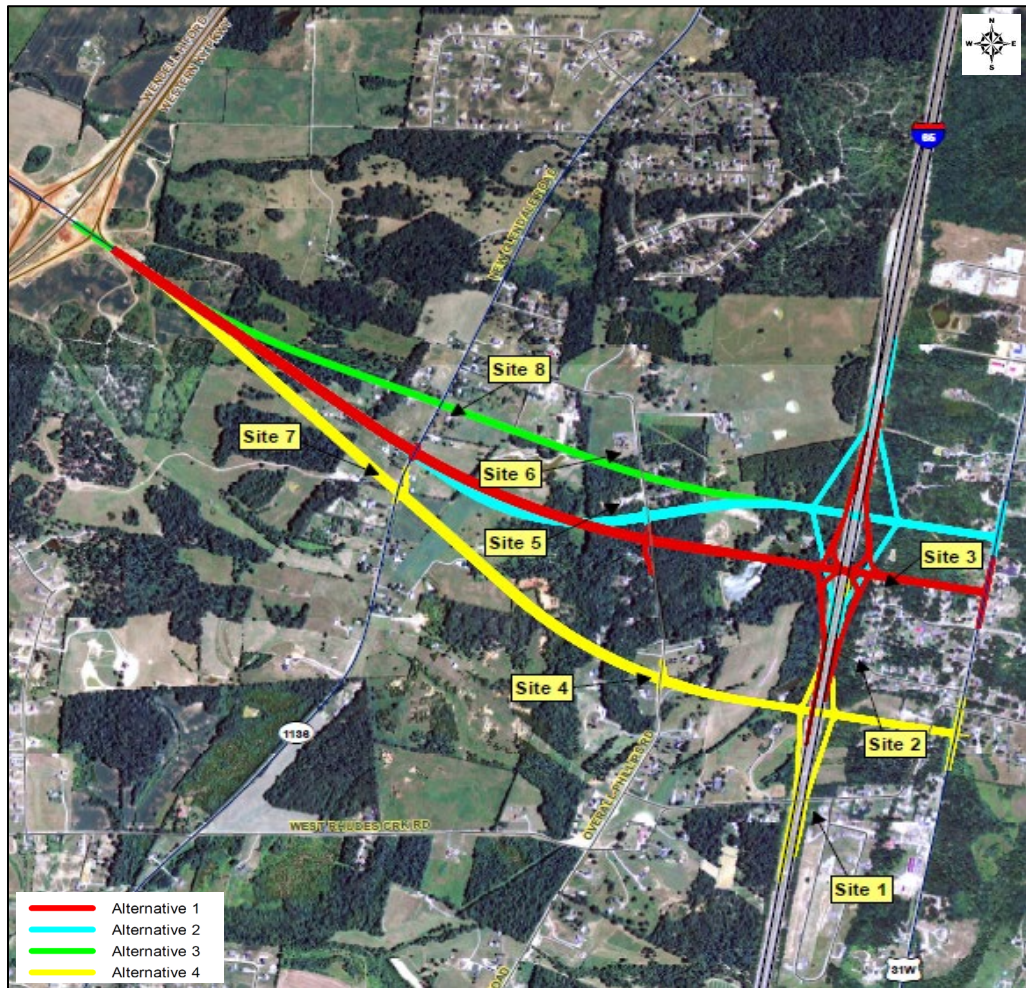


Figure 18. 2014 Noise Receptor Sites

decibels (dBA) averaged over an hour,³¹ ranged from 41 to 67 dBA. **Figure 19** (p. 43) relates these values to common noise levels for reference.

³¹ The pressure differences of sound are commonly measured in decibels (dB). To closely resemble the non-linear sensitivity of human hearing the “A-weighted” scale is used to define the relative loudness of different frequencies. Sound levels measured using the A-weighted scale are expressed as dBA L_{eq} .

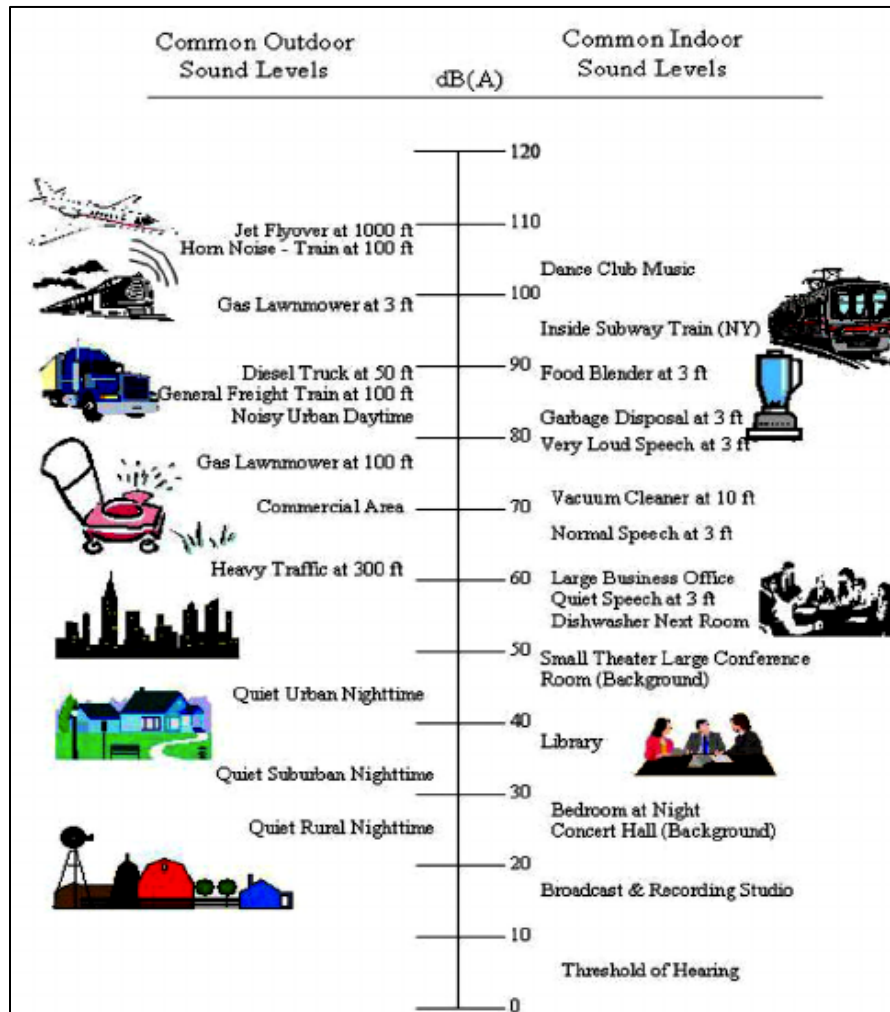


Figure 19: Reference Noise Levels

In 2014, traffic data for the 2040 design year were used to predict future noise levels for the No-Build and Build alternatives using the Traffic Noise Model (TNM) computer program. As defined by the current and past versions of KYTC's *Noise Analysis and Abatement Policy*, traffic noise impacts occur when the predicted noise levels approach (within 1 dBA of the NAC) or exceed the noise abatement criteria (NAC) or when the predicted noise level substantially increases (equal to or greater than 10 dBA) over existing noise levels.

Compared to existing levels, noise is projected to increase by 1.3 to 5.4 dBA by 2040 for the No-Build alternative. Generally, a 3 dBA change is considered barely perceptible to the human ear.

All four of the proposed Build alternatives would have similar future noise levels, impacting 5 to 14 receptors as summarized in [Table 11](#) (p. 44). Predicted noise levels for the Build alternatives range from a low of 52.9 dBA Leq to a high of 75.5 dBA Leq. The range of predicted noise levels for recommended **Preferred Alternative 3** would be 52.9 dBA Leq to 71.3 dBA Leq. One of the receptors would experience a substantial increase over the existing noise level.

Table 11. Summary of Impacted Receptors

Potential Impacted Receptor Locations	Alternatives				
	No-Build	Alt 1 (Red)	Alt 2 (Blue)	Alt 3 (Green) Preferred	Alt 4 (Orange)
Meadowview Estates	12	-	-	-	1
W. Rhudes Creek Road	2	-	-	-	2
Wildwood Drive	-	5	13	13	7
Overall Phillips Road	-	-	-	1 ¹	-
Total Impacted Receptors	14	5	13	14	10

¹Substantial increase

To abate noise impacts, KYTC policy defines feasibility and reasonableness criteria to determine when noise barriers merit consideration. A proposed barrier must provide a minimum 5 dBA reduction for at least three impacted receptors, must be feasible from an engineering perspective, and must satisfy a maximum cost per benefitted receptor requirement.

The construction of noise barriers was evaluated for four primary locations meeting the KYTC criteria for barrier consideration. These locations were identified as Meadowview Estates subdivision, Rhudes Creek Road, Wildwood Drive subdivision, and Overall-Phillips Road. However, based on a detailed noise barrier analysis conducted at these locations, the construction of noise barriers was determined to be neither cost-effective nor acoustically feasible and, therefore, not reasonable. Therefore, noise abatement measures in the form of noise walls were not recommended as part of the Ring Road extension project. Additional abatement measures were considered and determined not to be effective; none are proposed for future consideration. The findings of this analysis will be made available to the public to review and provide comments, following the approval of this Environmental Assessment.

4.5.2 2023 UPDATED NOISE ANALYSIS

KYTC's 2020 *Noise Analysis and Abatement Policy* was revised August 1, 2022. The traffic forecast was also updated for the IJS and the recommended Preferred Alternative was identified. A new *Traffic Noise Impact Study* was completed for the Preferred Alternative in 2023 to address the most current policy and the most current traffic forecasts for that alternative.

Existing (2023) sound levels were recorded at the sites mapped in Figure 20, p. 45. Using TNM modeling, traffic data for the design year (2045) and the most current design files for the Preferred Alternative, future noise levels would range from 52.4 dBA Leq to 68.9 dBA Leq.³² Noise levels would approach or exceed the appropriate 67 dBA Leq NAC for 11 of the modeled noise receptors. Ten of the 11 impacted receptors are along I-65 in the Wildwood Drive subdivision. One of the impacted receptors is in the vicinity of the Ring Road extension. Future noise levels would not substantially increase over existing noise levels for any of the modeled receptors.

³² The 2023 predicted noise levels for design year 2045 (52.4 to 68.9 dBA Leq) are very similar to those previously predicted in 2014 for then design year 2040 (52.9 to 71.3 dBA Leq).

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The construction of noise barriers was evaluated for the affected residences in Wildwood Drive subdivision. The analysis determined that construction of a barrier would not meet cost-effectiveness thresholds; thus, a barrier is not recommended. Other abatement measures were considered but are not proposed because none were determined reasonable as described in 23 CFR 772.13(c).

No known sources of additional traffic are currently being planned as part of this project. Future traffic forecasts used for the noise analysis were developed in coordination with the Hardin/Meade counties' regional TDM, which included consideration of population projections and anticipated land use changes based on input from local officials.

Following the approval of this EA, it will be made available to the public to review and provide comments, including the mitigation and minimization measures regarding this noise analysis. Responses to all substantive comments will be provided within the final Environmental Document.

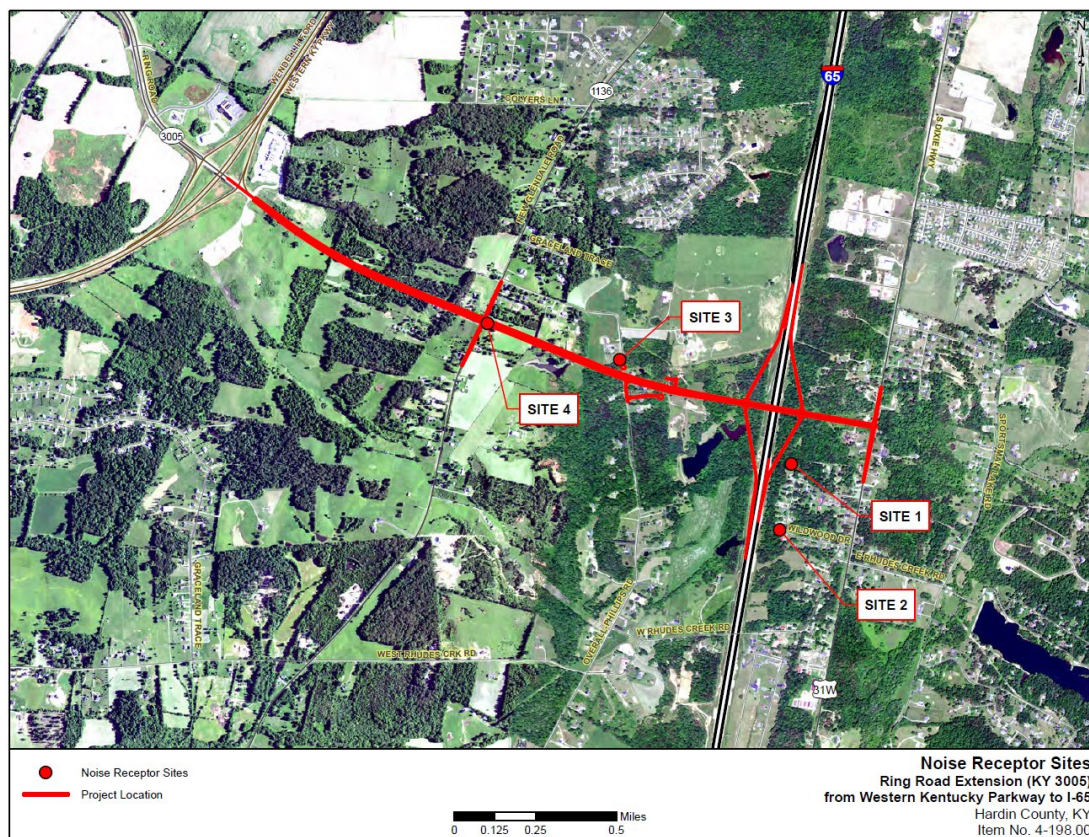


Figure 20. Preferred Alternative 2023 Noise Receptor Sites

4.6 AQUATIC AND TERRESTRIAL ECOSYSTEMS

An ecological baseline study was conducted during 2014 to assess potential impacts to ecological resources. The effort included coordination with state and federal agencies, literature reviews, field surveys, documentation of the environmental setting, and potential impact assessment. The baseline is in [Appendix F](#). No champion trees, Cold Water Aquatic Habitat, Outstanding State Resource Waters,

Exceptional Waters, Reference Reach Waters, Kentucky Wild River, or Outstanding National Resource Waters were identified within the area of potential effect. Relevant elements of that study have been updated for current (2023) policies and procedures. The updates did not result in any changes to the conclusions.

4.6.1 STREAMS, WETLANDS, & FLOODPLAINS

Jurisdictional under the Clean Water Act, “waters of the US” include streams, wetlands, and some other surface water features regulated by the USEPA and US Army Corps of Engineers (USACE). Desktop research and field surveys were conducted to locate these resources. The project area lies in the Upper Green River and Shaw Creek watersheds. It is not within the 100-year floodplain of either.

Investigations identified 29 streams, 8 wetlands, and several ponds. There are no boatable channels in the project area. Most streams in the area are ephemeral channels or relatively small first or second order streams. Field investigations and tests identified no streams as having high quality habitat. Elevated Total Dissolved Solids (TDS) levels indicate all blueline streams in the project area are degraded to some level. No mussels were found during the field investigations and low numbers of fish were caught. Potential alternative impacts to water resources are summarized in **Table 12**.

Table 12. Impacts to Water Resources

Potential Impacted Water Resources <i>Liner Feet (LF) / Acres (AC)</i>	Alternatives				
	No-Build	Alt 1 (Red)	Alt 2 (Blue)	Alt 3 (Green) Preferred	Alt 4 (Orange)
Perennial Streams (LF)	0	402	514	312	1,961
Intermittent Streams (LF)	0	1,024	1,166	1,166	751
Ephemeral Streams (LF)	0	4,445	5,563	4,428	2,637
Total Stream Impacts (LF)	0	5,871	7,243	5,906	5,349
Wetlands (AC)	0	0.76	0.73	0.29	1.38
Ponds (AC)	0	7.4	2.8	6.0	1.8

Alternative 2 impacts the most streams, and **Alternative 4** impacts the least, with about a 2,000-linear-foot difference between them. **Alternatives 1** and **3** have similar stream quantity impacts.

Alternative 4 impacts the most wetland acres, whereas **Alternative 3** impacts the least, impacting nearly a fifth the amount of acres impacted by **Alternative 4**. **Alternatives 1** and **2** have similar wetland impacts.

Alternative 1 impacts the most ponds, with four times more total acres of pond impacts than **Alternative 4**, which has the least impacts.

The western portion of the proposed extension of all four alternatives would bisect the Gaither Spring Wellhead Protection Area (WHPA) and the Kentucky Division of Water (KDOW) Source Water Protection Plan (SWPP) area (see **Figure 21**, p. 47). The WHPA is regulated to protect waters supplying the public water system. To ensure protection of the system from contamination, the drainage pattern in this area would warrant consideration during design, construction, and operation of the roadway. As such, best

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management practices (BMP) to minimize and treat storm water runoff during both construction and operation would need to be studied. For the section between US 62 and the WKP, KYTC worked with Hardin County Water District #2 and the KDOW to establish permanent BMPs to protect Gaither Spring between Gaither Station Road.

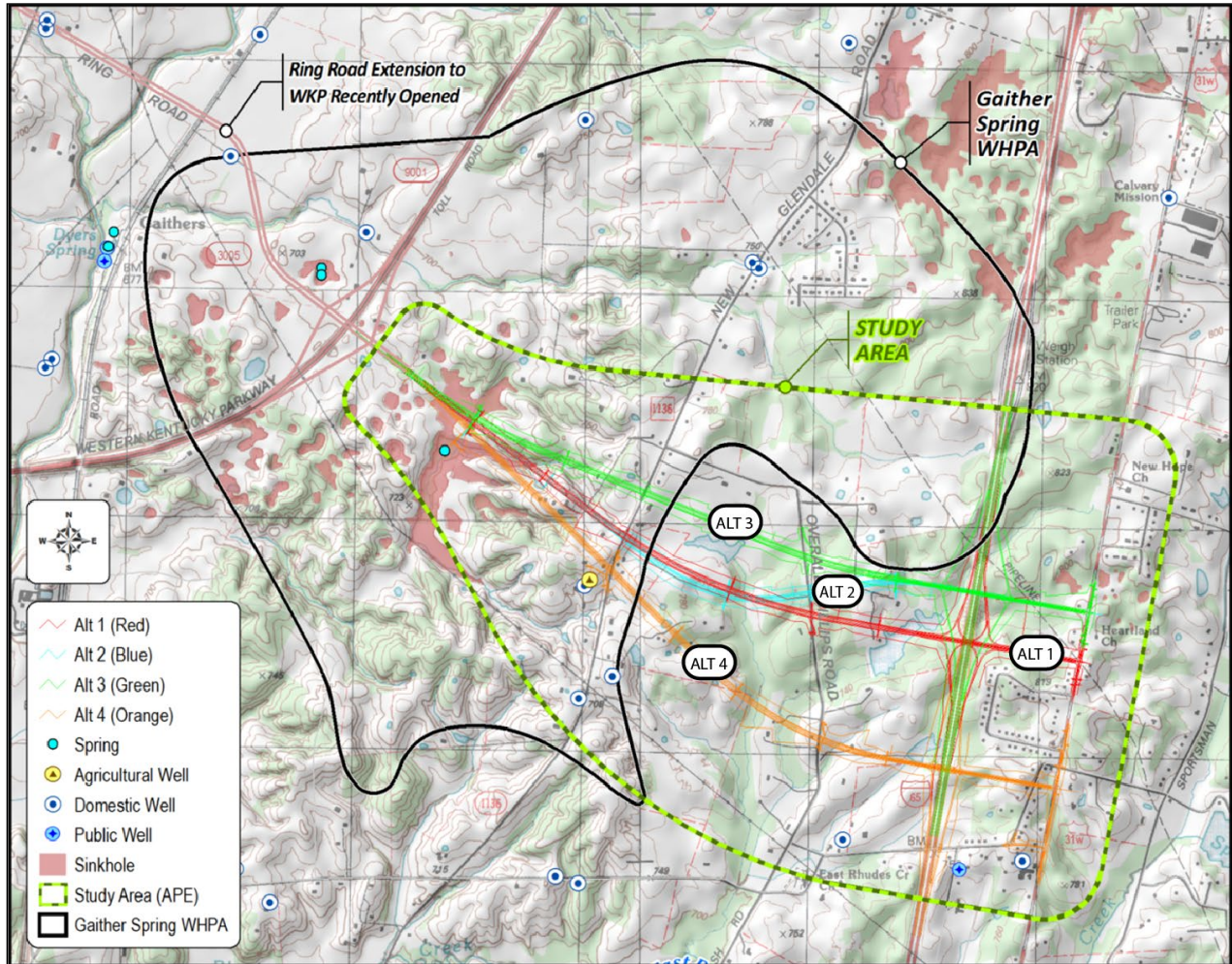


Figure 21. Project Area Water Supplies

STREAM IMPACTS. Construction activities and associated erosion would produce short- and long-term impacts to streams in the project corridor. Potential direct or reasonably foreseeable effects could include:

- The potential for sedimentation may increase as sediments are exposed, extracted, and moved during construction. Increased sedimentation can cause reduced stream capacity, which can increase flooding potential and smothering of aquatic habitat. Because fresh sediment and rock are exposed, levels may increase for parameters such as turbidity, conductivity, and suspended solids.

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- Short-term impacts from rechanneling due to bridge and/or culvert placement would include the direct disturbance of riparian and benthic (stream bottom) habitat. Artificial changes to the natural environment of a stream can produce long-term degradation and permanently altered hydrologic flows.
- Potential increases in the amount of impervious surface area following construction may contribute to greater and more rapid surface runoff to streams. Increased runoff during storm events may cause increased instream flows and velocities.
- New road surfaces would increase the potential for road salt, oil, antifreeze, and other nonpoint source pollutants to impact aquatic environments.
- Removal of any stream canopy may cause an increase in average stream temperatures during warmer months. Higher stream temperatures support lower concentrations of dissolved oxygen. Both factors have a negative impact on resident animal communities; in addition, more open canopies and the subsequent increase in sunlight promote excessive algal growths.
- If not revegetated, streambanks may be less stable and could erode and release sediment into stream channels. Increased sediment inputs reduce in-stream cover for fish and macroinvertebrates.
- Removal of riparian vegetation along streams may also reduce the amount of coarse woody debris (e.g., sticks and leaves) entering the stream systems. This material represents an energy source for organisms inhabiting stream systems.

The amount and type of anticipated stream impacts by alternative are presented in **Table 12** (p. 46).

Strict adherence to KYTC's *Standard Specifications* would minimize erosion and in-stream siltation. Guidance for sediment control is also provided in the FHWA *Best Management Practices (BMP) for Erosion and Sediment Control*. An erosion control plan should be developed for the project and approved by KYTC DEA prior to construction. The plan should include stringent erosion control methods, monitored periodically to ensure that they are functioning as planned. Similarly, the Kentucky Department of Fish and Wildlife Resources recommended numerous BMPs for all portions of the project corridor where streams are crossed.



Figure 22. Representative Project Area Streams

WETLAND IMPACTS. Construction would result in a direct impact to wetlands through filling, grading, and conversion to roadway. Wetland impacts by alternative are shown in [Table 12](#) (p. 57).

Avoidance measures should be used to avoid, reduce, or eliminate impacts to wetlands. Proper BMPs to reduce or eliminate runoff of contaminants should be used, including the proper use of silt fencing to protect wetlands from contamination and sedimentation.



Figure 23. Representative Project Area Wetlands

PERMITS. Impacts associated with implementing any alternative are anticipated to require a 404 Permit issued by USACE and a 401 Water Quality Certification and/or Permit to Construct along a Stream issued by KDOW. Any alternative would require permanent stream loss greater than 300 feet on a single stream; therefore, mitigation for stream impacts may be required. KYTC would also obtain a Kentucky Pollutant Discharge Elimination System (KPDES) KYR10 permit, which authorizes the discharge of pollutants in stormwater discharges associated with construction activities disturbing individually one acre or more.

4.6.2 THREATENED AND ENDANGERED SPECIES

In 2014, and again in 2023, an analysis was conducted for the proposed project to determine potential impacts to threatened and endangered species. The 2014 *Ecological Assessment* identified potential habitat types within the study area and estimated impacts for the four potential Build alternatives. In 2023, current federally listed species were reviewed and informal coordination with the U.S. Fish and Wildlife (USFWS) was completed (See [Appendix F](#)).

4.6.2.1 2014 ECOLOGICAL ASSESSMENT

No state or federally listed threatened/endangered (T/E) species was observed or captured during the 2014 field investigations, but coordination suggested several T/E species may be within in the impact area of the project (see [Section 4.6.2.2](#)). Suitable habitat for listed and non-listed species exists throughout the four alternative alignments. [Table 13](#) (p. 50) identifies T/E and other species potentially in the project area and the estimated acres of impacts to habitat with potential for use by those species. The estimates are based upon broad and generous habitat requirements of the individual species and should be used as a rough comparison of the alternatives.

Of the potential Build alternatives, [Alternative 3](#) has the potential to impact the most habitat that could be used by these species—about 1,280 acres. In contrast, [Alternative 4](#) would impact the least habitat—870 acres. [Alternative 1](#) would impact about 1,170 acres, and [Alternative 2](#) would impact 1,270 acres, almost as many acres as [Alternative 3](#).

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Table 13. Habitat Impacts (Estimated Acres) per Species

Species Potentially Affected by Habitat Impacts		Estimated Acres of Habitat Impact				
Scientific Name	Common Name	No-Build	Alt 1 (Red)	Alt 2 (Blue)	Alt 3 (Green) Preferred	Alt 4 (Orange)
<i>Accipiter striatus</i>	sharp-shinned hawk	0	63.6	70.4	71.1	43.8
<i>Ammodramas henslowii</i>	Henslow's sparrow	0	20.3	26.3	21.2	34.4
<i>Anas discors</i>	blue-winged teal	0	7.4	2.8	6.0	1.8
<i>Carex tetanica</i>	rigid sedge	0	0.09	0.02	0.02	0.4
<i>Castilleja coccinea</i>	scarlet Indian paintbrush	0	0.09	0.02	0.02	0.4
<i>Chondestes grammacus</i>	lark sparrow	0	20.3	26.3	21.2	34.4
<i>Cistothorus platensis</i>	sedge wren	0	20.4	26.3	21.2	34.8
<i>Clonophis kirtlandii</i>	Kirtland's snake	0	0.09	0.42	0.02	1.9
<i>Helianthemum bicknellii</i>	plains frostweed	0	63.8	70.0	71.1	42.3
<i>Helianthus eggertii</i>	Eggert's sunflower	0	63.8	70.0	71.1	42.3
<i>Hieracium longipilum</i>	hairy hawkweed	0	63.8	70.0	71.1	42.3
<i>Hyla versicolor</i>	gray tree frog	0	73.0	74.3	78.9	46.8
<i>Lophodytes cucullatus</i>	hooded merganser	0	7.4	2.8	6.0	1.8
<i>Myotis austroriparius</i>	southeastern bat	0	71.02	72.8	77.1	44.1
<i>Myotis grisescens</i>	gray bat	0	71.02	72.8	77.1	44.1
<i>Myotis sodalis</i>	Indiana bat	0	71.02	72.8	77.1	44.1
<i>Oenothera perennis</i>	small sundrops	0	63.8	70.0	71.1	42.3
<i>Ophissurus attenuatus longicaudus</i>	eastern slender glass lizard	0	83.9	96.7	92.3	78.2
<i>Pantherophis guttata</i>	corn snake	0	81.3	93.2	89.6	74.7
<i>Pontederia cordata</i>	pickerel-weed	0	1.8	1.8	1.8	0
<i>Ranunculus ambigens</i>	waterplantain spearwort	0	1.9	1.1	1.8	0.8
<i>Rhynchospora recognita</i>	globe beaked-rush	0	0.09	0.02	0.02	0.4
<i>Sagittaria graminea</i>	grassleaf arrowhead	0	0.09	0.02	0.02	0.4
<i>Satyrion Favonius Ontario</i>	northern oak hairstreak	0	63.8	70.0	71.1	42.3
<i>Silene regia</i>	royal catchfly	0	63.8	70.0	71.1	42.3
<i>Symphyotrichum pretense</i>	barrens silky aster	0	61.0	66.9	68.4	40.3
<i>Thamnophis sauritus sauritus</i>	eastern ribbon snake	0	4.6	4.6	4.5	4.7
<i>Thryomanes bewickii</i>	Bewick's wren	0	63.6	70.4	71.1	43.8
<i>Viola walteri</i>	Walter's violet	0	61.02	66.9	68.4	40.3
Total		0	1,168	1,270	1,282	870

Source of data: 2014 Ecological Assessment

4.6.2.2 2023 USFWS CONSULTATION

A 2025 search via the USFWS Information Planning and Consultation (IPaC) tool³³ revealed there are currently two federally listed species potentially in the project area—gray bats (*Myotis grisescens*), Indiana bats (*Myotis sodalist*), and whooping cranes (*Grus americana*); three proposed endangered species—tricolored bats (*Perimyotis subflavus*), eastern hellbenders (*Cryptobranchus alleganiensis alleganiensis*), and salamander mussels (*Simpsonaias ambigua*); and one proposed threatened species, the monarch butterfly (*Danaus plexippus*). Of these, only the gray and Indiana bats were referenced in the 2014 report.

Whooping Crane, Tricolored Bats, Eastern Hellbender, Salamander Mussel, and Monarch Butterfly.

While the whooping crane is listed as an endangered species, its status is Experimental Population, Non-Essential in Kentucky, meaning it is not essential for the continued existence of the species. In accordance with 50 CFR 17, since the project is not in a National Wildlife Refuge or National Park, the crane is treated as a species proposed for listing.³⁴ Species proposed for listing are not protected by the “take” prohibitions of Section 9 of the Endangered Species Act of 1973 (ESA).³⁵ The project alternatives would not be expected to jeopardize the continued existence of the whooping crane, tricolored bat, eastern hellbender, salamander mussel, or monarch butterfly. Thus, there are no further requirements for these species.

Indiana and Gray Bats. The construction of the proposed project would result in both short-term and long-term loss of productivity within the area’s ecosystem. Disruption to habitats, even those as disturbed as agricultural and residential lands would result in a disruption to the productivity of these areas where large amounts of biomass are generated. Woodlots within the project area, although previously disturbed, are generating leaf litter that is accumulating into productive, nutrient rich forest floor topsoil. Disruption to the riparian corridor could cause a decrease of diversity at the species level.

Impacts to stream productivity could also be a long-term loss. Degradation of water quality by sedimentation or heavy metals contamination could have detrimental impacts on the primary productivity of these streams. Adverse impacts could include the loss of any organism that depends on these streams for water, food, or habitat.

Due to the lack of known swarming habitat for Indiana bats, and lack of known occurrence of gray bats in the project corridor, a presence/absence survey was not conducted. No caves were found in the project area, and landowners had no knowledge of any caves within the project area. However, the project is in a karst area and there may be potential for portals or rock shelters near the project. No winter habitat for Indiana bats or gray bats was observed.

All practicable resources should be used to minimize impacts to T/ES habitats. In accordance with the final FHWA, KYTC, and USFWS September 27, 2019, *Programmatic Biological Assessment* and April 17, 2020

³³ <https://ipac.ecosphere.fws.gov/>

³⁴ <https://www.govinfo.gov/content/pkg/FR-2001-06-26/pdf/01-15791.pdf#page=1>

³⁵ <https://ipac.ecosphere.fws.gov/status/list>

Programmatic Biological Opinion, and December 13, 2024 update,³⁶ BMPs should be applied at stream crossings to minimize erosion and sedimentation. Implementation of a well-developed erosion control plan, as well as the utilization of diversion channels and silt barriers, temporary seeding and mulching of cut and fill slopes, and limiting in-stream activity would minimize adverse impacts.

Mitigation for adverse impacts to forested bat habitat should be addressed by adhering to the current *Indiana Bat and Gray Bat Programmatic Agreement* between KYTC, FHWA, and the USFWS and/or the *Range Wide Consultation and Conservation Strategy*. This typically includes committing to tree clearing restrictions (at least no clearing May 15 – July 31) and payment into the Imperiled Bat Conservation Fund (IBCF) to mitigate habitat loss through tree clearing impacts. Tree clearing estimates for all Build alternatives are provided in **Table 13** (p. 50).

4.7 SECTION 106 CULTURAL HISTORIC & ARCHAEOLOGICAL RESOURCES

The 1966 *National Historic Preservation Act*, as amended, requires federal agencies take into account the effects their activities and programs have on important historic properties 50 years of age and older. Important historic properties are those that are listed in or eligible for the National Register of Historic Places (NRHP). The NRHP lists districts, sites, buildings, structures, and objects administered by the National Park Service, which has developed national evaluation criteria to guide the selection of properties determined eligible for listing. The quality of significance in American history, architecture, archaeology, engineering, or culture may be present in resources that possess integrity of location, design, setting, materials, workmanship, feeling, and association with one or more of the following four criteria, defined in 36 CFR 60.4:

- A. Events that have made a significant contribution to the broad patterns of American history on a local, state, and/or national level.
- B. Lives of persons significant in the history of the city, state, and/or the United States.
- C. Distinctive characteristics of a type, period, or method of construction, or the work of a master, or high artistic values, or a significant and distinguishable entity whose components may lack individual distinction.
- D. Information important in prehistory or history.

An assessment of effects was conducted according to the criteria of adverse effect (36 CFR 800.5). Per regulations from the Advisory Council on Historic Preservation (ACHP), there are three levels of effects findings: No Effect, No Adverse Effect, and Adverse Effect. An Adverse Effect is an “alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register of Historic Places” such that a resource’s location, design, setting, materials, workmanship, feeling, or association is diminished. This can include both direct effects (caused by the action and occurring at the same time and place) and indirect effects (reasonably foreseeable effects caused by the project but occurring later in time or farther removed). A No Adverse Effect determination is found when the

³⁶ <https://www.fws.gov/sites/default/files/documents/2024-12/programmatic-biological-conference-opinion-for-transportation-projects-in-range-of-bats-december-2024.pdf>

undertaking's effects do not meet the criteria of the preceding sentences on adverse effects, or the undertaking is modified or conditions are imposed to avoid adverse effects. No Effect is found when there are no historic properties present or there are historic properties present but the undertaking would have no impact on them.

This section outlines the work undertaken to date to satisfy the requirements of this process. Historic resources and potential impacts by project Build alternatives were identified to inform project team decisions. These efforts have been coordinated with the State Historic Preservation Officer (SHPO) and formal documentation is attached in **Appendix G**. Opportunities to engage in the consultation process was provided through various mean. For both the June 4, 2014 and September 22, 2014 public meetings the advertisements included Section 106 Consulting Party information and a Section 106 booth was provided at each meeting. In additional a letter was mailed the County Judge/Executive to invite him to serve as a by-right Consulting Party. The project has also been advertised on the KYTC DEA Consulting Party projects webpage. No individuals have indicated a desire to participate to date. Since the project is not anticipated to have any adverse impacts to historic properties of religious or cultural significance to Indian Tribes, formal consultation through the ACHP did not occur.

4.7.1 CULTURAL HISTORIC INVESTIGATIONS ON ABOVEGROUND RESOURCES

In 2014, and again in 2023, an analysis was conducted for the proposed project to identify potential historic sites and determine potential impacts to them by the project.

4.7.1.1 2014 HISTORIC ELIGIBILITY AND EFFECTS

A *Cultural Historic Determination of Eligibility Survey* was completed for the project June 2014. The survey also considered the area of potential future expansion between I-65 and Lincoln Parkway (KY 61). The survey area encompassed all properties within 1,000 feet of the proposed alternatives. This survey effort documented 40 sites within the Area of Potential Effects (APE). Only one site was determined eligible for listing in the NRHP, Site 1 (Hagan House, HD-165, see **Figure 24**, p. 53).

The remaining 39 sites were determined not eligible for listing in the NRHP. The SHPO agreed with this determination, stating in a letter dated May 25, 2023, “..we **Concur** with your official effects determination of **No Historic Properties Effectuated.**” (**Appendix G**).



Figure 24. Facade of Historic Hagan House

A report documenting the *Assessment of Effect to Historic Properties* for the proposed project was completed in 2015. At that time, **Alternative 3** had been recommended as the **Preferred Alternative** and the assessment was focused on its potential impacts. None of the previously inaccessible areas would be directly impacted by this alternative. The only NRHP property is the Hagan House and all proposed alternatives are located south of the site. **Alternative 3** takes the northernmost route and is the closest to Site 1 (see **Figure 25**, p. 54); however, at its nearest point, it is over 500 feet away from the proposed NRHP boundary and 1,000 feet from the house, and is separated from the property by mature trees that would provide visual and auditory screening.

Further, the property already exists within an altered setting, with the WKP, a major 4-lane divided highway, to its west and a newer residential development to the east.

The components of setting most essential for understanding the significance of the site are found within the property itself, not within the larger viewshed. Any indirect effects related to construction would be minor and would not diminish the qualities of the property that make it eligible for listing in the NRHP. Thus, a determination of No Effect was made by the KY SHPO.

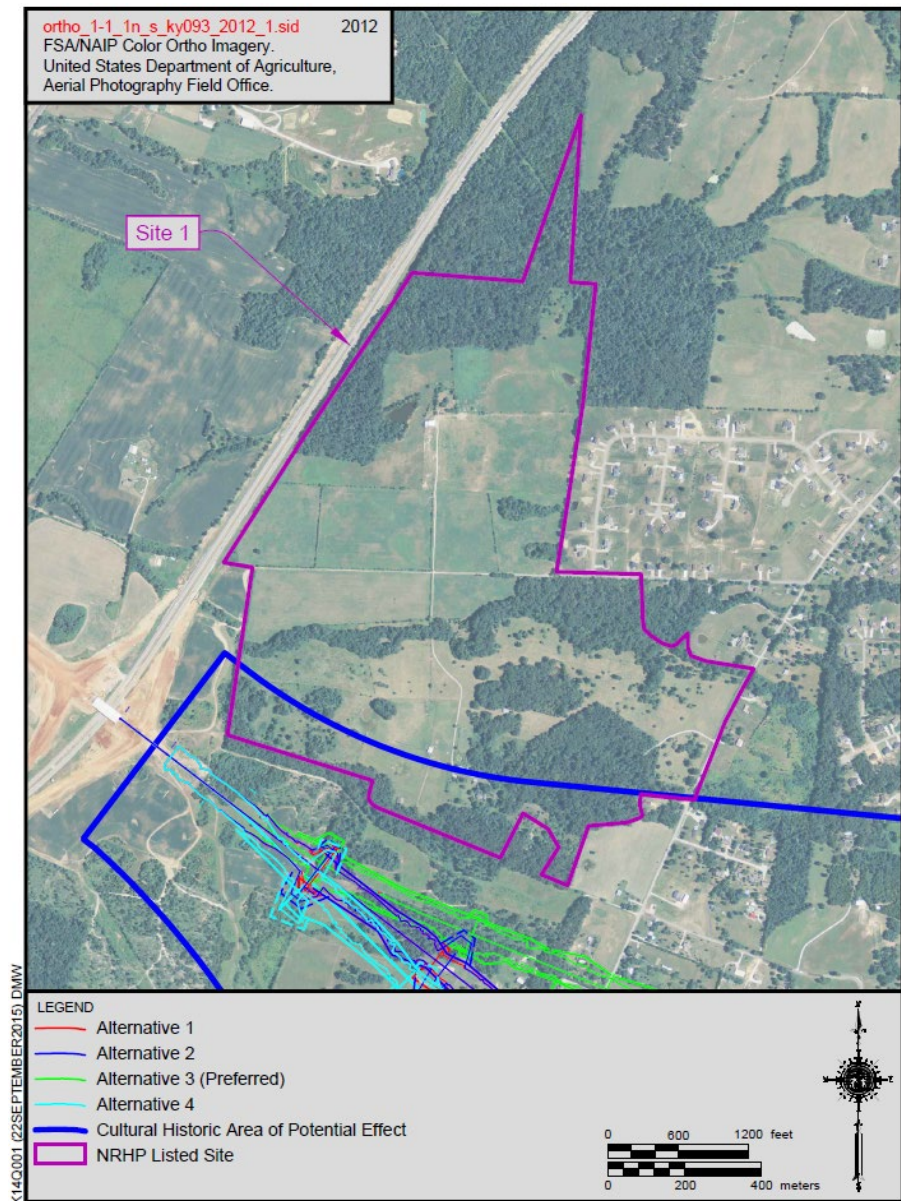


Figure 25. Site 1 NRHP Proposed Boundary Relative to Alternatives

4.7.1.2 2022/2023 HISTORIC ELIGIBILITY AND EFFECTS DETERMINATIONS

Because more than five years have passed since the 2015 survey, a new baseline survey was prepared in 2022/2023 to assess the potential for identifying additional historic properties and to complete or update survey forms as necessary. From May through August 2022, the new eligibility survey was conducted. The APE identified for the survey encompassed all four alternatives. Prior to conducting fieldwork, a Kentucky Heritage Council (KHC) records search was reviewed and 41 previously recorded resources were identified within the APE. The current field survey identified 156 resources within the APE, many of which are not considered eligible for inclusion in the NRHP. Recommendations for the remaining sites include:

- Site 1 (HD 165-Hagan House) – Eligible for inclusion in the NRHP under Criterion A and C; expand site boundary for the entire 321-acre parcel.
- Site 129 (HD 1273) – “Undetermined;” not accessible or visible during the survey.

The SHPO concurred with these recommendations in the attached letter dated January 30, 2023 ([Appendix G](#)).

For the reasons listed above in [Section 4.7.1.1](#), the project was determined to have No Effect to Site 1.

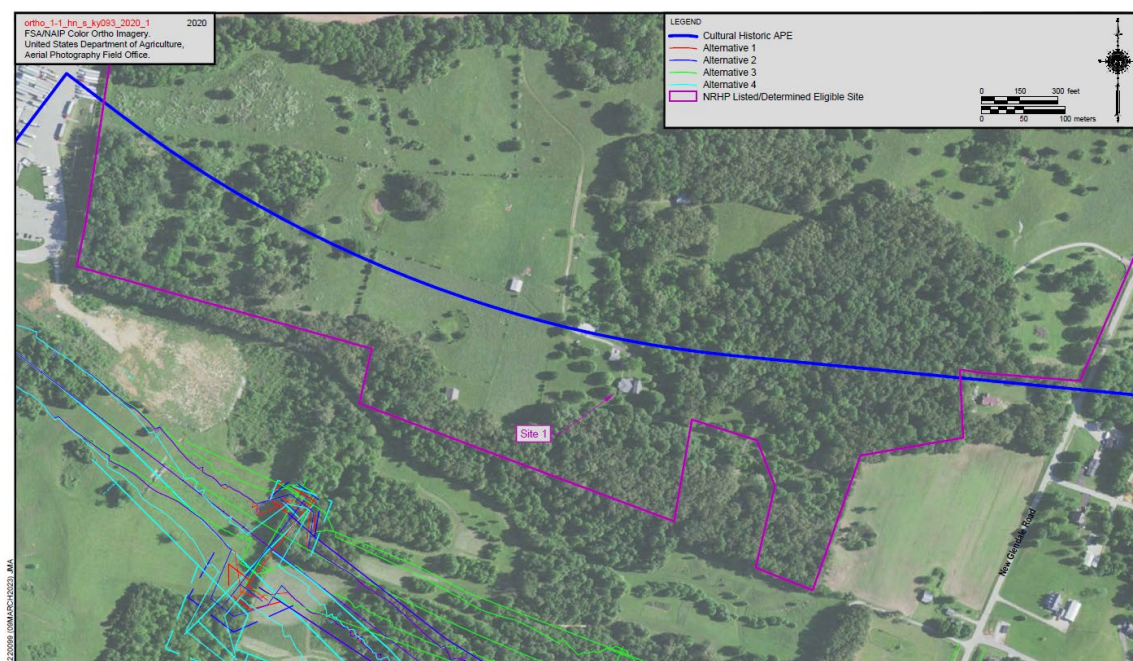


Figure 26. Current Site 1 NRHP Proposed Boundary Relative to Alternatives

Since Site 129 has an undetermined status, potential effects to the site were also assessed. All four Build alternatives are located southwest of the site. None of the alternatives would directly or indirectly impact the property. **Alternative 3** takes the northernmost route and terminates at its intersection with US 31W approximately 2,700 feet southwest of the residence. If determined eligible for inclusion in the NRHP at a later date, **Alternative 3** would result in no direct or indirect effects to Site 129 because of the existing vegetation buffers, distances from the proposed project’s Build alternatives, and topography.

A determination of No Effect was recommended for all alternatives. The SHPO agreed with this determination in attached letter dated 05/25/2023 ([Appendix G](#)).

Because Site 1 is eligible for listing in the NRHP, it would also be considered protected under Section 4(f) of the *Department of Transportation Act of 1966* (23 CFR 774), if it was determined the project would have a “use” of and an Adverse Effect to the site. However, no land from that property would be permanently incorporated into the transportation project, there would be no temporary occupancy of the land that would be adverse in terms of the statute’s preservation purpose, and as described above, there is no constructive use³⁷ or Adverse Effect; thus, the project would have “no use” of a Section 4(f) protected property and Section 4(f) does not apply.

4.7.2 ARCHAEOLOGICAL RESOURCES

In 2014, and again in 2023, analyses were conducted for the proposed project to identify potential archaeological sites and determine potential impacts to them by the project. An *Archaeological Overview* was completed for the study area in 2014 to identify known or potential archeological sites. A Phase I archaeological survey was completed in 2016 to assess the recommended **Preferred Alternative’s** potential effects. In 2023, another Phase I survey was completed to assess potential effects due to slight design modifications to the project footprint, and to assess parcels unsurveyed during the 2014 effort.

4.7.2.1 2014 ARCHAEOLOGICAL OVERVIEW

An *Archaeological Overview* was completed in 2014 to determine if the study area had been previously surveyed for archaeological resources, identify any previously recorded archaeological sites within the study area, provide information concerning what archaeological resources could be expected within the study area, and provide a context for any archaeological resources recovered within the project area. The NRHP records indicated that no archaeological sites listed on the NRHP were within either the study area or a 2-kilometer radius of the study area. The review of previous professional survey reports, archaeological site data, historic maps, and soil data provided basic information on the types of archaeological resources that would be likely to occur within the study area, only a small portion of which had been previously surveyed. Twenty-two archaeological sites were recorded within a 2-kilometer radius of the study area. Considering several prehistoric sites were recorded near the study area, and the fact that most of the study area is open, agricultural fields, the potential for encountering prehistoric sites was recommended to be considered as moderate to high.

4.7.2.2 2016 PHASE 1 ARCHAEOLOGY SURVEY

A Phase I archaeological survey for the recommended **Preferred Alternative** was completed February 2016. The APE identified for the survey encompassed approximately 162.4 acres. However, 9.6 acres could not be surveyed due to the lack of landowner permission. No previously identified sites were located within the APE. Field methods included intensive pedestrian survey, supplemented by screened shovel

³⁷ Constructive use would mean that the project’s proximity impacts are so severe that the protected activities, features, or attributes of the property would be substantially impaired.

testing. Two previously unrecorded archaeological sites and two prehistoric isolated finds were discovered. One of the sites appears to potentially extend beyond the project area and was not evaluated. If limits change, additional areas may need to be assessed. Due to their limited research potential, no further work was recommended and both sites were considered ineligible for listing in the NRHP.

FHWA and the SHPO entered into a *Memorandum of Agreement* (MOA) on March 30, 2016, to conduct a Phase I archaeological survey for all unsurveyed parcels where access was denied. This effort was to be completed prior to the initiation of any ground disturbing activities, such as utility relocation or construction.

4.7.2.3 2022/2023 PHASE 1 ARCHAEOLOGY SURVEY

Previously unsurveyed areas and additional areas added via slight design modifications (collectively adding up to about 22 acres) since the original 2016 effort were reviewed in 2023. Nearly all of the area (21.29 acres) was subjected to intensive pedestrian survey supplemented with screened shovel testing. One parcel (0.71 acres) could not be surveyed because no contact could be made with the landowner. SHPO agreed with deferring the archaeological survey on the inaccessible parcel until it has been acquired during the right-of-way phase by completing a phased identification of historic properties in the attached letter dated March 16, 2023 ([Appendix G](#)). No additional archaeology resources were found during the 2022 effort.

As a result of the survey, one previously unrecorded archaeological site and one isolated find were recorded. The portion of the site within the project area was recommended as not eligible for inclusion in the NRHP and no further work was recommended. It was noted that the site may extend beyond the project boundary to the east and that portion could not be assessed. If project plans change to potentially affect that area, then further survey may be necessary. The isolated find was not a site and therefore was also determined to be ineligible for inclusion in the NRHP. The SHPO agreed with both the 2014 and 2022 findings in the attached letter dated April 26, 2023 ([Appendix G](#)).

4.8 HAZARDOUS MATERIALS

A *Hazardous Materials / UST Assessment Phase I* baseline report was prepared in September 2014 to evaluate the site's history and current conditions to identify potential environmental conditions indicative of releases and threatened releases of hazardous substances, petroleum products or other contaminants, and other environmental concerns.

The Environmental Data Resources, Inc., (EDR) database search reported two hazardous waste sites (Sites 1 and 2). Further investigation identified four more potentially hazardous areas. Suspected contaminated sites and recommendations are summarized in [Table 14](#) (p. 58). During a field review of the study area in 2023, no changes in the identification of land uses that could contain hazardous materials were observed.

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Table 14. List of Potential HAZMAT Sites

Site #	Site	Suspected Contaminant or Environmental Concern	Alternative(s), Potential Risk, and Mitigation Required
1	2418 Gaither Station Road Private Residence	Marked as safeguard property by EDR. Previously had meth lab, closed and cleaned in 2012.	None
2	375 Mud-Splash Road Gates and Greenwell	Drum site marked by EDR. The property was closed in 2012.	None
3	3273 South Dixie Avenue Frankie's Auto Center	Possibility of hazardous waste on the premises.	None
4	195 Budco Lane Edward's Recycling Facility	Property contains mass amounts of recyclable materials and other waste. Possibility of hazardous waste and run-off from the site.	None
5	64 West Rhudes Creek Road Private Residence & Workshop	Single family home with on-site welding facility. There may be hazardous materials or other chemicals in the workshop.	Alternative 4 (Orange) – Phase II is recommended if this alternative is advanced. Mitigation would include removal and proper disposal of contaminants.



Figure 27. Potential HAZMAT Sites

Additional environmental concerns found throughout the project area not identified above, but may require investigation should the project impact these types of sites, which include:

- Multiple power pole mounted electrical transformers are suspect to contain polychlorinated biphenyls (PCBs'). Any contaminated sites would be the responsibility of the utility company to properly handle any hazardous materials and relocate the utilities. Thus, there is no risk to the proposed roadway project, nor the need to identify mitigation measures.
- Subject farms handle and store pesticides/herbicides on site for farming operations.

No updates to data from the 2014 report were warranted, as the land uses in the study area have not changed.

4.9 VIEWSHED & AESTHETIC RESOURCES

“Aesthetics” refer to the visual qualities and scenic nature of an area. Studies show there can be individual and regional preferences over what qualifies as “scenic.” The project corridor encompasses primarily rural environments and presents typical viewsheds. Within the project area, typical aesthetic elements associated with corresponding land uses (agricultural fields and rural residential, with limited commercial) are present, as demonstrated in figures and photographs presented in earlier chapters. No visually sensitive resources were identified.

Concerning the historic Hagan House, the components of setting most essential for understanding the significance of the site are found within the property itself, not within the larger viewshed. Nonetheless, at its nearest point, the proposed centerline would be approximately 400 feet away from the proposed NRHP boundary and separated from the property by mature trees that would provide visual and auditory screening for the property. Further, the property already exists within an altered setting—the WKP, a major 4-lane divided highway, is to its west, and a newer residential development is to the east along Colyers Lane and KY 1136. Thus, any indirect effects related to construction would be minor and would not diminish the qualities of the property that make it eligible for listing in the NRHP and expanded NRHP boundary. No direct or indirect effects would be anticipated because of the existing vegetation buffers, distances from the proposed project’s alternatives, and topography.

While the viewsheds of all alternatives have typical aesthetic qualities of a rural Kentucky landscape, none present unique aesthetic features or viewsheds that would be potentially impacted by the project.

4.10 POTENTIAL CONSTRUCTION IMPACTS

The proposed project is anticipated to produce a beneficial short-term economic impact by stimulating the local economy in terms of construction-related jobs, sales, income, government revenue and expenditures, and other variables. Furthermore, it could be expected to produce a beneficial long-term impact by providing the necessary infrastructure for efficient and safe mobility.

Highway construction activities would also have temporary air, water quality, noise, and traffic flow, and associated impacts within the project area. Steps that would be taken to minimize or avoid these

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temporary impacts could include, but not be limited to, implementing KYTC's *Standard Specifications for Road and Bridge Construction (Standard Specifications)*, as directed by the KYTC project manager, and through the use of Best Management Practices (BMPs). Some examples of potential impacts and associated practices include:

- The air quality impact would be temporary, and primarily in the form of diesel-powered construction equipment emissions and dust from exposed earth. Air pollution associated with airborne particle creation would be effectively controlled through the use of watering or the application of calcium chloride in accordance with the KYTC's *Standard Specifications*, as directed by the KYTC project manager.
- Water quality impacts resulting from erosion and sedimentation, and noise and vibration impacts originating from heavy equipment movement and other construction activities would be temporary and controlled in accordance with KYTC's *Standard Specifications*, as directed by the KYTC project manager, and by using BMPs. Structure and debris removal would be performed in accordance with local, state, and federal regulating agencies permitting the operation. Contractors would be required to obtain the necessary permits related to their construction practices such as for construction of temporary roads or waste and borrow pits, if necessary.
- Noise and vibration impacts would originate from heavy equipment movement, blasting, and construction activities such as pile driving and vibratory compaction of embankments. Noise control measures would include those contained in KYTC's *Standard Specifications*.
- Construction activities, including traffic maintenance and construction sequencing, would be planned and scheduled to minimize traffic delays. Signs would be used as appropriate to provide notice of road closures and other pertinent information to the traveling public. The local news media would be notified in advance of road closings and other construction-related activities that could excessively inconvenience the local residents, allowing motorists to plan travel routes in advance. Property access would be maintained to the maximum extent practical through controlled construction scheduling. Traffic delays would be controlled to the maximum extent possible where many construction operations are in progress simultaneously. The contractor would be required to maintain one lane of traffic in each direction at all times, and to comply with BMPs.
- Structure and debris removal would be performed in accordance with local and state regulatory agencies permitting the operation. The contractor would be responsible for pollution control methods in borrow pits, other materials pits, and areas used for waste materials disposal from the proposed project.
- Temporary erosion control features, as specified in KYTC's *Standard Specifications*, would consist of measures that could include the temporary placement of sod, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings, and berms.

These steps would be applied to both the construction of the roadway and construction-related activity at any of the borrow sites needed for Alternatives 1, 2, 3, or 4. All Build alternatives would have temporary construction impacts.

5. PUBLIC & AGENCY INVOLVEMENT

A key component in the development of a transportation project includes the involvement of the local, state, and federal agencies; elected officials and area planners; and members of the community to inform project team decisions. The communication process includes both gathering information from stakeholders and providing information in a timely manner. This coordination is a dynamic process that would continue throughout the life of the project. Efforts that have occurred to date are summarized herein and attached in [Appendix H](#).

Consultation with appropriate resource agencies has occurred throughout the NEPA process to date, as described in the previous chapters and will continue until a final decision is made. Previous coordination has occurred with the Kentucky SHPO, USFWS, USDA, USGS, and several other local and regional agencies.

Table 15, p. 61 provides a chronological summary of the key public and local official/stakeholder engagement efforts to-date. **Table 16**, p. 62 provides a summary of public comments received to date, with responses. The Comment Number correlate to the Index in [Appendix H](#).

Further details on potential future engagement efforts are discussed in [Section 6.2](#).

Table 15. Chronology of Key Engagement Efforts

June 7, 2013	A Stakeholders Meeting was held with officials from Elizabethtown, Hardin County, and the Elizabethtown-Radcliff MPO to review the project history and existing conditions; and obtain input on the purpose, need, and goals of the project.
November 14, 2013	A Public Informational Meeting was held to inform the public of the planned project and to obtain input on potential alignment location options, potential impacts and benefits, and known environmental constraints. Approximately 150 citizens attended, and 14 commenters drew possible alignment options on the map provided in the meeting handout materials. Each alignment drawn was within the northern half of the study area (north of W. Rhudes Creek Road).
June 24, 2014	A Public Information Meeting was held to present four Build alternative alignments and receive input. Information concerning Section 106 of the <i>National Historic Preservation Act</i> was available for anyone interested in requesting to be a Consulting Party to this process. Over 170 people attended, and 77 written comments were received. Alternative 3 received the least support, and feedback for the remaining three Build alternatives was nearly equal.
September 22, 2014	A Public Information Meeting was held to present the recommended alignment— Alternative 3 —to the public. About 170 people attended and 20 comments were received.
December 14, 2015	A Right-of-Way Informational Meeting was held to present the right-of-way impacts of the preferred alignment to property owners directly affected by the project. Approximately 50 people attended.
June 15-16, 2022	Meetings with officials from the Elizabethtown (6/15) and Hardin County (6/16) Planning and Zoning Departments were held to obtain inputs on socioeconomic

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growth and land use changes anticipated in the area to be used in the travel demand model for forecasting traffic.

- July 14, 2022** A Local Official and Stakeholder Meeting was held to inform them of the restart of this project, as well as other highway projects planned to address traffic needs generated by the BOSK Ford plant.
- August 10, 2022** A meeting was held with the Radcliff/Elizabethtown MPO Transportation Policy Committee to update them on the project status and inform them of the upcoming public meeting.
- September 15, 2022** A Local Officials and Stakeholders Meeting (from 3:00 to 4:00 PM) and then a Public Information Meeting (5:00 to 7:00 PM) was held to present all four Build and the No-Build options. Over 250 community members attended, and about 60 written comment forms, representing 68 individuals, were received. Build **Alternative 3** received the majority (nearly 70%) of the support.
- February 27, 2023** A coordination meeting was held with representatives from the Hardin County Water District #2 and KDOW to discuss the Gaither Station Wellhead Protection Area and KDOW's Source Water Area Protection Plan.
- March 1, 2023** A coordination meeting was USGS to review comments and reports related to karst areas and highway project.

Table 16: Summary of Public Comments Received to Date (Arranged Alphabetically by Subject)

Comment No.	Subject
16.6, 17.6	Air Quality
Comment:	Air quality would be significantly adversely affected by the 4-198 project.
Response:	See Environmental Assessment (EA) Section 4.4, Air Quality.
1.6	Context Sensitive Design
Comment:	Context sensitive design and context sensitive solutions are essential to the road planning process.
Response:	The proposed design of the road has been developed to align with the area's context while also meeting current and future mobility needs, KYTC's Complete Streets Policy, and current engineering and safety criteria. The design would match the existing four-lane divided KY 3005 by including a grass median (see Executive Summary Figure ES-2). The project was developed consistent with the context sensitive solutions philosophy of first learning what is important to the people who live near the project and planning for the use of the facility. In the early stages of the project development process, an initial public meeting was held on November 14, 2013 where participants were asked to identify areas of concern and draw possible alignment options. Later in June 2022, the project team met with officials from the Elizabethtown and Hardin County Planning and Zoning Departments to obtain input on socioeconomic growth and planned land use changes. Hardin County Planning and Development Commission future land use map indicates the western portion of the study area east to KY 1136 is planned for industrial use and continuing east is planned to be an urban area.
7.1, 19.1, 25.2	Coordination with U.S. Federal Emergency Management Agency (FEMA)
Comment:	"The FEMA stated there is no evidence of any coordination regarding a culvert at 37 39' 50.27" N and 85 53' 57.80" W."

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Response:	This culvert is located on the section built between US 62 and the WKP. See similar response to Comment 5.2, the section under consideration in this EA has independent utility from the section that has already been constructed.
1.4, 6.2, 16.2, 17.1, 20.1, 21.1, 22.1, 25.1, 26.3	Coordination with U.S. Geological Survey (USGS)
Comment:	The KY 3005 Extension will need to coordinate with the USGS special expertise in the Earth Sciences. U.S. Geological Survey shows the WHPA is a sensitive karst aquifer.
Response:	The USGS stated in correspondence dated June 8, 2023, to KYTC "this does not fall under our purview but appreciate you keeping us on the list." (See EA Appendix H, pp. 12-14). The FHWA met with the USGS on February 28, 2024. The USGS provided information regarding the WHPA, but when informed of the minimization and mitigation efforts to protect the groundwater, they did not express a concern about the project. The USGS noted since they are not a regulatory agency, recommendations could not be provided. Instead, applicable studies in the area were provided for the project team to consider. The USGS is a participating agency in the EA process and will be invited to review and comment on this Environmental Assessment and provide additional scientific research regarding karstic areas and roadway projects, as applicable.
11.5, 12.2, 12.10, 14.5, 27.5	Floodplain and USACE Permitting
Comment:	The KYTC did not comply with FEMA floodplain policies, Section 4(f), or USACE permitting conditions on KYTC Item No 4-7010.
Response:	This comment applies to the section of independent utility extending from US 62 to the WKP, which has been open to traffic since 2013. It does not apply to the section of independent utility that is the subject of this EA, Item 4-198, which is from the WKP to I-65 and US 31W.
1.3, 4.2, 5.5, 9.4, 10.2, 11.4, 12.1, 12.9, 13.3, 14.4, 15.2, 16.1, 16.4, 17.2, 17.4, 20.2, 20.3, 20.7, 23.3, 24.3, 26.4, 27.4	Gaither Spring WHPA Impact and Karst Topography
Comment:	The KY 3005 Extension will need to address the impacts to the Gaither Spring Wellhead Protection Area and the risk of karst collapses. The KYTC has not considered alternatives to avoid the limited area containing the "Gaither Spring" (also known as "Dyers Spring") Wellhead Protection Area and the karst collapse hazards. There are three sinkholes that would be modified by the project to receive stormwater runoff that would to the Gaither Spring WHPA. The KYTC has ignored publications of the US Government experts about how sensitive the karst aquifer of Gaither Spring WHPA is to contaminations. The KYTC has also ignored the City of Elizabethtown's Zoning Ordinance about karstic areas. The project would cause significant impact to karst hazards.
Response:	The KYTC held a meeting with Hardin County Water District #2, the agency overseeing the Gaither Spring Wellhead Protection Area (WHPA), on February 27, 2023 (refer to EA Section 6, Conclusion, Mitigations & Commitments, Table 15 , p. 61, Chronology of Key Engagement Efforts, and EA Appendix H). Together, they devised strategies to minimize and mitigate potential impacts to the WHPA. The KYTC has committed to implementing enhanced erosion control best management practices (BMPs) during construction and long-term measures within the WHPA to retain runoff from the road (refer to EA Section 6.5 Wellhead Protection Area and see response to comment 5.5).

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	Overall, despite already being intersected by various transportation corridors such as the CSX railroad, the Western Kentucky Parkway (WKP), Gaither Station Road, KY 3005, KY 1136, I-65, and numerous local roads, the WHPA has shown no adverse impacts to water quality or karst collapse. The same commenter noted in a letter dated February 23, 2017, on page 33 of 137: "The excellent raw water quality of the Gather Spring WHPA proven by the lab analysis for ADGWA #9000-1137 allows it to serve as a source of underground public drinking water." To minimize possible adverse effects to the water quality, the KYTC has committed to constructing spill detention basins alongside the road within the Wellhead Protection Area/Source Water Assessment and Protection Program (WHPA/SWAPP) zone. These basins are designed to hold up to 10,000 gallons of spillage, providing response teams with adequate time to contain the spill before it infiltrates the groundwater system. Similar basins have been successfully implemented on KY 313 in Hardin/Meade counties and along I-65 in karstic areas in and near Edmonson County. Additionally, enhanced best management practices will be used to minimize runoff during construction. The KYTC and FHWA have met with the USGS and the Hardin County Water District #2, and obtained available research about the Gaither Spring WHPA, including dye tracing results. The same research papers the commentor cited were provided to the KYTC by these agencies. The research does not appear to support the issue raised that roadways cause sinkholes to collapse. The report most cited by the commentor, <i>"Development of Sinkholes Resulting from Man's Activities in the Eastern United States,"</i>³⁸ states on page 40: "... Induced sinkholes resulting from water activities are predictable in some instances, but only in the sense that they will occur within a particular area.... The most predictable induced development is that resulting from dewatering by wells, quarries, and mines." There are a few wells, but no quarries or mines in the study area. KYTC has design policies and procedures for managing construction in karst area since, as noted in the KYTC Design Manual Section DR 202-14³⁹, an estimated 55% of Kentucky is underlain by rock that have the potential for karst development. These policies and procedures will be followed during construction. Regarding long-term land use changes in the area due to anticipated population and economic growth, officials from the Hardin County Water District #2 are committed to working with the Hardin County Planning and Development Commission on updating Hardin County's Comprehensive Plan. That effort will aim to promote sustainable and appropriate development in recharge areas (refer to EA Section 6.5 Wellhead Protection Area).
1.8, 5.6, 6.3, 9.1, 10.3, 11.3, 12.8, 14.5, 15.3, 16.5, 17.5, 20.4, 21.2, 22.2, 23.2, 24.2, 26.5, 27.2	Historic Property Impact
Comment:	There are three historic houses within the Area of Potential Effect: Historic Hagan House/Farm, Hazel Hill House and the Fannie Harrison Farm. The KY 3005 Extension will need to address adverse impacts to 4(f) properties and avoid impacts to them.

³⁸ <https://pubs.usgs.gov/circ/1987/0968/report.pdf>

³⁹ <https://transportation.ky.gov/Highway-Design/Drainage%20Manual/DR%20200%20Stormwater%20and%20Floodplain%20Management.pdf>

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	The KY SHPO expressed concern that the segment between US 62 and the WKP would have direct adverse effect to one historic site, and therefore an EIS is required. KYTC did not comply with Section 4(f) when it constructed the initial segment of the Ring Road project, between US 62 and the WKP. And because KYTC did not comply with Section 4(f) for the western section, it cannot comply with Section 4(f) for the eastern section. The KYTC's use of the 1000-foot APE is not large enough
Response:	Full compliance with Section 4(f) and Section 106 requirements regarding historic properties has been achieved, with coordination and approvals obtained from the Kentucky State Historic Preservation Office (KY SHPO). This thorough process has resulted in a determination of No Effect for all eligible historic resources within the Area of Potential Effect (APE) for the proposed project. Since no historic properties would be used by the project, there is no Section 4(f) involvement. There are no other Section 4(f) resources, such as publicly owned parks or wildlife refuges, present within the study area (see EA Section 4.7 Section 106 Cultural Historic & Archaeological Resources). The APE was developed with input from the SHPO's office, following policy for developing an APE and was accepted by the SHPO in a letter dated May 25, 2003. See Appendix G of the EA. The section between US 62 and the WKP is a section of independent utility that has been construction and in operation since 2013. Thus, it is not being addressed in the NEPA process for Item 4-198, between the WKP and I-65 and US 31W. See response to comments 5.2 and 13.5. Consequently, compliance with Section 4(f) is independent as well, and since the section of independent utility between US 60 and the WKP was built with state funds Section 4(f) (23 CFR 774) would not apply--it only applies to US DOT funded projects. For the 4-198 project there are no use of any Section 4(f) properties. Only one of those three sites is within the proposed project APE--the Hagan House/Farm, which would be avoided by all of the build alternatives, including the Preferred Alternative 3. Following the completion of the Section 106 process and careful consideration of all alternatives and historic sites within the Area of Potential Effect, the Kentucky State Historic Preservation Office (KY SHPO) concurred with a finding of No Effect to the project on May 25, 2023. The survey documented a total of 156 resources within the APE. This finding serves as an update from the previous determination made on October 29, 2015, which reached the same conclusion. The update was conducted to account for the passage of time. The section between US 62 and the WKP has been built (see response to comments 5.2 and 13.5). Regarding the comment for an EIS, see response to comment 1.1. The KYTC has elevated the interim NEPA document for the 4-198 project to an Environmental Assessment, from a Categorical Exclusion.
16.7, 17.7, 20.5, 27.1	Induced Land Use Changes
Comment:	The proposed Ring Road Extension would induce land use changes
Response:	The local planning agencies have comprehensive plans to manage growth. See response to comments 1.5, 1.6, 5.5, and 11.1. See EA Section 4.1.3 Impacts to Land Use.
1.5, 23.1, 24.1, 26.8, 27.3	Local Land Use Plans
Comment:	The KY 3005 Extension will need to address the Goals of Local Land Use Plans. [The project] is not consistent with the Goals and Objectives of the Hardin County Comprehensive

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	Development Guide 2024, citing Objective 6.1 Recognizing historic sites, 6.6 Preserving natural features and agricultural landscapes, and Goal 4 encourage development that is sensitive to the environment....
Response:	The planning and documentation for the proposed project has involved the review and incorporation of the Land Use Plans of both the City of Elizabethtown and Hardin County (see EA Section 4.1, Land Use). These plans are referenced herein. Meetings with officials from both agencies have been conducted. Both agencies support the project, have included it in their long-range plans, and it aligns with their respective planning goals and objectives. The 2024 Draft Comprehensive Plan does include the cited Goals and Objective; however, it also states on page 63: "The extension of Ring Road (KY 3005) from the (WKP) to I-65 is currently underway and will provide a new access to this planning area. This new connection will enhance connectivity to the planning area. The new interchange will also increase accessibility to the planning area, thereby increasing the viability of commercial development." The 2024 Draft Plan also identifies the area along Ring Road between US 62 and the WKP as the "logical expansion of the T.J. Patterson Industrial Park (p. 159).
11.1, 19.2	Metropolitan Planning Organization (MPO) Process
Comment:	The MPO should not include the project in the Metropolitan Transportation Plan (MTP) or the Transportation Improvement Plan (TIP) because it would attract industrial traffic and be hazardous to the traveling public.
Response:	Preparation of the TIP is required by Federal legislation (Fixing America's Surface Transportation Act) and by the Metropolitan Planning Regulations (23 CFR 450.326) of the USDOT. Federal regulations as defined in 23 CFR Part 450 and 49 CFR Part 613, require MPO's transportation planning activities, including the development of the TIP, to be carried out in a Continuing, Cooperative, and Comprehensive manner. Federal law requires expenditures in the TIP be consistent with the MTP. Inclusion of the project within the MTP and TIP is required for a project to advance. The TIP and MTP plans are adopted by the MPO Policy Committee, which is made up of elected local officials. Inclusion is not only required, but also an endorsement of the local community to advance the projects. Inclusion does not mean the project is subject to federal review under NEPA, circumvent the NEPA process, nor require selection of a Build option over the No Build option. The Alternatives Analysis shows that a No Build option would result in more industrial and work trips on surface streets which would be expected to be more dangerous to the traveling public than the Build options. The IJS and current design standards will ensure the design meets the highest level of safety for the traveling public. Hardin County Planning and Development Commission future land use map indicates the western portion of the study area east to KY 1136 is planned for industrial use and continuing east is planned to be an urban area. Hardin County's Comprehensive Development Guide recommends commercial (interstate or convenience), light industrial, and multi-family residential uses are appropriate along the Ring Road extension in the North Glendale Urban Area.
16.3, 17.3	Navigable Water Impacts
Comment:	Navigable waters of the US would be significantly adversely affected by the discharge of pollutants by Item 4-198
Response:	There are no USACE identified navigable waters within or near the study area.
1.1, 5.3, 6.1, 12.6, 13.1, 14.2, 15.1, 15.4, 16.8, 17.8, 20.6, 26.1	NEPA Level of Documentation
Comment:	The proposed construction of KY 3005 (Ring Road) Extension, KYTC Item 4-198.00 as 2.5 miles of new divided four-lane roadway with a new interchange with I-65 cannot qualify as

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	a categorical exclusion (CE). Furthermore, construction of this new divided four-lane roadway project is a "Class I" action that requires an Environmental Impact Statement (EIS) as Federal Regulation 23 CFR § 771.115 (a). The KYTC is attempting to circumvent the NEPA process by completing a CE Level-3. The KYTC has predetermination that the NEPA document will be an EA/FONSI. Since the 1987 study the ultimate project includes both sections, from US 62 to the WKP and further east to I-65 and US 31W. Because it is a Class 1 study it requires an EIS. Because an EIS was not completed "the Ring Road Extension will be removed, and [the Fannie May] Farm will be restored."
Response:	The FHWA responded to the "Comment 1" letter of September 28, 2016, on October 31, 2016. The KYTC in partnership with the FHWA developed a Programmatic Agreement to guide NEPA scoping decisions. Per Agreement, the proposed project's length and impacts are within the limits to qualify for a CE Level-3. However, due to concerns raised by this and other comments, the FHWA recommended to the KYTC in a letter dated September 26, 2016, to elevate the level of the initial NEPA document to an Environmental Assessment (EA). Consequently, this EA has been prepared to assess the environmental impacts of the No Build alternative and four Build alternatives. The results of the EA along with public engagement will determine whether FHWA can approve a NEPA decision document of a Finding of No Significant Impact (FONSI) or whether an Environmental Impact Statement (EIS) will be required, (see EA Section 7. Next Steps). Regarding the comment on predetermination, the commentor provides several internal KYTC emails identifying the project as an EA/FONSI. This internal communication does not predetermine the level of final NEPA document, only FHWA can make that determination after review of the EA and all public comments.
1.7, 3.1, 5.4, 9.2, 9.5, 9.6, 11.2, 12.4, 12.5, 13.4, 14.6, 18.1, 25.3, 26.6	NEPA process
Comment:	The KYTC's Final Design plans, geotechnical investigations, and advanced property acquisition for KY 3005 extension violate federal regulations. The (laws) require completion of the NEPA process before committing resources to an alternative in order to prevent prejudicing the selection of the final alternative. The KYTC has inappropriately included the 4-198 project in the Highway Plan prior to NEPA approval. On April 13, 2020 Governor Beshear signed the 2020 Highway Plan that allocated Utility and Construction funds for Item 4-198, suggesting a decision to advance the project with a preferred alternative has been made.
Response:	Final design has not yet been completed. Geotechnical investigations have been conducted, aligning with standard practice for highway projects, to support informed decision-making. FHWA Order 6640.1A clarifies the FHWA's policy regarding project related activities that may be advanced prior to the conclusion of the NEPA process. 23 CFR 636.103 includes geotechnical investigations in its definition of preliminary design. It is essential to note that these investigations do not predetermine any decision but rather provide critical data for more informed decision making. Advanced acquisition of right-of-way for a select few parcels was conducted with state funds and in accordance with 23 CFR 710.501. Concerns about the early acquisition were addressed in a response from the FHWA Kentucky Division to the commentor in a letter dated December 22, 2016. The same commentor noted in a separate letter that advanced

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	right-of-way acquisition does not predetermine a decision and "can be alleviated by the (KYTC) selling unused property when the (NEPA) process selects another alternative." Section 1302 of the Moving Ahead for Progress in the 21st Century Act (codified in 23 USC 108) states a State may carry out, at the expense of the State, acquisitions of interests in a real property for a project before completion of the review process required for the project under the NEPA. The Highway Plan provides the framework for advancing transportation projects during the upcoming two-year period (biennium) and lists recommended projects for the four-year period that follows. It contains a schedule and budget for proposed projects. A project cannot be advanced without being in the Highway Plan. Once a project appears in the biennium, funding may be authorized for the designated phases. The Highway Plan does not authorize funds; instead, it specifies funding available for authorization during the biennium. In the 2020 Highway Plan, the 4-198 project description of "extend Ring Road from the WKP to I-65" does not suggest a preferred alternative. The project Utility and Construction budgets were scheduled for fiscal year 2023 and 2024 in the 2020 highway with state dollars. Since these were not included in the biennium, funding could not be authorized. The Highway Plan does not circumvent the NEPA process. The NEPA process must be followed if federal funds are assigned to it or federal approvals are required, such as the proposed I-65 interchange access. Federal Utility and Construction funds cannot be authorized until the NEPA process is final. Additionally, any decision by the USDOT Secretary concerning a metropolitan transportation plan or TIP developed through the processes provided for in 23 U.S.C. 134, 49 U.S.C. 5303, and this subpart shall not be considered to be a Federal action subject to review under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.)
9.5	NEPA Environmental Analysis
Comment:	There generally are ten intensity factors to consider when making a determination on significance, and thus the appropriate level of NEPA documentation. Such factors include public health or safety, unique characteristics of the geographic area, historic or cultural resources, effects on the quality of the human environment, etc.
Response:	These and other issues are addressed with the EA. See EA Section 4, Affected Environment and Impacts for description of the existing environment and likely impacts associated with Build alternatives.
1.9, 2.1, 2.2, 5.1, 8.1, 12.11, 15.5	NEPA Process - Alternatives
Comment:	All reasonable alternatives need to be considered. There is room for reasonable alternatives from US 62 to the WKP and on to I-65 and US 31W that have not yet been analyzed and achieve the purpose and need of the project, while avoiding sensitive sites. The FHWA will need to include alternatives to avoid the limited area with the Gaither Spring WHPA, karst collapse hazards, and historic 4(f) resources. The IJS "shows Alternative 2 has already been selected as the Selected Build Alternative."
Response:	The western terminus of the project is the existing interchange of KY 3005 and the WKP. That interchange is within the Gather Spring WHPA. Thus, there is no avoiding it to meet the logical termini (see EA Section 2.1, Logical Termini) and purpose and need of the project (see EA Section 2, Purpose and Need). All reasonable build alternative concepts are within the WHPA. This fact is illustrated on the exhibit on page 48 of 70 of the comment, on EA Table 3 (p. 14), Potential Build Alternative Impacts, and Figure 6, p. 12. The language within the IJS serves the specific objective of seeking FHWA approval for an interchange and does not constitute a NEPA decision. The FHWA's preliminary approval

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	letter dated March 3, 2016, explicitly states that final approval will be granted upon completion of the environmental process. Thus, the process leading to this EA, including public engagement and environmental analyses, has considered all alternatives equally (refer to EA Section 3. Alternatives Considered). The section between US 62 and the WKP has been built. It and the section being addressed herein each have independent utility. For the section from the WKP to I-65 and US 31W being addressed in this document, see EA Section 3, Alternatives, for a description of the range of alternatives considered. These were considered in the June 24, 2014 public meeting and again at the September 15, 2022 public meeting.
5.2, 9.6, 9.7, 10.1, 12.3, 13.5, 14.3, 26.7	NEPA Process - Project Segmentation
Comment:	Both Section 1 (from US 62 to the WKP) and Section 2 (from WKP to I-65) are interdependent parts of the larger extension action, as evident in the 1987 KYTC Planning Study.
Response:	The 1987 Planning Study addresses the proposed corridor as two sections--from US 62 to the WKP and from the WKP to I-65/US 31W. That study recognizes their mutual benefit from a traffic perspective. However, they are clearly independent, not interdependent, based on the fact that the first segment was opened to traffic in 2013 and currently carries an average daily traffic (ADT) volume of 6,900 vehicles, and the second section has yet to be built. (see EA Section 2.1, Logical Termini). This document is for the eastern section, between the WKP and I-65/US 31W, which is undergoing evaluation of Section 4(f) and other NEPA processes. From a larger perspective, the entire KY 3005 Ring Road project around Elizabethtown has been constructed in sections of independent utility, beginning in 1995 with the section between US 62 (north of the city) to Pear Orchard Road, then in 1999 from US 31W to US 62 south of the city, then in 2008, between Pear Orchard Road to US 31W, and most recently in 2013 between US 62 and the WKP south of the city. Each was able to operate as independent roads after construction and each has been built as funding and project development has allowed. Phasing long term projects into constructable segments of independent utility is a common practice for road infrastructure projects. See response to comments 5.2 and 9.1.
8.2, 9.2	Public Review of EA
Comment:	The EA must be made available for public review and comment before a final decision is made. The fact that the Highway Plan has budgeted funds for the project, and the NEPA process has not included public involvement is "mockery" of the law.
Response:	The ongoing NEPA process has included multiple opportunities for public involvement, and public input has been an important part of the process (see EA Section 5, Public and Agency Involvement). This EA is an interim document within the NEPA Process, and its public release aims to solicit input and feedback. This EA will be made available for public comment and review as described in Section 7, Next Steps.
1.2, 12.7, 13.2, 14.1, 26.2	Traffic Forecasts
Comment:	The KY 3005 Extension will need to use current accurate traffic data in analyzing traffic impacts. [The project] will cause significant widespread adverse effects in regard to traffic.
Response:	The KYTC has worked continually over the years with the Radcliff-Elizabethtown Metropolitan Planning Organization (MPO) and KYTC Central Office Planning to update the travel demand model to provide updated traffic forecasts for the proposed project. These forecasts have been updated multiple times, including the most recent update in 2023. The update considered current hourly counts and the information about the Blue Oval plant in

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	Glendale, which is forecasted to bring 5,000 new jobs, to ensure existing conditions and future projections were appropriately considered. The revised and final traffic numbers from the model have been included in the NEPA document and the Interchange Justification Study (IJS). They were also used to forecast crashes and safety considerations (see EA Section 3.4 Traffic).
73	Oppose Alternative 3 (Green)
Comment:	Oppose Alternative 3
Response:	Comment noted.
33, 34, 58, 59, 60, 67, 68, 75	Oppose Alternative 4 (Orange)
Comment:	Oppose Alternative 4
Response:	Comment noted.
58, 59, 60	Oppose Roundabouts
Comment:	No Roundabouts
Response:	Comment noted.
36, 37, 38, 39, 40, 41, 48, 71, 72, 73, 80, 84, 85	Overall-Phillips Intersection
Comment:	Do not provide a connection to the Ring Road extension to or from Overall Phillips Road.
Response:	This comment will be taken into consideration during the development of Final Engineering Plans. At this stage, the project only has Preliminary Plans.
80	Prefer Alternative 1 (Red)
Comment:	Prefer Alternative 1
Response:	Comment noted.
32, 63, 65, 70	Prefer Alternative 2 (Blue)
Comment:	Prefer Alternative 2
Response:	Comment noted.
29, 30, 33, 35, 36, 39, 40, 41, 42, 43, 46, 47, 49, 50, 51, 52, 56, 57, 58, 59, 60, 62, 63, 64, 65, 66, 67, 68, 69, 75, 76, 77, 78, 79, 81, 83, 87	Prefer Alternative 3 (Green)
Comment:	Prefer Alternative 3
Response:	Comment noted.
44, 45, 71, 72, 73, 82, 84, 85, 86, 88	Prefer Alternative 4 (Orange)
Comment:	Prefer Alternative 4
Response:	Comment noted.
58, 60	Stop at I-65
Comment:	Do not connection east to US 31W
Response:	The connection to US 31W would provide the most connected roadway network, which is part of the purpose and need for the project. To build an interchange that could never connect to US 31 would require sweeping ramps to meet design speeds, which would extend east to be very close to US 31W. Also, the City of Elizabethtown and Hardin County have identified long range plans to extend Ring Road to the Lincoln Parkway, and possibly

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	further east. Those possible extensions are not the subject of this project, they would have their own independent utility and be advanced on their own schedules.
74	Support Rebuilding Existing Roads
Comment:	Widen WKP north, Revamp I-65/WKP interchange, widen I-65 (if needed)
Response:	Comment noted.
33	Traffic Lights
Comment:	Traffic lights will be needed on US 31W
Response:	Traffic signal warrants are completed after projects are completed and operational. This will allow KYTC to determine if the intersection warrants a signal.
31, 43, 63, 66	US 31W Widening
Comment:	US 31W should be widened from Lincon Parkway south.
Response:	Further widening north or south would be a separate project(s). The only possible widening of US 31W with this project would be at the new intersection with KY 3005, if turn lanes are warranted.

6. CONCLUSIONS, MITIGATIONS, & COMMITMENTS

Table 3, p. 14 summarizes the environmental impacts associated with preliminary designs for the Build alternatives, discussed throughout **Section 4**. The following commitments and mitigation measures are recommended for implementation to offset impacts identified throughout this EA for the **Preferred Alternative**.

6.1 DISPLACEMENTS

Summarized in **Section 4.2.2**, any Build alternative discussed herein would displace homes and/or businesses. KYTC would implement a relocation program in accordance with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act*. Relocation resources would be available to all residential relocatees without discrimination with an experienced agent assigned to each displaced household or business to navigate the process. A review of the local housing market reveals an ample supply of housing available at any one time. However, considering that some of the relocatees may require modifications due to disabilities, and the higher value homes may lack sufficient comparables at the time of relocation, the need for Last Resort Housing may arise. This program would be used if comparable replacement housing would not be available, or unavailable within the displacee's financial means, and the replacement payment exceeds the state legal limitation.

6.2 BAT HABITAT

Discussed in **Section 4.6.2**, three federally-listed bat species have the potential to occur within the vicinity. No critical habitats were identified. Appropriate resources should be utilized to minimize impacts to habitats conducive to threatened and **endangered** species such as BMPs at stream crossings to minimize erosion and sedimentation. Mitigation for impacts to forested Indiana bat and gray bat habitat should be addressed by adhering to the *Indiana Bat and Gray Bat Programmatic Agreement* between KYTC, FHWA, and the USFWS and/or the *Range Wide Consultation and Conservation Strategy*. Tree clearing restrictions and payment into the IBCF would be determined prior to construction.

6.3 ARCHAEOLOGY

Per [Section 4.7.2](#), a Phase I archaeological survey would be conducted for the portions of the **Preferred Alternative** footprint that have not been previously cleared.

6.4 CONSTRUCTION

As with any highway project, temporary and minimal air, noise, water quality, and traffic flow impacts are likely to occur during construction (see [Section 4.10](#)). Impacts should be addressed by implementing KYTC's *Standard Specifications for Road and Bridge Construction*, as directed by the KYTC project manager, and through the use of BMPs.

6.5 WELLHEAD PROTECTION AREA

All four Build alternatives would impact a sinkhole in the western section of the project. The sinkhole would be investigated and recommendation made for treatment during Final Design. The treatment method along with the drainage design would be addressed. The project is a candidate for application of KYTC Karst Policy. The sinkhole is located within a Wellhead Protection Area. Therefore, coordination with Hardin County Water District #2 and KDOW would continue to occur. In a meeting with these agencies on February 27, 2023, the following short- and long-term mitigation commitments were discussed:

Short-term mitigation: During construction, KYTC would require the contractor to have a *Kentucky Pollutant Discharge Elimination System* (KPDES) permit, which would require several conditions to protect waters, including best management practices to minimize silt runoff and storage of petroleum.

KYTC would include a Special Note regarding construction staging areas; and storage of petroleum and other chemicals would be restricted from within or near the known sinkholes in the corridor.

Long-term mitigation: KYTC would build spill detention basins along the side of the road through the WHPA/SWAPP area. This detention area would hold up to 10,000 gallons and allow time for response teams to collect the spill before the majority infiltrates the ground water system. Similar basins have been constructed on KY 313 in Hardin/Meade counties and along I-65 in the karstic areas in and near Edmonson County.

Concerning long-term land use changes in the area because of anticipated population and economic growth, the Hardin County Water District #2 officials would continue working with the Hardin County Planning and Development Commission on Hardin County's *Comprehensive Plan* update to promote sustainable and appropriate development in recharge areas.

6.6 PERMITS

Wetland and stream impacts require mitigation. The project would require a *404 Permit* issued by the US Army Corps of Engineers and a *401 Water Quality Certification and/or Permit to Construct along a Stream* issued by KDOW. Based on current plans, cost estimates for mitigation are about \$23,000 for

wetland impacts and \$2.1 to \$4.3 million for stream impacts. A field delineation would be required to assess stream quality and quantify impacts based on final plans prior to construction. The project is anticipated to disturb more than 1 acre; therefore, a KPDES KYR10 electronic notice of intent is also required.

6.7 I-65 WEIGH-STATION CLOSURE

The proposed new interchange is located just south of this existing weigh station. The proximity would cause a conflict between the merging traffic from the weigh station and the traffic diverging to the new interchange. Therefore, the southbound entrance ramp from the weigh station would be closed prior to the opening of a new I-65 interchange as part of the Ring Road extension project. This commitment will be included in the *Interchange Justification Study*, which FHWA must approve before the interchange can be built.

Per KYTC Item No. 4-286, the plan is to relocate the weigh station to the former rest area site at MP 82.1 along south bound I-65, south of the Glendale/KY 222 (Exit 86, MP 85.7) and north of the Sonora/KY 84 (Exit 81, MP 80.5) in Hardin County. A *Categorical Exclusion* for the construction of the weigh station at this location was approved by FHWA June 7, 2004. No environmental impacts were identified, other than temporary impacts due to construction activities, which would be mitigated through Best Management Practices. The site is currently vacant and nearly all weigh station construction would occur within existing KYTC right-of-way.

The weigh station relocation action is independent of the proposed Ring Road extension and new I-65 interchange, however the projects are related because of KYTC's commitment to close the weigh station at its current location prior to opening the new proposed Ring Road/I-65 interchange. This commitment does not mean the new weigh station must be constructed, per Item 4-286, only that the existing weigh station southbound entrance ramp must be closed at its current location to prevent the traffic conflict described above.

The 2022–2028 *Highway Plan* includes federal funds for Item 4-286 for the following phases and fiscal years: Design, \$1,000,000 in 2023; Right-of-Way, \$100,000 in 2024; Utilities, \$2,000,000 in 2025; and Construction, \$16,000,000 in 2025.

7. NEXT STEPS

Potential next steps in the environmental process are described herein.

7.1 ENVIRONMENTAL ASSESSMENT

This EA would be made available to the public as an Administration document and coordinated with the Kentucky Interagency Clearinghouse. The document would be made available to the public for inspection for a minimum of 30 days in accordance with 23 CFR 771.119.⁴⁰ To minimize hardcopy requests and

⁴⁰ <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-771/section-771.119>

printing costs, the KYTC District 4 webpage⁴¹ would be available to make the document publicly accessible by electronic means. Hardcopies would also be made available upon written request.

A notice of availability (NOA) of the EA would be sent to the affected units of federal, tribal, state, and local governments, as appropriate, and to state intergovernmental review contacts established under Executive Order 12372.⁴² A notice would be placed in the local newspaper(s) advising the public of the availability of the EA and where information concerning the action may be obtained.

A public hearing would also be held to share information and solicit feedback. Comments would be invited from all interested parties. Comments must be submitted in writing to KYTC or FHWA during the 30-day review period of the EA. Responses to all substantive comments will be provided within the final Environmental Document.

7.1.1 PUBLIC HEARING

A public hearing would be held as part of the environmental review process. The EA would be available at the public hearing and for a minimum of 15 days in advance of the public hearing. KYTC would publish a notice of the public hearing in local newspapers to announce the availability of the EA and where it may be obtained or reviewed. Responses to all substantive comments will be provided within the final Environmental Document

Any comments submitted in writing to KYTC or FHWA during the 30-day EA availability period and received during the public hearing would be included via transcript as an appendix to the EA (**Appendix H**). The public will be able to comment on the document and the project at KYTC's District 4's website (<https://transportation.ky.gov/DistrictFour/Pages/default.aspx>). The public could obtain a hearing record through a formal open records request through KYTC's Office of Legal Services.⁴³

FHWA would review the EA, public and agency comments submitted on the EA (in writing or at the public hearing), and other supporting documentation, as appropriate.

7.2 ENVIRONMENTAL DECISION DOCUMENT

If the project is determined to have no significant impacts, and the project is proposed to be advanced by the KYTC and FHWA, then a FONSI would be prepared. If the project is determined to have significant impacts, then an EIS would be prepared.

7.2.1 FONSI

If after review, FHWA determines that no significant impacts are anticipated, then a FONSI would be issued, incorporating by reference the EA and other applicable environmental documents. The FONSI would be made available to the public as an Administration document in accordance with 23 CRF

⁴¹ <https://transportation.ky.gov/DistrictFour/Pages/default.aspx>

⁴² <https://www.archives.gov/federal-register/codification/executive-order/12372.html>

⁴³ <https://transportation.ky.gov/LegalServices/Pages/Open-Record.aspx>

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771.121.⁴⁴ To minimize hardcopy requests and printing costs, the KYTC District 4 webpage⁴⁵ would be used to make the document publicly accessible by electronic means. Hardcopies would also be made available upon written request.

A notice of availability of the EA/FONSI, would be sent to the affected units of federal, tribal, state, and local government, as appropriate, and the state intergovernmental review contacts established under Executive Order 12372.⁴⁶

7.2.2 EIS

If, after review, FHWA determines that significant impacts are anticipated, then an EIS would be prepared in accordance with 23 CFR 771.123.⁴⁷ A Notice of Intent (NOI) to prepare an EIS would be published in the *Federal Register*.⁴⁸ The NOI would serve to inform the public of the upcoming environmental analysis, describe how the public can become involved in the EIS preparation, and start the scoping process—which is when the FHWA and public would collaborate to define the range of issues and potential alternatives to be addressed in the EIS.

A Draft EIS would be published, for a minimum of 45 days, for review and comment by government agencies and organizations participating in the process, and by the general public. FHWA would then consider all substantive comments and, if necessary, conduct further analyses.

Responses to substantive comments would be included in the Final EIS/Record of Decision (ROD), which would then be published for a minimum of 30 days.

Both the Draft and Final EIS/ROD would be published in the *Federal Register*.⁴⁸

In accordance with 23 CFR 771.124,⁴⁹ the EIS process would end with the issuance of a combined FEIS/ROD, which would explain the project decision, alternatives considered, and plans for mitigation and monitoring, as necessary. To minimize hardcopy requests and printing costs, the KYTC District 4 webpage⁵⁰ would be used to make the document publicly accessible by electronic means. Hardcopies would also be made available upon written request.

A notice of availability of the FEIS/ROD, would be sent to the affected units of federal, tribal, state, and local government, as appropriate, and the state intergovernmental review contacts established under Executive Order 12372.⁵¹

⁴⁴ <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-771/section-771.121>

⁴⁵ <https://transportation.ky.gov/DistrictFour/Pages/default.aspx>

⁴⁶ <https://www.archives.gov/federal-register/codification/executive-order/12372.html>

⁴⁷ <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-771/section-771.123>

⁴⁸ <https://www.federalregister.gov/agencies/environmental-protection-agency>

⁴⁹ <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-771/section-771.124>

⁵⁰ <https://transportation.ky.gov/DistrictFour/Pages/default.aspx>

⁵¹ <https://www.archives.gov/federal-register/codification/executive-order/12372.html>