

Project End MP: 8.400

Project Start MP: 1.395



PRESTON

TRANSPORTATION PLAN



*KY 61 from
I-264 to I-265*

APRIL 2025

KY 61 | Preston Transportation Plan

Jefferson County Item No. 5-80205
Kentucky Transportation Cabinet

TEAM KENTUCKY
TRANSPORTATION CABINET

AECOM

EXECUTIVE SUMMARY

The Kentucky Transportation Cabinet (KYTC), in partnership with the Kentuckiana Regional Planning & Development Agency (KIPDA) conducted the **Preston Transportation Plan** to develop a comprehensive, data-driven approach for addressing critical transportation challenges along KY 61 (Preston Highway) in Louisville. This 7.005-mile corridor, extending from Commerce Crossings Drive (MP 1.395) to Briden Avenue (MP 8.400) in Jefferson County, serves as a critical connector between residential, commercial, and industrial areas in the region. The study aligns KYTC's strategic goals of improving safety, reducing congestion, and enhancing multi-modal accessibility while supporting sustainable community growth.

Study Goals and Objectives

The Preston Transportation Plan is a forward-looking initiative designed to:

- Improve **safety** for all users, including pedestrians, bicyclists, and motorists.
- Address **traffic congestion** at key intersections and along the corridor.
- Enhance **multi-modal transportation options**, including premium transit, sidewalks, and bicycle paths.
- Incorporate **Complete Streets Guidance** to ensure equity and accessibility.
- Identify short- and long-term improvements that align with local and regional transportation plans, including Louisville Metro's Preston Corridor Plan.



Figure ES- 1: Project Area

Key Findings

Existing Conditions

The study assessed existing conditions to identify key challenges impacting the corridor. Key findings include:

- Traffic and Safety:** The corridor experiences significant congestion, with average daily traffic volumes ranging from 20,500 to 41,000 vehicles. High-crash intersections, including Outer Loop, Fern Valley Road, and Commerce Crossings Drive, contribute to recurring delays and unsafe conditions. Between 2019 and 2023, 2,298 crashes were reported, including 22 fatal incidents. Rear-end and angle collisions were the most prevalent crash types.
- Infrastructure Deficiencies:** The corridor lacks consistent pedestrian and bicycle infrastructure, with significant sidewalk gaps and limited crosswalks. Many intersections have outdated designs that fail to accommodate current traffic volumes or multi-modal users. Bridges along the corridor also require improvements to support future enhancements such as shared-use paths and Bus Rapid Transit (BRT).
- Environmental Constraints:** Floodplains, underground storage tanks, and historic resources were identified as key environmental considerations, although they pose minimal barriers to recommended improvements.

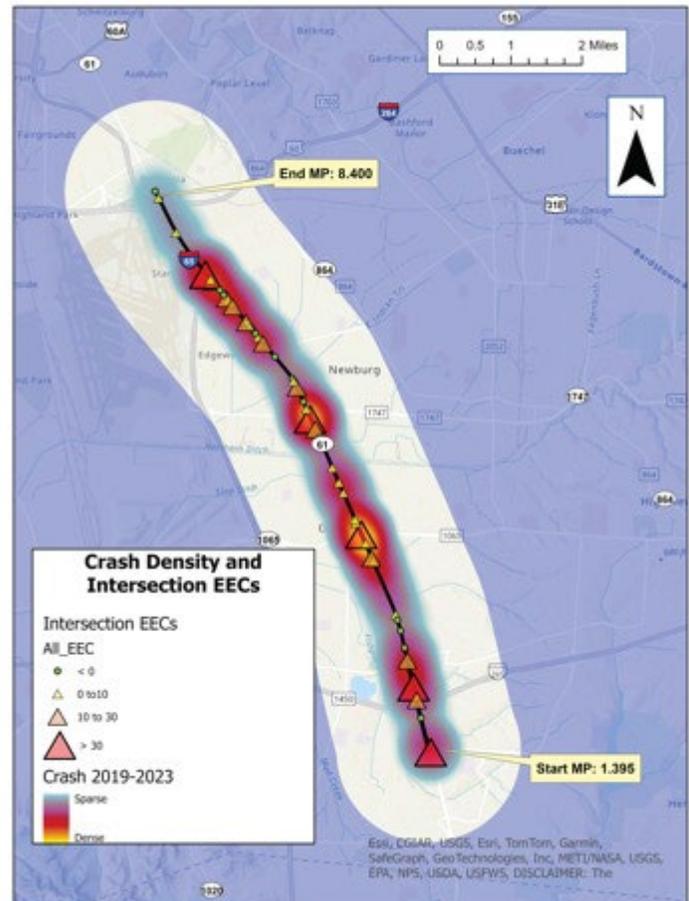


Figure ES- 2: Crash Density and EECs

Public Engagement and Community Input

Public engagement was central to the study’s approach, ensuring that recommendations reflect the needs and priorities of the community. Engagement efforts included public meetings, targeted outreach, and online surveys. Key insights gathered include:

- Community Concerns:** Traffic congestion (37%), safety (37%), poor road conditions (22%) and lack of bike and/or pedestrian infrastructure (4%) emerged as top concerns from survey respondents.
- Support for Improvements:** Participants strongly supported enhancements such as upgraded street lighting, extended sidewalks, and improved transit options. Among Spanish-speaking respondents, 52% emphasized the need for safer pedestrian and bicycle infrastructure.

- **Priorities for Investment:** Key intersections for improvement, as identified by the public, include Outer Loop, Fern Valley Road, and Commerce Crossings Drive.

These insights informed the prioritization of improvement concepts and reinforced the need for equitable engagement strategies, particularly for underserved communities.

Proposed Improvements and Recommendations

The study developed a phased plan of corridor-wide and location-specific improvements to address identified challenges. Recommendations include:

Corridor-Wide Recommendations:

- **Multi-Modal Enhancements:** Prioritize pedestrian and bicycle infrastructure, including the construction of a shared-use path from Commerce Crossings Drive to Southern High School and sidewalk connectivity along the entire corridor.
- **Transit Improvements:** Integrate infrastructure to support BRT, including enhanced bus stops, signal prioritization, and space for dedicated lanes where feasible.
- **Intersection Upgrades:** Introduce advanced traffic control systems, including improved signal backplates, timing optimization, and lighting upgrades at key intersections.
- **Access Management:** Consider implementation of raised medians, restricted left turns, and improved signal timing to reduce crashes and improve traffic flow while balancing accessibility.

Priority Intersection Improvements:

The following intersections were identified as priorities based on traffic modeling, crash analysis, and public feedback. To address safety concerns, accommodate projected growth and improve traffic flow, both conventional (i.e., lane extensions, additional turn lanes, improving sidewalks, and traffic signals) and innovative concepts were considered:

1. **Commerce Crossings Drive/Cooper Chapel Road:** Conventional improvements and a Partial Displaced Left Turn Intersection evaluated during design.
2. **Outer Loop (KY 1065):** Conventional improvements and a Partial Displaced Left Turn Intersection evaluated during design.
3. **Fern Valley Road (KY 1747):** Conventional improvements and a Partial Displaced Left Turn Intersection evaluated during design.
4. **Indian Trail, Gilmore Lane, and South Park/E. Manslick Road:** Conventional intersection-specific enhancements to address localized safety and operational issues.

These recommendations balance short-term feasibility with long-term sustainability, aligning with regional growth forecasts and KYTC's policy framework. Table 1 provides a detailed cost breakdown for the improvements at each section along the corridor, highlighting both short-term and long-term enhancements.

Table ES-1: Improvement Phase Costs

Description	Design	ROW	Utilities	Construction	Total
Commerce Crossings - Conventional Improvements	\$ 500,000	\$ 130,000	\$ 50,000	\$ 2,400,000	\$ 3,080,000
Commerce Crossings - Partial Displaced Left	\$ 600,000	\$ 130,000	\$ 125,000	\$ 5,500,000	\$ 6,355,000
Boerste and Glen Rose - Positive Offset Left Turn and Signal Upgrades	\$ 250,000	\$ 145,000	\$ 50,000	\$ 950,000	\$ 1,395,000
South Park - Conventional Improvements	\$ 250,000	\$ 195,000	\$ 25,000	\$ 1,000,000	\$ 1,470,000
Outer Loop - Conventional	\$ 450,000	\$ 390,000	\$ 75,000	\$ 2,900,000	\$ 3,815,000
Outer Loop - Partial Displaced Left - Turn NS	\$ 600,000	\$ 860,000	\$ 225,000	\$ 4,750,000	\$ 6,435,000
Fern Valley - Conventional Improvements	\$ 450,000	\$ 600,000	\$ 50,000	\$ 2,100,000	\$ 3,200,000
Fern Valley - Partial Displaced Left Turn - EW	\$ 600,000	\$ 600,000	\$ 200,000	\$ 4,450,000	\$ 5,850,000
East Indian Trail - Conventional	\$ 250,000	\$ 445,000	\$ 25,000	\$ 1,000,000	\$ 1,720,000
Gilmore Lane - Conventional Improvements	\$ 250,000	\$ 600,000	\$ 50,000	\$ 1,100,000	\$ 2,000,000
I-65 Ramps - Conventional Improvements	\$ 200,000	\$ 110,000	\$ 50,000	\$ 900,000	\$ 1,260,000
Grade Lane/I-65 Ramps - Peanut	\$ 450,000	\$ 560,000	\$ 225,000	\$ 2,100,000	\$ 3,335,000
Shared Use Path - Commerce Crossings to Southern High School	\$ 750,000	\$ -	\$ -	\$ 5,000,000	\$ 5,750,000
Sidewalk Connectivity Project	\$ 2,325,000	\$ -	\$ -	\$ 15,500,000	\$ 17,825,000
Access Management Project	\$ 1,200,000	\$ 600,000	\$ 600,000	\$ 15,500,000	\$ 17,900,000
Signal System and Lighting Upgrades	\$ 400,000	\$ -	\$ -	\$ 1,680,000	\$ 2,080,000
Complete Street Rebuild with BRT	\$ 7,000,000	\$ 5,000,000	\$ 2,000,000	\$ 156,000,000	\$ 170,000,000

Environmental and Social Considerations

The Preston Transportation Plan places significant emphasis on addressing environmental challenges and ensuring equitable improvements for all corridor users. Floodplain concerns are a key focus, with planned drainage enhancements aimed at mitigating flooding and improving stormwater management. Streetscaping initiatives, including expanded tree canopies and native plantings, are designed to enhance aesthetics, reduce urban heat, and promote environmental sustainability.

Social considerations are equally vital, with targeted efforts to address gaps in pedestrian and bicycle infrastructure. The corridor’s safety enhancements, such as enhanced crosswalks, intersection streetlighting, and pedestrian refuges, aim to reduce crash risks, particularly in areas near schools and high-crash intersections. Proposed improvements also align with social equity goals, emphasizing better connectivity for underserved communities. Feedback from Spanish-speaking populations and other underrepresented groups has shaped priorities for safer, more accessible multimodal options, including sidewalks, shared-use paths, and Bus Rapid Transit (BRT) features.

Next Steps

The 2024-2030 Enacted Highway Plan has \$1,500,000 in Design funds programmed in 2026. An additional \$5,000,000 in Design funds are programmed in 2027, with funding for Right of Way and Utilities in 2028 and Construction funds programmed for 2030. The funds shown are "NH", which are National Highway Performance Program funds. As KY 61 is not included on the National Highway System (NHS), it is not eligible for these funds. KYTC Program Management would need to work with FHWA to determine if other federal funds could be swapped in.

Details are listed in the excerpt below:

Jefferson	KY-61	From MP 1.395 To 8.400		On NHS	Description:	IMPROVE SAFETY, REDUCE CONGESTION, AND IMPROVE MULTI-MODAL TRANSPORTATION OPTIONS ALONG KY 61 FROM COMMERCE CROSSINGS DR (BMP 1.395) TO BRIDEN AVENUE (EMP 8.400) INCLUDING THE I-264 (WATTERSON EXPRESSWAY) AND I-265 (GENE SNYDER FREEWAY) INTERCHANGES. (2022CCN) (2024CCR)			
				NO					
Item#:	5-80205.00	Parent#:	5-80205.00	Length	Type of Work:	RECONSTRUCTION(O)			
Plan Year:	2022	Parent Year:	2022	7.01	Bridge ID:				
FUND	PH	2024	2025	2026	2027	2028	2029	2030	Phase Total
NH	D	\$0	\$0	\$1,500,000	\$5,000,000	\$0	\$0	\$0	\$6,500,000
NH	R	\$0	\$0	\$0	\$0	\$6,310,000	\$0	\$0	\$6,310,000
NH	U	\$0	\$0	\$0	\$0	\$10,570,000	\$0	\$0	\$10,570,000
NH	C	\$0	\$0	\$0	\$0	\$0	\$0	\$58,850,000	\$58,850,000
FY TOTAL:		\$0	\$0	\$1,500,000	\$5,000,000	\$16,880,000	\$0	\$58,850,000	\$82,230,000

The next step is for KYTC leadership to determine if they would like to advance any of the improvement concepts recommended in this study. With a total of \$6,500,000 programmed for design in 2026 and 2027, the three priority intersections could be designed as a package:

1. Commerce Crossings/Cooper Chapel
2. Outer Loop
3. Fern Valley

The estimated design cost for these three intersections would be \$1,800,000 with a total cost for these three intersections ranging from \$10,000,000 for conventional treatments, to \$20,000,000 for partial displaced left-turn intersections.

KYTC could also consider partnering with Louisville Metro to address gaps in the sidewalk system. Metro’s Department of Public Works routinely executes sidewalk projects at a relatively low cost expeditiously.

KYTC could have further discussions with Louisville Metro concerning the implementation of the Conceptual Access Management Policy and Plan.

KYTC could continue to coordinate with Louisville Metro Government and TARC regarding the Complete Street Rebuild and accommodation and implementation of BRT and provide support should those agencies seek FTA CIG funding for the Preston Corridor. The Shared-Use Path from Commerce Crossings Drive/Cooper Chapel Road to Southern High School could also be considered. This project would provide a significant connection across I-265, connecting communities with the future path of the Louisville Loop. This shared-use path is a large investment due to costs to reconfigure the KY 61 bridge over I-265 for the path. \$750,000 in Design funds backed with \$5,000,000 for construction would provide the best bicycle/pedestrian crossing for the Gene Snyder (I-265).

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List of Acronyms

AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
ATR	Automatic Traffic Recorder
BCR	Benefit-Cost Ratio
BQWS	Back of Queue Warning System
BRT	Bus Rapid Transit
CHAF	Continuous Highway Analysis Framework
CMF	Crash Modification Factor
FHWA	Federal Highway Administration
GIS	Geographic Information System
HIS	Highway Information System
HSIP	Highway Safety Improvement Program
IMR	Interchange Modification Report
ITS	Intelligent Transportation Systems
JCTC	Jefferson Community and Technical College
KHFN	Kentucky Highway Freight Network
KIPDA	Kentuckiana Regional Planning & Development Agency
KTC	Kentucky Transportation Center
KYTC	Kentucky Transportation Cabinet
LOS	Level of Service
MP	Milepoint
MPH	Miles per hour
MTP	Metropolitan Transportation Plan
NHS	National Highway System
NRHP	National Register of Historic Places
PDO	Property Damage Only
STRAHNET	Strategic Highway Network
TARC	Transit Authority of River City
TED	Transportation Enterprise Database
TIP	Transportation Improvement Program
TRIMARC	Traffic Response & Incident Management Assisting River City
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
VPD	Vehicles per day

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INTRODUCTION

In partnership with the Kentuckiana Regional Planning and Development Agency (KIPDA), the Kentucky Transportation Cabinet (KYTC) initiated a corridor study for KY 61 (Preston Highway) in Jefferson County from south of the I-265 interchange at Commerce Crossing Drive, milepoint (MP) 1.955 to north of the I-264 interchange at Briden Avenue, MP 8.400.

The study examines transportation needs related to safety and mobility, identifying practical, affordable solutions to address those current needs. Study limits are shown in **Figure 1** on the following page.

Study tasks include creating an inventory of existing conditions, defining the study goals and objectives, forecasting existing and future traffic, identifying red flag environmental issues, developing build concepts with construction cost estimates, and documenting the study process and results. The following chapters explore these efforts.

This study was prepared with Federal Statewide Transportation Program Funds (STP).

Project History

This Preston Transportation Plan, KYTC Item No. 5-80205, seeks to build upon Louisville Metro Government's Preston Corridor Plan completed in 2023. The Preston Corridor Plan stated purpose was to propose strategic investments that will make Preston a vibrant, safe, and equitable transportation link for all Louisvillians. By addressing safety, access, and mobility issues, the recommendations in this plan will guide Metro to better serve those who travel along and live near Preston. The opportunities outlined in this document were identified through an extensive community engagement process. More work is needed to bring this conceptual framework to life, but this plan represents the community's vision for a 21st Century Preston. Louisville Metro's Preston Corridor Plan extended from the Bullitt/Jefferson County line to downtown Louisville. As referenced in the purpose statement above, those involved acknowledged that "more work is needed to bring this conceptual framework to life". The KYTC Preston Transportation Plan (this study) provides that additional work for the segment of KY 61 (Preston Highway) between I-265 and I-264.

Related Transportation Studies

As mentioned previously, this study expands on the Louisville Metro Government's (LMG) 2023 Preston Corridor Plan by examining current needs and proposed solutions, and it updates the KY 61 Preston Corridor Transportation Plan as discussed below.

In 2023, the Preston Corridor Plan provided a strategic framework to transform the 13-mile Preston corridor into a safe, equitable, and multimodal transportation route. By addressing safety concerns, mobility challenges, and land-use inefficiencies, the plan aims to support Louisville Metro's broader goals of fostering connected, sustainable, and inclusive growth. Extensive analysis revealed critical issues, including high crash rates, gaps in pedestrian and bicycle infrastructure, and limited transit-oriented development, particularly in suburban segments. The corridor's varied character—ranging from urban, walkable neighborhoods near downtown to car-centric areas south of the Gene Snyder Freeway—necessitates tailored interventions across its seven segments.

Key recommendations focus on transforming Preston into a "complete street" with tools such as narrow lanes, wider sidewalks, center medians, and protected bike lanes to enhance safety and multimodal accessibility. Bus Rapid Transit (BRT) is identified as the preferred premium transit option, offering efficient and cost-effective service with dedicated lanes to improve reliability. Catalytic sites at key intersections, such as Preston & Broadway and Eastern Parkway, are proposed to demonstrate transit-oriented development potential, fostering walkable and sustainable land-use patterns. Safety improvements include high-visibility crosswalks, pedestrian refuge islands, ADA-compliant facilities, and enhanced lighting, with a focus on unsignalized intersections and transit stop areas.

The plan emphasizes the importance of public engagement, incorporating insights from nearly 2,000 survey responses and interactive workshops to align its vision with community needs. Implementation will require adoption into local and state transportation plans, feasibility studies, and securing funding from federal, state, and local sources.

In 2024, the Preston Corridor Plan - Transit Study examined the feasibility of Bus Rapid Transit along Preston from the area of the Jefferson Mall/Outer Loop (KY 1065) to downtown Louisville. This study is a continuation of the Preston Corridor Plan focused on further developing and investigating the feasibility of Bus Rapid Transit (BRT) premium transit service within the Preston Corridor. The study was led by Louisville Metro Government (Metro) in partnership with the Transit Authority of River City (TARC) and the Kentucky Transportation Cabinet (KYTC). The Preston Corridor Plan study area extends from Downtown Louisville to the Jefferson Mall, encompassing both the Muhammad Ali International Airport passenger terminal and UPS World Port. Development of this study area was informed by the 2023 preliminary alignment concept and existing bus service along the corridor.

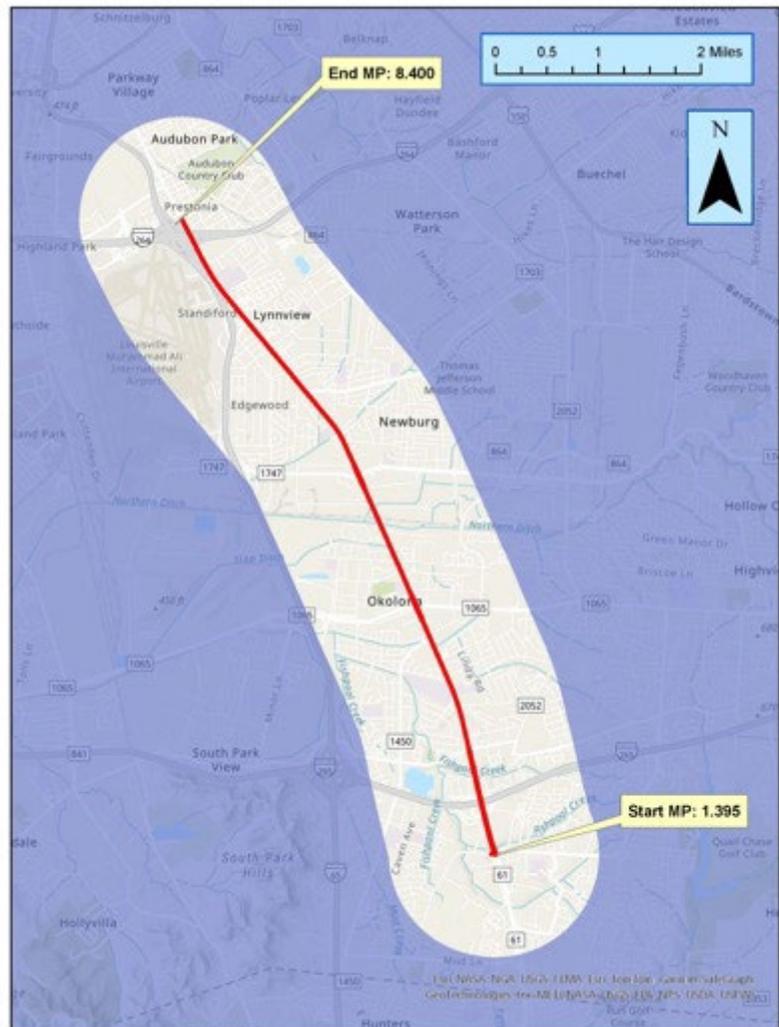


Figure 1: Study Area Map

Nearby Transportation Projects

Numerous proposed projects and planning study recommendations exist within the vicinity, compiled from the current Enacted Highway Plan (FY 2024 – FY 2030), KYTC’s Continuous Highway Analysis Framework (CHAF) database, and from KIPDA’s latest Metropolitan Transportation Plan (MTP) – Connecting Kentuckiana 2050 – and Transportation Improvement Program (TIP) (FY 2023 – FY 2026).

Four projects in the FY 2024 – FY 2030 Highway Plan are near the study area: Item No. 5-136.00, clean and paint all steel bridges and steel bearings along I-265; Item No. 5-80203.00, improve safety and reduce congestion on KY 1065 (Outer Loop) from I-65 to KY 2052 (Shepherdsville Road); Item No. 5-559.00, improve safety and reduce congestion at the I-65/I-264 interchange; and Item No. 5-20067, address condition of I-65 from BMP 127.57 to EMP 131.24.

Three KYTC CHAF concepts overlap the study area:

- IP 20080210: Improve safety and reduce congestion at the KY 1065 and KY 61 intersection
- IP 20230068: Improve safety and reduce congestion on I-264 EB and on both ramps from I-65 to I-264 EB
- IP 20230057: Improve safety, improve traffic flow, and reduce driver confusion along I-264 WB by modifying/reconstructing the I-264 WB to I-65 SB loop ramp

KIPDA’s MTP lists six additional concepts to improve transportation in the vicinity:

- 407: Improve safety and reduce congestion on I-265 from I-65 to US 31E/150 (Bardstown Road) – open 2028
- 961: Reconstruct KY 2845 (Manslick Road) from KY 61 to KY 864 (Beulah Church Road) – open 2032
- 154: Widen KY 1450 (Blue Lick Road) from I-265 to KY 61 – open 2023
- 436: Improve safety and reduce congestion on KY 1065 (Outer Loop) from I-65 to KY 2052 (Shepherdsville Road) – open 2030
- 2766: Complete bicycle/pedestrian connections along KY 1747 (Fern Valley Road and Hurstbourne Parkway) east of KY 61 – open 2045
- 2121: Improve safety and reduce congestion at the I-65/I-264 (Watterson Expressway) interchange (project length is 2.29 miles) – open 2034

These projects from the Highway Plan, KYTC’s CHAF, and KIPDA’s MTP are shown on the following map as Nearby Transportation Projects. Shown in **Figure 2**.

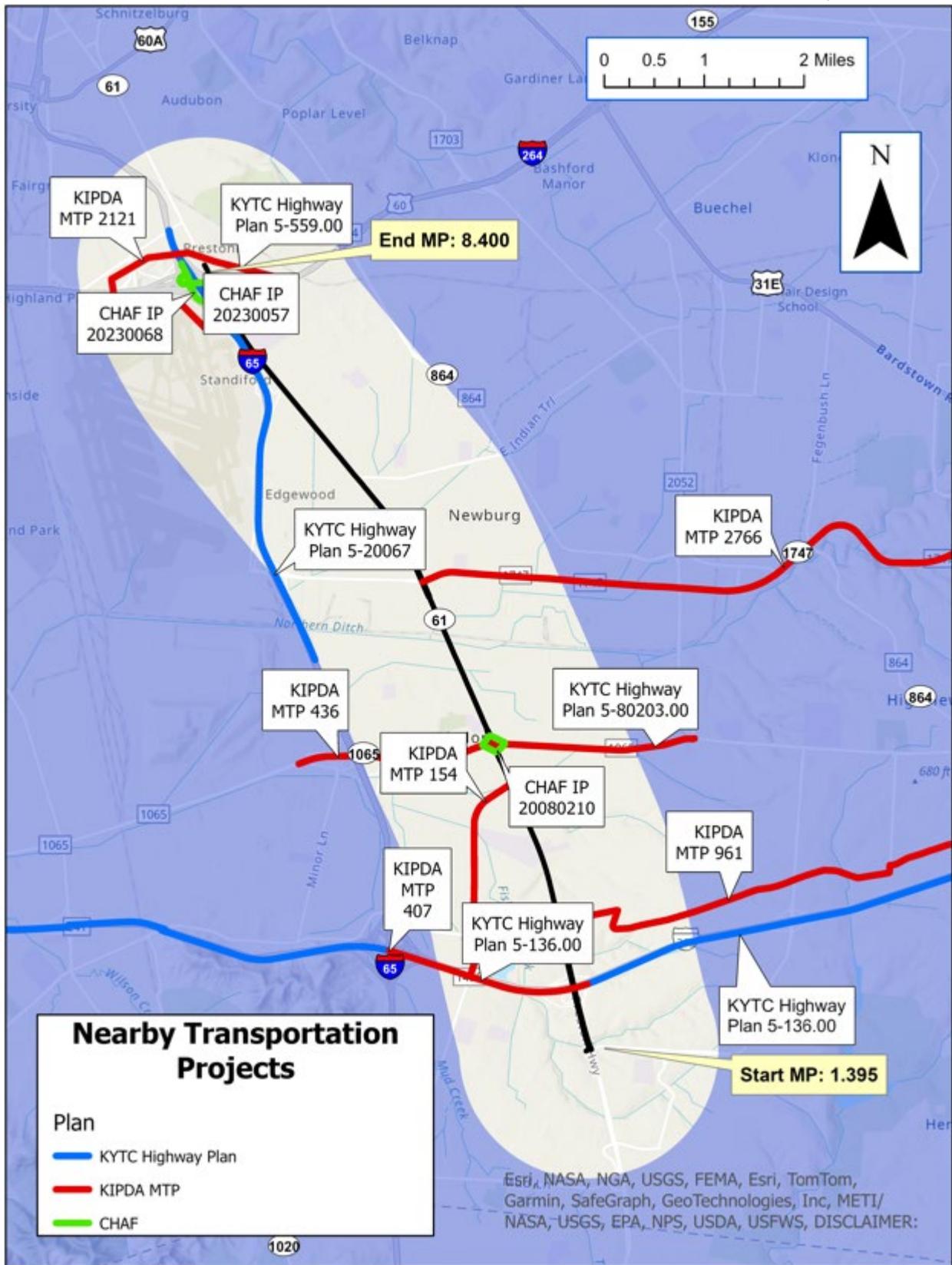


Figure 2: Nearby Transportation Projects

KIPDA’s TIP lists five additional concepts for maintenance in the vicinity that are not shown on the preceding map:

- 3312: Installation of pavement markers on I-265 & I-264 – open 2025
- 3289: Installation of high friction surface treatment on KY 1747 (Fern Valley Road) from BMP 1.82 to EMP 1.943 – open 2024
- 3290: Installation of high friction surface treatment on KY 1747 (Fern Valley Road) from BMP 1.943 to EMP 2.018 – open 2024
- 3003: Improvements to the pavement markings and signing along KY 1747 (Fern Valley Road) – open 2023
- 3202: Installation of high friction surface treatment on KY 61 BMP 8.0 to EMP 8.05, on I-65 ramp 511 (connecting Preston Highway SB to I-264 EB) BMP 0 to EMP 0.276, and on I-65 ramp 512 (connecting I-65 NB to I-264 EB) BMP 0 to EMP 0.351 – open 2024

Table 1: Nearby Transportation Projects

KIPDA ID #	Project Name	Project Description	Project Sponsor	State ID/DES #	Open to Public
154	KY 1450	Widen Blue Lick Road from Snyder Freeway north to KY 61 (LOU T.I.P.) (Section 2) (RU-04DE0B)(08CCR)(12CCR)(16CCR).	KYTC	5-247.10, 5-247.11	2023
229	KY 1450	Widen Blue Lick Road from Bullitt County Line north to the Snyder Freeway (LOU T.I.P.)(SEE 5-8010.00 AND 5-8907.00)(08CCR)(10CCR)	KYTC	5-8907.00	2033
392	I-65/KY 61	Construct new interchange at I-65 and KY 61 (Preston Highway).	KYTC	-	2039
407	I-265	KYTC Highway Plan (June, 2018): Improve safety and reduce congestion on I-265 from I-65 to US 31E. CHAF ID: IP20080191. Additional Considerations: Project will evaluate widening to the inside from 4 to 6 lanes.	KYTC	5-554.00	2028
436	KY 1065	Improve safety and reduce congestion on KY 1065 (Outer Loop) from I-65 to KY 2052 (Shepherdville Road). Project will evaluate the addition of one travel lane in each direction and consider accommodations for bicyclists and pedestrians. CHAF IP20080211.	KYTC	5-80203.00	2030
453	KY 1065	Improve safety and reduce congestion on KY 1065 and KY 61 Intersection. Project will consider adding a right turn lane on westbound KY 1065 (Outer Loop) at KY 61 (Preston Highway). CHAF IP20080120.	KYTC	-	2026
464	Shepherdville Road	Widen Shepherdville Road from 2 to 3 lanes (3rd lane will be a center turn lane) from KY 2845 (Manslick Road) to Applegate Lane and build sidewalk.	Louisville Metro	-	2040
491	I-65	6 YP DESC: Widen I-65 from 6 to 8 lanes from KY 61 (Preston Highway) in Lebanon Junction to I-265 (Gene Snyder Freeway). CHAF DESC: Reduce congestion and improve mobility on I-65 from KY 61 (Preston Highway) in Lebanon Junction (Bullitt County) to I-265 (Gene Snyder Freeway) in Jefferson County. CHAF ID: IP20170064	KYTC	5-550.00	2030
961	KY 2845	Reconstruct KY 2845 (Manslick Road) from KY 61 to KY 864 (Beulah Church Road). Project will evaluate 3-lane widening with two-way center turn lane and consider accommodations for bicyclists and pedestrians. CHAF IP20080224.	KYTC	-	2032
1357	KY 61 Premium Transportation Corridor Project	The KY 61 Premium Transportation Corridor Project is a design-build project that will: 1) streamline transit service on a key corridor by adding traffic signal bus prioritization, new bus stops, and increasing bus service frequency; 2) bring intelligent signal upgrades, which will include traffic signals and communication equipment to support premium transit and overall mobility; 3) incorporate complete streets roadway improvements by including bicycle and pedestrian facilities, intersection safety improvements, access management strategies for surrounding land uses, and new streetscape design elements	Louisville Metro	-	2040
1857	Louisville Loop Southern Shared-Use Path (Parent)	Design and construct a shared-use path system connecting the Ohio River Levee Trail section of the Louisville Loop at Watson Lane to the Parklands of Floyds Fork section of the Louisville Loop at Bardstew Road. This corridor is approximately 33 miles of the 100+ Louisville Loop.	Louisville Metro	-	2035
2032	Floyd Central - Highland Hills Safe Routes to School Project	Multi-use path to connect Floyd Central High School and Highland Hills Middle School in Georgetown. Current area lacks any pedestrian/multi-modal infrastructure. Project could be located along Edwardsville-Galena Road and would provide pedestrian/multi-modal access to existing neighborhoods around both schools.	Floyd County	-	2025

2064	East Market Street Streetscape Improvements	Streetscape enhancements to improve pedestrian/bicycle amenities along East Market Street from Brook Street to Baxter Avenue. Enhancements include the addition of landscape medians in two separate blocks to serve as a gateway to the neighborhood and repurposing one of the existing east-bound drive lanes to provide a dedicated separate bike facility. Project length 0.96 miles.	Louisville Metro	5-8703.00	2024
2121	I-65	6YP DESC: Improve safety and reduce congestion at the I-65/I-264 (Watterson Expressway) interchange. Project length is 2.29 miles. CHAF DESC: Improve safety and reduce congestion at the I-65/I-264 (Watterson Expressway) interchange. CHAF ID - IP20160017. Additional Considerations: Model does not include any changes to this interchange and the configuration is assumed to be the same as the one we drive on today. KIPDA asked KYTC for clarity on this project's description and was notified that they cannot provide any suggested changes to the number of lanes or to the configuration until a planning study is complete (email from Tom Hall to Andy Rush on 7/31/18).	KYTC	5-559.00, 5-559.01	2034
2148	KY 2053	CHAF: Improve Mt. Washington Road from Preston Highway to Penn Run Creek Bridge. (10CCN)(12CCR). Same as 5-8611.80 Section 1 - Current project design is 3-lane widening with two way center turn lane. CHAF ID: IP20150290	KYTC	5-8205.00	2032
2148	KY 205	CHAF: Improve Mt. Washington Road from Preston Highway to Penn Run Creek Bridge. (10CCN)(12CCR). Same as 5-8611.80 Section 1 - Current project design is 3-lane widening with two way center turn lane. CHAF ID: IP20150290	KYTC	5-8205.00	2032
2507	I-264	Address pavement condition of PCC pavement on I-264 both direction(s) from MP 12.7 (just east of I-65) to MP 18.41 (just west of I-64).	KYTC	5-20016.00	2028
2601	I-65	Improve safety and reduce congestion at the I-65/I-265 (Gene Snyder Freeway) interchange. CHAF IP20160019.	KYTC	5-560.00	2033
2606	KY 841/Renaissance Park	KYTC Highway Plan (June, 2018): Construct new interchange on KY 841 at the Renaissance South Business Park. Project length is 1 mile. CHAF ID: 20190131. Additional Considerations: Construct new interchange on KY 841 at the Renaissance South Business Park.	KYTC	5-80006.00	2026
2766	KY 1747 (Fern Valley Road/Hurstbourne Parkway) Complete Street	Complete bicycle/pedestrian connections along Fern Valley Road and Hurstbourne Parkway	Louisville Metro	-	2045
2780	KY 61 Premium Transportation Corridor Project	Improve safety, reduce congestion, and improve multi-modal transportation options along KY 61 from Commerce Crossings Drive (BMP 1.395) to Briden Avenue (EMP 8.400) including the I-264 (Watterson Expressway) and I-265 (Gene Snyder Freeway) interchanges. CHAF IP20160018.	KYTC	-	2031
3081	I-65	Improve safety, reduce congestion, and address condition of PCC pavement on I-65 from Exit 121/KY 1526 to Exit 125/I-265 (MP 120.88 to 124.00).	KYTC	5-575.00	2032

EXISTING CONDITIONS

This section describes existing transportation network conditions within the study area and includes information on roadway systems and geometry, bridges, traffic volumes and operations, and crash history. Data was compiled from KYTC’s Highway Information System (HIS) database, KYTC’s Transportation Enterprise Database (TED), bridge inspection reports, traffic counts, aerial photography, and field reviews.

Roadway Systems and Geometric Characteristics

KYTC’s HIS database was queried during February 2024 to obtain roadway systems information and geometric characteristics of the KY 61 study corridor and other major roadways within the study area boundary. Data assembled from HIS for analyses included:

- Lane, shoulder, and median widths;
- Speed limits;
- Truck routes; and
- Functional classifications and other roadway system designations.

Lanes

Per data obtained from the KYTC Highway Information System, KY 61 contains four 12-foot-wide lanes throughout much of the study area. GIS and field measurements show lane widths typically less than 12 feet and vary from 10.5 feet to 14 feet. The six-lane segment between Cooper Chapel (MP 1.401) and the EB I-265 On Ramp (MP 1.620) is a four-lane roadway with a northbound turn lane, and with the southbound portion gaining two left turn lanes and one right turn lane approaching Cooper Chapel Road.

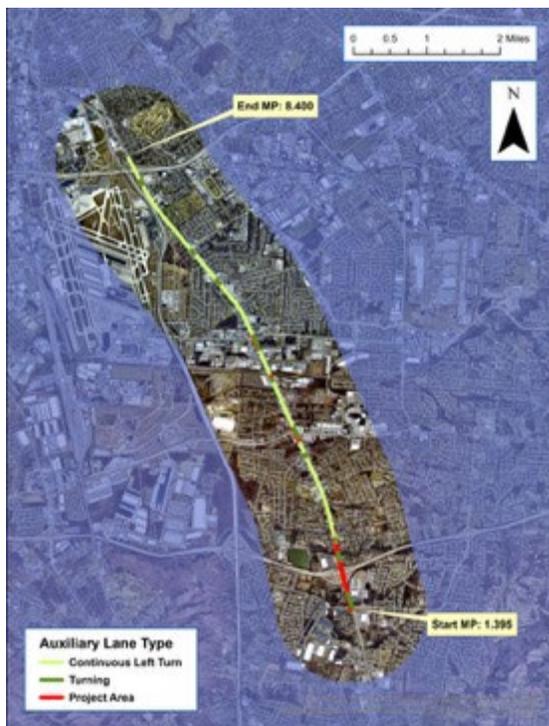


Figure 4: Turn Lanes *Shoulders*



Figure 3: Number of Lanes

KY 61 has varied shoulder widths and types across the study area, with differences often seen on opposing sides of the same stretch of road. Across 7.005 miles of project, there is a total of 14.010 miles of shoulder. The most common shoulder type is no shoulder, which spans 7.218 miles of the project area. The second most common is curbed, which spans 4.065 miles of the project area. The remainder of the project contained asphalt or asphalt combination shoulders. The shoulder width varies greatly across the project area. The most common shoulder width is 0 feet (no shoulder), and spans 7.218 miles. The second most common shoulder width is 10 feet, covering 2.511 miles. The third most common shoulder width is 2 feet, covering 2.389 miles. The remainder of the shoulders on the project are 3, 4, 5, 6, or 8 feet. The northbound right side has approximately 4.5 miles of curb and 2.5 miles of asphalt shoulder, while the southbound right side has about 5 miles of curb and 2 miles of asphalt shoulder. This data is shown in **Figures 5 and 6**.

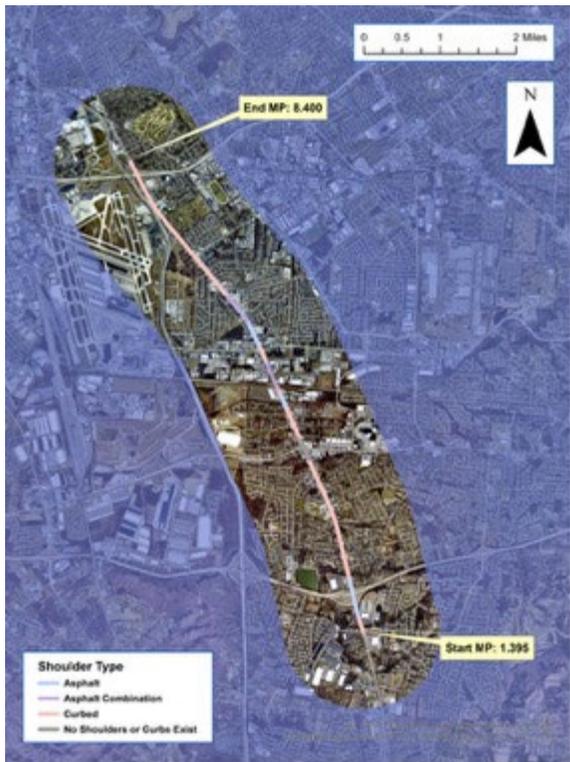


Figure 5: Shoulder Types

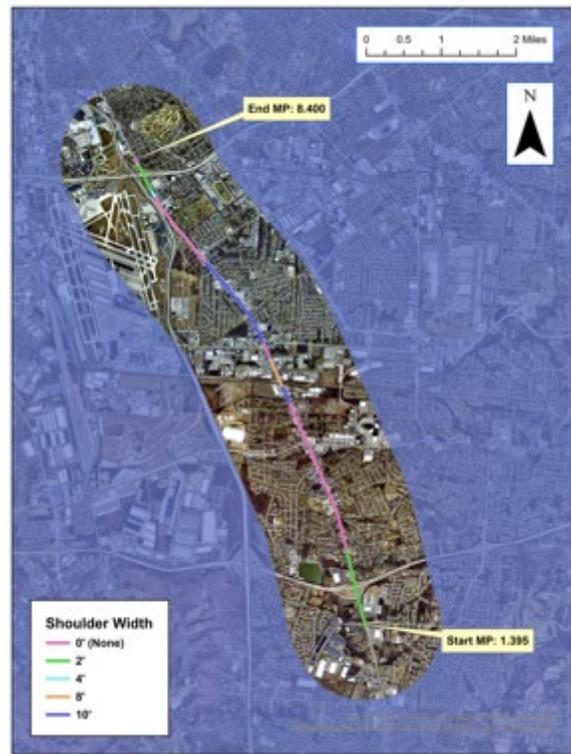


Figure 6: Shoulder Widths

Medians

KY 61 is mostly an undivided highway with 5.42 miles having no median. A 16-foot raised non-mountable median exists from MP 1.395 (Project Start) to MP 2.126 (Glen Rose Road), which transitions to a 16-foot raised mountable median from MP (2.126) to MP (2.34), a 28-foot flush median from MP (3.8) to MP (4.07), with a 12-foot raised non-mountable median from MP (4.731) to MP (4.84), and another 28-foot flush median from MP (5.201) to MP (5.46). This data is shown in **Figure 7**. Areas with no median have a flush two-way left-turn lane or a dedicated left turn lane.

Interstate Ramps

The study corridor includes 10 interstate ramp connections to KY-61 across three interchanges within the study area. These ramps are distributed between northbound/southbound and on/off configurations. All ramps provide sufficient merge and diverge lengths, allowing drivers to safely adjust speeds to interact with interstate traffic. However, certain ramp intersections with KY 61, particularly those at the I-65 interchange, exhibit high Expected Excess Crash (EEC) values (Section 2.7) and require modifications to improve safety. Detailed information on the interstate ramps within the study area is as follows:

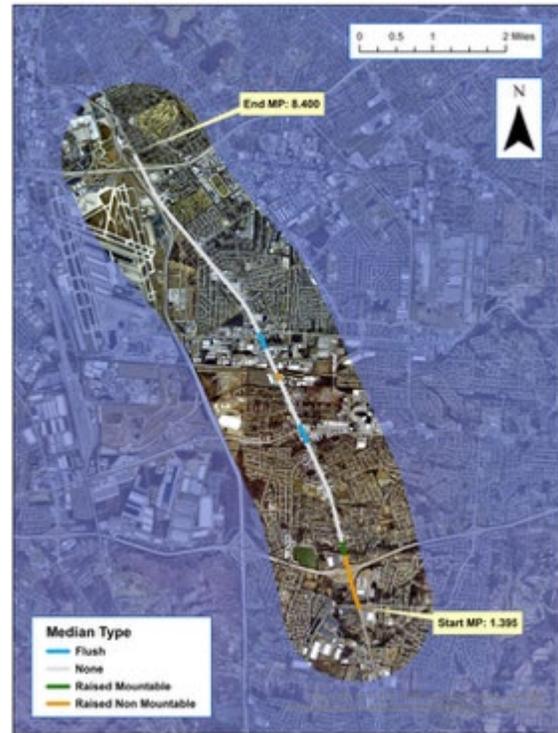


Figure 7: Medians

1 Northbound

- a) Diverge from KY 61 NB to I-265 EB – 2429'
- b) Diverge from KY 61 NB to I-265 WB – 2170' (diverges from ramp 1a & merges with ramp 2c)
- c) Merge from I-265 WB to KY 61 NB/SB – 1547'
- d) Merge from I-264 WB to KY 61 NB/SB – 2709'

2 Southbound

- e) Merge from I-265 EB to KY 61 – 2571'
- f) Diverge from KY 61 SB to I-265 EB – 1996'
- g) Diverge from KY 61 SB to I-265 WB – 2175'
- h) Merge from I-65 NB to KY 61 NB/SB – 2170'
- i) Diverge from KY 61 NB/SB to I-65 NB – 1827'
- j) Diverge from KY 61 NB/SB to I-264 EB – 3152'

Geometric Deficiencies

HIS data was reviewed to identify any substandard grades or curves along study area routes. At a planning level, KYTC classifies vertical grades and horizontal curves into six classes (A to F). The entire KY 61 project area is rated A for horizontal curves and A or B for vertical grades, except for four segments rated C. There are no horizontal curve deficiencies, and the listed deficiency

from MP 5.273 to MP 5.31 is likely an error. The C-rated vertical grade segments are from MP 1.90 to MP 2.17 and from MP 2.62 to MP 3.00.



Figure 8: Horizontal Grades

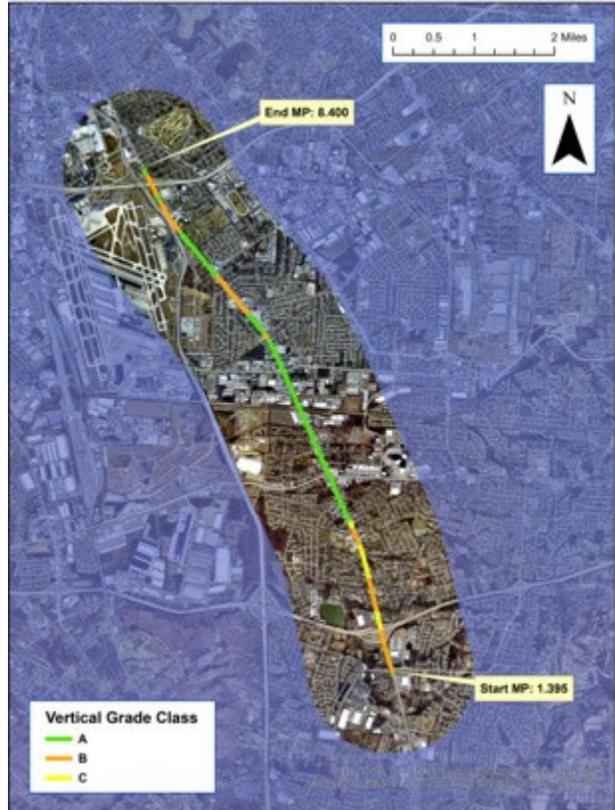


Figure 9: Vertical Grades

Speed Limits and Travel Speeds

Posted speed limits can help suggest the character and intended function of highway segments. The posted speed limit(s) along KY 61 range from 35 mph to 50 mph throughout the project corridor. The section from MP 3.007 to MP 4.75, between the I-264 and I-265 interchanges, has the lowest speed limit at 35 mph. Speed limits increase to 45 mph from MP 2.126 to 3.007 and MP 4.75 to 8.371, reaching 50 mph near the I-265 interchange (MP 1.395 to 2.126). The segment closest to Louisville’s urban center (MP 8.371 to 8.400) slows down to 35 mph. The most common speed limit is 35 mph, covering 77% of the KY 61 study area.

HERE Speed Data from 2020 and 2021 shows that speed reductions mainly occur at intersections, with speeds increasing to the limit in longer segments between signals. Speeds are generally faster in the AM, reaching the speed limit, while slowdowns are more pronounced in the PM. Traffic speeds are similar in both northbound and southbound directions.

Table 2: 2019 Travel Time Trends

Statistic	AM Peak	PM Peak
Northbound		
Minimum	17 mph	15 mph
Maximum	48 mph	45 mph
Average	36 mph	32 mph
Southbound		
Minimum	16 mph	13 mph
Maximum	46 mph	41 mph
Average	35 mph	31 mph

Truck Routes

From MP 1.9 to MP 8.4, KY 61 is classified as a Tier 3 Truck route on the Kentucky Highway Freight Network, indicating it is an intermodal arterial/collector with an Annual Average Daily Traffic (AADT) between 500 and 4000, signifying statewide regional importance. A smaller section, from MP 1.395 to MP 1.900, is rated as Tier 4, indicating a local access road with an AADT under 500, signifying local access importance.

The project area intersects with two other Tier 3 roads (KY 1065 and KY 1747) and connects to I-65, I-264, and I-265, which are Tier 1 routes with an AADT over 7000, indicating national regional significance.

Functional Classification

Functional classification is the process of grouping streets and highways according to the character of travel service they provide. This classification system recognizes travel involves movement through a hierarchical system of facilities that progress from lower classifications handling short, local trips to higher classifications serving longer distance travel at a higher level of mobility.

Over the years, functional classification has come to assume additional significance. Functional classification includes expectations about roadway design, such as vehicle speed, capacity, and relationship to land use development. Federal legislation uses functional classification in

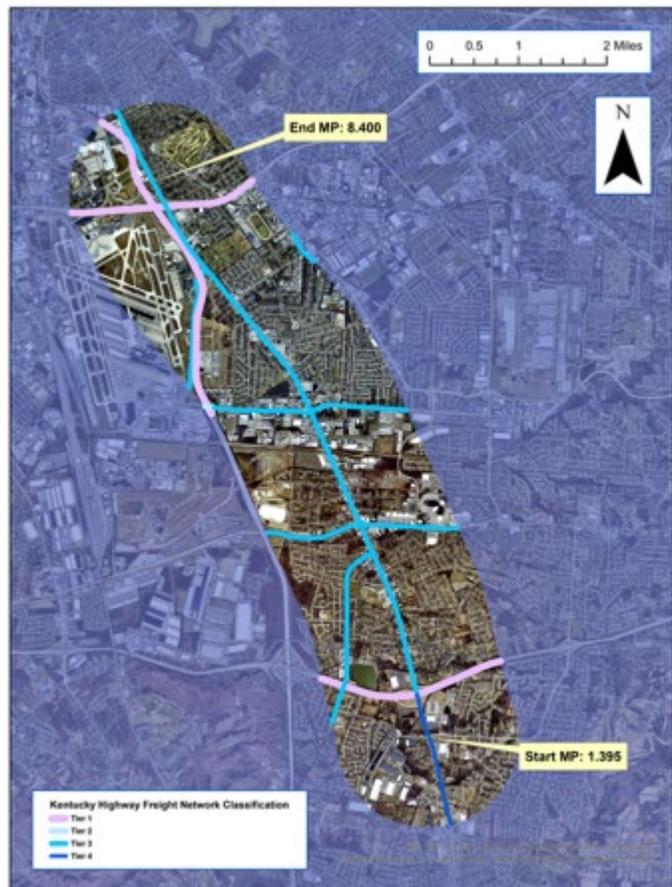


Figure 12: Kentucky Highway Freight Network Classification

determining eligibility for funding under the Federal-aid program. Transportation agencies often describe roadway system performance, benchmarks, and goals by functional classification.

The following are short definitions of major functional classes:

Freeways & Interstates	Provide high speed, high mobility links for long distance trips.
Principal Arterials	Serve major centers for metropolitan areas, provide a high degree of mobility, and can also provide mobility through rural areas.
Minor Arterials	Provide service for trips of moderate length, serve geographic areas smaller than their Principal Arterial counterparts, and offer connectivity to the Principal Arterial system.
Collectors	Gather traffic from local roads and funnel them to the arterial network. Classified as either a major or minor collector; generally serve intra-county travel and shorter trips.
Local Roads	Not intended for long distance travel, except at the origin or destination end of the trip, due to their direct access to abutting land. Often designed to discourage through traffic.

The entirety of the project area is classified as an urban minor arterial. Minor arterials provide services for trips of moderate length and provide connectivity to principal arterials. Traffic is funneled into minor arterials by major and minor collectors. KY 61 is not part of any larger federal roadway systems such as the federal highway system.

The following page shows the functional classification of roadways within the study area.

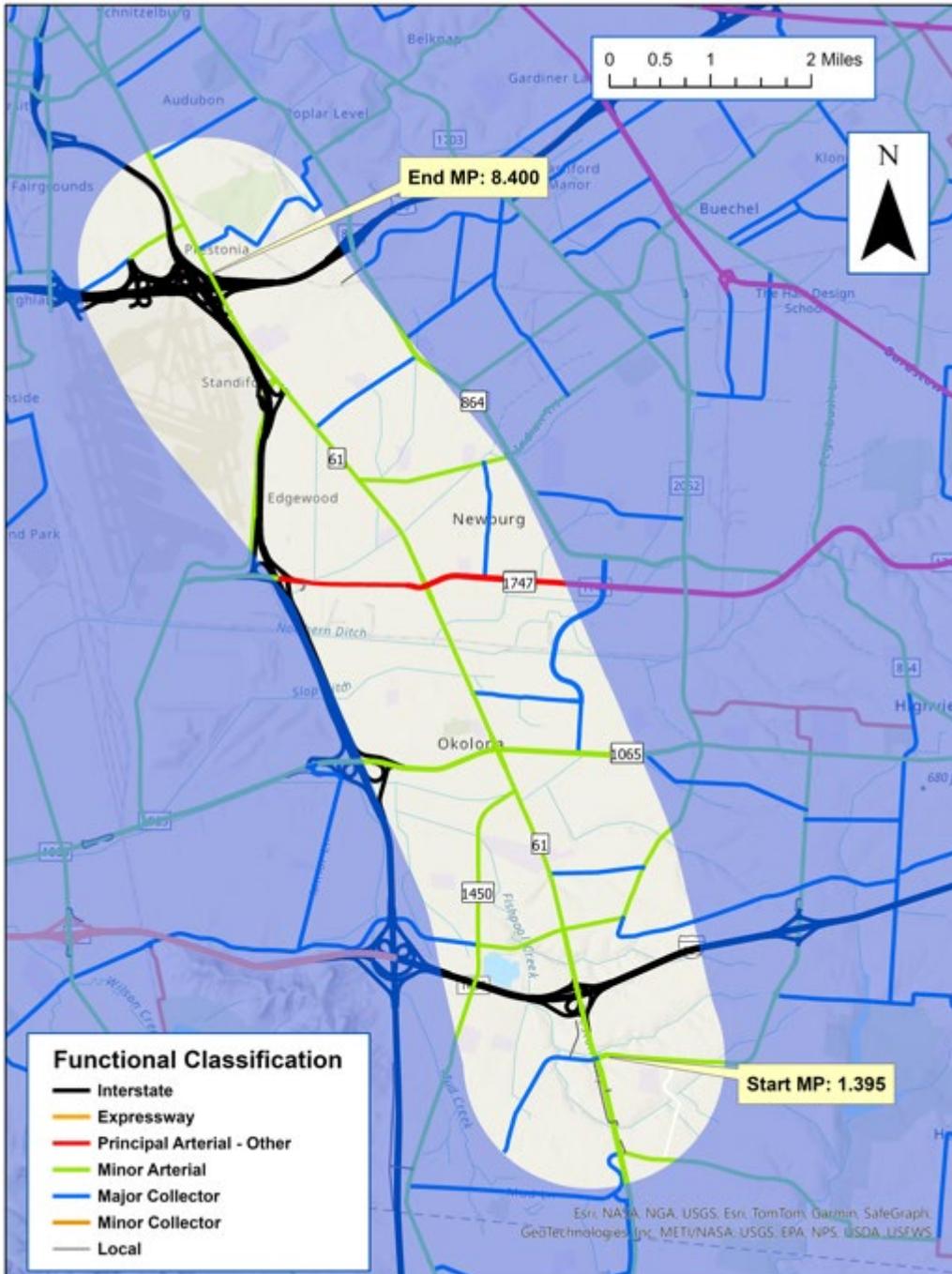


Figure 11: Functional Classification Roadway System

Highway Systems

KY 61 is not on the National Highway system (NHS), Strategic Highway Network “STRAHNET”, and is also not a part of the National Trucking Network.

Bridges

Within the study limits, there are nine bridges (**Figure 12**), of which eight are in fair condition and one is in poor condition. As part of the National Bridge Inventory (NBI) program, KYTC inspects these bridges every two years in accordance with federal standards. Bridge conditions are classified as Good, Fair, or Poor based on the condition ratings of the deck, superstructure, and substructure. A Good rating requires all three components to score 7 or higher on a 10-point scale, while a Poor rating indicates at least one component scores below 4. Bridges that do not meet these criteria are classified as Fair. Detailed information on the bridges within the study area is as follows:

Table 3: Study Area Bridges

Bridge ID	Rating	Route	Intersecting Feature
056B00326N	Fair	KY 61	I-265
056B00327N	Fair	I-265 WB On-Ramp	I-265 and KY 61
056B00032N	Fair	KY 61	Wet Woods Creek
056B00031N	Fair	KY 61	Northern Ditch
056B00030N	Poor	KY 61	Blue Spring Ditch
056B00028N	Fair	KY 61	Greasy Ditch
056B00029N	Fair	KY 61	Tributary to Greasy Ditch
056B00341N	Fair	KY 61	I-264 EB On-Ramp
056B00342N	Fair	KY 61	I-264 & I-264 WB Off-Ramps

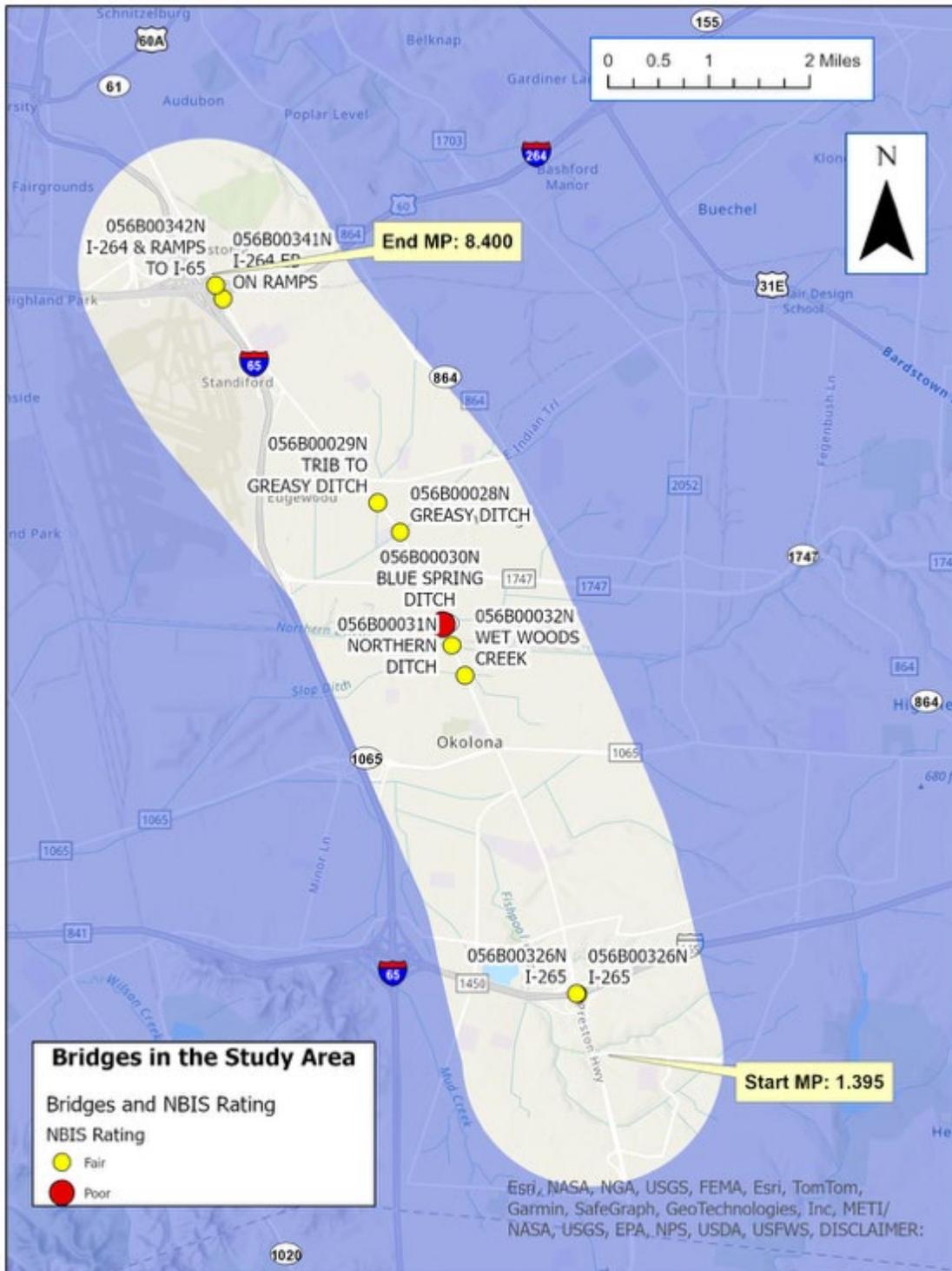


Figure 12: Bridges

Bicycles and Pedestrians

The KY 61 corridor currently has inconsistent pedestrian facilities with multiple gaps. However, three sidewalk extension projects by Louisville Metro are in the final design phase to address gaps on the east side of KY-61 between Fern Valley Road (KY 1747) and East Indian Trail. As of December 2024, the corridor lacks designated bike lanes, and no bikeways are planned per Louisville Metro’s Bicycle Master Plan (2018–2020 Update). Bike lanes are designated travel lanes separate from vehicle driving lanes, while neighborways use shared lanes with painted markings where cyclists and motorists coexist. Addressing impacts to bicyclists and pedestrians, particularly at ramp connections and interstate interchanges, remains a critical focus during the development of improvement concepts.

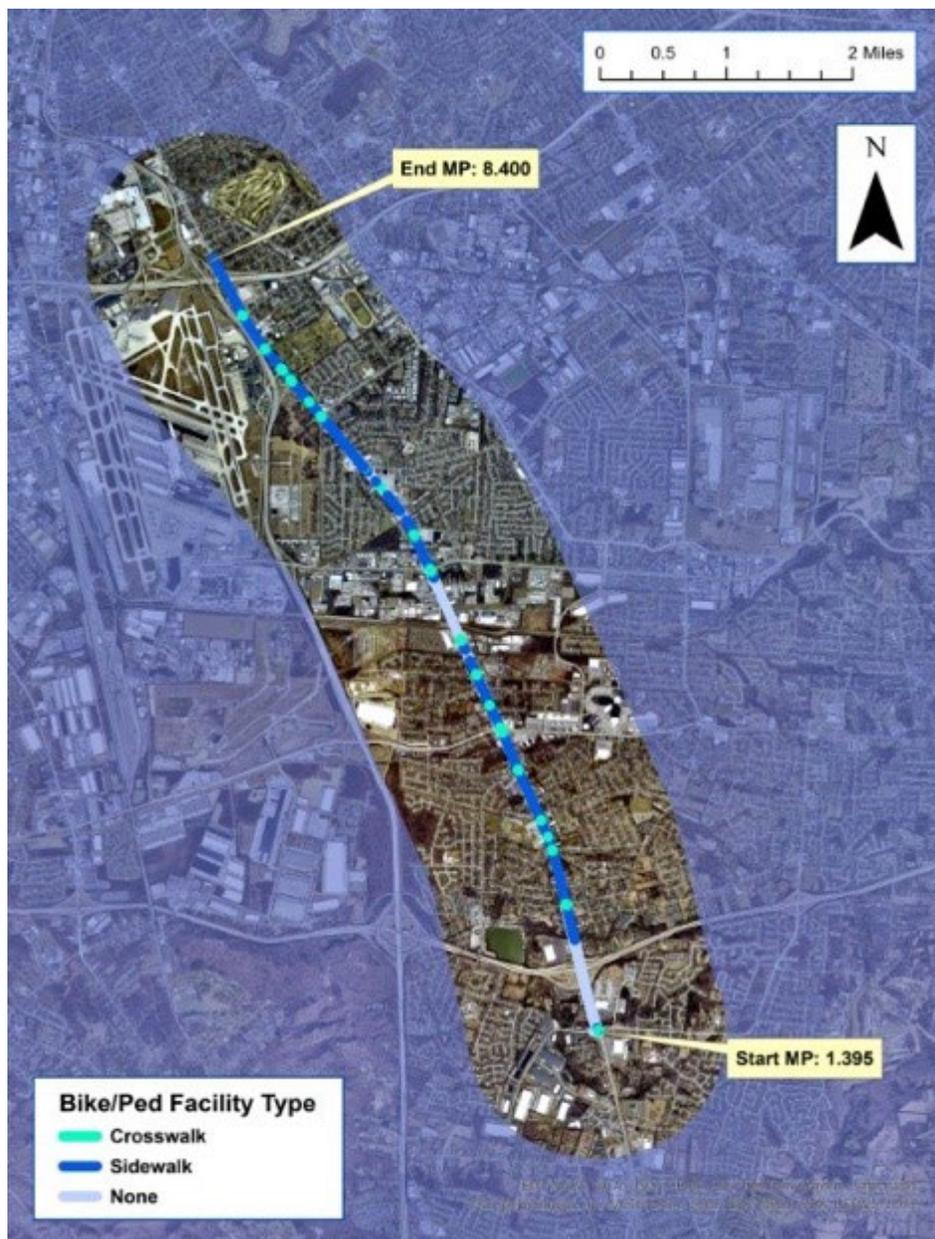


Figure 13: Bike/Ped Facility Types

Transit

TARC provides public transit in the Louisville Metro Area, with two fixed bus routes in the study area: Route 28 - Preston and Route 46 - Outer Loop. Route 28 has eight variants, differing mainly by their southern terminus locations (Jefferson Mall, UPS World Port, or UPS Edgewood lot). Route 46 runs from Iroquois Park to Standiford Plaza.

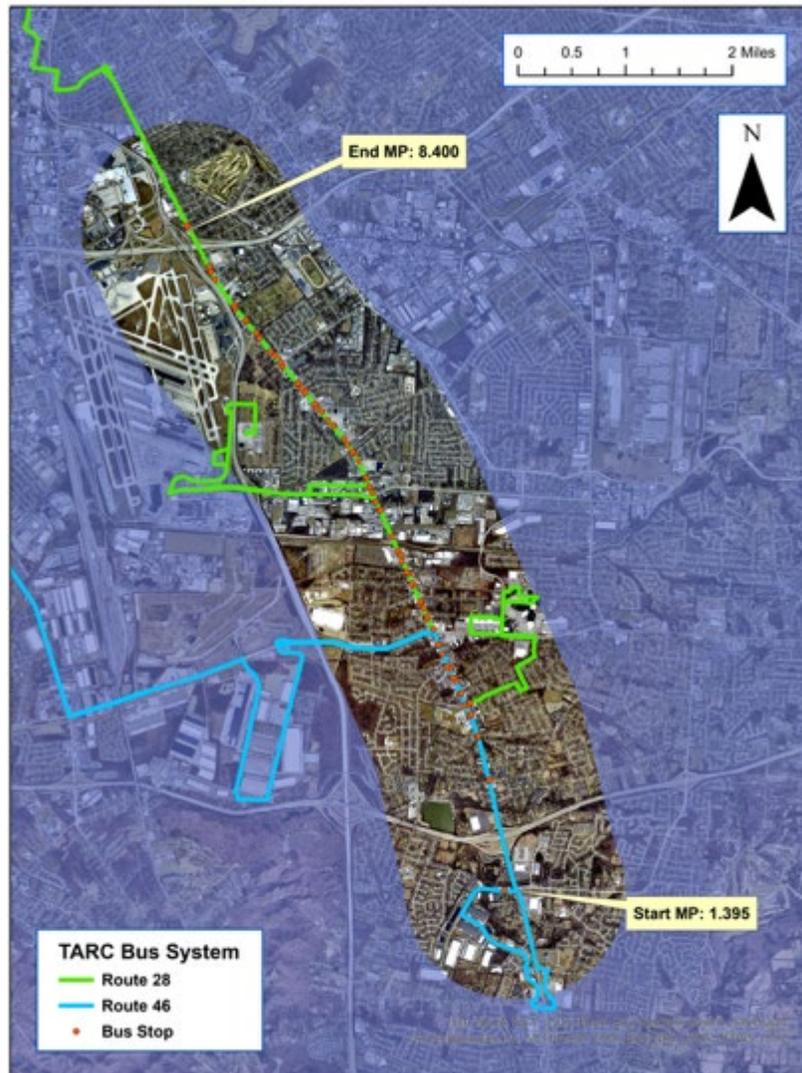


Figure 14: TARC Bus Routes and Stops

A parallel study shows Route 28 is highly productive, ranking third in daily ridership and passengers per revenue hour, and fourth in passengers per revenue mile within the TARC network. However, it ranks in the bottom third for average weekday on-time performance.

ITS and Wayfinding Signage

No TRIMARC cameras are present within the project area as the KY 61 corridor is not part of the interstate system.

Wayfinding signage along the KY 61 corridor falls into three primary categories:

1. **Interchange Wayfinding Signs:** These alert drivers to upcoming interchanges for I-65, I-264, and I-265 in both directions.
2. **Intersection Wayfinding Signs:** These provide guidance for intersections with Manslick Road (KY 2845), Outer Loop (KY 1065), and Fern Valley Road (KY 1747) in both directions.
3. **Route Identification Signs:** These indicate the current roadway, labeled as KY 61 North or KY 61 South.

A visual summary of wayfinding signs can be found in **Figures 15 and 16**.

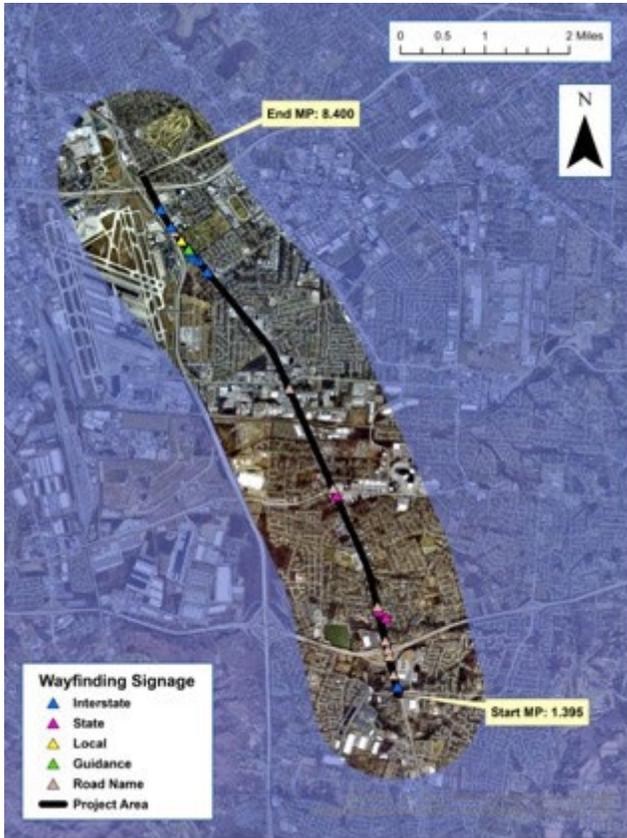


Figure 15: Wayfinding Signage (NB)

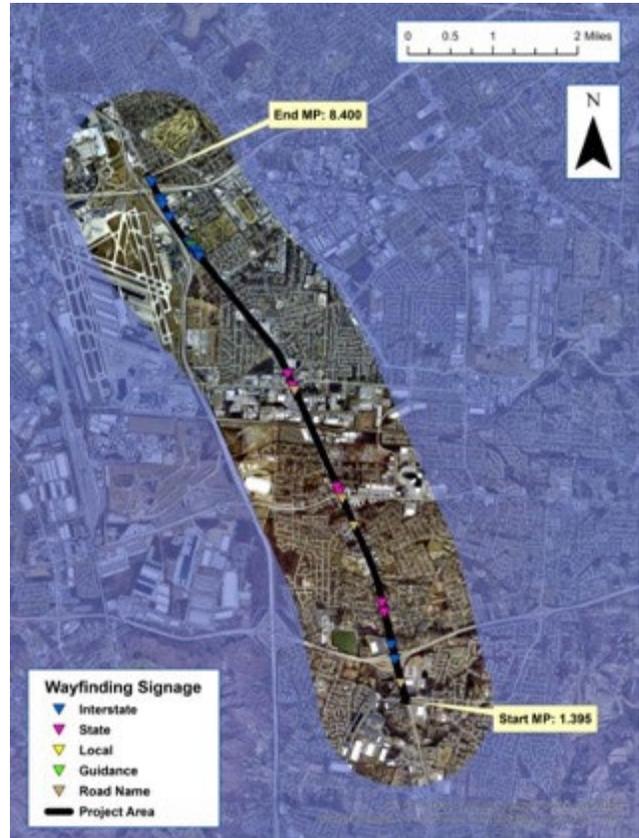


Figure 16: Wayfinding Signage (SB)

Existing Traffic

Historic Counts

Six KY 61 mainline count stations cover the length of the corridor:

- Station 056286 covers MP 0.648 to 1.900, physically located just south of Cooper Chapel Road, with 40,414 vehicles per day (vpd) recorded in 2023.
- Station 056593 covers MP 1.900 to 3.617, physically located just north of High School Drive, with 20,500 vehicles per day recorded in 2023. Trucks make up 13.64% of the daily volume.
- Station 056999 covers MP 3.617 to 3.951, physically located just north of Lambert Road, with 29,843 vehicles per day recorded in 2023. Trucks make up 13.64% of the daily volume.
- Station 056501 covers MP 3.951 to 5.358, physically located just south of Old Fern Valley Road, with 27,081 vehicles per day recorded in 2018. Trucks make up 5.87% of the daily volume.
- Station 056607 covers MP 5.358 to 8.150, physically located just south of Park Brook Lane, with 24,463 vehicles per day recorded in 2023. Trucks make up 3.99% of the daily volume.
- Station 056785 covers MP 8.150 to 9.957, physically located just north of Bourbon Avenue, with 20,905 vehicles per day recorded in 2023. Trucks make up 6.26% of the daily volume.

Historic counts suggest the KY 61 project area has shown slight decreases in growth rate over the past 20 years. This trend remains even when declines from COVID19 in 2020 are accounted for. Annual Average Daily Traffic Volumes since 2000 are presented in Figure 17. Directional factors on KY 61 are not significant. All traffic count stations in the project have a D Factor ranging from 0.51 to 0.57, indicating that traffic is evenly distributed in each direction.



Figure 17: KY 61 (Preston) Traffic Volumes just north of KY 1065 (Outer Loop) Directional

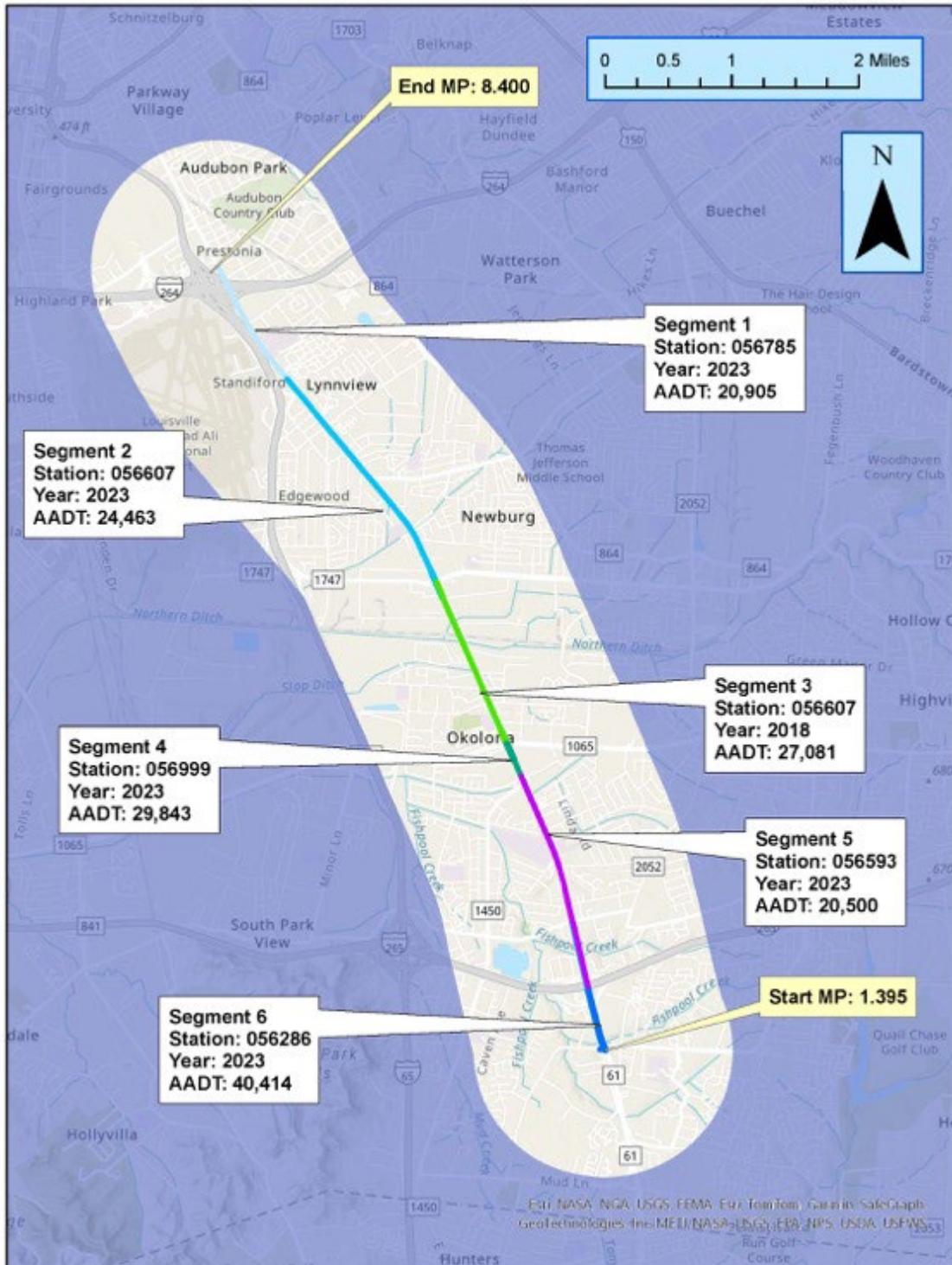


Figure 18: Annual Average Daily Traffic (AADT)

Travel Times

In addition to analyzing historic traffic counts, HERE speed data was collected to analyze corridor travel times. HERE data provides traffic travel times using GPS probe data. Most, but not all signalized intersections in the area created significant traffic slowdowns, with average speed often reducing to under 25 mph.

Intersections facing significant slowdown speeds are listed below. All of the following intersections face consistent slowed travel times in both AM and PM peak periods in both NB and SB directions:

- Cooper Chapel Road
- I-265 Interchange
- South Park Road
- Outer Loop
- McCawley Road
- Fern Valley Road
- East Indian Trail
- Gilmore Lane
- I-65 Interchange

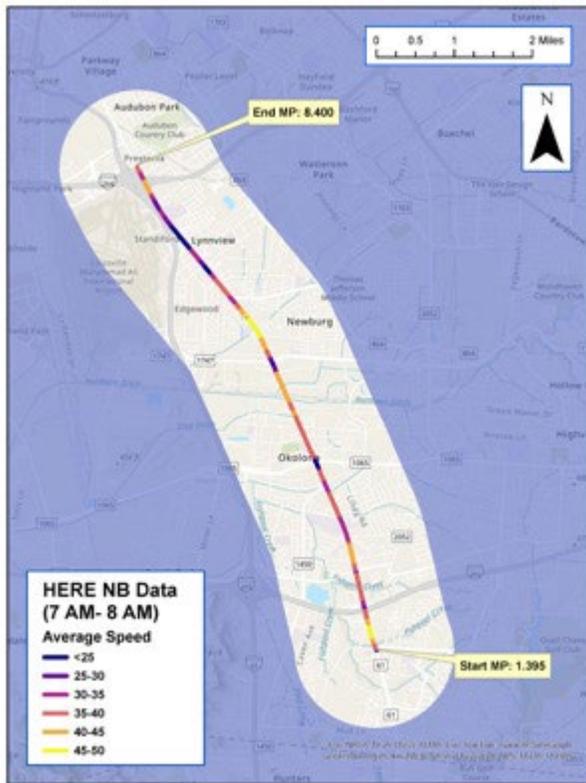


Figure 21: HERE NB (7AM – 8AM)

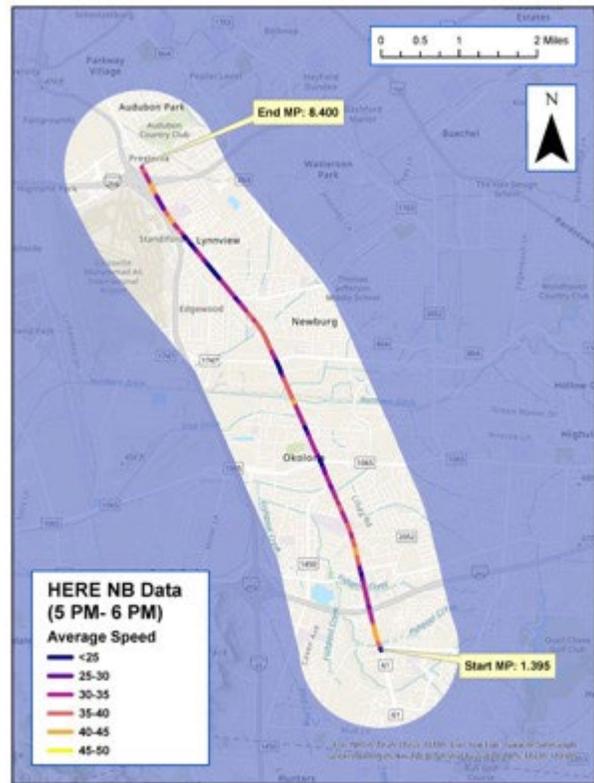


Figure 20: HERE NB (5PM – 6PM)



Figure 21: HERE SB (7AM – 8AM)



Figure 22: HERE SB (5PM – 6PM)

Existing Traffic Operations

Traffic operation is assessed using metrics like Level of Service (LOS), Volume Capacity Analysis, and queue lengths. LOS rates traffic quality from LOS A (free-flowing) to LOS F (high congestion and delays). Volume/Capacity Analysis is the ratio of current traffic volume to the road’s design capacity. Queue length measures the distance of stalled traffic from the intersection to the last queued vehicle.

Synchro and VISSIM models are being used to analyze these metrics for 2023 and 2045 scenarios. Synchro models traffic flow and signal timing in complex networks, while VISSIM provides in-depth intersection analysis, considering turning movements and traffic flow. Both models evaluate the impact of roadway geometrics and lane configurations, including changes due to turn lane additions or removals.

Microsimulation

For this study, Synchro Studio microsimulation software was used to model corridor operations. PTV VISSIM software was used as a more detailed check of the partial displaced left intersection improvement concepts. Sidra Intersection software was used to analyze potential roundabouts. While any model has limitations—particularly in over capacity congested conditions, these models represent industry standard tools available to approximate current and future traffic scenarios. To calibrate the models, analysts collected information regarding existing traffic conditions: signal

timing plans on connected surface streets, queue lengths, operating speeds, etc. Additional technical information about the microsimulation modeling tasks is included in **Appendix E**.

In addition to illustrating existing needs within the study area, the microsimulation models form a baseline to test how proposed infrastructure improvement concepts would affect traffic operations.

Figure 23 presents peak hour operations along KY 61 for the 2023 scenario. As shown, approximately 32% of the northbound traffic operates at a LOS E, or F during the AM peak hours. During the PM peak hours, the same percentages are applicable. The southbound traffic shows approximately 55% of the AM traffic as a LOS E or F, while 36% of the PM traffic is categorized as the same. In urban areas, LOS D is considered acceptable. Detailed information on segment LOS is shown in Table 5 below.

Table 4: Level of Service during Peak Hour Operations

Segment	NB AM LOS	SB AM LOS	NB PM LOS	SB PM LOS
<i>Commerce Crossing to South Park Road</i>	B	B	B	C
<i>South Park Road to Blue Lick</i>	B	B	B	C
<i>Blue Lick to Pinecroft Drive</i>	B	B	B	C
<i>Pinecroft Drive to Outer Loop</i>	D	E	E	C
<i>Outer Loop to Markwell Lane</i>	D	D	D	C
<i>Markwell Lane to Old Fern Valley Road</i>	D	D	D	E
<i>Old Fern Valley Road to Fern Valley Road</i>	D	D	D	E
<i>Fern Valley Road to East Indian Trail</i>	A	D	A	E
<i>East Indian Trail to Gilmore Lane</i>	F	A	F	A
<i>Gilmore Lane to Grade Lane</i>	A	D	A	F
<i>Grade Lane to Briden Avenue</i>	A	D	C	D

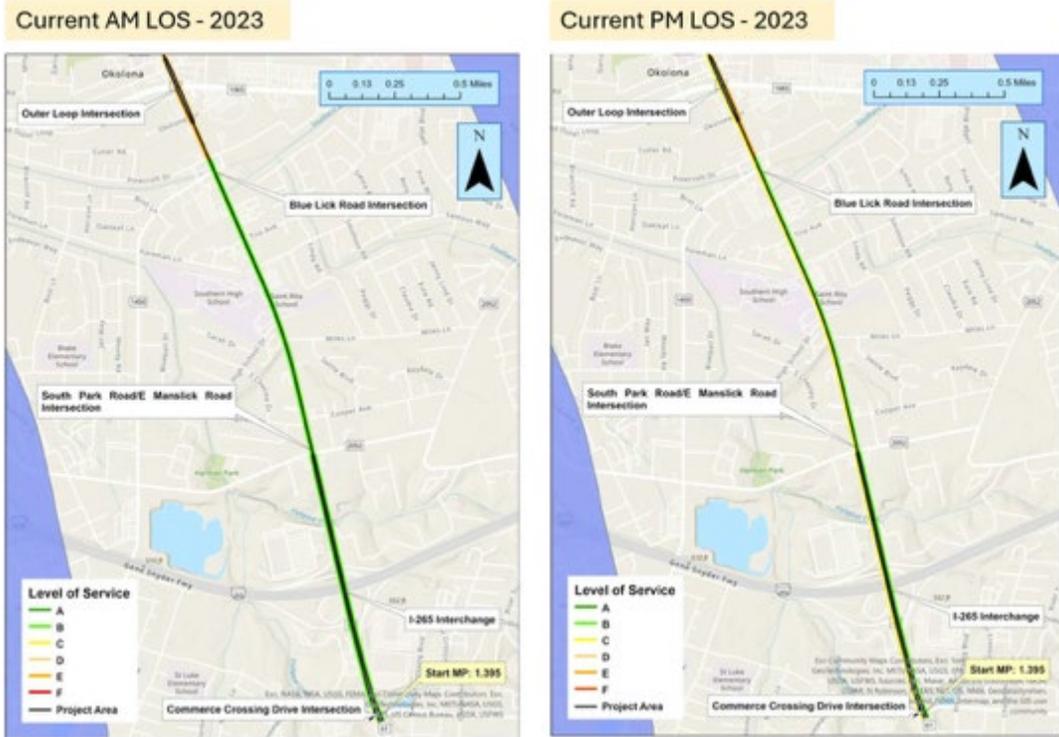


Figure 23: Segment 1 - Commerce Crossing Drive to Outer loop

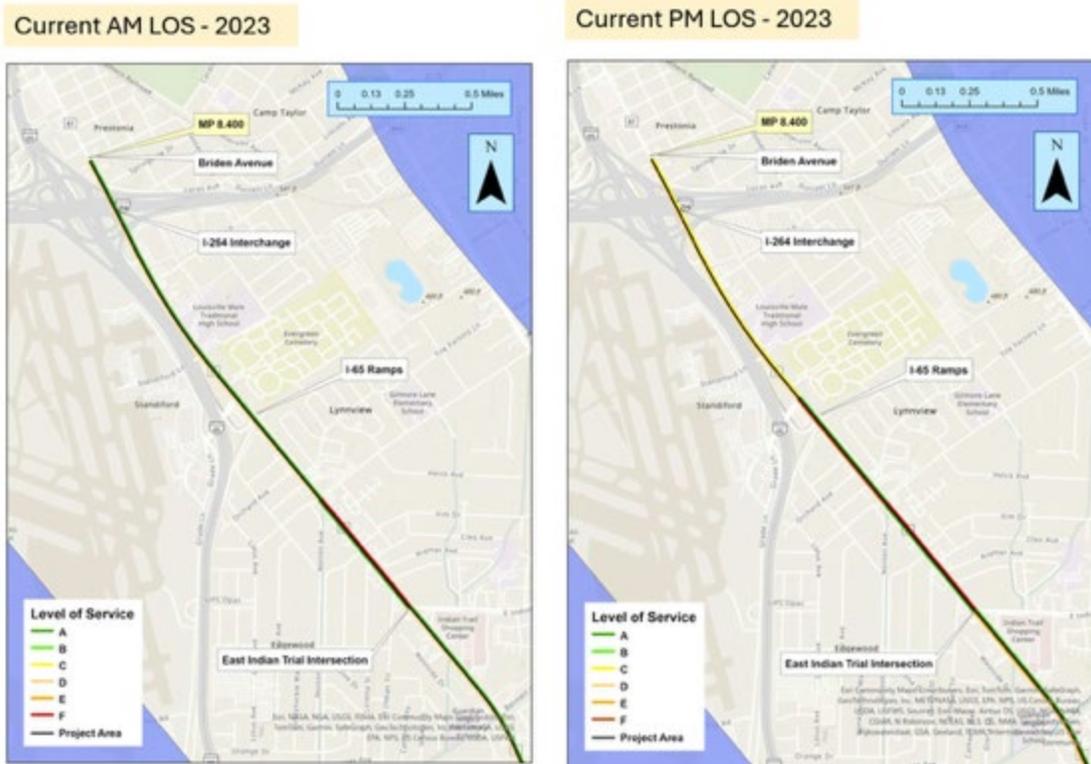
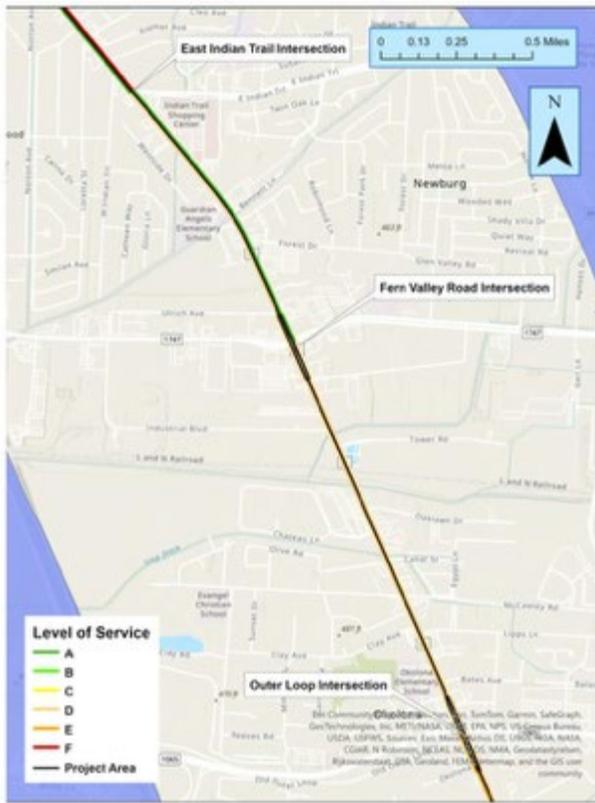


Figure 26: Segment 2 - Outer Loop to East Indian Trail

Current AM LOS - 2023



Current PM LOS - 2023

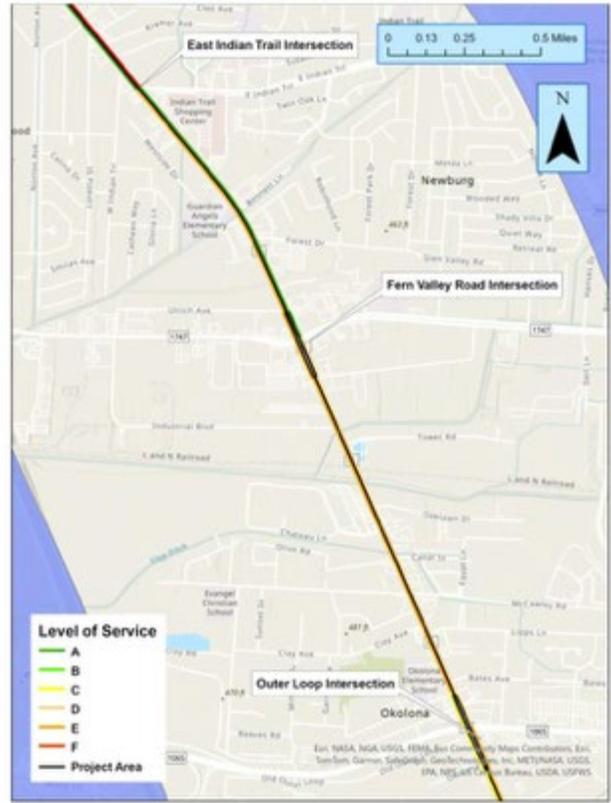


Figure 27: Segment 3 - East Indian Trail to Morgan Avenue

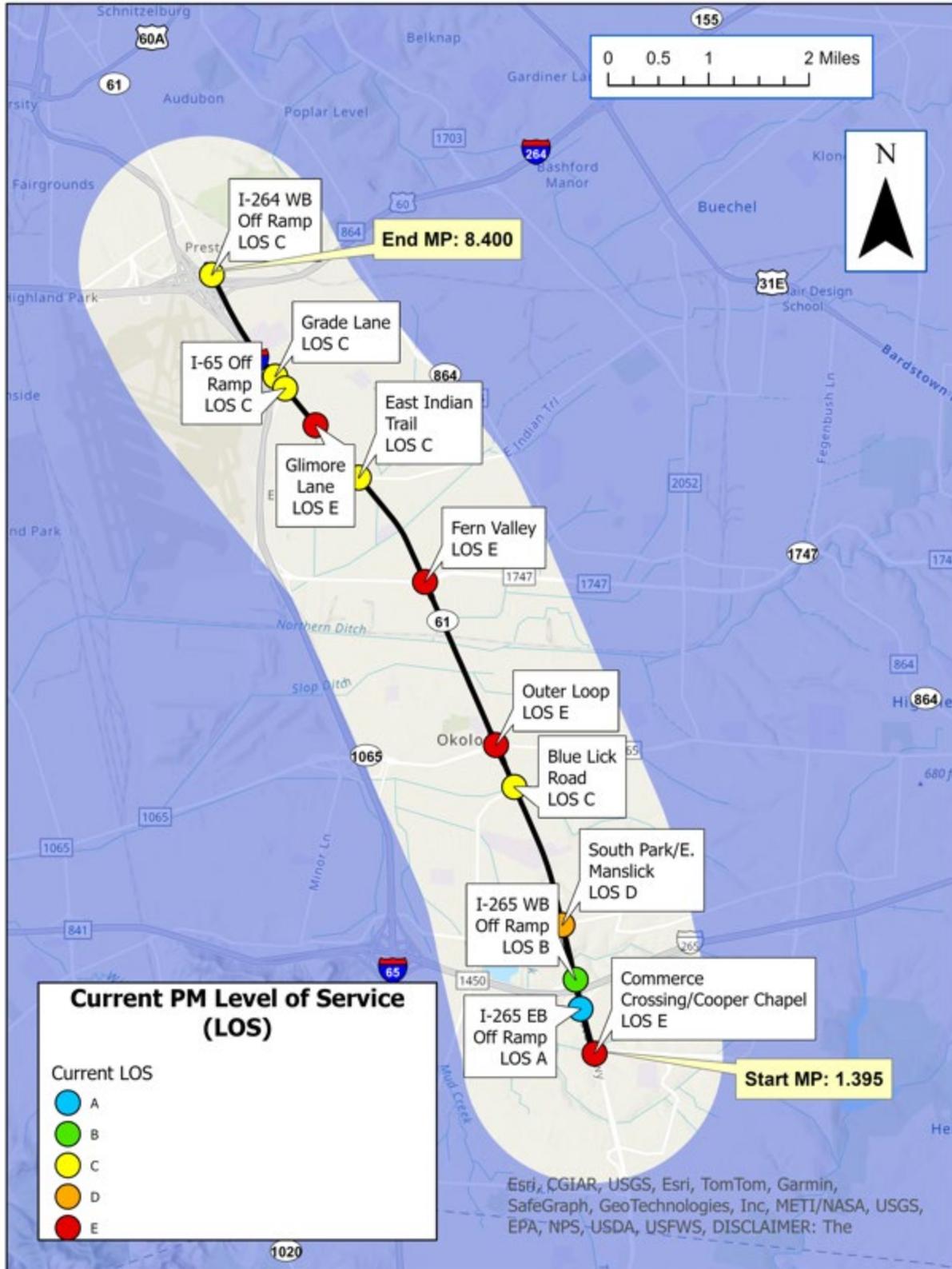


Figure 24: 2020 Existing Peak Hour LOS

Crash History

Crash Types and Crash Distribution

Historical crash data for the five-year period from January 2019 to December 2023 was collected from the Kentucky State Police database and analyzed for the study area.

<http://crashinformationky.org/>

During this time period, there were 2298 crashes, with 22 fatal crashes (22 fatalities – some crashes involving multiple lives lost) and 536 injury crashes (101 of those crashes involving suspected serious injuries), which are shown in **Figure 25**.

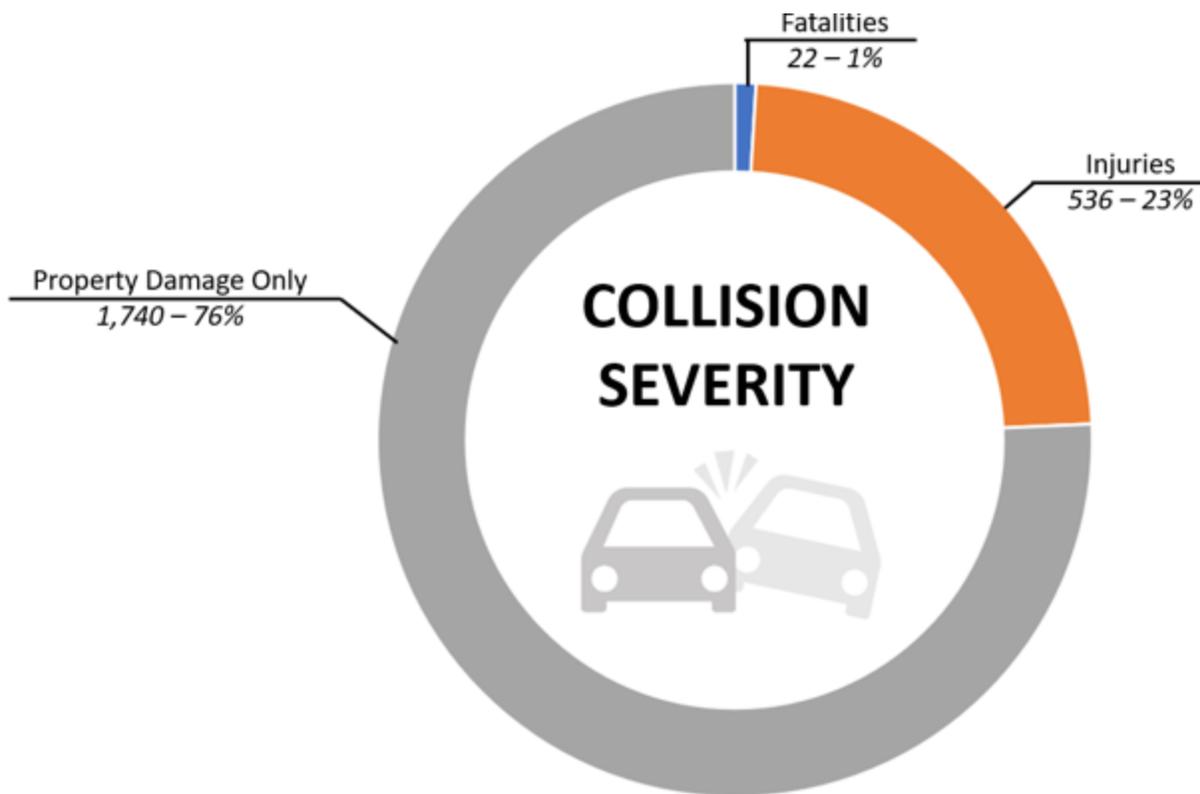


Figure 25: Collision Severity

The two most common crash types were Rear End and Angle crashes. These consisted of 40% (909) rear end and 30% (687) angle crashes. Other prevalent crash types in the area are Sideswipe Same Direction, Single Vehicle, Opposing Left Turn, and Head On collisions. The least common crash types are Sideswipe Opposite Direction, Rear to Rear, and Backing, with each of these types only consisting of 1% of the crash total.

Shown in Figure 26, the manner of collision trends reveals most crashes were Rear End crashes (40%) followed by Angle crashes (30%).

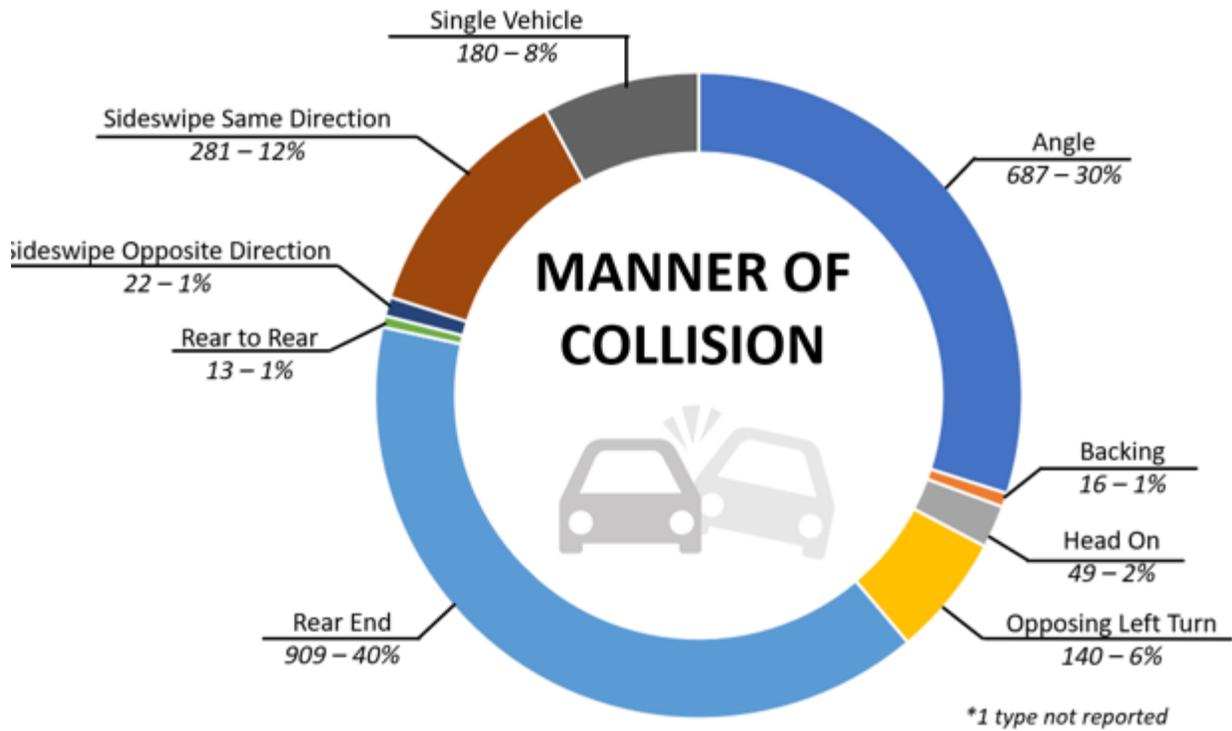


Figure 26: Crash Type Trends

Additionally, there were 15 crashes involving bicycles and 42 crashes involving pedestrians. There were 22 fatalities involving bicycles or pedestrians reported during this analysis period.

Overall crash distributions (by all severity) were analyzed to create a set of heat maps (**Figures 27, 28 and 29**), showing the areas with the highest crash densities at intersections.

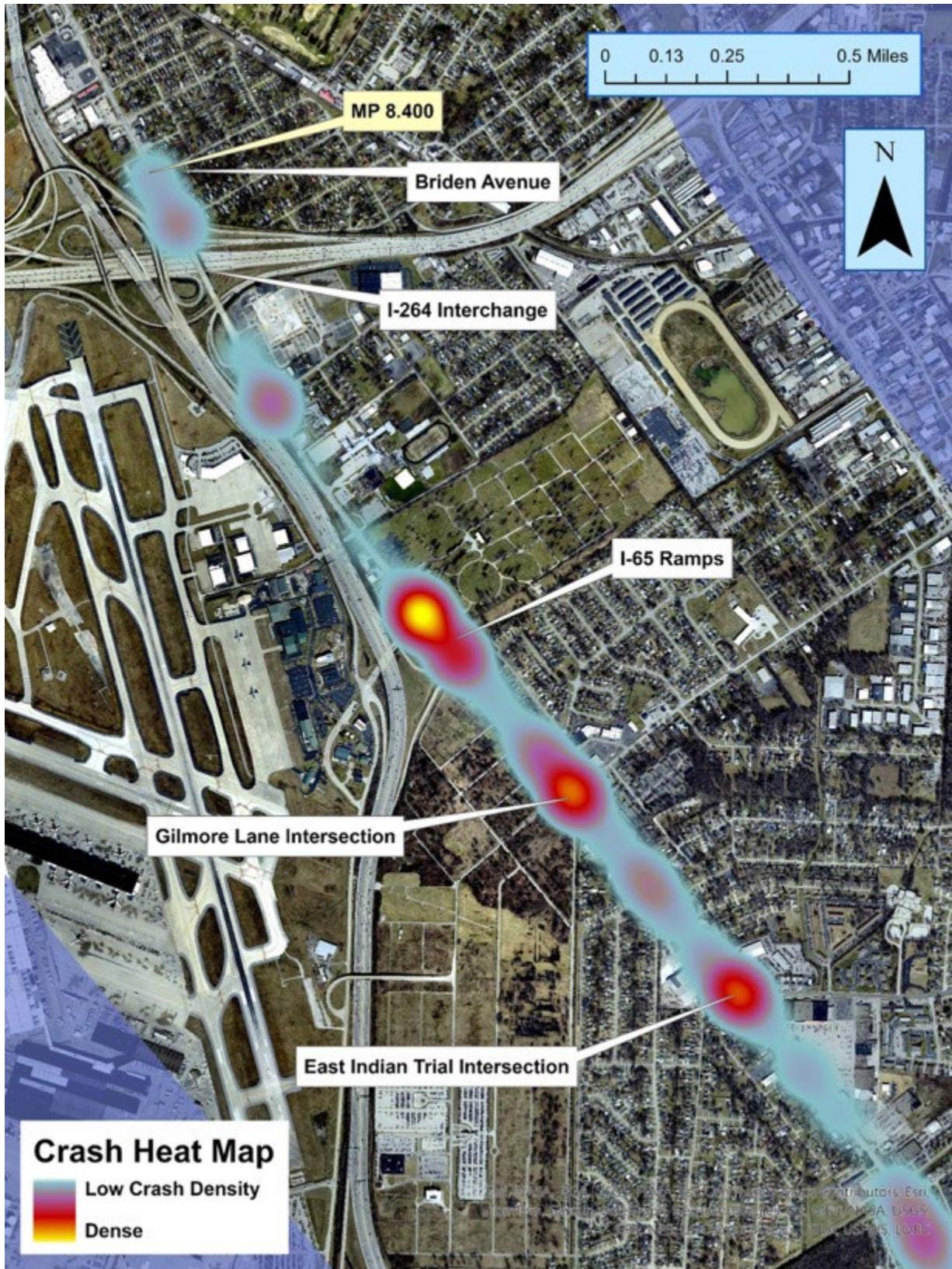


Figure 27: Crash Heat Map

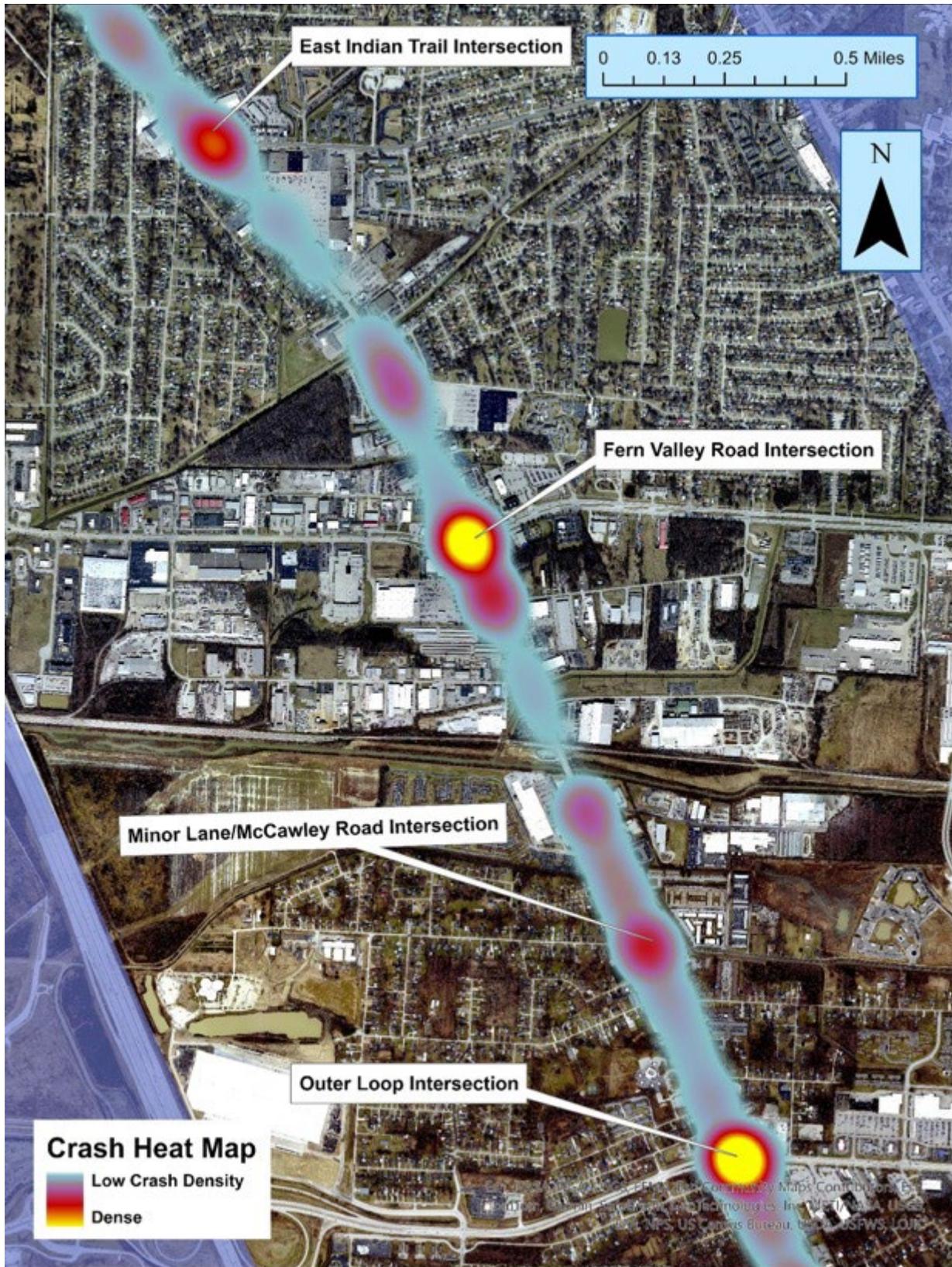


Figure 28: Crash Heat Map

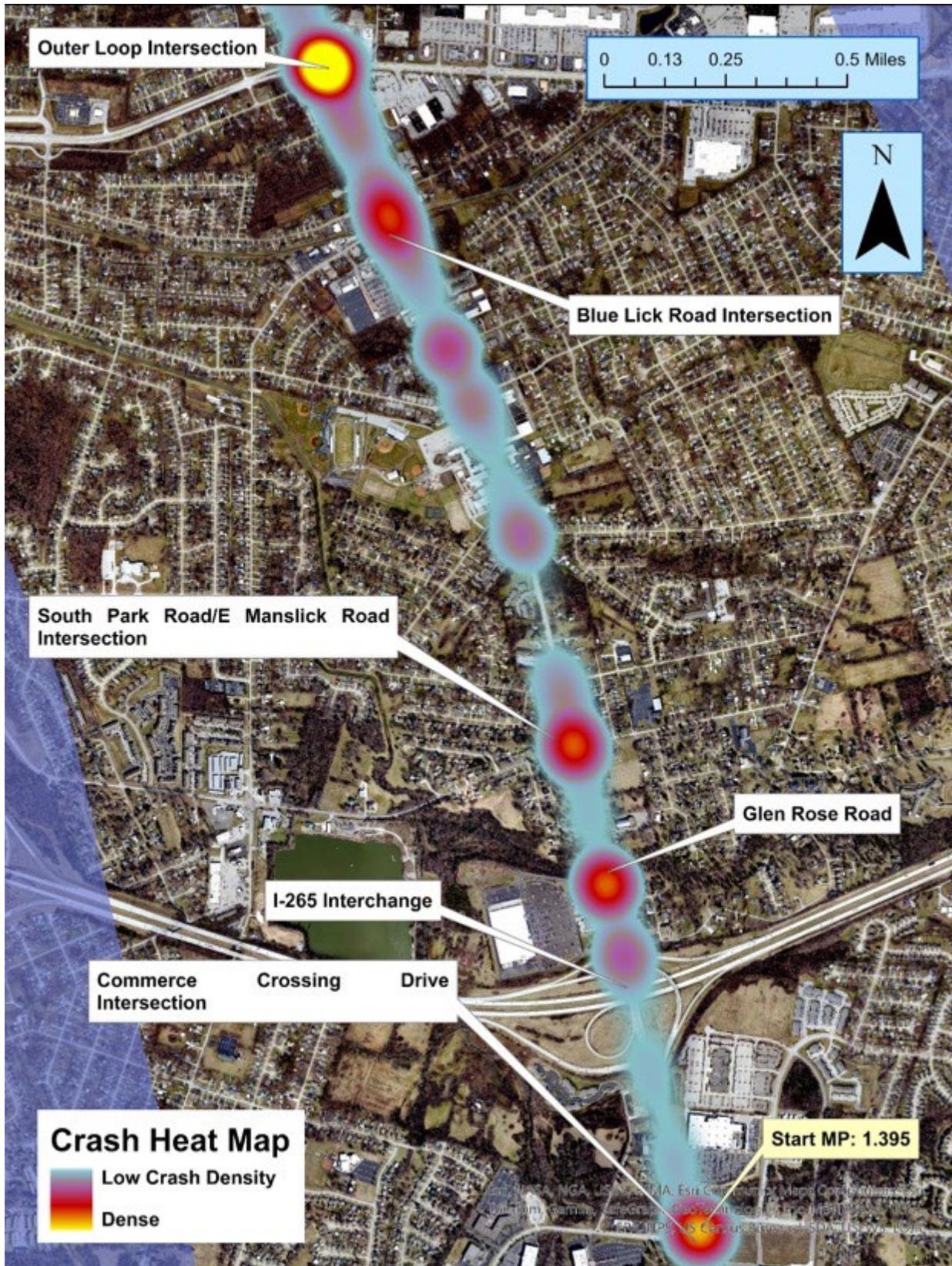


Figure 29: Crash Heat Map

KIDPA Crash Analysis

KIPDA identifies top crash spots and segments for its metropolitan planning jurisdiction.

<https://kipda.maps.arcgis.com/apps/webappviewer/index.html?id=1f10e74494634d4196219f5b21cf4830>

Regarding intersections, or crash spots, the following intersections along KY 61 are identified by KIPDA as, "Kentucky Intersection Crashes Top 40":

- KY 61 (Preston Highway) intersection with KY 1065 (Outer Loop)
- KY 61 (Preston Highway) intersection with KY 1747 (Fern Valley Road)
- KY 61 (Preston Highway) intersection with East Indian Trail
- KY 61 (Preston Highway) intersection with Grade Lane

Regarding roadway segments, the following segments along KY 61 (Preston Highway)

- KY 61 (Preston Highway) between KY 1450 (Blue Lick Road) and Mcawley Road, *which includes the KY 1065 (Outer Loop) intersection*
- KY 61 (Preston Highway) between KY 1747 (Fern Valley Road) and East Indian Trail
- KY 61 (Preston Highway) between Gilmore Lane and Grade Lane

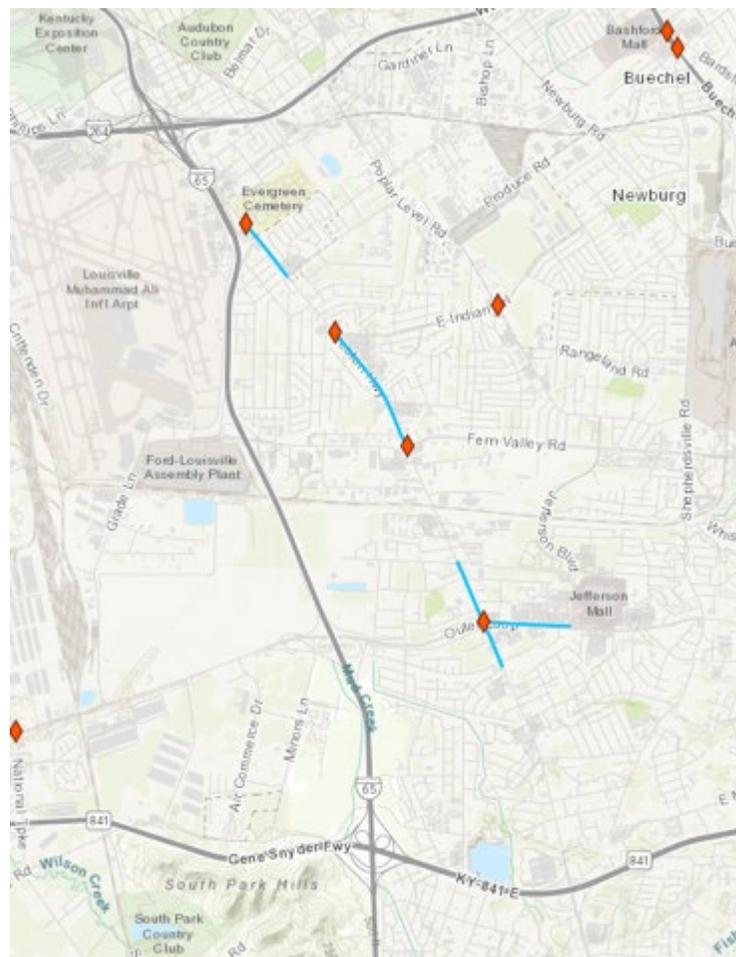


Figure 30: KIPDA Crash Analysis

High Injury Network

Louisville Metro Government’s Vision Zero Louisville report identifies KY 61 (Preston Highway) from Commerce Crossing Drive to Hart Lane as part of the High Injury Network. This approximately 7.5 mile road segment of KY 61 (Preston Highway), encompasses our complete 7 mile study area from Commerce Crossing Drive/Cooper Chapel Road to Briden Drive.

<https://louisvilleky.gov/government/vision-zero-louisville/high-injury-network>

A High Injury Network is a data-driven approach which identifies non-interstate roadway segments that account for a disproportionate amount of a community’s fatal and serious injury crashes. Developing a High Injury Network is a national best practice among Vision Zero communities. The High Injury Network allows communities to focus limited resources on improving safety on high priority corridors.

Of 53 road segments prioritized as part of Vision Zero Louisville’s High Injury Network, this segment of KY 61 (Preston Highway) is the 9th highest priority.

Table 5: High Injury Network

Priority Ranking	Corridor Route	Corridor Name	Begin Location	End Location	Approx. Length (Miles)	Ownership
1	US-150	Broadway	S 22nd St	Baxter Ave	3.4	KYTC
2	CS-1011F	S 7th St	Algonquin Pkwy	Split to S 9th St	0.9	METRO
3	CS-1021F	W Broadway	S 22nd St	S 35th St (north leg)	1.2	METRO
4	US-60A	7th Street Rd / Berry Blvd / Taylor Blvd / Winkler Ave	Dixie Hwy	S 3rd St	3.2	KYTC
5	KY-1865	Taylor Blvd / New Cut Rd	Gene Snyder Fwy	Berry Blvd	5.3	KYTC
6	US-60	Shelbyville Rd	Lexington Rd	Thierman Ln	0.6	KYTC
7	US-31E	Bardstown Rd	Captain Pl	Beulah Church Rd / Seatonville Rd	1.7	KYTC
8	US-31W	S 22nd St / Bernheim Ln	Dixie Hwy	Dumesnil St	1.1	KYTC
9	KY-61	Preston Hwy	Cooper Chapel Rd / Commerce Crossings Dr	Hart Ave	7.5	KYTC
10	US-31W	Dixie Hwy	Depot Ln	Bernheim Ln	14.5	KYTC

Excess Expected Crashes (EEC)

KYTC, in conjunction with the Kentucky Transportation Center, provides information on EECs through the Crash Data Analysis Tool (CDAT).

<http://crashtool.uky.edu/>

EEC refers to the difference between the observed crash frequency and the expected crash frequency predicted by the Safety Performance Function (SPF). It is a metric used to identify locations with higher-than-expected crashes, indicating potential safety issues that may require intervention. The EEC helps prioritize sites for safety improvements by highlighting areas where the actual number of crashes exceeds what would be expected based on traffic volume and other factors.

Both intersection and roadway segment EECs were queried for the five-year period from January 2019 to December 2023 and analyzed for the study area. In this study area, roadway segments with high EECs aligned with intersections with high EECs. Intersection crashes were identified through this Data Driven Safety Analysis (DDSA) as the primary area of focus.

Maps (Figures 31, 32, 33, and 34) showing EECs follow. A positive EEC number indicates more crashes than similar intersections or road segments. A negative EEC number indicates fewer crashes than similar intersections or road segments.

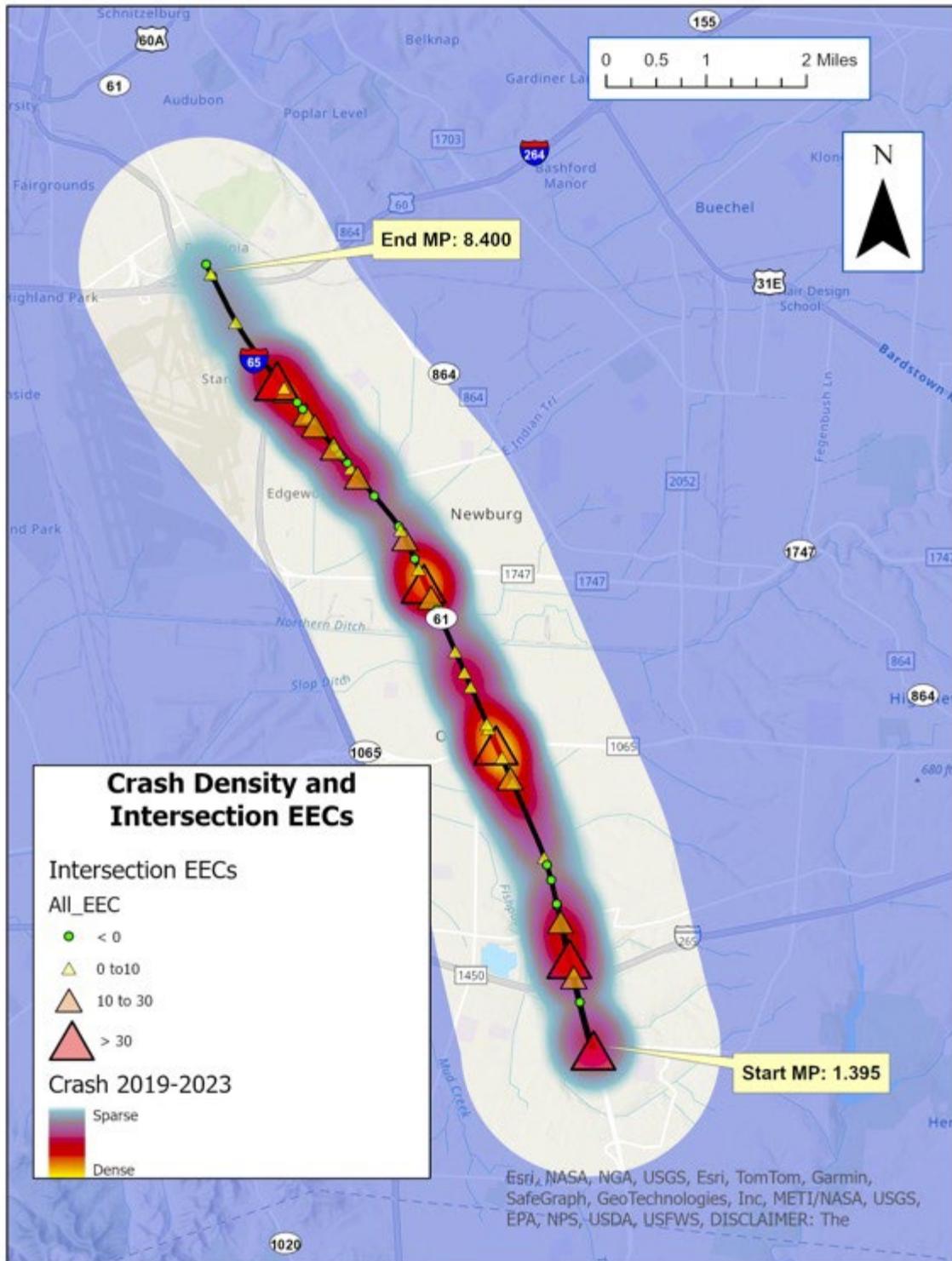


Figure 31: Crash Density and Intersection EECs

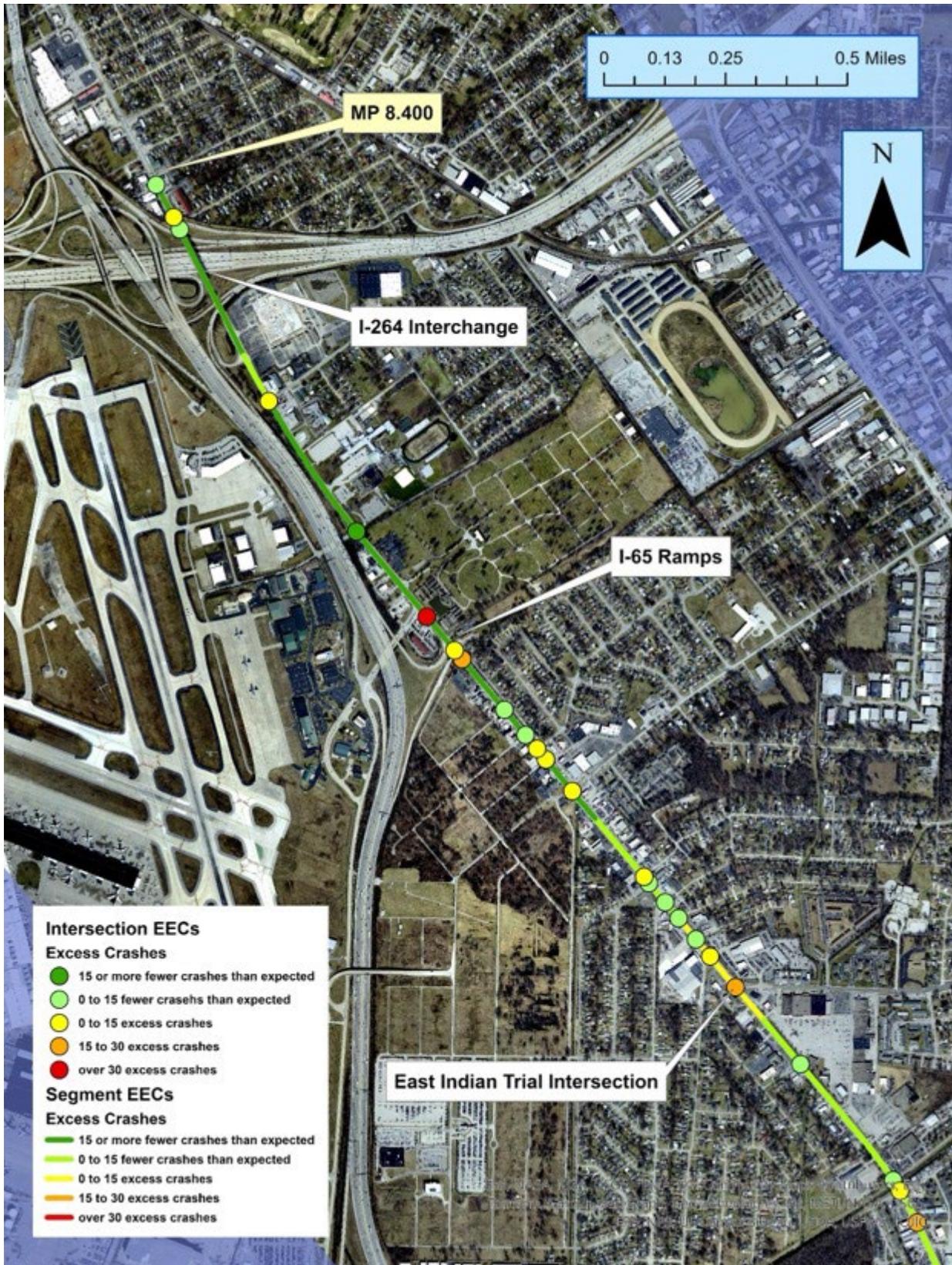


Figure 32: Intersection EECs



Figure 33: Intersection EECs

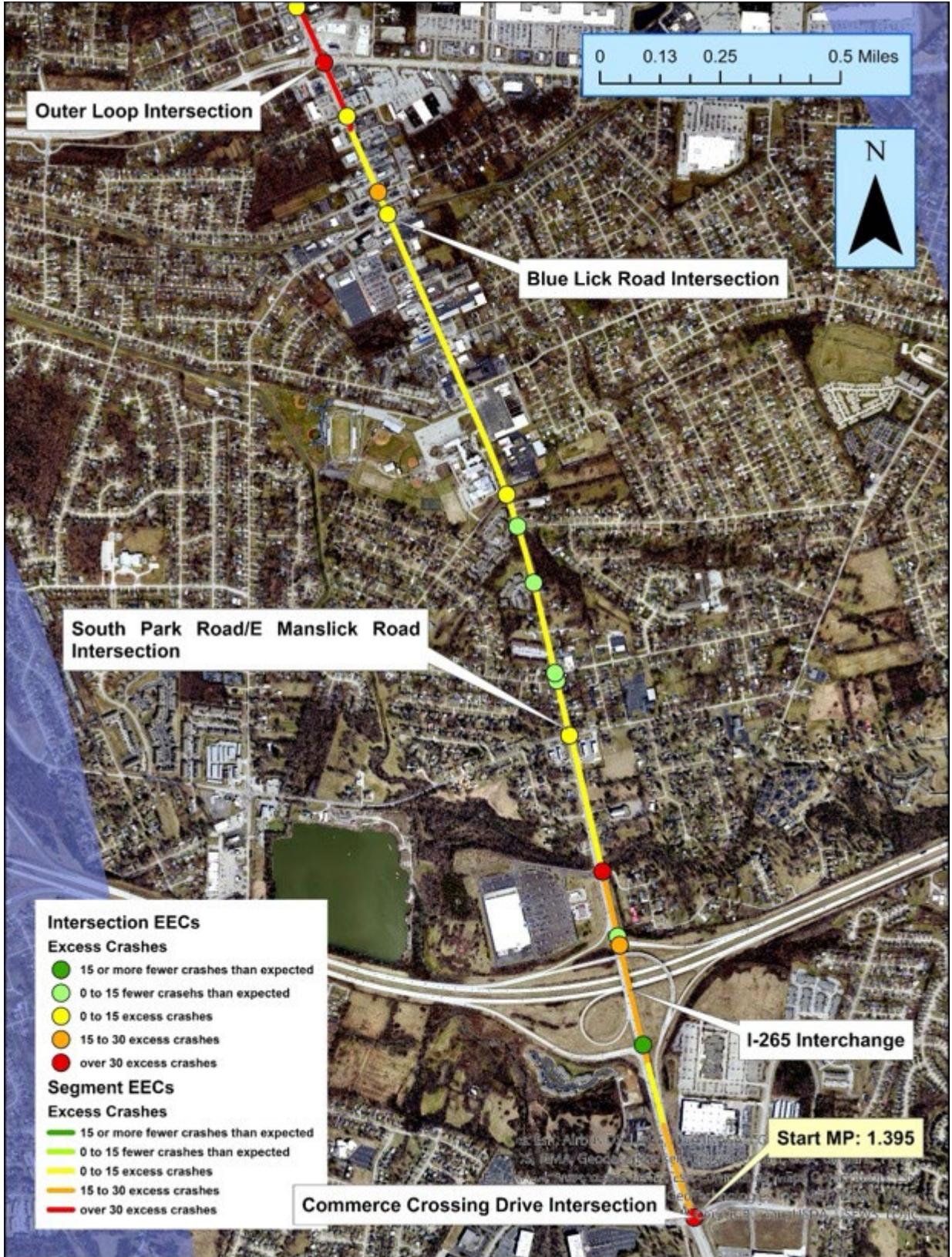


Figure 34: Intersection EECs

Crash Focus Areas

Through this DDSA, the following intersections with KY 61 (Preston Highway) were of particular concern and focus, due to inclusion on KIPDA's Intersection Crash List, 9th priority on Vision Zero Louisville's High Injury Network, high intersection EECs and high density of overall crashes:

- Commerce Crossing/Cooper Chapel Road (EEC 40.90)
- I-265 (North Ramp) (EEC 17.885)
- I-265 (South Ramp) (EEC -25.823)
- Boerste Way/Glen Rose Road (EEC 43.51)
- South Park Road/East Manslick Road (EEC 11.99)
- KY 1065 (Outer Loop) (EEC 83.13)
- KY 1747 (Fern Valley Road) (EEC 53.73)
- East Indian Trail (EEC 27.78)
- Gilmore Lane (EEC 10.87)
- I-264 Ramp (North Ramp) (EEC 6.661)
- I-65 Ramps and Grade Lane (EEC 60.01)

ENVIRONMENTAL OVERVIEW



Figure 35: Study Area Segments

The KY 61 Preston Highway Plan (MP 1.395 - MP 8.4) encompasses a study area extending from Briden Avenue in Jefferson County to Commerce Crossings Drive near the Bullitt County border, with a 1-mile buffer radius surrounding the highway’s centerline. This planning-level environmental review assesses potential impacts to natural and human environments within the corridor, providing a baseline for identifying practical, affordable, and environmentally sensitive transportation improvements. The report supports the Kentucky Transportation Cabinet’s (KYTC) efforts to develop short- and long-term solutions that enhance safety, mobility, and multimodal transportation options while minimizing environmental impacts.

The environmental overview identifies potential red flags or fatal flaws that could influence the feasibility of proposed alternatives, ensuring that project development concepts align with the National Environmental Policy Act (NEPA) requirements. It highlights existing conditions within the natural and human environments, including streams, floodplains, karst topography, socioeconomic characteristics, and historic resources. While no significant environmental barriers were identified, the report underscores the importance of early consideration of sensitive resources—such as endangered species habitats, historic properties, and disadvantaged populations—in planning and design. These findings will guide alternative development and ensure compliance with regulatory requirements in future project phases.

The project study area, shown in Figure 35, includes an approximate 1-mile buffer radius surrounding the existing centerline of the KY 61 study area.

Physiology and Topography

The study area is within the New Providence Shale Member of the Mississippian Age Borden Formation, a bedrock unit found in several states including Kentucky and Indiana. The Borden Formation consists mainly of gray argillaceous siltstone and shale, with some fine-grained sandstone and minor interbedded limestones.

The area spans four USGS topographic map quadrangles: Louisville West, Louisville East, Valley Station, and Brooks. It is part of the Bluegrass Section of the Interior Low Plateaus, featuring gently rolling plains with elevations from 440 to 650 feet above sea level. The land is heavily used for commercial and residential purposes.

- Man-made surface water flow influences, such as storm water drains and drainage ditches, divert flow through the combined sewer system. A combined sewer overflow area is present in northern and northwestern Jefferson County, near downtown Louisville. The average annual precipitation is about 48 inches.

Historic Resources

At the federal level, the National Register of Historic Places (NRHP), administered by the National Park Service, is the nation's official list of properties recognized for their significance in American history, architecture, archaeology, engineering, and culture. Properties are protected under the *National Historic Preservation Act* and Section 4(f) of the *US Department of Transportation Act*. In addition, Louisville Metro maintains its own historic preservation districts—many of which overlap with NRHP boundaries. Local districts are overseen by the Historic Landmarks and Preservation Districts Commission.

A request for site information within the study corridor was sent to the Kentucky Heritage Council. The following is a summary of information provided by the KHC.

- **National Register Historic Districts:** Lynnview Historic District.
- **National Register of Historic Places:** 125 sites identified.
- **KHC Historic Resources:** 49 sites, including:
 - 0 NR District Contributing
 - 2 NRHP Listed
 - 2 Part of a National Register Complex
 - 0 NR Eligible
 - 42 NR Status not determined
 - 3 Demolished

These properties are protected under the National Historic Preservation Act and Section 4(f) of the US Department of Transportation Act. Section 4(f) properties include public parks, recreation areas, wildlife refuges, and historic sites listed or eligible for listing on the NRHP. Audubon Park is a Section 4(f) property within the study area.

Louisville Metro also maintains historic preservation districts, many overlapping with NRHP boundaries, overseen by the Historic Landmarks and Preservation Districts Commission.

Four land management agencies (National Park Service, Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Forest Service) use Land Water and Conservation Fund (LWCF) funds to protect natural resources and enhance public access for recreation. These resources are not expected to be impacted by the proposed improvements, so Section 6(f) considerations are unlikely in future project phases.

The project study area has significant NRHP Historic Districts and individually listed properties, requiring Section 106 review and coordination in future project phases. The Full Site Check data from the Site Identification Program (Project Registration #: FY21-4067) is available upon request.

Archaeological Potential

Here's a summary of the information provided by the Kentucky Office of State Archaeology (OSA) regarding archaeological resources within the study area:

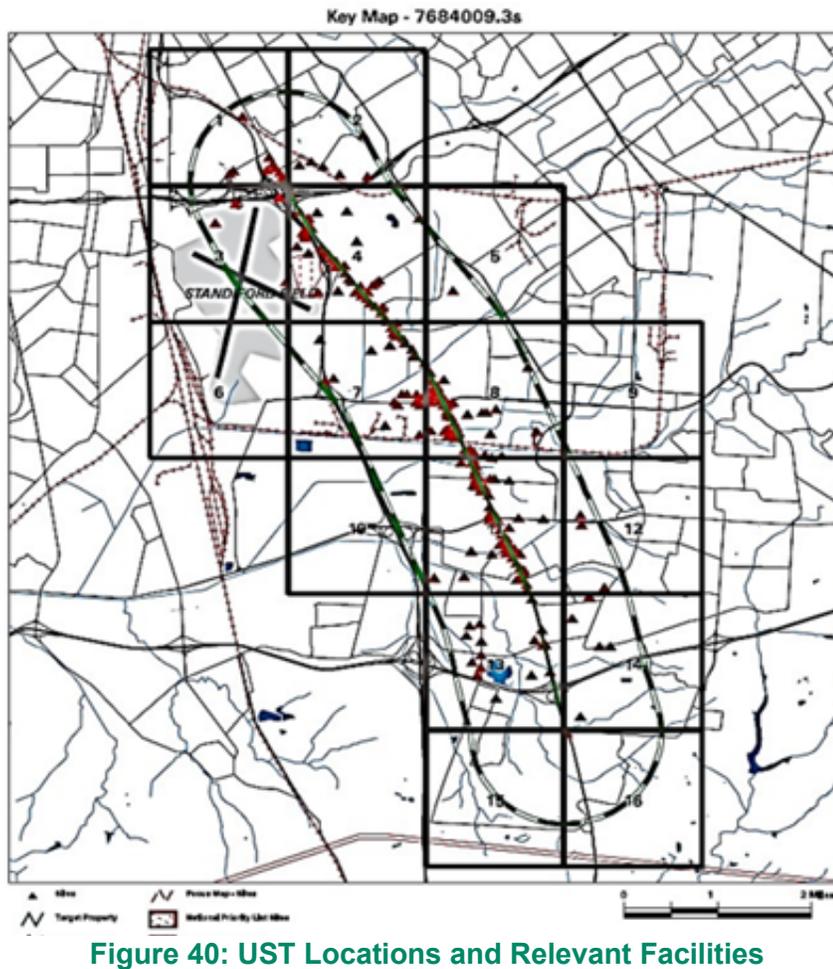
- **Phase II – Site Evaluation:** This phase assesses how much of the site remains undisturbed and the potential information it can provide. Sites with many artifacts and features, or those undisturbed by construction or erosion, may offer unique insights into past inhabitants.
- **Phase III – Mitigation of Adverse Effect:** If a site is eligible for the National Register of Historic Places (NRHP), efforts should be made to avoid it through project redesign. If avoidance is not possible, data recovery excavations are conducted to mitigate adverse effects.

Based on the information from the Kentucky OSA, **10 Phase II/III sites** have been identified within the study area:

- **8 sites** in the northern end of the study area
- **1 site** in Old Louisville
- **1 site** at the Louisville Muhammad Ali International Airport

Hazardous Materials

A review of environmental databases identified 134 locations with underground storage tanks (USTs) within the study area. USTs are crucial for project planning as they store petroleum or hazardous substances, and unidentified USTs could lead to groundwater contamination from potential leaks. Most locations have multiple storage tanks with active, closed, or a combination status. There are currently 20 active sites and 80 inactive (closed) sites. Additionally, lead priority sites have been identified within the study area.



Air Quality Concerns

Pollutants impacting air quality are generated by a wide variety of sources and enter the air, water, and soil through different types of media. Table 7 contains standards for six principal pollutants, based on the Clean Air Act of 1990, which sets standards for national ambient air quality standards. Jefferson County is designated as a nonattainment area for Sulfur Dioxide (2010) and for 8-Hour Ozone (2015).

Table 6: National Ambient Air Quality Standards

Pollutant [Links to Historical Tables of NAAQS Reviews]	Primary/Secondary	Averaging Time	Level	Form
Carbon Monoxide (Co)	Primary	8 Hours	9 Ppm	Not To Be Exceeded More Than Once Per Year
		1 Hour	35 Ppm	
Lead (Pb)	Primary And Secondary	Rolling 3-Month Average	15.0 µg/m³ 15.0 µg/m³	Not To Be Exceeded
Nitrogen Dioxide NO ₂ NO ₂	Primary	1 Hour	100 Ppb	98 th Percentile Of 1-Hour Daily Maximum Concentrations, Averaged Over 3 Years
	Primary And Secondary	1 Year	53 Ppb	Annual Mean
Ozone O ₃ O ₃	Primary and secondary	8 hours	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
PM _{2.5} PM _{2.5}	Primary	1 year	12.0 µg/m³ 12.0 µg/m³	Annual mean averaged over 3 years.
	Secondary	1 year	15.0 µg/m³ 15.0 µg/m³	Annual mean, averaged over 3 years
Particle Pollution (PM)	Primary and secondary	24 hours	35.0 µg/m³ 35.0 µg/m³	98 th percentile, averaged over 3 years
	PM ₁₀ PM ₁₀	Primary and secondary	24 hours	150 µg/m³ 150 µg/m³
Sulfur Dioxide SO ₂ SO ₂	Primary	1 hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3 hours	0.5 ppm	Not to be exceeded more than once per year

To demonstrate air quality conformity, federally funded transportation capacity projects recommended for further development should be modeled and then included in KIPDA’s TIP and KYTC’s Statewide TIP to ensure conformity requirements are satisfied.

<https://transportation.ky.gov/Planning/Pages/Air-Quality.aspx>

Noise Considerations

Highway noise impacts are a quality-of-life consideration along highways. KY 61 was constructed pre-NEPA, therefore noise was not considered at that time. Within the project study area, urban neighborhoods, schools, churches, and daycare facilities are present. These receptors within the study area have been identified in Figure 41. Future phases of the project may require a technical evaluation of existing and future noise impacts based on a KYTC Noise Policy for Type I projects. Projects meeting Type I criteria will be evaluated to determine if noise abatement measures are feasible and reasonable according to the Policy.

Socioeconomic Data and Community Impact Analysis

Projects are conducted with the goal of ensuring fair and consistent treatment for all communities. This includes avoiding situations where certain areas may be disproportionately affected by environmental impacts resulting from industrial, municipal, or commercial activities, or from the implementation of federal, state, local, or tribal programs and policies.

Key strategies to support meaningful public engagement include promoting participation in all stages of environmental decision-making, encouraging active community involvement, using consistent public participation practices, recognizing local input, and applying engagement strategies that are responsive to the needs of different audiences.

While there is no formal benchmark or uniform guidance for what constitutes "elevated" percentages of affected populations, for the purposes of this report, a significant impact is defined as one that is more concentrated or severe in certain areas compared to others within the study area.

Definitions and classifications referenced in this chapter are based on federal guidelines, including demographic criteria established by the U.S. Department of Transportation (USDOT) Order 5610.2, as published in the Federal Register on April 15, 1997. The data and analysis provided are informed by these foundational criteria.

As part of the environmental review, the presence of environmental hazards, including Underground Storage Tanks (USTs), wetlands, and streams was evaluated to better understand potential risks along the corridor and to guide responsible infrastructure planning.

USTs, typically found at commercial fuel stations, auto repair facilities, and industrial properties, are present throughout the KY 61 corridor. Improperly maintained or aging USTs pose potential contamination risks to soil and groundwater, especially in areas with high development density near residential neighborhoods, schools, and public facilities. Multiple UST and Leaking Underground Storage Tank (LUST) sites are concentrated around key intersections such as Fern Valley Road, Indian Trail, and Grade Lane. These areas may require additional environmental investigation and oversight during future project phases.

In addition to USTs, the corridor includes environmentally sensitive features such as wetlands and streams, particularly in the southern section near Commerce Crossings and adjacent to the I-265 interchange. These features serve important ecological functions, including flood mitigation, water quality protection, and wildlife habitat. Construction-related disturbances, runoff, or encroachment into these areas could result in negative downstream effects if not properly managed. This is especially relevant in areas where stormwater infrastructure is already limited.

Planning efforts should take into account the specific needs of affected populations such as seniors and individuals with disabilities to support balanced and responsible project outcomes.

Socioeconomic Data

Socioeconomic data for Jefferson County and Census Tract Block Groups within the 1-mile environmental analysis study area were obtained and analyzed to identify areas that may require closer review during the planning process.

A comprehensive understanding of the environmental baseline conditions in the study area is critical in understanding potential positive and unintended impacts associated with the implementation of both short-term and long-term corridor improvements. The study area has a slightly higher population density than Jefferson County, with an average of 2,400 persons per square mile compared to a county-wide density of 2,100.



Existing Population Density (2022)



Figure 41: Existing Population Density (2022)

Minority Populations

The proportion of people from diverse backgrounds is consistent between the study area and Jefferson County. The county-wide population identified as White is 507,400 (65%), higher than the study area at 23,900 (57%). However, the study area has a higher percentage of individuals identifying as Hispanic/Latino and Black/African American, with 6,500 (16%) and 9,600 (23%) individuals, respectively, compared to Jefferson County's 49,000 (6%) Hispanic/Latino and 169,400 (22%) Black/African American populations.

In addition, the total study area has a smaller percentage of individuals identifying as Asian and those identifying with other or 2+ races, with only 300 (1%) and 1,300 (3%) individuals, respectively, compared to Jefferson County's 23,100 (3%) Asian and 30,300 (4%) other or other racial populations.

Limited English Proficiency (LEP) Populations

Language access is a key component of meaningful public participation. The presence of individuals with limited English proficiency, defined as those who speak English less than very well, is likely given the area's racial and ethnic diversity. Future public involvement should include bilingual materials, translation services, and culturally appropriate engagement strategies to ensure these residents can fully participate in transportation decisions that affect their communities.

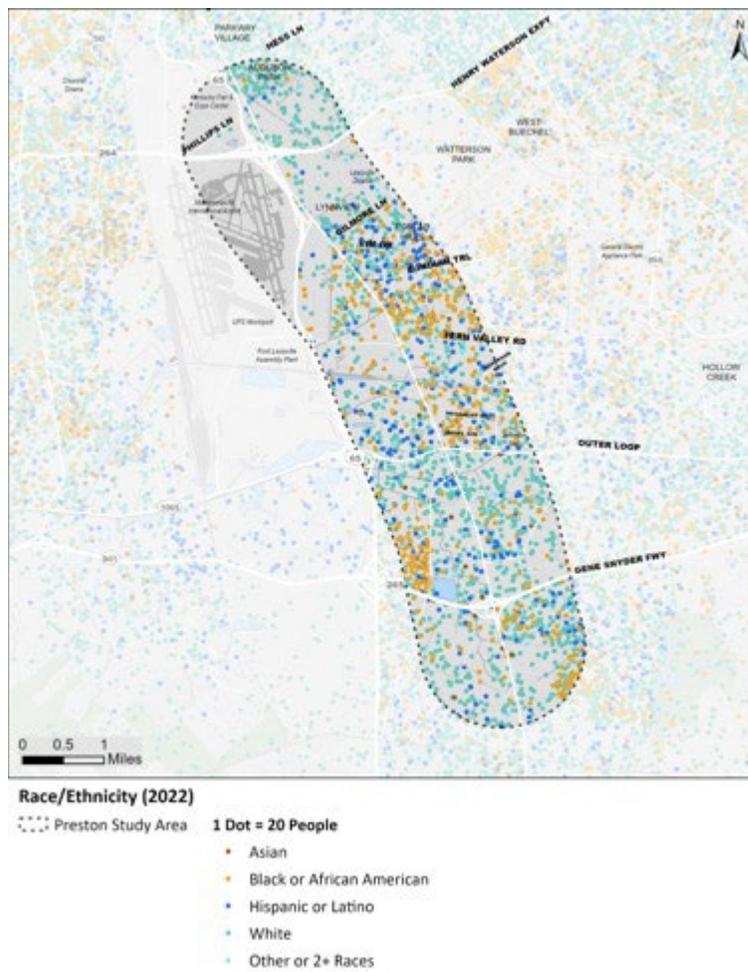


Figure 42: Race/Ethnicity (2022)

Poverty

In the poverty levels between the study area and Jefferson County, unique transportation planning and implementation considerations are highlighted. Despite having a larger total population, Jefferson County has a smaller percentage of persons in poverty, at 14% (107,900 individuals), with a poverty density of 300 persons per square mile. In contrast, the study area has fewer people in poverty, at 6,500 individuals, but this constitutes a higher percentage of its population at 16% and a notably higher poverty density of 1,000 persons per square mile.

This concentration of poverty within the smaller total study area may amplify the need for more affordable and accessible public transportation options, as individuals in poverty might rely more heavily on these services. The higher poverty density could increase demand for transportation services, which may strain current resources if not properly planned. Consequently, the study's transportation improvement measures should consider these unique demographic factors to effectively address the needs of the total study area.

In contrast, Jefferson County's lower poverty density, despite the larger total number of individuals in poverty, might necessitate a more dispersed transportation network to ensure access to services across its wider geographical area. Therefore, strategies for Jefferson County might focus on improving connectivity and reach rather than concentrating resources in densely populated areas.

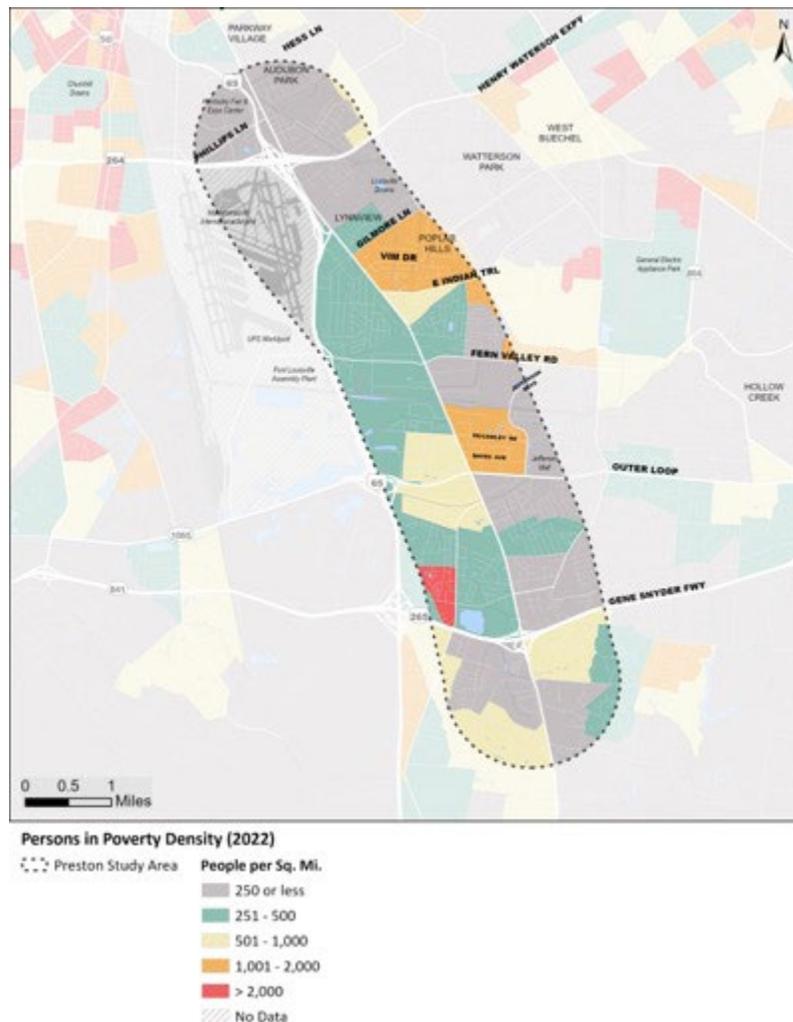


Figure 36: Persons in Poverty Density (2022)

Elderly Populations

The senior population also presents notable differences between Jefferson County and the study area. Jefferson County has 130,300 seniors, representing 17% of its population, with a senior density of 300 persons per square mile. In contrast, the study area has fewer seniors, with 6,500 individuals or 16% of its population, but has a significantly higher senior density of 600 persons per square mile. These disparities should be considered in planning and implementing improvement measures, particularly regarding accessibility and transportation services for the senior population along the corridor.

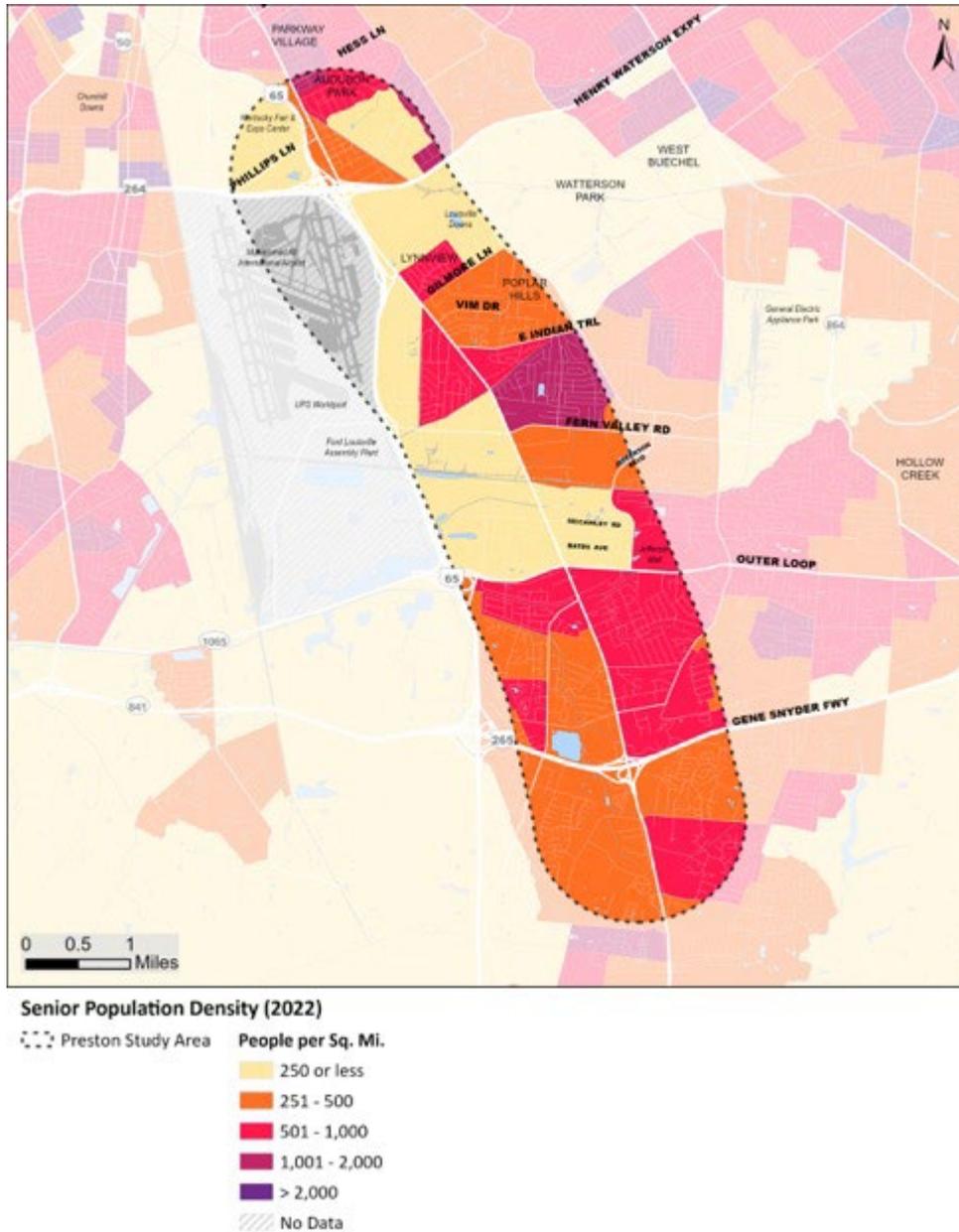


Figure 37: Senior Population Density (2022)

Disabled Populations

The data reveals notable differences in the disabled population between Jefferson County and the study area in both percentage and density. Jefferson County has a total of 54,000 individuals with disabilities, representing approximately 7% of its overall population. The population density of people with disabilities in the county is approximately 200 persons per square mile.

In contrast, the study area has a smaller total number of individuals with disabilities, approximately 8,900, but this group accounts for a higher percentage of the area's total population, at 21%. The population density of individuals with disabilities in the study area is approximately 350 persons per square mile.

These differences highlight the importance of considering local demographic conditions in the planning and implementation of corridor improvements, particularly to ensure that accessibility needs are adequately addressed.

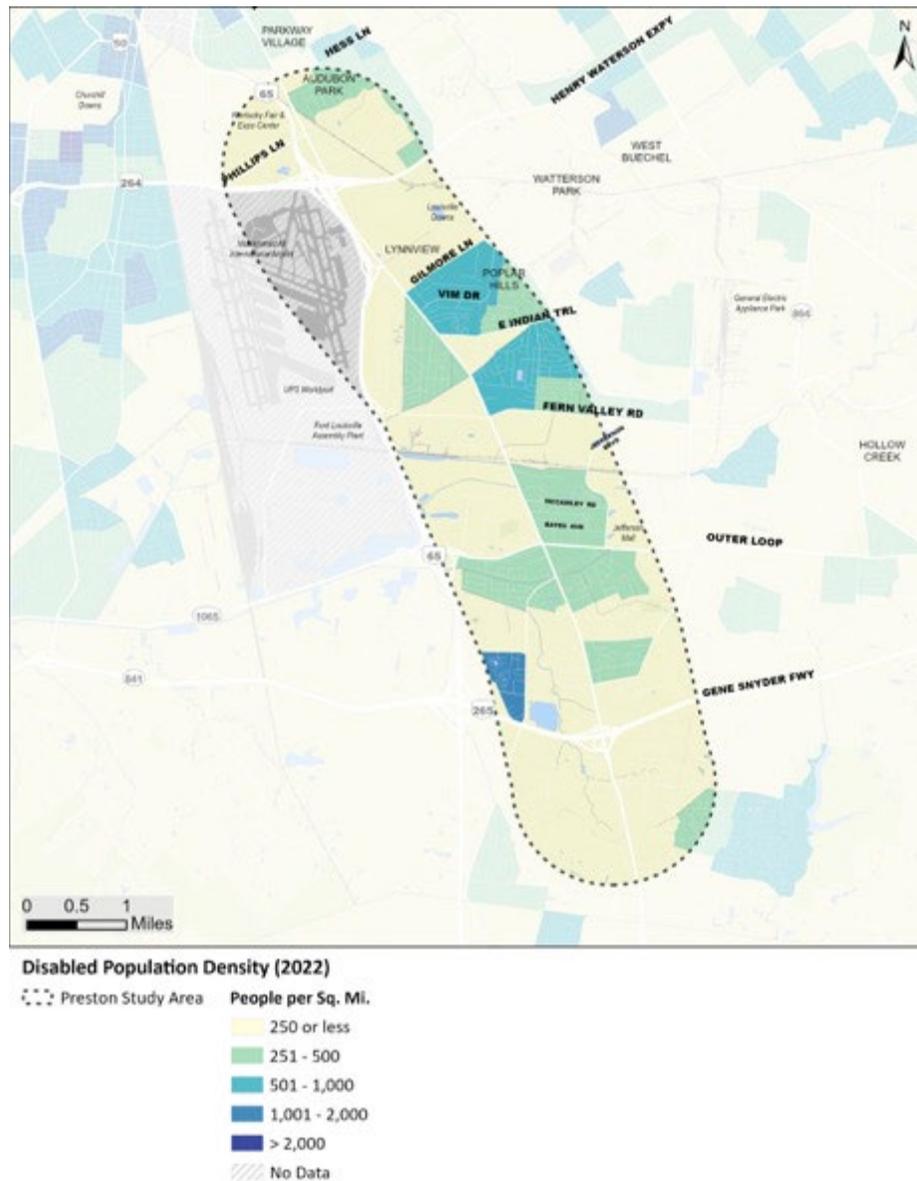


Figure 38: Disabled Population Density (2022)

FUTURE NO-BUILD TRAFFIC

AECOM developed Synchro models for KY 61 (Preston Highway) from Commerce Crossings Drive to Briden Avenue in Jefferson County as part of the Preston Corridor Improvement Study. This segment covers approximately 7.005 miles, spanning from milepost (MP) 1.395 to MP 8.400. Models were developed for existing traffic volumes during the AM and PM peak periods based on 2023 data collection. Models were also developed using 2045 forecasted traffic volumes. The geometric layout is the same for the existing and 2045 No-build models. Vissim modeling was also used for the following key intersections. These models will be beneficial for future tasks to evaluate alternatives including transit options, identify capacity issues, and recommend potential intersection and corridor improvements: The consultant in consultation with KYTC and KIPDA identified the following ten key intersections to focus traffic analysis on:

1. Commerce Crossings Drive/Cooper Chapel Road
2. I-265
3. Boerste Way/Glen Rose Road
4. South Park Road/East Manslick Road
5. Outer Loop (KY 1065)
6. Fern Valley Road/Hurstbourne Lane (KY 1747)
7. Indian Trail
8. Gilmore Lane
9. I-65/Grade Lane
10. I-264

The analysis revealed varying levels of service (LOS) across different intersections during the existing and no-build conditions at AM and PM peaks. Some intersections currently operate at acceptable LOS (grades A to C) during peak hours, indicating minimal to moderate delays. However, the following intersections are experiencing congestion, operating at LOS E or worse at existing and no-build with optimized timing during peak periods.

Table 7: Fern Valley Road/Hurstbourne Lane (KY 1747)

KY 61 / KY 1747	Existing				2045 No Build (optimized splits)			
	AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	E	56.2	E	62.8	D	48.9	E	63.5
WB Approach	D	38.4	D	45.9	D	40.9	D	55.0
NB Approach	E	60.2	E	73.9	E	62.4	E	78.6
SB Approach	D	49.5	E	59.1	D	48.5	E	56.8
Overall	D	50.4	E	59.2	D	49.5	E	62.3

Table 8: Outer Loop (KY 1065)

KY 61 / KY 1065	Existing				2045 No Build (optimized splits)			
	AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	D	50.6	E	77.4	D	48.9	F	87.3
WB Approach	D	39.5	D	53.1	D	48.4	E	75.8
NB Approach	E	55.6	E	61.8	E	56.0	F	85.8
SB Approach	D	54.1	E	62.0	E	55.1	F	104.3
Overall	D	50.1	E	64.4	D	52.0	F	87.9

Table 9: Commerce Crossings Drive/Cooper Chapel Road

KY 61 / Cooper Chapel Road	Existing				2045 No Build (optimized splits)			
	AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	F	81.2	E	73.2	F	82.2	E	76.7
WB Approach	C	32.7	D	35.1	C	35.0	D	36.3
NB Approach	E	61.9	F	140.8	E	59.0	F	112.7
SB Approach	B	14.7	C	26.2	B	16.3	C	30.1
Overall	D	42.8	E	64.2	D	42.4	E	58.6

Table 10: Gilmore Lane

KY 61 / Gilmore Lane	Existing				2045 No Build (optimized splits)			
	AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	F	80.7	F	82.4	F	81.2	F	82.2
WB Approach	D	45.0	F	112.0	D	44.4	E	62.1
NB Approach	E	79.6	F	91.0	F	97.1	E	79.1
SB Approach	A	9.7	C	27.6	A	2.5	D	35.6
Overall	D	47.7	E	71.4	D	52.5	E	59.5

The result tables indicate that these intersections have significant delays during the PM peak under both Existing and 2045 No-Build conditions. Additionally, based on the SimTraffic simulation results found in **Appendix E**, there is a significant increase in queue length along all approaches at the KY 61 intersection with KY 1065. The KY 61 southbound approach at the intersection with Cooper Chapel and the I-265 EB ramp also experienced increased queue lengths. The queue factors must be considered when implementing any improvements at these intersections.

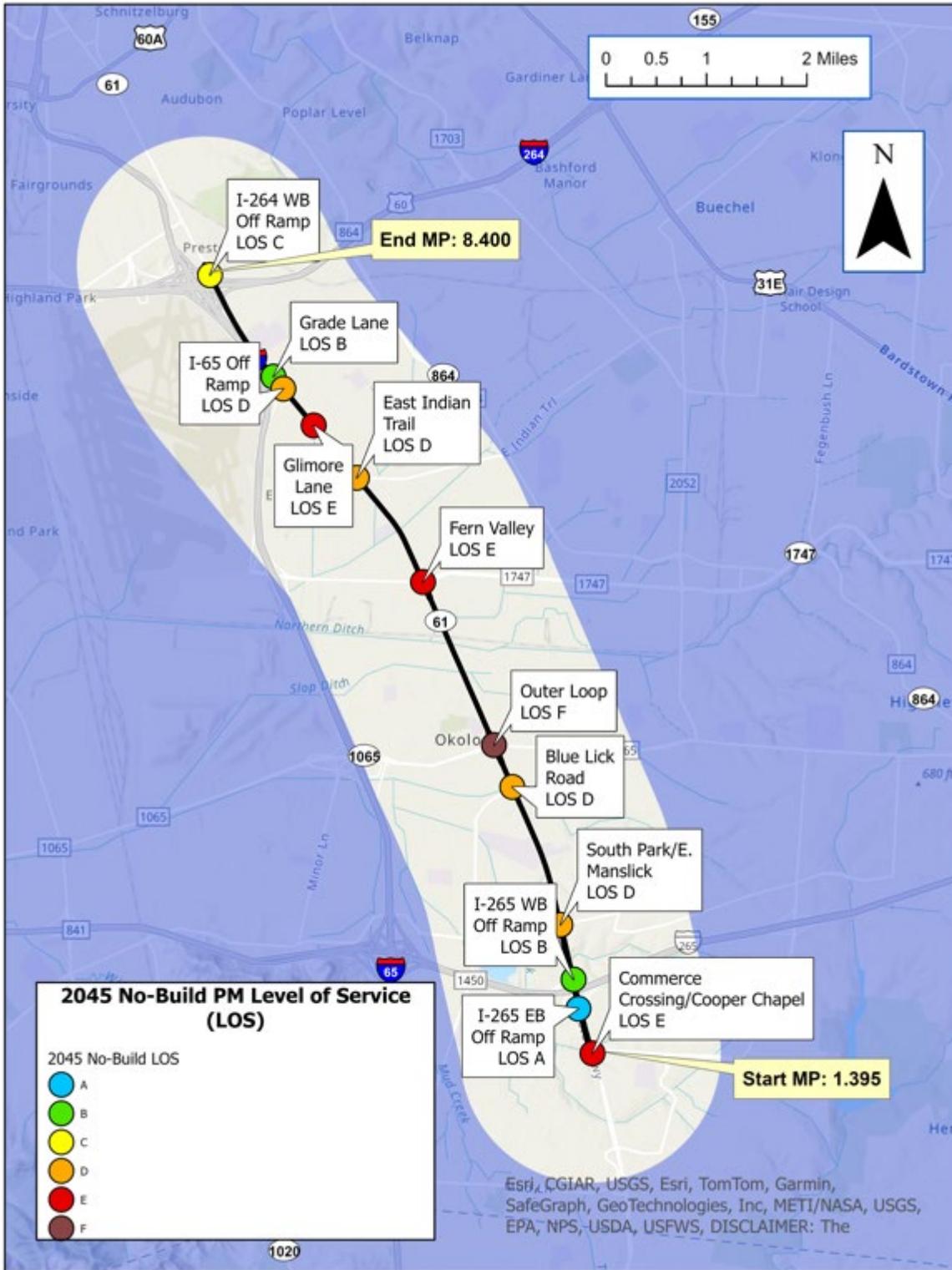


Figure 40: 2045 No-Build PM Level of Service

INITIAL COORDINATION EFFORTS

Phase 1 of public outreach for the KY 61 Preston Highway Plan focused on gathering baseline data on corridor usage, community concerns, and improvement priorities. The engagement efforts included a combination of in-person and digital strategies to ensure broad and inclusive participation.

Coordination with the project team occurred throughout the study process. The project team consisted of KYTC District 5 and Central Office staff, representatives from KIPDA, and consultant staff. Summaries of project meetings presented chronologically are in **Appendix C**.

Project Team Meeting No. 1

Following the existing conditions inventory, the project team met at the KYTC District 5 office on March 22, 2024, to discuss the study process to date. Key discussion items included:

- **Existing Transit Conditions:** Route 28 was identified as the primary transit route along the corridor, with high ridership but below-average on-time performance. The transit study will evaluate up to three alternatives, including Bus Rapid Transit (BRT) options with varied services and alignments.
- **Pedestrian and Bicycle Infrastructure:** Gaps in pedestrian facilities were highlighted as a major safety concern. Along KY 61, 42% of pedestrian infrastructure is incomplete, and 16 TARC stops lack pedestrian connectivity. There are no designated bike facilities within the corridor.
- **Safety Concerns:** Crash data showed 715 crashes per year, including 11 involving pedestrians or cyclists and four fatalities. Improvement strategies should prioritize reducing speeds, minimizing unsafe turning movements, and enhancing pedestrian crossings.
- **Environmental and Socioeconomic Considerations:** Environmental concerns included floodplain issues and numerous underground storage tanks. Socioeconomic analysis revealed disproportionate levels of poverty, minority populations, and limited-English speakers within the corridor.
- **Public Engagement:** A public meeting was scheduled for mid-May 2024, followed by pop-up events to increase community involvement. Outreach efforts included message boards, surveys, and targeted social media campaigns to engage underserved populations.
- **Improvement Strategies:** Key strategies discussed included upgrading pedestrian and bike facilities, addressing transit reliability, reducing congestion, and implementing traffic management and communication upgrades.

Additional discussion focused on branding and selecting a logo for the project, as well as finalizing the public meeting format to prioritize accessibility for community members.

Local Officials Meeting No. 1

On May 16, 2024, the project team presented to local officials and stakeholders to provide an overview of the study's purpose, scope, and progress. The goal was to gather participant's input and guidance before advancing to the first public meeting. The presentation outlined the study's purpose and scope, focusing on improving safety, reducing congestion, and enhancing multimodal transportation options along the 7-mile corridor between Commerce Crossings Drive and Briden Avenue.

Stakeholders raised several questions and concerns regarding the proposed improvements, focusing on land acquisition at key intersections such as Fern Valley Road and Outer Loop and the potential impacts of raised medians on accessibility and traffic flow. Ensuring pedestrian safety, particularly at crossings and near schools, emerged as a priority, with suggestions for improved signals and dedicated pathways. Discussions also highlighted the importance of traffic modeling accuracy, addressing utility challenges, and exploring the feasibility of innovative designs like continuous flow intersections. Emphasis was placed on the need for inclusive engagement, particularly with Spanish-speaking communities, to guide decision-making and prioritization effectively.

Public Meeting No. 1

On May 21, 2024, the first public meeting was held to gather feedback on existing corridor conditions and proposed improvements. Display boards outlined key challenges, including high crash rates, gaps in pedestrian and bicycle infrastructure, and transit reliability issues, particularly with Route 28, the primary bus route. Supporting data, such as crash heat maps and Excess Expected Crashes (EEC), identified high-risk areas, while environmental maps highlighted floodplains, underground storage tanks, and historic resources. Traffic analysis offered insights into AM and PM congestion patterns, Level of Service (LOS) ratings, and gaps in multimodal connectivity.

Proposed solutions were presented to address these challenges, focusing on multimodal enhancements like Bus Rapid Transit (BRT), upgraded pedestrian crossings, and expanded sidewalks. Traffic improvements included new turn lanes, optimized signal timings, and enhanced drainage systems. Environmental strategies, such as expanded tree canopies and streetscaping, aimed to improve the corridor's aesthetic and resilience. This meeting provided a platform for the community to share insights, helping to refine the project's goals and ensure alignment with public needs and priorities.

Pop-up Event Engagement (Targeted Hispanic Outreach)

The two pop-up events, held at key locations frequented by Spanish-speaking communities—Supermercado Guanajuato #2 on June 14, 2024, and Indian Trail Square on June 17, 2024—offered a vital opportunity to connect with underrepresented populations along KY 61. In collaboration with Catholic Charities of Louisville, the project team provided translation services to ensure meaningful communication and inclusivity.

These events featured project maps, informational boards, and Spanish-language handouts and surveys, enabling attendees to provide direct feedback. A significant insight from these engagements was that 52% of respondents prioritized improvements to bike and pedestrian infrastructure, highlighting the community's demand for safer and more accessible travel options within the corridor.

Survey Participation

The KY 61 Preston Highway Plan gathered public input through surveys distributed both in-person and online during two public meetings, as well as during subsequent comment periods. In total, 150 survey responses were received—122 from Public Meeting 1 (including 30 Spanish-language submissions) and 28 from Public Meeting 2. The survey results offered valuable insights into travel behaviors, corridor challenges, and community preferences for future improvements along KY 61.

Key Findings

Top Concerns

- **Public Meeting 1:** The most critical concerns were traffic congestion, safety, and poor road conditions, cited by 42% of respondents.
- **Public Meeting 2:** Safety and traffic congestion were each identified by 37% of participants, followed by poor road conditions (22%) and limited bicycle and pedestrian infrastructure (4%).

Travel Patterns

- **Public Meeting 1:** 61% of respondents traveled daily on KY 61, and 86% used the corridor at least once per week.
- **Public Meeting 2:** 50% of participants reported daily travel, underscoring the corridor's importance for commuting and daily activities.

Mode of Travel

- **Public Meeting 1:** The majority (78%) traveled by car, while 18% reported biking or walking.
- **Public Meeting 2:** 71% drove, and 32% reported biking or walking as their primary mode, suggesting increased awareness and interest in non-vehicular travel options.

Support for Enhancements

- **Public Meeting 1:** 63% of respondents supported a medium-speed collector design for KY 61.
- **Public Meeting 2:** 50% favored corridor enhancements such as improved street lighting and added sidewalks to improve accessibility and safety.

Key Takeaways

- **Corridor Usage:** KY 61 is a heavily traveled route, with most survey participants reporting regular weekly or daily travel to access services, work, school, or visit family and friends..
- **Community Priorities:** Safety and congestion consistently ranked as the most urgent concerns. Participants also emphasized a need for better signal timing, street lighting, and non-motorized travel infrastructure.
- **Spanish-Speaking Participants:** Among Spanish-language respondents, 52% identified the need for improved bicycle and pedestrian facilities, reflecting a shared desire for safer, more inclusive transportation options.
- **Focus Areas for Investment:** Participants identified Outer Loop, Fern Valley Road, and the Grade Lane/I-65 ramps as top locations for improvement and showed strong support for transit upgrades and multimodal solutions.

This public feedback highlights strong community interest in safer and more reliable transportation along KY 61. The insights gathered will help shape the plan's recommendations to align with the needs and priorities of the people who use the corridor.

STUDY GOALS AND PROJECT PURPOSE

Project Purpose and Need

The purpose and need of the project is to improve safety, reduce congestion, and improve multi-modal transportation options for KY 61 (Preston Highway) in Jefferson County from south of the I-265 interchange at Commerce Crossing Drive, MP 1.955 to north of the I-264 interchange at Briden Avenue, MP 8.400. This study will identify short-term and long-term improvements for KY 61 (Preston Highway) that KYTC and Louisville Metro can use for further project development and implementation. The project will develop improvement concepts and make recommendations for safety and congestion while incorporating the KYTC Complete Streets Guidance.

Study Process

The Preston Transportation Plan followed the typical KYTC transportation corridor planning study process, with three additional elements added:

1. **KYTC's Intersection Control Evaluation (ICE) Process:** This was used to screen and evaluate potential improvement concepts for key intersections in the study area.
2. **Companion Study by Louisville Metro Government:** This study evaluated the feasibility of Bus Rapid Transit (BRT) in the study area.
3. **Conceptual Access Management Plan:** A plan was developed for the corridor.

Data Collection: Key data elements included historic crash data, traffic volumes, roadway geometric information, traffic signal information (including timing plans), review of previous studies in the corridor, land use data, and current traffic count data.

Sharing Information: The existing conditions information was shared with the project team, local elected officials, stakeholders, and the public. These groups were queried about their perceptions of transportation concerns and needs in the corridor. This feedback helped the project team develop a purpose and needs statement to guide the screening and development of improvement strategies and concepts.

Traffic Modeling and Forecasting: Micro-simulation traffic models were developed along with traffic forecasts for the year 2045, using Synchro software. Traffic forecasts were based on KIPDA's regional traffic demand model. The traffic analysis indicated that the PM Peak was the controlling condition throughout the corridor, subsequently, though analysis was conducted for both AM and PM Peak Hours, the results shown in this report will reflect the existing or modeled conditions of the PM Peak Hours.

Data Analysis: Data was analyzed to identify locations for potential improvement, focusing on areas with high crash rates and operational issues (e.g., congestion). Major data inputs included locations experiencing a high number of crashes and operational issues, as identified by the project team, local officials, stakeholders, and the public.

Key Findings

Intersections as Bottlenecks: Both crash data and traffic operations analysis indicated that intersections were the primary areas of need. For example, KY 61 (Preston Highway) has sufficient lane capacity to handle projected traffic in 2045, so an additional lane is not needed. However, intersections were identified as bottlenecks, particularly during peak hours, operating at unacceptable levels of service. Crash data also showed a predominance of crashes at intersections, with rear-end and angle crashes being most common.

Intersection Control Evaluation (ICE) Policy: The Kentucky Transportation Cabinet’s newly instituted ICE policy was used for developing and screening improvement concepts. The Federal Highway Administration’s (FHWA) Capacity Analysis for the Planning of Junctions (CAP-X) tool was used to identify potential intersection improvements. Forecasted turning movement volumes for each intersection were input into the CAP-X tool, and transportation professionals used it to screen for the most constructive improvement concepts. Additional analysis included a review of crash severity and collision types to identify patterns and determine ways to mitigate collisions.

In addition to spot, or intersection improvements, there are a few strategies that could be implemented throughout the corridor. These strategies do not involve adding lanes but include:

- Improvements to access management
- Enhancements to the sidewalk infrastructure, specifically filling in network gaps
- Upgrades to the traffic signal system

If the entire corridor, or a significant portion of it, were to be reconstructed, the purpose would be to better accommodate transit, access management, and address safety for vulnerable road users. Any improvements considered in the corridor should consider the potential for future premium transit. The companion study by the Louisville Metro Government, the Preston Transit Plan, recommends that KY 61 be reconstructed at some future date to accommodate Bus Rapid Transit (BRT) from downtown Louisville to Jefferson Mall on Outer Loop (KY 1065).

To accommodate premium transit, specifically BRT along KY 61, there is no need to add additional lanes except in the area where KY 61 has shoulders south of Fern Valley Road. These shoulders would be converted to bus-only BRT dedicated lanes. Considering this, any bridges in that area that need to be reconstructed should be widened to accommodate the additional lanes. The locations of these bridges are as follows:

Table 11: Bridge Locations

MP	BRIDGE ID	Feature
4.568	056B00032N	WET WOODS CREEK
4.824	056B00031N	NORTHERN DITCH
5.003	056B00030N	BLUE SPRING DITCH
5.816	056B00028N	GREASY DITCH
6.103	056B00029N	TRIB TO GREASY DITCH

Any projects to add sidewalks or shared-use paths or to improve such facilities along KY 61 should also consider the possibility of a future BRT project. For example, in the stretch of KY 61 where there are existing paved shoulders, it would be short-sighted to convert those shoulders to accommodate bikes or pedestrians. These shoulders should be reserved so that they can ultimately be used for BRT lanes. In those areas, if sidewalks or shared-use paths are to be added, these facilities should be placed outside of the existing shoulder.

Study Terminology

This study uses the terms Conventional and Innovative as follows:

Conventional Intersection improvement concepts consider the following:

- Signal Optimization
- Additional Turn Lanes
- Lengthening Existing Turn Lanes

Innovative Intersection improvement concepts are as follows:

- Restricted Crossing U-Turn Intersection (R-CUT), signalized and unsignalized
- Displaced Left Turn Intersection (DLT), AKA Continuous Flow Intersection (CFI)
- Partial Displaced Left Turn Intersection (P-DLT)
- Green-T
- Roundabouts
- Peanut – Two connected Roundabouts

Of the innovative intersections, most were eliminated from consideration. Notably, the P-DLT and Peanut are recommended by this study for further consideration at specific intersections along KY 61.

The P-DLT, also known as a Continuous Flow Intersection (CFI), is an innovative design that relocates left-turn movements to the other side of opposing traffic flow before the main intersection. This allows left-turning vehicles to proceed simultaneously with through traffic, eliminating the need for a separate left-turn phase. The P-DLT reduces the number of traffic signal phases and conflict points, improving traffic operations and safety performance. It is designed to enhance intersection efficiency, reduce delays, and improve safety at a lower cost and with fewer impacts compared to other intersection designs.



Figure 41: Partial Displaced Left Turn Intersection (P-DLT)

Screening and Prioritization of Improvement Concepts and Strategies

The discussion that follows summarizes the needs identified and proposed improvement concepts. This summary starts at the south end of the study area and progresses north. Following the discussions on location-specific improvement concepts, we will address strategies for corridor-wide improvement strategies.

The first Project Team Meeting focused on a presentation of the existing conditions for this study. During the second Project Team Meeting, a wide range of improvement concepts and strategies were presented and discussed. The scoring matrix is shown below:

Table 12: Improvement Concept Scoring Matrix

		Relative Construction Cost	Traffic Operations LOS/Delay	Traffic Calming	Overall Safety	Walkability/ Bicycle Accommodations	Right-of-Way Impacts	Utility Relocation Impacts	Public Support	Transit Impacts	Totals															
 <p>PRESTON TRANSPORTATION PLAN Preston Transportation Plan KY61 Planning Study KYTC Item No. 5-80205.00</p>																										
<p>Scoring</p> <table border="1"> <tr><td>5</td><td>Most Desirable</td><td>Low Cost/Impact</td></tr> <tr><td>4</td><td></td><td></td></tr> <tr><td>3</td><td>Average</td><td></td></tr> <tr><td>2</td><td></td><td></td></tr> <tr><td>1</td><td>Less Desirable</td><td>High Cost/Impact</td></tr> </table>												5	Most Desirable	Low Cost/Impact	4			3	Average		2			1	Less Desirable	High Cost/Impact
5	Most Desirable	Low Cost/Impact																								
4																										
3	Average																									
2																										
1	Less Desirable	High Cost/Impact																								
		Relative Construction Cost	Traffic Operations LOS/Delay	Traffic Calming	Overall Safety	Walkability/ Bicycle Accommodations	Right-of-Way Impacts	Utility Relocation Impacts	Public Support	Transit Impacts	Totals															
General Location		Weight (1-10; 5 default)	7	9	6	8	7	5	7	5																
Concept Name																										
1	Commerce Crossings	Conventional Improvements	3	4	3	4	3	5	3	3	212															
2	Commerce Crossings	Partial Displaced Left - NS	1	5	2	5	2	2	3	2	173															
3	Boerste/Glen Rose	Positive Offset LT	4	3	3	4	3	5	3	3	210															
4	South Park	Conventional Improvements	3	3	3	3	3	5	3	3	195															
5	Gilmore	Conventional Improvements	3	4	3	3	3	5	3	3	204															
6	Gilmore	Green T	3	5	3	4	3	4	3	3	210															
7	Outer Loop	Partial Displaced Left - NS	2	5	2	4	2	2	3	2	187															
8	Fern Valley	Conventional Improvements	3	4	3	3	3	4	3	3	193															
9	Fern Valley	Partial Displaced Left - NS	1	5	2	4	2	2	3	2	160															
10	Indian Trail	Green T	3	4	3	4	3	3	3	3	190															
11	Grade Lane/I-65 Ramps	Front	1	5	4	4	3	1	3	2	168															
12	Southern HG	Full Refuge with RFB	4	3	4	5	5	5	5	4	253															
13	Oxiana Elem	RFB	5	3	4	4	5	5	5	4	252															
14	Commerce to Southern HG	Shared Use Path	4	3	3	4	5	4	3	4	223															
15	Southern HG to Outer Loop	TW, TL to Median	4	4	4	4	4	4	3	3	221															
16	Outer Loop to Lexista	TW, TL to Median	4	4	4	4	4	4	3	3	221															
17	Lexista to Fern Valley	Median & Bus Ln	4	3	4	4	3	4	4	4	213															
18	Lexista to Fern Valley	Median & Bus Ln & Sidewalk	2	3	4	4	4	4	4	4	206															
19	Lexista to Fern Valley	Median & Bus Ln & Path	2	3	4	4	5	3	4	4	207															
20	Lexista to Fern Valley	Shared Use Path	3	4	3	5	5	2	3	5	221															
21	Fern Valley to Gilmore	Median & Bus Ln	3	4	4	4	3	4	4	4	215															
22	Fern Valley to Gilmore	Median & Bus Ln & Sidewalk	3	4	4	4	4	4	4	4	222															
23	Fern Valley to Gilmore	Fix Gaps in Sidewalk System	3	4	4	4	5	3	4	4	223															
24	Gilmore to Durrett	TW, TL to Median	4	4	4	4	4	4	3	3	221															
25	Gilmore to Durrett	Median with Bike Ln	4	4	5	4	4	4	3	3	227															
26	Gilmore to Durrett	Median with Path	3	4	4	5	3	4	4	3	222															
27	Corridor Wide	Street Lighting	4	3	4	4	4	5	5	4	238															
28	Corridor Wide	Signal Modernization	4	5	3	4	4	5	4	4	243															

This matrix was useful in promoting discussion. The scoring proposed by the consultant prompted discussion but should not be considered an official prioritization. The scoring matrix assisted in the discussion of each improvement concept. Through this discussion, the Project Team determined what concepts would move forward for further analysis, development, and consideration.

During the third Project Team Meeting, those improvement concepts, not screened out during the second Project Team Meeting, were further discussed. During the fourth Project Team Meeting, a final screening took place, and the improvement concepts not screened out were prioritized.

The final prioritization for intersections is as follows:

1. Commerce Crossings/Cooper Chapel
2. Outer Loop
3. Fern Valley
4. Indian Trail
5. Gilmore Lane
6. Southpark/ E. Manslick
7. Boerste Way/Glen Rose
8. Grade Lane/I-65 Ramps

Pedestrian Accommodations at Intersections

Pedestrian accommodations, such as sidewalks, crosswalks, and pedestrian signals, should be included in any advanced intersection improvement concepts. The conceptual drawings for this study have included a buffer area for sidewalks but the drawings do not reflect actual sidewalk locations. Cost estimates include costs for these pedestrian facilities.

INITIAL CONCEPT DEVELOPMENT

Discussions of Improvement Concepts

The discussion that follows summarizes the needs identified and proposed improvement concepts at spot locations, typically intersections. This summary starts at the south of the study and moves north. At the end of the spot location specific improvement concept discussions are discussions of corridor wide improvement concepts.

Spot Location Improvement Concepts

Commerce Crossing Drive/Cooper Chapel Road

Current Traffic Operations

KY 61 SB traffic currently queues at this intersection up to the KY 61 and I-265 interchange. This impacts traffic exiting from I-265 NB onto KY 61, causing queuing on the ramp that at times impacts traffic flow on I-265. The LOS of the KY 61 intersection with Commerce Crossing Drive/Cooper Chapel Road for the PM Peak is LOS E.

Safety (Crash Data 2019-2023)

The Excess Expected Crashes (EEC) at this intersection is 40.09. EEC quantifies the number of crashes occurring at a location more than what would be expected. EEC is positive, more crashes are occurring than expected and negative is fewer crashes are occurring than expected.

Most crashes were Rear Ends. There were 2 fatalities and 2 serious injuries. All involved vulnerable road users. A vulnerable road user (VRU) is someone who is more likely to be injured or killed in a road crash because they have less protection than other road users. VRUs include pedestrians, cyclists, and other non-motorized road users. Both fatalities involved pedestrians. Of the serious injury crashes, one involved a pedestrian and the other a motorcyclist.

CAP-X Screening

Based on future volumes, the Partial Displaced Left Turn (also known as a Continuous Flow Intersection), Displaced Left Turn, and timing optimized Traffic Signal performed the best based on Volume to Capacity (V/C) ratio. See the table below summarizing the CAP-X analysis.

Table 13: CAP-X Analysis (Commerce Crossing Dr/Cooper Chapel Rd)

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
Partial Displaced Left Turn N-S	0.53	1	Good	Excellent
Displaced Left Turn	0.53	1	Good	Excellent
Traffic Signal	0.67	3	Good	Excellent
Signalized Restricted Crossing U-Turn N-S	0.71	4	Good	Excellent
Partial Median U-Turn N-S	0.80	5	Good	Excellent
Median U-Turn N-S	1.09	6	Good	Excellent

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
3 X 3 Roundabout	4.49	7	Fair	Excellent
Unsignalized Restricted Crossing U-Turn N-S	15.07	8	Good	Excellent

Based on this screening, a Conventional Intersection and a Partial Displaced Left Turn Intersection (P-DLT) were advanced.

Traffic Modeling

Traffic Modeling confirmed the CAP-X analysis.

KY 61 / Cooper Chapel Road	Existing				2045 No Build (optimized splits)				2045 With Conventional Improvement				2045 Partial Displaced Left - NS			
	AM		PM		AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	F	81.2	E	73.2	F	82.2	E	76.7	F	83.8	F	80.4	C	24.7	C	28.9
WB Approach	C	32.7	D	35.1	C	35.0	D	36.3	D	35.5	D	35.7	C	22.6	D	39.5
NB Approach	E	61.9	F	140.8	E	59.0	F	112.7	D	49.4	F	90.5	B	13.1	C	29.0
SB Approach	B	14.7	C	26.2	B	16.3	C	30.1	B	16.2	C	27.0	A	5.4	C	33.1
Overall	D	42.8	E	64.2	D	42.4	E	58.6	D	37.6	D	49.4	B	10.7	C	31.6

Conventional

The conventional improvements include adding a channelized northbound right turn lane, extending the southbound right through lane on the south leg at least 400 feet south of Commerce Crossing Drive/Cooper Chapel Road, adding sidewalks in the northwest and northeast quadrants with crosswalks across KY 61, and optimizing the signal.

The Project Team recommends the southbound right through lane on the south leg be extended, not just 400 feet south of Commerce Crossing Drive/Cooper Chapel Road, but further to Mudd Lane. Instead of 400 feet, this would be an extension of 1,550 feet.

Per the Traffic Modeling, the LOS is improved from E to D.

P-DLT

The partial displaced left option includes reconstructing the intersection as a Partial Displaced Left Turn Intersection (P-DLT) along KY 61 and extending the southbound right through lane on the south leg at least 400 feet. This concept also includes adding sidewalks in the northwest and northeast quadrants with crosswalks across KY 61 and optimizing the signal.

Per the Traffic Modeling, the LOS is improved from E to C.

Discussion

The Project Team expressed concern that the additional signals required for the P-DLT may be too close to the interstate ramps. While this was also initially a concern to the consultant team, it was determined that there is sufficient space.

Both the Conventional and P-DLT should reduce crashes. Both concepts would add a dedicated right turn lane and extend the southbound right through lane. Adding a dedicated right turn lane has been shown to reduce rear-end crashes at intersections.

According to FHWA fact sheets, a 24% reduction in crashes for a P-DLT is possible.

While the roadway's typical width gets wider and pedestrian crossings get longer with DLTs, they provide the opportunity to add refuge islands where pedestrians can pause while crossing the intersection. Adding stop bars and pedestrian buttons for right turn lanes can also be used to make the crossings safer for pedestrians.

DLTs and P-DLTs are not ideal for Bus Rapid Transit (BRT), however, there are options such as nearside stations or placing stations on the traditional leg of a P-DLT. The BRT proposed for KY 61 is expected to extend from downtown to KY 1065 (Outer Loop), so this is not an issue at this intersection.

The Project Team expressed concerns that the DLTs may confuse drivers as they exit the I-265. Additionally, the P-DLT adds two signals to the intersection. This is important to note because it will require additional maintenance in the future. These concerns should be considered if these improvements at this intersection are advanced.

Conclusion

This intersection is Priority 1 of 8. The Project Team recommended that both the Conventional and the P-DLT be considered and further studied during design should this intersection advance.

Project Sheet in **Appendix D**.

I-265 (Gene Snyder Expressway)

Redesign or configuration of the interstate interchanges was not part of the scope of this study. This study considered traffic operations and safety where the interstate ramps connect with KY 61. The study also considered pedestrian mobility along KY 61 that would cross the interstate ramps.

Current Traffic Operations

The interchange operates at an acceptable LOS both today and in the future design year of 2045. The off ramp from I-265 Northbound (traveling from I-65 towards KY 61) exiting onto KY 61 experiences queuing that can back-up onto I-265. No other ramps experience queuing that impacts traffic on I-265.

Safety (Crash Data 2019-2023)

The Excess Expected Crashes at the ramp intersection south of I-265 is negative. The ramp intersection north of I-265 is 17.885. At the ramp intersection north of I-265, angle and rear-end collisions have both resulted in severe injury crashes. The cause of the high EEC at this location could not be determined by this planning level data review of crash records and field visit.

Discussion

The queuing of the off ramp from I-265 Northbound exiting onto KY 61 is mitigated by solving the queuing situation for KY 61 Southbound traffic at the Commerce Crossing Drive/Cooper Chapel Road intersection. This involves extending the southbound right through lane on the south leg at least 400 feet south of Commerce Crossing Drive/Cooper Chapel Road. It would be preferable to extend the southbound right through lane to Mudd Lane, a distance of 1,550 feet instead of the minimal length of 400 feet.

Pedestrian traffic along KY 61 is addressed by the Shared-Use Path improvement concept that follows.

Conclusion

No spot or intersection improvements are recommended at the I-265 interchange.

No Project Sheet warranted.

Shared-Use Path through I-265 (Gene Snyder Expressway) Interchange

Redesign or configuration of the interstate interchanges was not part of the scope of this study. This study considered traffic operations and safety where the interstate ramps connect with KY 61. The study also considered pedestrian mobility along KY 61 that would cross the interstate ramps.

Pedestrian and Bicycle Facilities

There are no pedestrian or bicycle facilities through the I-265 interchange. Between Commerce Crossing Drive/Cooper Chapel Road and Boerste Way/Glen Rose Drive, there are paved shoulders along KY 61. There are sidewalks along KY 61 starting at Boerste Way/Glen Rose Drive proceeding north. Both Commerce Crossing Drive and Cooper Chapel Road have sidewalks. The sidewalks on Cooper Chapel Road provide a pedestrian connection to McNeely Lake Park. This park is a key connection to the Louisville Loop. The Louisville Loop will eventually cross KY 61 south of I-265. This crossing will likely be at Commerce Crossing Drive/Cooper Chapel Road or further south at Mudd Lane. Regardless of where it crosses KY 61, the completion of this section of the Louisville Loop will increase the need to improve safety for pedestrians choosing to travel to KY 61 and cross through the I-265 interchange.

KY 61 through this study is not part of Louisville Metro Government's Bicycle Master Plan. <https://louisvilleky.gov/government/bike-louisville/bike-master-plan>

Discussion

Pedestrian crossings are safer at stop-controlled conditions where both the ramp traffic and the pedestrian movements are controlled by a traffic signal. Rather than a sidewalk or shared-use path on both sides of KY 61, passing through the I-265 interchange, a shared-use path is proposed to start on the west side of KY 61 south of I-265, to cross the off ramp from I-265 northbound to KY 61, to then cross KY 61 from west to east at the traffic signal, and then to continue north along KY 61 on the east side, across the bridge over I-265 and then across the off ramp from I-265 southbound to KY 61. Once through the interchange, the shared-use path would continue on the east side of KY 61 until it terminated at the Boerste Way/Glen Rose intersection. At that point, pedestrians would transition to the existing sidewalks on both the East and West sides of KY 61.

The shared-use path would require the median of the KY 61 bridge over I-265 to be narrowed and the shoulder on the east side of KY 61 to be converted to a shared-use path.

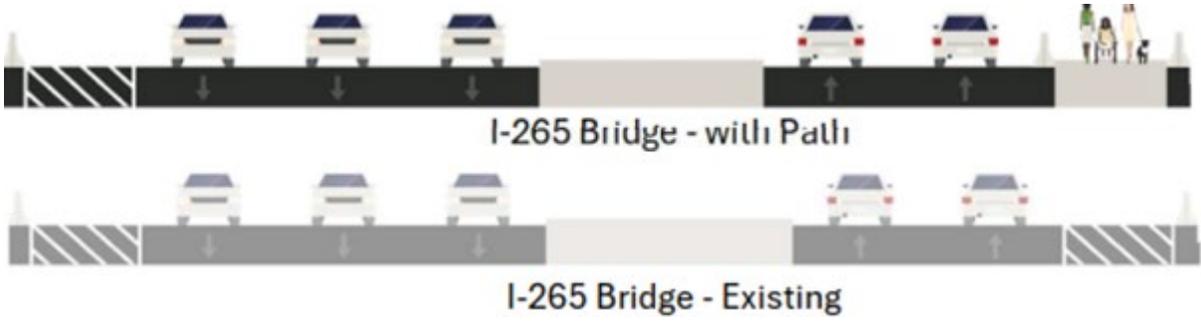


Figure 49: Proposed Shared-Use Path



Figure 50: Proposed Shared-Use Path Location

Conclusion

A shared-use path is recommended along KY 61 from Commerce Crossing Drive/Cooper Chapel Road, through the I-265 interchange to Boerste Way/Glen Rose Road. This project could be included with intersection improvements at Commerce Crossing Drive/Cooper Chapel Road should that improvement concept advance.

Not prioritized.

Project Sheet is provided in **Appendix D**.

Boerste Way/Glen Rose Road

Current Traffic Operations

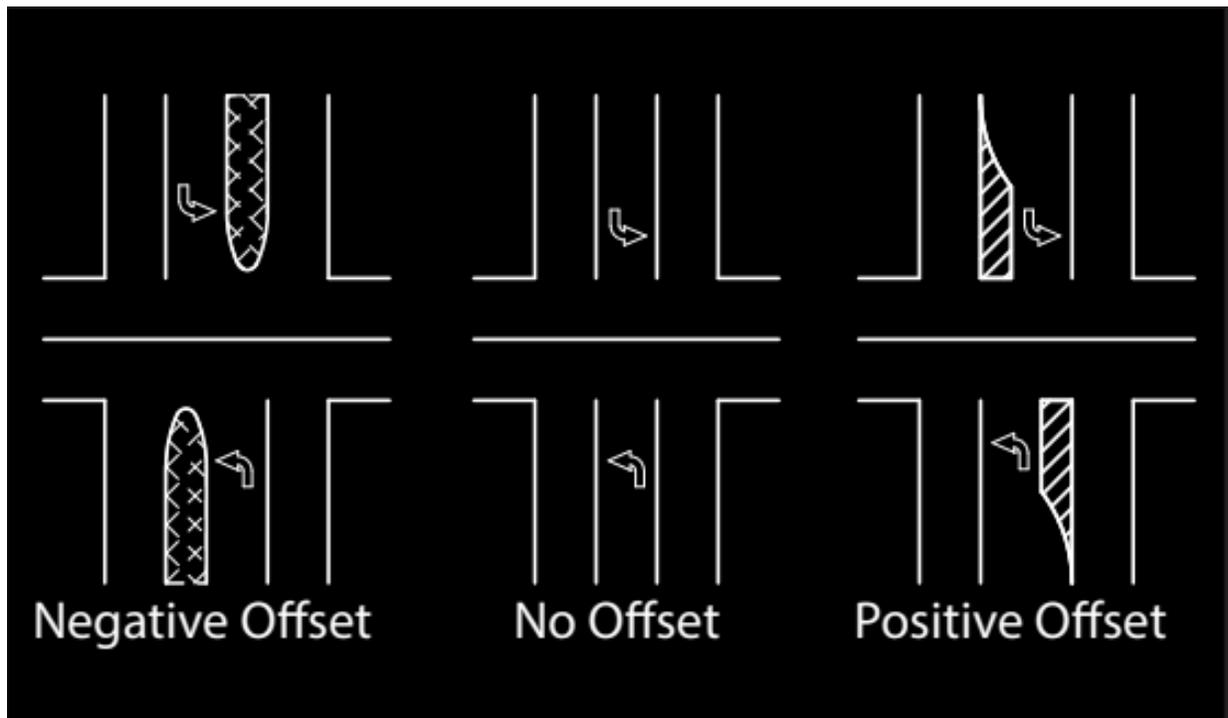
The intersection operates at an acceptable LOS both today and in the future design year of 2045.

Safety (Crash Data 2019-2023)

The Excess Expected Crashes at this intersection is 43.506. Most crashes were Rear Ends. There was one serious injury crash.

Discussion

The high number of crashes, though few are severe, is concerning. After a planning level review of crash data and field visits, no definitive cause or problem was identified. The Project Team discussed that the high number of crashes could be related to this being the first signalized intersection just North of the I-265 interchange. The traffic signal might be “overlooked”. Simple low-cost improvements that might improve safety are recommended. The Project Team recommends reconstructing the left turns from KY 61 to Boerste Way and Glen Rose Road to create a positive offset, to optimize the traffic signal timing, and to add retroreflective backplates the traffic signal.



C

Figure 42: Turning Lane Offset Types

This intersection is Priority 7 of 8. The Project Team recommends reconstructing the left turns on KY 61 to create a positive offset, optimization of the traffic signal timing, and adding retroreflective backplates.

Project Sheet in **Appendix D**.

South Park Rd/E. Manslick Rd

Current Traffic Operations

Traffic at this intersection currently is an acceptable LOS D with a delay of 50.0. The future (2045) no-build model shows a LOS D with a delay of 54.1.

Safety (Crash Data 2019-2023)

The Excess Expected Crashes at this intersection is 11.99. Crashes were Rear Ends and Angles. There were 2 serious injury crashes.

CAP-X Screening

Based on future volumes, various innovative intersections performed better than the existing conventional Traffic Signal intersections. See the table below summarizing the CAP-X analysis.

Table 14: CAP-X Analysis (South Park Rd/E. Manslick Rd)

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
Partial Median U-Turn N-S	0.54	1	Good	Excellent
Median U-Turn N-S	0.67	2	Good	Excellent
2 X 2 Roundabout	0.69	3	Good	Excellent
Bowtie N-S	0.70	4	Good	Excellent
Traffic Signal	0.75	5	Good	Excellent
2NS X 1EW Roundabout	0.99	6	Good	Excellent
1 X 1 Roundabout	1.49	7	Excellent	Excellent

Traffic Modeling

Traffic Modeling indicated that in the 2045 no-build scenario, this intersection would operate at LOS D. Since D is an acceptable LOS in urban areas, traffic modeling doesn't present a compelling reason to reconstruct the intersection from the conventional Traffic Signal to one of the innovative intersections identified through CAP-X.

The Project Team investigate low-cost, conventional improvements with the primary goal of improving safety and access management. The conventional improvements considered do improve traffic operations. The LOS in 2045 would remain D, but the intersection delay would be reduced from 54.1 for the 2045 no-build to 40.8, which is even an improvement over the existing delay of 50.0.

KY 61 / South Park	Existing				2045 No Build (optimized splits)				2045 With Conventional Improvement			
	AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	E	76.9	F	83.4	E	77.2	F	85.6	E	73.7	E	82.8
WB Approach	E	78.1	F	80.4	E	77.4	F	81.5	D	51.0	D	46.3
NB Approach	A	4.3	B	14.2	A	4.8	B	18.3	A	3.9	B	11.4
SB Approach	D	41.6	E	64.3	D	43.9	E	70.8	A	2.1	D	54.3
Overall	D	36.4	D	50.0	D	37.2	D	54.1	C	23.1	D	40.8

Conventional

The conventional improvements for this concept include reallocating the South Park westbound turn lane into Thorntons into a new, South Park eastbound left turn lane, separate from the eastbound through/right turn lanes, converting the entrance to Thorntons from South Park to Right In Right Out (RIRO), and changing the eastbound and westbound movements from split phase to a permitted phase with protected/permitted left turn phases and improve sidewalks.

Per the Traffic Modeling, the intersection delay is reduced from 54.1 in the 2045 No Build scenario to 40.8 with these proposed improvements.

Conclusion

This intersection is Priority 6 of 8. The Project Team recommends the Conventional improvements advance.

Project Sheet in **Appendix D**.

KY 1065 (Outer Loop)

Current Traffic Operations

This intersection is currently the worst overall intersection LOS and associated delay, both for the existing (LOS E – delay 64.4) and the 2045 No Build scenario (LOS F – delay 87.9).

Safety (Crash Data 2019-2023)

The Excess Expected Crashes at this intersection is 83.13. Most crashes were Rear Ends and Angles. There were 3 serious injuries. Though a high number of crashes occur, most are not severe injury crashes. This is likely due to the congestion and subsequent lower speeds of crashes.

CAP-X Screening

Based on future volumes, the Displaced Left Turn, Quadrant, Partial Displaced Left Turn, and timing optimized Traffic Signal performed the best. See the table below summarizing the CAP-X analysis.

Table 15: CAP-X Analysis (KY 1065 | Outer Loop)

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
Displaced Left Turn	0.61	1	Good	Excellent
Quadrant Roadway N-E	0.77	2	Good	Excellent
Partial Displaced Left Turn N-S	0.82	3	Good	Excellent
Traffic Signal	0.92	4	Good	Excellent
Quadrant Roadway S-E	0.97	5	Good	Excellent
Partial Median U-Turn N-S	1.06	6	Good	Excellent
Median U-Turn N-S	1.08	7	Good	Excellent
Signalized Restricted Crossing U-Turn N-S	1.68	8	Good	Excellent
3 X 3 Roundabout	2.60	9	Fair	Excellent
Bowtie N-S	3.42	10	Good	Excellent

Based on this screening, the Displaced Left Turn, Quadrant, Partial Displaced Left Turn, and timing optimized Traffic Signal were advanced for further consideration.

Contextual Screening

Quadrant Intersections were screened out.

Quadrant Intersections would require significant additional right of way and construction in one quadrant for the connector, or bypass roadway. Parcels in the triangle created would have limited access, potentially requiring a change in use or require a “total take” of the property due to the remaining parcel being an uneconomic remnant. The impacts on businesses, right of way costs and risks, and construction costs prompted the Project Team to screen out Quadrant Intersections as a potential improvement concept at this location.

Full Displaced Left Turn was screened out.

DLTs and P-DLTs are not ideal for Bus Rapid Transit (BRT), however, there are options such as nearside stations or placing stations on the traditional leg of a P-DLT. DLTs have significant impacts on all four legs for the intersection, whereas P-DLTs primary impacts are limited to two of the four legs. The proposed BRT would travel from downtown Louisville to Outer Loop and then travel east on Outer Loop to Jefferson Mall. The proposed location of the BRT station at this intersection is on Outer Loop. This means that a P-DLT with the cross-over on the N-S route (KY 61) would not negatively impact the BRT line. For these reasons, the full DLT was screened out and the P-DLT was selected as the innovative intersection concept to advance.

Traffic Modeling

Traffic Modeling shows that conventional improvements at this intersection do little to improve operations. The LOS F and overall delay are not improved. The P-DLT provides significant operational improvements, with a LOS D, and the overall intersection delay from the 2045 No Build scenario of 87.9 being reduced by the P-DLT to a delay of 53.1.

KY 61 / KY 1065	Existing				2045 No Build (optimized splits)				2045 With Conventional Improvement				2045 Partial Displaced Left - NS			
	AM		PM		AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	D	50.6	E	77.4	D	48.9	F	87.3	D	48.9	F	86.9	C	27.7	B	14.8
WB Approach	D	39.5	D	53.1	D	48.4	E	75.8	D	48.4	E	76.2	C	28.8	D	35.4
NB Approach	E	55.6	E	61.8	E	56.0	F	85.8	D	56.0	F	84.9	C	28.2	D	53.6
SB Approach	D	54.1	E	62.0	E	55.1	F	104.3	D	55.1	F	104.3	D	39.8	F	98.2
Overall	D	50.1	E	64.4	D	52.0	F	87.9	D	52.0	F	87.9	C	30.7	D	50.3

While conventional improvements may not significantly enhance Level of Service (LOS) or reduce delays, traffic models indicate they can help alleviate specific queuing issues. These improvements offer a lower-cost alternative with minimal right-of-way impacts while still providing safety and access management benefits. Given these advantages, both the conventional design and the Partial Displaced Left Turn (P-DLT) concept were further developed for consideration.

Conventional

The conventional improvements propose the following:

- NB Approach - extend Lt Turn storage from 290 to 390 ft. Reconstruct Rt Turn to meet 3rd EB through In.
- EB Approach - extend Lt Turn storage from 180 to 415 ft. Add 3rd EB through lane.
- SB Approach - extend Lt Turn storage from 200 to 300 ft. Add accel lane for Rt Turn.
- WB Approach - extend Lt Turn storage from 170 to 280 ft. Add dedicated Rt Turn lane.
- Per the Traffic Modeling, the LOS does not improve.

P-DLT

The Displaced Left Turn (DLT) intersection, also known as a Continuous Flow Intersection (CFI), is an innovative design that relocates left-turn movements to the other side of opposing traffic flow before the main intersection. This allows left-turning vehicles to proceed simultaneously with through traffic, eliminating the need for a separate left-turn phase. The DLT reduces the number of traffic signal phases and conflict points, improving traffic operations and safety performance. It is designed to enhance intersection efficiency, reduce delays, and improve safety at a lower cost and with fewer impacts compared to other intersection designs.

Conclusion

This intersection is Priority 2 of 8. The Project Team recommended that both the Conventional and the P-DLT be considered and further studied during design should this intersection advance.

Project Sheet in **Appendix D**.

KY 1747 (Fern Valley Road)

Current Traffic Operations

This overall intersection has an existing LOS E – delay 59.2 and a 2045 No Build scenario LOS E – delay 62.3. Only the KY 1065 (Outer Loop) intersection performs worse in the study area with respect to traffic operations.

Safety (Crash Data 2019-2023)

The Excess Expected Crashes at this intersection is 53.73. Most crashes were Angles, with Rear Ends being a similar number. There were 2 serious injuries, both involving pedestrians. Though a high number of crashes occur, most are not severe injury crashes. This is likely due to the congestion and subsequent lower speeds of crashes.

CAP-X Screening

Based on future volumes, the Displaced Left Turn, Partial Median U-Turn, and timing optimized Traffic Signal performed the best. See the table below summarizing the CAP-X analysis.

Table 16: CAP-X Analysis (KY 1747 | Fern Valley Rd)

TYPE OF INTERSECTION	Overall v/c Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
Displaced Left Turn	0.52	1	Good	Excellent
Partial Displaced Left Turn N-S	0.60	2	Good	Excellent
Partial Median U-Turn N-S	0.64	3	Good	Excellent
Traffic Signal	0.76	4	Good	Excellent
Median U-Turn N-S	0.85	5	Good	Excellent
Signalized Restricted Crossing U-Turn N-S	1.20	6	Good	Excellent
3 X 3 Roundabout	1.34	7	Fair	Excellent
Bowtie N-S	1.71	8	Good	Excellent
2 X 2 Roundabout	1.97	9	Good	Excellent
Unsignalized Restricted Crossing U-Turn N-S	17.20	10	Good	Excellent

Based on this screening, the Displaced Left Turn, Partial Median U-Turn, and timing optimized Traffic Signal were advanced for further consideration.

Contextual Screening

Full Displaced Left Turn were screened out.

DLTs and P-DLTs are not ideal for Bus Rapid Transit (BRT), however, there are options such as nearside stations or placing stations on the traditional leg of a P-DLT. DLTs have significant impacts on all four legs for the intersection, whereas P-DLTs primary impacts are limited to two of the four legs. The P-DLT would place the cross-over on Fern Valley Road. The proposed location of the BRT station at this intersection is on KY 61, minimizing the impact the P-DLT would have on BRT operations. For these reasons, the full DLT was screened out and the P-DLT was selected as an innovative intersection concept to advance.

Partial Median U-Turn were screened out.

CAP-X indicated that the P-DLT would operate better than the Partial Median U-Turn. Additionally, the Project Team sought consistency regarding innovative intersections to be considered in the corridor. Driver expectations might be strained if multiple innovative intersection types were encountered in a relatively short stretch or highway. Since P-DLTs were being considered for Commerce Crossing Drive and Outer Loop, P-DLT was selected to advance, and the Partial Median U-Turn was screened out.

Traffic Modeling

Traffic Modeling shows that conventional improvements at this intersection slightly improve operations. The LOS E remains the same, but the overall delay improves from 62.3 in the 2045 No Build scenario to 57.2 for conventional improvements. The P-DLT provides significant operational improvements, with a LOS D, and the overall intersection delay from the 2045 No Build scenario of 62.3 being reduced by the P-DLT to a delay of 47.4.

KY 61 / KY 1747	Existing				2045 No Build (optimized splits)				2045 With Conventional Improvement				2045 Partial Displaced Left - NS			
	AM		PM		AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	E	56.2	E	62.8	D	48.9	E	63.5	D	46.7	E	53.4	C	26.4	D	41.1
WB Approach	D	38.4	D	45.9	D	40.9	D	55.0	D	39.5	D	51.6	C	26.1	C	28.5
NB Approach	E	60.2	E	73.9	E	62.4	E	78.6	D	51.4	E	65.8	C	25.2	E	75.4
SB Approach	D	49.5	E	59.1	D	48.5	E	56.8	D	51.2	E	61.3	D	40.4	E	55.5
Overall	D	50.4	E	59.2	D	49.5	E	62.3	D	46.2	E	57.2	C	28.2	D	47.4

Though conventional improvements provide only minor improvements to the delay, traffic models indicate they can also improve some queuing issues. The conventional improvement would be lower cost, have less right of way impacts, and would provide some safety and access management benefits. For these reasons, both the conventional and P-DLT were further developed.

Conventional

- The conventional improvements propose the following:
- EB approach - convert shared Through/Rt Ln to Rt Turn only with 275 ft storage and overlapping right-turn phase
- NB approach - add 300ft Rt Turn Ln with overlapping right-turn phase
- EB approach - extend Lt Turn storage from 225 to 300 ft
- SB approach - extend Lt Turn storage from 275 to 380 ft
- WB approach - extend Lt Turn storage from 275 to 370 ft

Per the Traffic Modeling, the LOS does not improve, though delay is reduced from 62.3 to 57.2.

P-DLT

The partial displaced left option includes reconstructing the intersection as a partial Displaced Left Turn (DLT) along KY 61.

Per the Traffic Modeling, the LOS is improved from E to D.

Discussion

Both the Conventional and P-DLT should reduce crashes.

According to FHWA fact sheets, a 24% reduction in crashes for a P-DLT is possible.

While the roadway's typical width gets wider and pedestrian crossings get longer with DLTs, they provide the opportunity to add refuge islands where pedestrians can pause while crossing the intersection. Adding stop bars and pedestrian buttons for right turn lanes can also be used to make the crossings safer for pedestrians.

P-DLTs are not ideal for Bus Rapid Transit (BRT), however, the proposed BRT would travel from downtown Louisville to Outer Loop and then travel east on Outer Loop to Jefferson Mall. The proposed location of the BRT station at this intersection is on Outer Loop. This means that a P-DLT with the cross-over on the N-S route (KY 61) would not negatively impact the BRT line.

P-DLTs are not ideal for Bus Rapid Transit (BRT), however, the P-DLT would place the cross-over on Fern Valley Road. The proposed location of the BRT station at this intersection is on KY 61, minimizing the impact the P-DLT would have on the BRT operations.

P-DLT adds two signals to the intersection. This is important to note because it will require additional maintenance in the future. These concerns should be considered if this improvement at this intersection is to advance.

Conclusion

This intersection is Priority 3 of 8. The Project Team recommended that both the Conventional and the P-DLT be considered and further studied during design should this intersection advance.

Project Sheet in **Appendix D**.

East Indian Trail

Current Traffic Operations

This overall intersection has an existing LOS C – delay 33.7 and a 2045 No Build scenario LOS D – delay 48.7. The No Build scenario LOS D is acceptable for an urban intersection.

Safety (Crash Data 2019-2023)

The Excess Expected Crashes at this intersection is 27.78. The relative number of fatal and severe crashes at this intersection cause concern. There were 3 fatal and 5 severe injuries. Of the fatal, two involved pedestrians and one involved a motorcycle. Of the 5 severe injury crashes, two involved pedestrians and one involved a scooter. Improvements to enhance pedestrian safety and access management strategies to define movements and increase predictability of traffic should be considered.

CAP-X Screening

Based on future volumes, a Roundabout, P-DLT, Bowtie, and Continuous Green T performed the best. See the table below summarizing the CAP-X analysis.

Table 17: CAP-X Analysis (East Indian Trail)

TYPE OF INTERSECTION	Overall v/c Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
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3 X 3 Roundabout	0.34	1	Fair	Excellent
Partial Displaced Left Turn N-S	0.37	2	Good	Excellent
Bowtie N-S	0.42	3	Good	Excellent
Continuous Green T E	0.47	4	Good	Excellent
Quadrant Roadway S-E	0.47	4	Good	Excellent
Partial Median U-Turn N-S	0.49	6	Good	Excellent
Traffic Signal	0.50	7	Good	Excellent
2 X 2 Roundabout	0.50	8	Good	Excellent
Signalized Restricted Crossing U-Turn N-S	0.52	9	Good	Excellent
2NS X 1EW Roundabout	0.57	10	Good	Excellent

Acknowledging that traffic operations were acceptable in the 2045 No Build, the Project Team focused on solutions that would enhance pedestrian and overall safety at the intersection.

Contextual Screening

Innovative intersections have been screened out.

Though CAP-X indicated that various innovative intersections would reduce delay, the traffic modeling indicated that the 2045 No Build scenario provided an acceptable LOS D. The Project Team considered all the innovative intersections as harmful to pedestrian safety. While the initial CAP-X analysis screens many innovative intersections as good for pedestrian accommodation, further analysis of the context of these intersections found that innovative intersections created increased walk distances for pedestrian maneuvers. Issues are also caused by innovative intersections with continuously flowing traffic. For example, a continuous Green T would make it so traffic traveling southbound does not stop, making it challenging for pedestrians to cross KY 61. With pedestrian safety as the primary concern at this intersection, the innovative intersection concepts were screened out.

Traffic Modeling

The proposed conventional improvements at this intersection do not impact traffic model inputs to any significant degree. Therefore, the conventional improvements, per the traffic model, do not improve traffic operations.

KY 61 / East Indian Trail	Existing				2045 No Build (optimized splits)			
	AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	F	99.6	F	104.6	F	98.1	F	104.9
WB Approach	E	62.4	E	59.2	E	64.6	E	61.8
NB Approach	A	0.4	D	46.9	A	0.3	D	41.1
SB Approach	A	6.5	A	0.8	A	9.5	D	48.1
Overall	B	16.1	C	33.7	B	17.5	D	48.7

Conventional

- The conventional improvements propose the following:
- WB Approach - Install raised median; restrict access within 200 ft of intersection
- NB Approach - Install raised median; approximately 300 ft
- Consolidate entrances

Discussion

The Conventional Improvements should improve safety, pedestrian mobility, and access management. The project will improve pedestrian safety by improving sidewalks and creating high visibility intersections. The conventional intersection improvements increase benefit to pedestrian safety as compared to the innovative intersections considered.

Conclusion

This intersection is Priority 4 of 8. The Project Team recommended the Conventional Improvement Concept be considered should this intersection advanced to design.

Project Sheet in **Appendix D**.

Gilmore Lane

Current Traffic Operations

This overall intersection has an existing LOS E – delay 67.6 and a 2045 No Build scenario LOS E – delay 67.0. This shows that by optimizing the traffic signal timing, the growth forecast by 2045 can be mitigated.

Safety (Crash Data 2019-2023)

The Excess Expected Crashes at this intersection is 10.87. Rear End and Angle crashes being the predominant collision types. The relative number of fatal and severe crashes at this intersection cause concern. There were 2 fatal and 2 severe injuries. Of the fatal, both involved pedestrians. Of the 2 severe injury crashes, one involved a motorcycle. Improvements to enhance pedestrian safety and access management strategies to define movements and increase predictability of traffic should be considered.

CAP-X Screening

Based on future volumes, various innovative intersections outperformed the conventional Traffic Signal intersection (the existing condition). It should be noted that CAP-X indicates the overall V/C for the conventional Traffic Signal intersection is acceptable. See the table below summarizing the CAP-X analysis.

Table 18: CAP-X Analysis (Gilmore Lane)

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
Partial Displaced Left Turn N-S	0.50	1	Good	Excellent
Quadrant Roadway N-E	0.55	2	Good	Excellent
Median U-Turn N-S	0.55	2	Good	Excellent
Signalized Restricted Crossing U-Turn N-S	0.60	4	Good	Excellent
Bowtie N-S	0.60	5	Good	Excellent
Partial Median U-Turn N-S	0.61	6	Good	Excellent
2 X 2 Roundabout	0.63	7	Good	Excellent
Traffic Signal	0.67	8	Good	Excellent
2NS X 1EW Roundabout	1.19	9	Good	Excellent
Unsignalized Restricted Crossing U-Turn N-S	2.81	10	Good	Excellent

The Project Team focused on conventional solutions that could improve traffic operations and enhance pedestrian and overall safety. There were concerns that the innovative intersections would have greater cost, right-of-way impacts, and be detrimental to pedestrian safety.

Contextual Screening

Innovative intersections have been screened out.

The Project Team developed the Conventional Improvement concept for traffic modeling. This conventional concept showed a LOS D for 2045. The Project Team determined to advance this low-cost conventional improvement concept and to screen out all innovative intersection concepts with the understanding that they would all have a relatively higher cost, greater right of way impact, and potentially diminish pedestrian safety.

Traffic Modeling

The proposed conventional improvements at this intersection improve the traffic operations from a LOS E and delay of 67.0 for the 2045 No Build scenario to a LOS D and delay of 48.9.

KY 61 / Gilmore Lane	Existing				2045 No Build (optimized splits)				2045 With Conventional Improvement			
	AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	F	80.7	F	82.4	F	81.4	F	82.2	E	77.6	E	77.6
WB Approach	F	81.0	F	94.1	F	81.2	F	92.2	C	34.1	E	57.5
NB Approach	E	79.6	F	91.0	F	83.9	E	79.1	E	60.3	E	63.3
SB Approach	B	14.8	C	27.6	A	6.1	D	36.1	A	2.1	C	25.0
Overall	E	55.0	E	67.6	D	53.6	E	67.0	D	34.7	D	48.9

Conventional

- WB Rt Turn Ln added with 150+ ft storage
- WB Lt Turn Storage Ln extended from 120 to 490 ft

- SB Lt Tun Storage Ln extended from 275 to 460 ft
- EB and WB phases changed from split to permitted phases with protected permitted for Lt Turns
- Improve sidewalks along Gilmore Lane

Discussion

The Conventional Improvements should improve traffic operations, safety, pedestrian mobility, and access management. The project will improve pedestrian safety by improving sidewalks and creating high visibility intersections. The conventional intersection improvements increase benefit to pedestrian safety as compared to the innovative intersections considered.

Conclusion

This intersection is Priority 5 of 8. The Project Team recommended the Conventional Improvement Concept be considered should this intersection advanced to design.

Project Sheet in **Appendix D**.

I-65 Ramps and Grade Lane

The ramps connecting KY 61 to I-65 just south of I-264 and the KY 61 intersection with Grade Lane are separated by only 700 feet. In this study, these intersections were analyzed as a single system.

Current Traffic Operations

The intersection of the I-65 ramps has an existing LOS C – delay 22.1 and a 2045 No Build scenario LOS D – delay 42.3. The intersection at Grade Lane has an existing LOS C – delay 31.7 and a 2045 No Build scenario LOS B – delay 19.7 (traffic operations improvements based on proposed traffic signal optimization). This shows the by optimizing the traffic signal timing, the growth forecast by 2045 can be mitigated for Grade Lane.



Figure 44: Existing Intersection and Ramp Configuration

Safety

(Crash Data 2019-2023)

The Excess Expected Crashes at the intersection of the I-65 ramps is 7.04 while the EEC for the Grade Lane intersection is 60.00. Rear Ends account for the overwhelming number of crashes. These intersections reflect a large overall number of crashes. There were no fatal and four severe crashes during 2019-2023. None of the severe crashes involved pedestrians.

CAP-X Screening

Based on future volumes, Roundabouts and Green T outperformed the conventional Traffic Signal intersection (the existing condition). It should be noted that CAP-X indicates the overall V/C for the conventional Traffic Signal intersection is very close to the innovative intersections. See the table below summarizing the CAP-X analysis.

Table 19: CAP-X Analysis (I-65 Ramps)

TYPE OF INTERSECTION	Overall v/c Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
3 X 3 Roundabout	0.57	1	Fair	Excellent
2 X 2 Roundabout	0.60	2	Good	Excellent

Traffic Signal	0.65	3	Good	Excellent
Continuous Green T W	0.65	3	Good	Excellent
2NS X 1EW Roundabout	0.98	5	Good	Excellent

Table 20: CAP-X Analysis (Grade Lane)

TYPE OF INTERSECTION	Overall V/C Ratio	V/C Ranking	Pedestrian Accommodations	Bicycle Accommodations
Continuous Green T W	0.54	1	Good	Excellent
Traffic Signal	0.55	2	Good	Excellent
2 X 2 Roundabout	0.66	3	Good	Excellent
3 X 3 Roundabout	0.66	3	Fair	Excellent
2NS X 1EW Roundabout	1.00	5	Good	Excellent

Contextual Screening

The Green T intersection has been screened out.

The Project Team screened out the Green T at Grade Lane and focused on conventional solutions and a “Peanut” (connected roundabout) concept. Traffic modeling for the Peanut was done with SIDRA Intersections. <https://www.sidrasolutions.com/>

Traffic Modeling

The Peanut improvements at the intersection with the I-65 Ramps improve the traffic operations from a LOS D and delay of 42.3 for the 2045 No Build scenario to a LOS B and delay of 13.5. See **Appendix E**, Traffic Analysis Report for SIDRA Results.

KY 61 / I-65 Off Ramp	Existing				2045 No Build (optimized splits)				2045 Roundabout (Peanut)			
	AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	D	53.3	E	79.8	D	50.2	E	67.0	B	11.8	C	23.9
NB Approach	A	7.9	A	4.9	A	8.9	A	9.5	B	11.5	B	12.5
SB Approach	C	25.8	A	7.4	C	24.8	E	67.7	A	7.4	A	9.7
Overall	C	25.2	C	22.1	C	24.2	D	42.3	B	10.3	B	13.5

The Peanut improvements at the intersection with Grade Lane improve the traffic operations from a PM LOS C and delay of 31.7 for the 2045 No Build scenario to a LOS B and delay of 13.1. See **Appendix E**, Traffic Analysis Report for SIDRA Results.

KY 61 / Grade Lane	Existing				2045 No Build (optimized splits)				2045 Roundabout (Peanut)			
	AM		PM		AM		PM		AM		PM	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
EB Approach	D	38.1	D	48.9	D	43.3	D	43.2	A	6.7	C	15.6
NB Approach	A	1.5	A	6.6	A	1.4	A	5.5	A	8.0	B	12.4
SB Approach	D	41.3	D	50.1	C	32.9	B	18.6	A	6.5	B	12.0
Overall	B	19.8	C	31.7	B	18.9	B	19.7	A	7.3	B	13.1

Overall, the LOS goes from LOS D and B in the 2045 No Build scenario to a LOS B and B.

Conventional

Conventional Improvements at these intersections are minor improvements to improve pedestrian safety.

NB Approach	Extend stop bar 50 ft north. Close Preston Dr access point.
EB Approach	Add raised islands.
WB Approach	Add signal for commercial entrance.
Intersection	Reconstruct signal span from diagonal to box. Multiple pole locations to consider.

Peanut - Combined Roundabout

Reconstruct intersections as a combined roundabout – Peanut. Improve pedestrian facilities.



Figure 45: Conceptual Peanut Roundabout Configuration

Conclusion

The intersection, ranked as Priority 8 of 8, recently saw low-cost improvements by KYTC. Initially skeptical about the Peanut design, the Project Team noted that while it enhanced the first intersection, some legs of the second intersection experienced a decrease in Level of Service (LOS) compared to the Conventional Improvement Concept due to shifted traffic patterns. Despite these issues, the overall level of service is greatly improved. The team acknowledged the overall benefits of the Peanut design and decided to move forward with it. They recommended considering both the Conventional Improvement Concept and the Peanut design if the intersection progresses to the design phase.

Project Sheet in **Appendix D**.

FINAL COORDINATION EFFORTS

Once the concepts were defined, the project team reached out to local officials, stakeholders, the public, and resource agencies to solicit feedback. Additional details are provided in **Appendix C**.

Project Team Meeting No. 2

The meeting was held on August 23, 2024, at the KYTC District 5 Office and via Teams, with participation from KYTC and other stakeholders. Key discussion points included the following:

- **Improvement Concepts:** Evaluated options for ten intersections using the **Intersection Control Evaluation (ICE)** methodology, focusing on safety, operations, and right-of-way impacts. Concepts like Displaced Left Turns (DLTs) and Continuous Green Ts (CGTs) were refined, with some eliminated based on feasibility.
- **Pedestrian and Bicycle Facilities:** Addressed infrastructure gaps, prioritizing refuge islands, signal upgrades, and shared-use paths to improve accessibility and safety.
- **Bus Rapid Transit (BRT):** Assessed corridor-wide feasibility, ensuring compliance with funding requirements and operational needs, including the need for dedicated lanes.
- **Corridor-Wide Enhancements:** Reviewed strategies for signal improvements, lighting, and median configurations to ensure consistency and functionality throughout the corridor.
- **Environmental and Right-of-Way Considerations:** Focused on minimizing impacts while addressing challenges at key intersections like Outer Loop and Fern Valley Road.

Project Team Meeting No. 3

The third project team meeting was held on October 2, 2024, at the KYTC District 5 Office and via MS Teams. The meeting focused on reviewing improvement concepts, discussing the development of a conceptual access management plan, finalizing materials for the public meeting, and planning public engagement strategies.

Access Management Plan:

The team proposed a conceptual access management plan for the 4-mile segment from Southern High School to Gilmore Lane. This plan included 2D designs based on parcel lines and aerial imagery, as well as a narrative outlining methodologies aligned with KYTC policies. The plan aimed to support future coordination with Louisville Metro Planning and Zoning.

Improvement Concepts:

The team reviewed proposed improvements for major intersections, including Commerce Crossing, Outer Loop, Fern Valley, and Grade Lane/I-65 Ramps, where both conventional and partial Displaced Left Turn (DLT) options were prepared for public input. For intersections like South Park/E. Manslick, Boerste/Glen Rose, and Gilmore, conventional improvements were prioritized. A peanut/double roundabout option was evaluated for Grade Lane/I-65 to enhance safety. Additionally, the team explored the addition of medians and access management measures for Indian Trail and a shared-use path connecting Commerce Crossings to Southern High School.

Survey Revisions:

The project team refined the survey to gather more targeted feedback. Changes included adding a question about public support for premium transit, segmenting the corridor for input on raised

medians, and simplifying questions to allow participants to prioritize up to three issues. Visual aids, such as crash heat maps, were added for context.

Local Officials and Stakeholders Meeting No. 2

The second Local Officials and Stakeholders meeting, held on October 24, 2024, at the South-Central Regional Library, provided an opportunity to review proposed improvement concepts for KY 61 and gather input to refine priorities. The project team shared updates on study progress, focusing on safety enhancements, congestion reduction, and multi-modal transportation improvements. Key concepts presented included intersection upgrades such as conventional designs, partial Displaced Left Turns (DLTs), continuous flow intersections, and a proposed "peanut" roundabout at the Grade Lane/I-65 ramps. Additional improvements highlighted included upgraded traffic signals, pedestrian crossings, street lighting at intersections, and a shared-use path from Commerce Crossings to Southern High School.

A conceptual access management plan was introduced, featuring raised medians to improve safety while maintaining essential access points. Attendees discussed the potential impacts of these medians on local businesses and traffic flow. Transit enhancements, including compatibility with Bus Rapid Transit (BRT), were also emphasized, building on recommendations from Louisville Metro's Preston Corridor Plan.

The meeting underscored the importance of stakeholder feedback, with discussions on prioritizing high-impact intersections such as Fern Valley Road, Outer Loop, and Commerce Crossings. The project team also highlighted efforts to ensure inclusive public engagement, including targeted outreach to underrepresented groups and providing survey materials in English and Spanish. Insights from this meeting and the subsequent public meeting will inform the refinement of the improvement concepts and guide recommendations in the final project report.

Public Meeting No. 2

Public Meeting No. 2 was held on October 24, 2024, at the South-Central Regional Library in Louisville, Kentucky, following the Local Officials and Stakeholders (LOS) meeting earlier that day. The event aimed to share refined improvement concepts for KY 61 with the community and gather feedback to guide the study's recommendations. Attendees were presented with project-related maps, conceptual designs, and key findings, while project team members were available to answer questions and provide clarifications.

Strong public support emerged for improvements such as upgraded street lighting, additional sidewalks, premium transit options, and medium-speed collector designs.

Project Team Meeting No. 4

The fourth Project Team Meeting for the KY 61 Preston Highway study was held on November 20, 2024, to review public survey feedback, prioritize improvement concepts, and discuss the Preston Transit Plan and access management policy. The team analyzed survey responses from the second public meeting, identifying the Outer Loop, Fern Valley, and Grade Lane/I-65 Interchange as the top intersections for improvement. Recommendations were made to refine future surveys by including questions on how participants learned about the meeting or survey to improve outreach strategies.

Prioritization discussions resulted in the following ranking of improvement concepts:

- Commerce Crossings/Cooper Chapel as the top priority due to anticipated growth and development, followed by Outer Loop and Fern Valley.

- Other intersections, such as Indian Trail, Gilmore Lane, and Southpark/E. Manslick, were ranked lower based on operational needs and public feedback.
- Recent upgrades to the Grade Lane/I-65 ramps placed it at the lowest priority.

The team also reviewed the Preston Transit Plan, highlighting the need for future infrastructure to accommodate Bus Rapid Transit (BRT), sidewalks, and Shared Use Paths (SUPs). Access management was addressed and will be included in **Appendix F**.

PRIORITIZED RECOMMENDATIONS

This chapter presents the final, prioritized recommendations of the study’s findings—including an assessment of costs and impacts. Project sheets at the end of this section and in **Appendix D** provide a succinct overview of each concept.

SUMMARY OF RECOMMENDATIONS

The Project Team prioritized the intersection improvements as follows:

Intersection Improvements - Prioritized	
Priority	
1	Commerce Crossings/Cooper Chapel
2	Outer Loop
3	Fern Valley
4	Indian Trail
5	Gilmore Lane
6	Southpark/ E. Manslick
7	Boerste Way/Glen Rose
8	Grade Lane/I-65 Ramps

Throughout the study process, the Project Team emphasized the high priority for the following:

Non-Intersection Improvements	
High Priority	Sidewalk Connectivity
High Priority	Shared-Path Commerce Crossing to Glen Rose
High Priority	Upgrade Traffic Signals with Intersection Street Lighting

The following corridor strategies were also considered but not prioritized.

Corridor Strategies
Access Management Project (Southern HS to Gilmore)
Complete Streets Rebuild for BRT (Outer Loop to I-264)

Cost Estimates

Design models were used to estimate quantities of high-cost construction items including earthwork, pavement, and structures. Construction costs were tabulated using KYTC District 5 average unit bid prices. KYTC District 5 provided right-of-way estimates where appropriate while the consultant developed utility relocation estimates. Planning-level cost estimates by phase are presented in **Table 22**. Each construction cost includes an additional 40% for contingencies. All costs are presented in 2024 dollars.

Table 22: Cost Estimates by Phase

Description	Design	ROW	Utilities	Construction	Total
Commerce Crossings - Conventional Improvements	\$ 500,000	\$ 130,000	\$ 50,000	\$ 2,400,000	\$ 3,080,000
Commerce Crossings - Partial Displaced Left	\$ 600,000	\$ 130,000	\$ 125,000	\$ 5,500,000	\$ 6,355,000
Boerste and Glen Rose - Positive Offset Left Turn and Signal Upgrades	\$ 250,000	\$ 145,000	\$ 50,000	\$ 950,000	\$ 1,395,000
South Park - Conventional Improvements	\$ 250,000	\$ 195,000	\$ 25,000	\$ 1,000,000	\$ 1,470,000
Outer Loop - Conventional	\$ 450,000	\$ 390,000	\$ 75,000	\$ 2,900,000	\$ 3,815,000
Outer Loop - Partial Displaced Left -Turn NS	\$ 600,000	\$ 860,000	\$ 225,000	\$ 4,750,000	\$ 6,435,000
Fern Valley - Conventional Improvements	\$ 450,000	\$ 600,000	\$ 50,000	\$ 2,100,000	\$ 3,200,000
Fern Valley - Partial Displaced Left Turn - EW	\$ 600,000	\$ 600,000	\$ 200,000	\$ 4,450,000	\$ 5,850,000
East Indian Trail - Conventional	\$ 250,000	\$ 445,000	\$ 25,000	\$ 1,000,000	\$ 1,720,000
Gilmore Lane - Conventional Improvements	\$ 250,000	\$ 600,000	\$ 50,000	\$ 1,100,000	\$ 2,000,000
I-65 Ramps - Conventional Improvements	\$ 200,000	\$ 110,000	\$ 50,000	\$ 900,000	\$ 1,260,000
Grade Lane/I-65 Ramps - Peanut	\$ 450,000	\$ 560,000	\$ 225,000	\$ 2,100,000	\$ 3,335,000
Shared Use Path - Commerce Crossings to Southern High School	\$ 750,000	\$ -	\$ -	\$ 5,000,000	\$ 5,750,000
Sidewalk Connectivity Project	\$ 2,325,000	\$ -	\$ -	\$ 15,500,000	\$ 17,825,000
Access Management Project	\$ 1,200,000	\$ 600,000	\$ 600,000	\$ 15,500,000	\$ 17,900,000
Signal System and Lighting Upgrades	\$ 400,000	\$ -	\$ -	\$ 1,680,000	\$ 2,080,000
Complete Street Rebuild with BRT	\$ 7,000,000	\$ 5,000,000	\$ 2,000,000	\$ 156,000,000	\$ 170,000,000

General Recommendations

Pedestrian Mobility

Fixing the gaps in the sidewalk system is recommended. Cost to fix all the sidewalk connectivity issues is estimated to be over \$17,000,000. This work could easily be phased. Some segments are estimated at around \$1,000,000, while the most expensive (the Shared-Use Path from Commerce Crossings Drive to Southern High School) is estimated at nearly \$6,000,000.

Bicycle Facilities

A shared-use path is recommended from Commerce Crossings Drive to Southern High School. For the rest of the corridor, adding bicycle lanes or a shared-use path would require additional right of way or a reduction in travel lanes. Bicycle accommodations should be considered if the Complete Street Rebuild with Bus Rapid Transit progresses. KY 61 is not included in any local bicycle plans. No short or mid-term recommendations are made beyond the shared-use path from Commerce Crossings Drive to Southern High School.

Traffic Signal Upgrades and Intersection Street Lighting

KYTC is currently upgrading the traffic signal controllers along KY 61. For any signals without 2070 controllers, upgrades are recommended. Additionally, each signal should get retroreflective backplates, appropriate pedestrian signals, and intersection overhead streetlighting.

Access Management

The public, stakeholders, and the Project Team acknowledged safety issues, some of which are exacerbated by an abundance of access points along KY 61. This abundance of access points leads to an abundance of conflict points, not just for cars, but also for pedestrians along the corridor. Two-way left-turn lanes combined with the widen open access along KY 61 make for an unpredictable traveling experience. Just where is that car going? When are they going to turn? What are they doing?

Non-traversable medians and the consolidation of entrances are two ways to address access management issues. A conceptual access management policy was developed as part of this study project and is detailed in **Appendix F**. Feedback Input received from the study's public engagement phase highlighted concerns regarding a highly restrictive access management

concept. The Project Team aimed to create a balanced policy to enhance safety while maintaining reasonable access to homes and businesses along the corridor.

This policy seeks to minimize traffic conflicts and improve safety by regulating the location, design, and operation of driveways and access points. It addresses intersection spacing for future signalized and unsignalized intersections, provides guidelines for median openings, and designs turn lanes to ensure safe and efficient vehicle movements. Both traversable and non-traversable medians are recommended throughout the corridor. The policy neither restricts nor promotes U-turns and is adaptable to future changes in the corridor. This conceptual access management policy should serve as a starting point, not a detailed blueprint, for future designers and developers.

Complete Streets and Bus Rapid Transit

Louisville Metro led a companion study to examine the feasibility of implementing Bus Rapid Transit (BRT) on KY 61 from downtown to Outer Loop and the Jefferson Mall. The executive summary of that study, the Preston Corridor Plan – Transit Study (Transit Study) is included as **Appendix G**. The Transit Study was built upon Louisville Metro’s 2023 Preston Corridor Plan. The Transit Study determined that advancing a BRT and seeking funding from the Federal Transit Authority is not recommended at this time. The Transit Study does see BRT as a possibility for Preston in the future. It is imperative that any road work that advances on KY 61 consider the possibility of BRT in the future with dedicated transit lanes for some segments. KYTC and Louisville Metro should ensure that work on KY 61 not build in “obstacles” for future BRT. If bridges in the study area along KY 61 are reconstructed, they should be widened to accommodate a dedicated BRT lane and bicycle and pedestrian facilities. If a project advances to add a sidewalk or shared use path, these facilities should be located outside of space that could potentially be used for a BRT lane. The Transit Study recommends the conversion of shoulders (with narrowing of medians) to accommodate dedicated BRT lanes along KY 61 from Canal Street (MP 4.57) to Gilmore Lane (MP 6.88). Specifically in this 2.31-mile segment of KY 61, any improvements should be planned and designed to widen and convert the shoulders to an additional lane that could one day accommodate BRT.

Louisville Metro, TARC, and KYTC should monitor the following, which will be indicators on if and when the community should advance BRT along KY 61

- **TARC Operations-** Currently TARC is facing budget issues and moving to reduce and restructure bus service. BRT along KY 61 must be something that fits into TARC’s operational plans. At this time, it is not clear that a new BRT service along KY 61 would support TARC’s short term operational goals.
- **FTA Capital Investment Grant (CIG) merit criteria.** The Transit Plan examined the feasibility of BRT along KY 61, estimating the capital and O&M cost, forecasting the potential ridership and community benefits, and determined that under current merit criteria, this project would not be competitive for FTA CIG funding. FTA is currently revising the CIG merit criteria. Once the criteria is finalized, this project could be re-evaluated for competitiveness.
- **Broadway All The Way (BATW)** – This project to implement BRT along Broadway currently has funding through design. The design is expected for be complete and ready for construction in late 2027 or early 2028. Louisville Metro and TARC have not identified construction funds yet. If funding is secured, BRT on Broadway could be operations before 2030. Once BRT is operating on Broadway, it would be appropriate to revise the ridership forecasts and other assumptions that were part of the Transit Study.

Ultimately, a re-examination of the Transit Study for Preston will probably be warranted as 2030 approaches. At that time, TARC will likely have implemented operational changes, FTA CIG merit criteria will be revised, and the Broadway BRT will be under construction or operating. In the short-term, any changes to KY 61 should plan for BRT sometime beyond 2030 but likely before 2045.

Improvement Concept Project Sheets

The following pages contain project sheets for each of the improvement concepts.

KY 61 - Jefferson County			
Commerce Crossings/Cooper Chapel Intersection - Conventional Improvements		Priority	
BMP:	1.085	EMP:	1.520
Project Description		1	
Add channelized NB Rt Turn Ln (480 ft) Extend SB Rt Ln at south leg to Maple Springs Dr (consider extending to Mudd Ln) Add sidewalks in NW and NE quadrants and with KY 61 crossing Optimize Signal			
Identified Needs		Expected Benefits	
Queuing KY 61 SB Queuing I-265 NB off ramp to KY 61 Exceeded Expected Crashes 40.09 PM LOS E Inadequate pedestrian facilities		Queuing at will be reduced on KY 61SB and the ramp Rear-end collisions due to queuing will be reduced PM LOS D Pedestrian mobility will be improved Ramp capacity will be mitigated	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 500,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 130,000.00
2023 ADT	40,414	Utilities	\$ 50,000.00
2045 No-Build ADT	44,640	Construction	\$ 2,400,000.00
EEC	40.09		
Bike/Ped Facilities	Intermittent Sidewalk	Total Cost	\$ 3,080,000.00



KY 61 - Jefferson County			
Commerce Crossings/Cooper Chapel Intersection - Partial Displaced Left			Priority
BMP: 1.096 EMP: 1.697			1
Project Description			
Reconstruct as Partial Displaced Left Turn along KY 61			
Add channelized NB Rt Turn Ln (480 ft)			
Extend SB Rt Ln at south leg to Maple Springs Dr (consider extending to Mudd Ln)			
Add sidewalks in NW and NE quadrants and with KY 61 crossing			
Optimize Signal			
Identified Needs		Expected Benefits	
Queuing KY 61 SB		Queuing at will be reduced on KY 61SB and the ramp	
Queuing I-265 NB off ramp to KY 61		Rear-end collisions due to queuing will be reduced	
EEC 40.09		PM LOS C	
PM LOS E		Pedestrian mobility will be improved	
Inadequate pedestrian facilities		Ramp capacity issue and queuing will be mitigated	
		24% reduction in crashes	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	N/A	Design	\$ 600,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 130,000.00
2023 ADT	40,414	Utilities	\$ 125,000.00
2045 No-Build ADT	44,640	Construction	\$ 5,500,000.00
EEC	40.09	Total Cost	\$ 6,355,000.00
Bike/Ped Facilities	Intermittent Sidewalks		

KY 61 - Jefferson County

Boerste/Glen Rose Intersection - Postive Offset Lt Turn and Signal Upgrade Priority 7

BMP: 1.992 **EMP:** 2.293

Project Description

Add Positive Offset Left Turn Lanes
 Optimize signal timing
 Add retroreflective backplates to traffic signal

Identified Needs	Expected Benefits
Safety issues at intersection EEC 43.51 First signalized intersection after interstate intersection	8% or greater reduction in crashes for positive offset 15% reduction in crashes due to backplates

Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 250,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 145,000.00
2023 ADT	20,500	Utilities	\$ 50,000.00
2045 No-Build ADT	44,640	Construction	\$ 950,000.00
EEC	43.51	Total Cost	\$ 1,395,000.00
Bike/Ped Facilities	Intermittent Sidewalks		

KY 61 - Jefferson County			
Southpark/E Manslick Intersection - Conventional Improvements			Priority
BMP:	2.344	EMP:	2.541
Project Description			6
Separate Thru and Lt Turn Ln on South Park by adding Ln Convert entrance to Thornton's to Right-In/Right-Out Improve sidewalks with focus on NE quadrant			
Identified Needs		Expected Benefits	
Queuing at intersection PM LOS D Delay 54.1 EEC 11.99 Inadequate pedestrian facilities		Mitigation of queuing PM LOS D Delay 39.0 Improved safety Improved pedestrian mobility	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	N/A	Design	\$ 250,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 195,000.00
2023 ADT	20,500	Utilities	\$ 25,000.00
2045 No-Build ADT	44,640	Construction	\$ 1,000,000.00
EEC	11.99	Total Cost	\$ 1,470,000.00
Bike/Ped Facilities	Sidewalks		



KY 61 - Jefferson County			
Outer Loop Intersection - Partial Displaced Lt - NS			Priority
BMP: 3.619 EMP: 4.249			2
Project Description			
Reconstruct as Partial Displaced Left Turn along KY 61 Improved pedestrian facilities			
Identified Needs		Expected Benefits	
Queuing and delay EEC 83.13 PM LOS F Inadequate pedestrian facilities		Improved traffic operations Reduction in crashes/improved safety PM LOS D Improved pedestrian mobility 24% reduction in crashes	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 600,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 860,000.00
2023 ADT	29,843	Utilities	\$ 225,000.00
2045 No-Build ADT	35,056	Construction	\$ 4,750,000.00
EEC	83.13	Total Cost	\$ 6,435,000.00
Bike/Ped Facilities	Sidewalks		

KY 61 - Jefferson County

Fern Valley Intersection - Conventional Improvements Priority 3

BMP: 5,232 **EMP:** 5,512

Project Description

EB approach - convert shared Thru/Rt Ln to Rt Turn only with 275 storage and overlapping right-turn phase
 NB approach - add 300ft Rt Turn Ln with overlapping right-turn phase
 EB approach - extend Lt Turn storage from 225 to 300 ft
 SB approach - extend Lt Turn storage from 275 to 380 ft
 WB approach - extend Lt Turn storage from 275 to 370 ft

Improve sidewalks and crossings

Identified Needs	Expected Benefits
Queuing and delay at intersection	Improved traffic operations
PM LOS E	PM LOS E
Delay 62.3	Delay 57.2
EEC 53.73	Improved safety
Inadequate pedestrian facilities	Improved pedestrian mobility

Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 450,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 600,000.00
2023 ADT	27,081	Utilities	\$ 50,000.00
2045 No-Build ADT	35,056	Construction	\$ 2,100,000.00
EEC	53.73	Total Cost	\$ 3,200,000.00
Bike/Ped Facilities	Sidewalks		

KY 61 - Jefferson County			
Fern Valley Intersection - Partial Displaced Lt - EW			Priority
BMP:	5,177	EMP:	5,512
Project Description			3
Reconstruct as Partial Displaced Left Turn along KY 61 Improve sidewalks and crossings			
Identified Needs		Expected Benefits	
Queuing and delay at intersectoin PM LOS E Delay 62.3 EEC 53.73 Inadequate pedestrian facilities		Improved traffic operations PM LOS D Delay 23.7 Improved safety 24% reduction in crashes Improved pedestrian mobility	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 600,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 600,000.00
2023 ADT	27,081	Utilities	\$ 200,000.00
2045 No-Build ADT	35,056	Construction	\$ 4,450,000.00
EEC	53.73	Total Cost	\$ 5,850,000.00
Bike/Ped Facilities	Sidewalks		

KY 61 - Jefferson County			
Indian Trail Intersection - Conventional			Priority
BMP:	6.204	EMP:	6.429
Project Description			4
WB Approach	Install raised median; restrict access within 200' of intersection		
NB Approach	Install raised median; approximately 300'		
Consolidate entrances			
Identified Needs		Expected Benefits	
Queuing at intersection		LOS D - no significant improvement Improved safety Improved pedestrian mobility Improved access management	
Delay at intersection			
LOS D			
EEC 27.78			
Inadequate pedestrian facilities			
Multiple access points			
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 250,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 445,000.00
2023 ADT	24,463	Utilities	\$ 25,000.00
2045 No-Build ADT	25,472	Construction	\$ 1,000,000.00
EEC	27.78	Total Cost	\$ 1,720,000.00
Bike/Ped Facilities	Sidewalks		

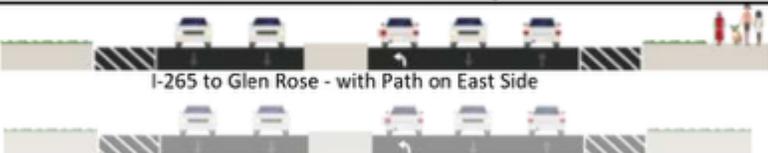
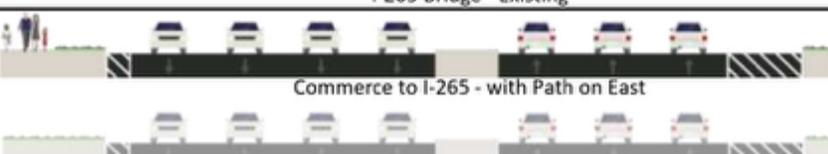
KY 61 - Jefferson County

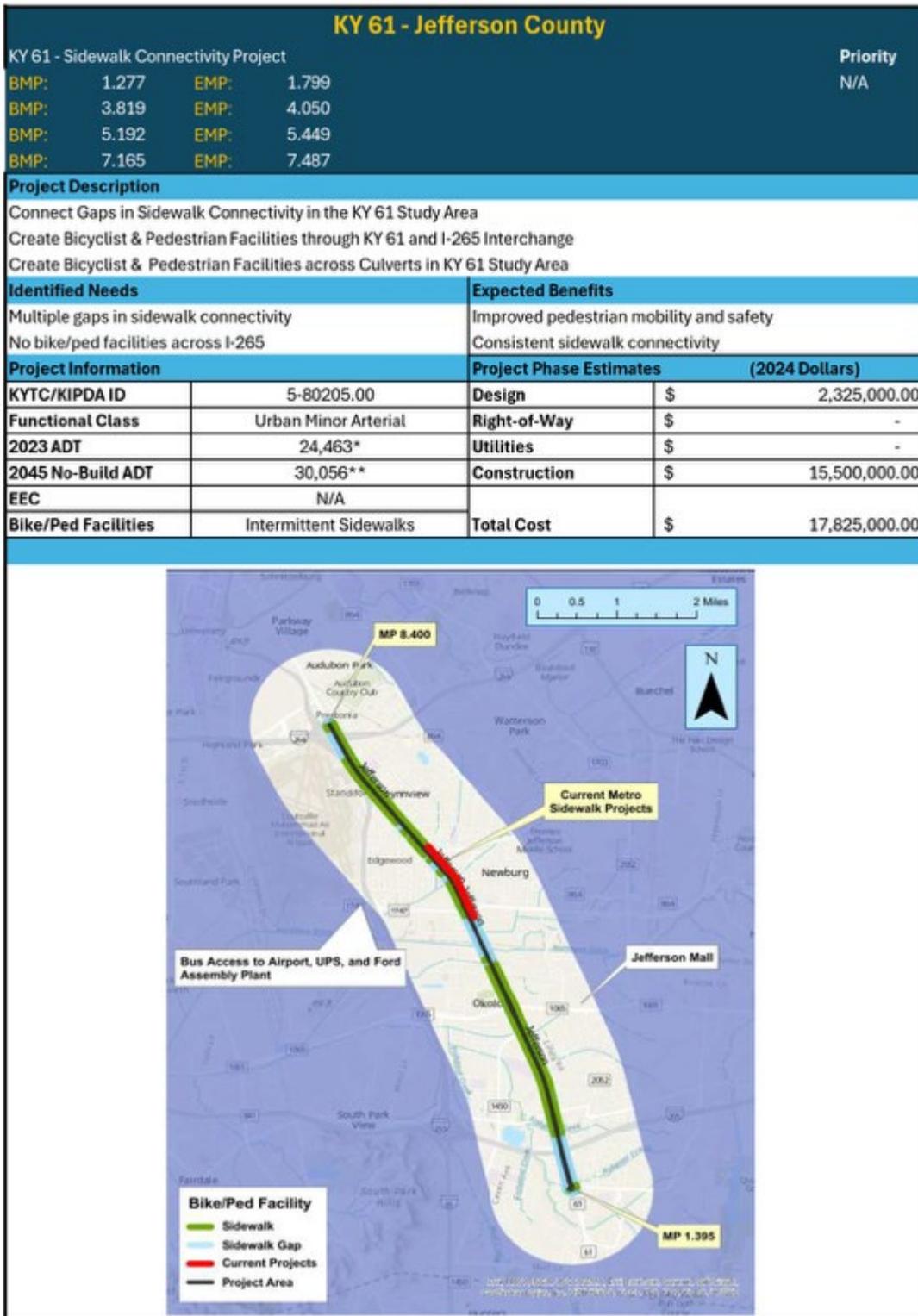
Glimore Intersection - Conventional Improvements		Priority	
BMP:	6.799	EMP: 7.031	
Project Description			
WB Rt Turn Ln added with 150+ ft storage		Improve sidewalks along Glimore	
WB Lt Turn Storage Ln extended from 120 to 490 ft			
SB Lt Tun Storage Ln extended from 275 to 460 ft			
EB and WB phases changed from spilt to permitted phases with protected-permitted for Lt Turns			
Identified Needs		Expected Benefits	
Queuing at intersection		Queuing reduced	
Delay at intersection		Improved safety	
PM LOS E		PM LOS D	
EEC 10.87		Better access management	
Inadequate pedestrian facilities		Improved pedestrian mobility	
Multiple access points			
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 250,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 600,000.00
2023 ADT	24,463	Utilities	\$ 50,000.00
2045 No-Build ADT	25,472	Construction	\$ 1,100,000.00
EEC	10.87	Total Cost \$ 2,000,000.00	
Bike/Ped Facilities	Sidewalks		

KY 61 - Jefferson County

I-65 Ramps - Conventional		Priority	
BMP:	7.145	EMP: 7.356	
8			
Project Description			
NB Approach	Extend stop bar 50' north. Close Preston Dr access point.		
EB Approach	Add raised islands.		
WB Approach	Add signal.		
Intersection	Reconstruct signal span from diagonal to box. Multiple pole locations to consider.		
Identified Needs		Expected Benefits	
Queuing and delay at intersection		Grade Lane LOS B - no significant change	
Grade Lane LOS B		I-65 Ramps LOS D - no significant change	
I-65 Ramps LOS D		Improved signal operations	
Safety issues		Improved pedestrian safety	
Grade Lane EEC 60.01			
I-65 Ramps EEC 16.54			
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	N/A	Design	\$ 200,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 110,000.00
2023 ADT	24,463	Utilities	\$ 50,000.00
2045 No-Build ADT	25,472	Construction	\$ 900,000.00
EEC	60.01 and 16.54	Total Cost \$ 1,260,000.00	
Bike/Ped Facilities	Sidewalks		

KY 61 - Jefferson County			
Grade Ln/I-65 Ramps - Peanut			Priority
BMP:	7.148	EMP:	8
7.480			
Project Description			
Reconstruct intersections as a combined roundabout - Peanut			
Improve pedestrian facilities			
Identified Needs		Expected Benefits	
Queuing and delay at intersection		Grade Lane LOS B	
Grade Lane LOS B		I-65 Ramps LOS B	
I-65 Ramps LOS D		37 % reduction in all crashes	
Safety issues		90 % reduction in fatal crashes	
Grade Lane EEC 60.01		75 % reduction in injury crashes	
I-65 Ramps EEC 16.54		40 % reduction in pedestrian injuries	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	N/A	Design	\$ 450,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 560,000.00
2023 ADT	24,463	Utilities	\$ 225,000.00
2045 No-Build ADT	25,472	Construction	\$ 2,100,000.00
EEC	60.01 and 16.54	Total Cost	\$ 3,335,000.00
Bike/Ped Facilities	Sidewalks		

KY 61 - Jefferson County			
Shared Use Path - Commerce Crossings to Southern High School			Priority
BMP:	1,401	EMP:	3,175
			N/A
Project Description			
Add Shared Use Path from Commerce Crossings/Cooper Chapel Road to Southern High School			
West side of KY 61 South of I-265 then transition to East side of KY 61 at I-265			
Reconfigure bridge over I-265 to accommodate path without widening bridge			
Identified Needs		Expected Benefits	
No bike/ped facilities across I-265		Improved safety for bike/ped	
Gap in sidewalk network		Bike/ped mobility	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 750,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ -
2023 ADT	24,463*	Utilities	\$ -
2045 No-Build ADT	30,056**	Construction	\$ 5,000,000.00
EEC	N/A	Total Cost	\$ 5,750,000.00
Bike/Ped Facilities	Intermittent Sidewalks		
 <p>South Park to Southern HS - with Path on East Side</p>  <p>South Park to Southern HS - Existing</p>			
 <p>Glen Rose to South Park - with Path on East Side</p>  <p>Glen Rose to South Park - Existing</p>			
 <p>I-265 to Glen Rose - with Path on East Side</p>  <p>I-265 to Glen Rose - Existing</p>			
 <p>I-265 Bridge - with Path</p>  <p>I-265 Bridge - Existing</p>			
 <p>Commerce to I-265 - with Path on East</p>  <p>Commerce to I-265 - Existing</p>			



KY 61 - Jefferson County		Priority	
Sidewalk Cost		N/A	
Project Segment Estimates			
Section One - Cardinal Left		Section One - Cardinal Right	
BMP	1.395 (Cooper Chapel)	BMP	1.425 (Cooper Chapel)
EMP	2.126 (Boerste Way)	EMP	2.126 (Boerste Way)
Gap Mileage	0.731	Gap Mileage	0.701
Culvert Number	0	Culvert Number	0
Sidewalk Cost	\$ 2,950,371.48	Sidewalk Cost	\$ 4,951,256.11
Culvert Cost	\$ -	Culvert Cost	\$ -
Total Cost	\$ 2,950,371.48	Total Cost	\$ 4,951,256.11
Design Cost	\$ 442,555.72	Design Cost	\$ 742,688.42
Section Two - Cardinal Left		Section Two - Cardinal Right	
BMP	4.552 (Lavista Way)	BMP	4.552 (Lavista Way)
EMP	5.014 (Industrial Blvd)	EMP	5.014 (Industrial Blvd)
Gap Mileage	0.456	Gap Mileage	0.462
Culvert Number	2	Culvert Number	2
Sidewalk Cost	\$ 1,840,450.61	Sidewalk Cost	\$ 1,864,667.06
Culvert Cost	\$ 300,000.00	Culvert Cost	\$ 300,000.00
Total Const Cost	\$ 2,140,450.61	Total Const Cost	\$ 2,164,667.06
Design Cost	\$ 321,067.59	Design Cost	\$ 324,700.06
Section Three - Cardinal Left		Section Three - Cardinal Right	
BMP	5.014 (Industrial Blvd)	BMP	5.014 (Industrial Blvd)
EMP	5.355 (Fern Valley Rd)	EMP	5.355 (Fern Valley Rd)
Gap Mileage	0.298	Gap Mileage	0.243
Culvert Number	1	Culvert Number	1
Sidewalk Cost	\$ 1,202,750.62	Sidewalk Cost	\$ 980,766.44
Culvert Cost	\$ 150,000.00	Culvert Cost	\$ 150,000.00
Total Const Cost	\$ 1,352,750.62	Total Const Cost	\$ 1,130,766.44
Design Cost	\$ 202,912.59	Design Cost	\$ 169,614.97
Section Four - Cardinal Left		Section Four - Cardinal Right	
BMP	6.339 (E Indian Trail)	BMP	6.339 (E Indian Trail)
EMP	6.639 (Vim Dr)	EMP	6.639 (Vim Dr)
Gap Mileage	0.074	Gap Mileage	0.212
Culvert Number	0	Culvert Number	0
Sidewalk Cost	\$ 298,669.62	Sidewalk Cost	\$ 855,648.09
Culvert Cost	\$ -	Culvert Cost	\$ -
Total Const Cost	\$ 298,669.62	Total Const Cost	\$ 855,648.09
Design Cost	\$ 44,800.44	Design Cost	\$ 128,347.21
Section Five - Cardinal Left			
BMP	6.639 (Vim Dr)		
EMP	6.881 (Gilmore Lane)		
Gap Mileage	0.156		
Culvert Number	0		
Sidewalk Cost	\$ 629,627.84		
Culvert Cost	\$ -		
Total Const Cost	\$ 629,627.84		
Design Cost	\$ 94,444.18		

KY 61 - Jefferson County

Corridor Wide - Signal System Upgrades		Priority	
BMP:	1,395	EMP: 8,400	
		N/A	
Project Description			
Add retroreflective backplates		21 traffic signals in corridor	
Upgrade controllers to 2070 as needed			
Add ped buttons were needed			
Optimize signal timing			
Identified Needs		Expected Benefits	
Traffic signal delay		Improved traffic operations	
Safety concerns at signalized intersections		Improved safety	
Lack of ped buttons at many locations		Improved pedestrian mobility & safety	
Poor accessibility of ped buttons		15% reduction in crashes due to backplates	
		https://highways.dot.gov/safety/proven-safety-countermeasures	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 325,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ -
2023 ADT	24,463*	Utilities	\$ -
2045 No-Build ADT	30,056**	Construction	\$ 1,365,000.00
EEC	N/A		
Bike/Ped Facilities	Intermittent Sidewalk	Total Cost	\$ 1,690,000.00

Example of a signal backplate formed with a retroreflective border.
Source: FHWA

*ADT was taken from largest segment with a recorded ADT on the KYTC Traffic Counts site. This count is the 2023 count from station 056607.
**The 2045 ADT was taken from the averages of the north point and south point of the 2045 model, as there was no ADT tracked for the central segment.

KY 61 - Jefferson County

Corridor Wide - Intersection Street Lighting		Priority	
BMP: 1,395 EMP: 8,400		N/A	
Project Description			
Intersection Lighting (4 lights per intersection) at the 21 signalized intersections in the study area.			
Identified Needs		Expected Benefits	
Safety concerns at signalized intersections Poor lighting		Improved safety Improved pedestrian mobility & safety 42% reduction in nighttime injury pedestrian crashes https://highways.dot.gov/safety/proven-safety-countermeasures/lighting	
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 80,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ -
2023 ADT	24,463*	Utilities	\$ -
2045 No-Build ADT	30,056**	Construction	\$ 525,000.00
EEC	N/A	Total Cost \$ 605,000.00	
Bike/Ped Facilities	Intermittent Sidewalk		

Source: FHWA

*ADT was taken from largest segment with a recorded ADT on the KYTC Traffic Counts site. This count is the 2023 count from station 056607.
 **The 2045 ADT was taken from the averages of the north point and south point of the 2045 model, as there was no ADT tracked for the central segment.

KY 61 - Jefferson County			
Access Management Project - Southern HS to Gilmore Lane			Priority
BMP:	3.000	EMP:	6.870
			N/A
Project Description			
Curb and gutter		Consolidate entrances	
Install raised medians at specific locations		Southern HS (MP 3.00) to Gilmore Ln (MP 6.87)	
Channelize left turn lanes		Approx. 3.87 miles	
Right-in/Right-out at specific locations			
Identified Needs		Expected Benefits	
Safety concerns due to unpredictability		Improved safety (20% reduction in crashes)	
Multiple conflict points		Reduction in delay (23% reduction in delay)	
Delay associated with multiple access points			
Project Information		Project Phase Estimates (2024 Dollars)	
KYTC/KIPDA ID	5-80205.00	Design	\$ 1,200,000.00
Functional Class	Urban Minor Arterial	Right-of-Way	\$ 600,000.00
2023 ADT	24,463*	Utilities	\$ 300,000.00
2045 No-Build ADT	30,056**	Construction	\$ 15,500,000.00
EEC	N/A	Total Cost	\$ 17,600,000.00
Bike/Ped Facilities	Intermittent Sidewalk		

Conceptual Access Management

Start MP: 1.395
 End MP: 8.400

Southern High School Access Management
 End MP: 3.00

Gilmore Lane Access Management
 End MP: 6.87

Scale: 0 0.5 1 2 Miles

Source: ESRI, DeLorme, Garmin, SafeGraph, GeoTechnologies, Inc., HERE, NGA, USGS, EPA, APF, USDA, USFWS. DISCLAIMER: © 2024



NEXT STEPS

The 2024-2030 Enacted Highway Plan has \$1,500,000 in Design funds programmed in 2026. An additional \$5,000,000 in Design funds are programmed in 2027, with funding for Right of Way and Utilities in 2028 and Construction funds programmed for 2030. The funds shown are "NH", which are National Highway Performance Program funds. As KY 61 is not included on the National Highway System (NHS), it is not eligible for these funds. KYTC Program Management would need to work with FHWA to determine if other federal funds could be swapped in.

Details are listed in the excerpt below:

Jefferson	KY-61	From MP 1.395 To 8.400			On NHS	Description:	IMPROVE SAFETY, REDUCE CONGESTION, AND IMPROVE MULTI-MODAL TRANSPORTATION OPTIONS ALONG KY 61 FROM COMMERCE CROSSINGS DR (BMP 1.395) TO BRIDEN AVENUE (EMP 8.400) INCLUDING THE I-264 (WATTERSON EXPRESSWAY) AND I-265 (GENE SNYDER FREEWAY) INTERCHANGES. (2022CCN) (2024CCR)		
					NO				
						Type of Work:	RECONSTRUCTION(O)		
Item#:	5-80205.00	Parent#:	5-80205.00	Length		Bridge ID:			
Plan Year:	2022	Parent Year:	2022	7.01					
FUND	PH	2024	2025	2026	2027	2028	2029	2030	Phase Total
NH	D	\$0	\$0	\$1,500,000	\$5,000,000	\$0	\$0	\$0	\$6,500,000
NH	R	\$0	\$0	\$0	\$0	\$6,310,000	\$0	\$0	\$6,310,000
NH	U	\$0	\$0	\$0	\$0	\$10,570,000	\$0	\$0	\$10,570,000
NH	C	\$0	\$0	\$0	\$0	\$0	\$0	\$58,850,000	\$58,850,000
FY TOTAL:		\$0	\$0	\$1,500,000	\$5,000,000	\$16,880,000	\$0	\$58,850,000	\$82,230,000

The next step is for KYTC leadership to determine if they would like to advance any of the improvement concepts recommended in this study. With a total of \$6,500,000 programmed for design in 2026 and 2027, the three priority intersections could be designed as a package:

- 1 Commerce Crossings/Cooper Chapel
- 2 Outer Loop
- 3 Fern Valley

The estimated Design cost for these three intersections would be \$1,800,000 with a Total cost these three intersections ranging from \$10,000,000, for conventional treatments, to \$20,000,000 for Partial Displaced Left Turn intersections.

KYTC could also consider partnering with Louisville Metro to address gaps in the sidewalk system. Metro’s Department of Public Works routinely executes sidewalk projects at a relatively low cost and expeditiously.

KYTC could have further discussions with Louisville Metro concerning the implementation of the Conceptual Access Management Policy and Plan.

Regarding the Complete Street Rebuild and accommodation and implementation of BRT, KYTC could continue to coordinate with Louisville Metro Government and TARC and provide support should those agencies seek FTA CIG funding for the Preston Corridor.

The Shared-use Path from Commerce Crossings Drive/Cooper Chapel Road to Southern High School could also be considered. This project would provide a significant connection across I-265, connecting communities with the future path of the Louisville Loop. This shared-use path is a large investment due to costs to reconfigure the KY 61 bridge over I-265 for the path. \$750,000

in Design funds backed with \$5,000,000 for construction would provide the best bicycle/pedestrian crossing for the Gene Snyder (I-265).

ADDITIONAL INFORMATION

Any written requests for additional information regarding the study may be sent to:

Director of KYTC Division of Planning
200 Mero Street
Frankfort, KY 40622
Phone: 502.564.7183

KIPDA Transportation Division
11520 Commonwealth Drive
Louisville, KY 40299
Phone: 502.266.6084