AUGUST 2025

KY 1865 (TAYLOR BOULEVARD/NEW CUT ROAD) SAFETY STUDY

TEAM KENTUCKY®
TRANSPORTATION CABINET

BURGESS & NIPLE

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1. Introduction

In 2022, Louisville became a Vision Zero city, with a vision of zero roadway deaths on surface streets by 2050. Vision Zero Louisville, the city's transportation safety initiative, is managed by Louisville Metro Public Works in partnership with the Kentucky Transportation Cabinet (KYTC). As part of this initiative, a High Injury Network was developed using a data-driven approach to identify roadway segments that account for a disproportionate amount of fatal and serious injury crashes in Jefferson County. Developing a High Injury Network is a national best practice among Vision Zero communities, as it allows communities to focus resources on improving safety on high priority corridors.

KY 1865 (Taylor Boulevard/New Cut Rd) is ranked fifth on Louisville's High Injury Network, which identified 5% of non-interstate miles accounting for 55% of non-interstate fatal and suspected serious injury crashes. The corridor begins at Gene Snyder Freeway (KY 841) and ends at Berry Boulevard, covering 5.3 miles in total. This study covers a 4.8-mile segment within the High Injury Network corridor, from Old New Cut Road, 0.15 miles past the Gene Snyder Freeway (KY 841), to the Watterson Expressway (I-264). The purpose of this study was to analyze the existing safety and capacity conditions and determine potential countermeasures to reduce crash frequency and severity along the corridor.

KYTC Safe System Approach Elements & Foundational Principles

Vision Zero

Vision Zero Louisville utilizes the U.S. Department of Transportation-recommended Safe System Approach in its work. The Safe System Approach offers a modern framework to understand our transportation system, prioritizing the prevention of fatal and serious injury crashes through overlapping strategies. All aspects of the Safe System Approach must work together to achieve the best solutions.

This safety study most directly supports the **Safer Roads, Safer Speeds, Safer People, and Partnership** strategies. Partnership is an important aspect added to the Safe System Approach by KYTC. The project also supports the Post-Crash Care strategy, as work throughout the project with emergency services will ensure the access needed for swift responses to crashes.

2. Existing Conditions Analysis

The existing conditions analysis includes an overview of corridor characteristics that are within the scope of the project. Specific intersections of importance are highlighted as well.

A review of public facilities, including roadway lane configuration/widths, bicycle and pedestrian facilities, transit routes and amenities, and school zones, was completed to identify areas of need. Existing plans, studies, and future planned projects are highlighted here as well as the existing land uses and zoning.

A. Study Corridor Characteristics

KY 1865 runs north-south and is located in Jefferson County, KY. The roadway is classified as Urban Principal Arterial. It is a four-to-five lane roadway for most of the corridor with two lanes in each direction and a posted speed limit of 35-45 mph. There are a total of 14 signalized intersections in the study area. See Figure 1 for the corridor study area.

B. Bicycle and Pedestrian Facilities

Pedestrian sidewalks are located along both sides of the corridor. Pedestrian sidewalks are four-to-five feet in width. Pedestrian crossings are located at all signalized intersections where pedestrian facilities are present. There are no pedestrian facilities present at KY 1865 at Gene Snyder Freeway (KY 841) Eastbound Ramps, KY 1865 at Gene Snyder Freeway (KY 841) Westbound Ramps, and KY 1865 at Old New Cut Road/Commerce Park Ct. There is an existing mid-block crossing near Arling Avenue, directly opposite Iroquois High School.

There are no dedicated bicycle facilities along the study corridor.

C. Transit

There are 43 bus stops along the corridor for the Transit Authority of River City (TARC) Bus Routes 6 and 4. Bus Route 6 provides access to St. Mary and Elizabeth Medical Center, Walmart at New Cut Market Center, Iroquois Park, St. James Court and Downtown Louisville. Bus Route 4 provides access to Walmart, the Iroquois Amphitheater, Churchill Downs, the University of Louisville, Spalding University, the Kentucky International Convention Center and Downtown Louisville. More information regarding TARC routes can be found in Appendix A.

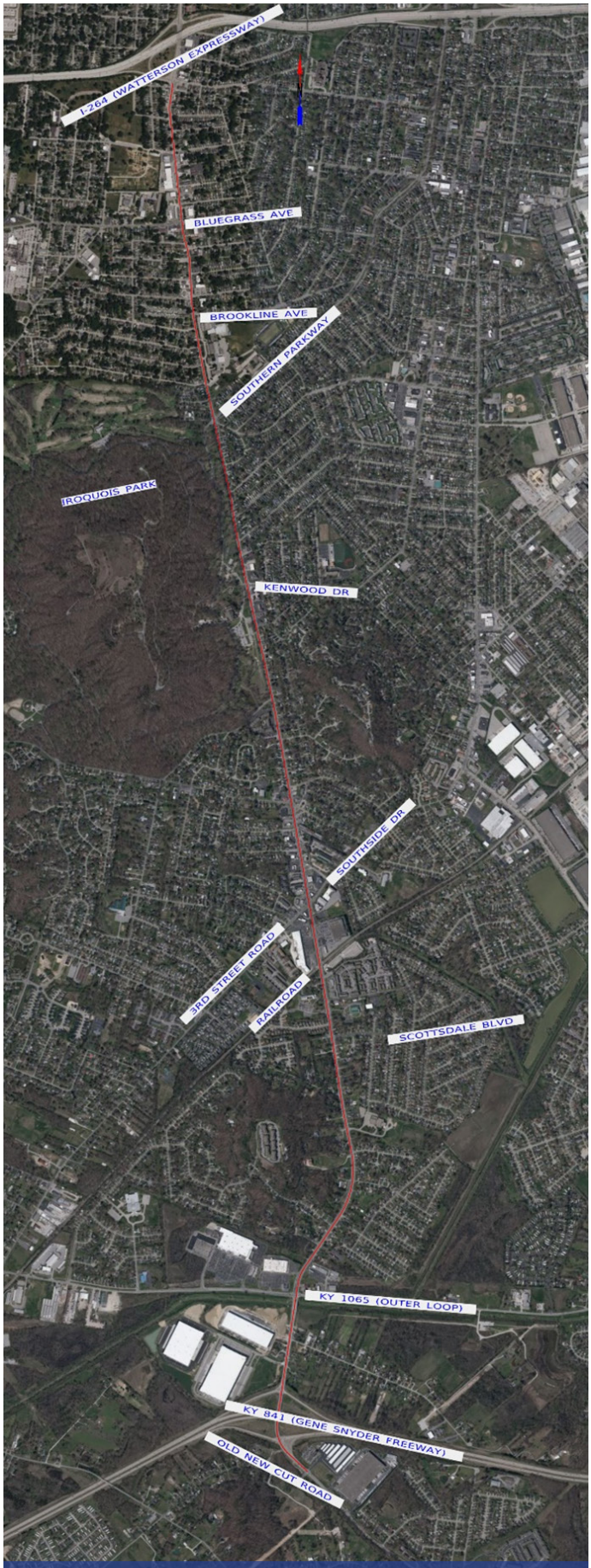


Figure 1: Corridor Study Area

D. School Zones

There are a total of nine schools near or adjacent to the study corridor. These consist of elementary, middle, and high schools, and there are both public and private schools:

- Hazlewood Elementary School
- Iroquois High School
- Olmsted Academy South
- DeSales High School
- Kenwood Elementary School
- St. Nicholas Academy
- Valiant Christian Academy
- Auburndale Elementary
- Lassiter Middle School

E. Planned Projects in the Area

The Olmsted Parkways Shared-Use Path System project will create improved pedestrian and bicycle opportunities along approximately 7.8 miles of the parkways that link the major Olmsted parks in Louisville, as well as the numerous neighborhoods that these parkways traverse. The parkways included in this project are the entire length of Algonquin Parkway, Southwestern Parkway from Gilmore Lane north to Broadway at Shawnee Park, and the entire length of Southern Parkway.

The Southern Parkway Rightsizing project (by Gresham Smith) will reconfigure the roadway with the goal of making the streets safer and calmer by reducing speeding and weaving between lanes. It will also make the roadway more inclusive and comfortable for other road users.

A meeting was held with Gresham Smith to discuss both the Shared Use Path and Rightsizing projects. Improvements at KY 1865 at Southern Parkway were coordinated and files shared between projects.

A KYTC project (by Prime AE) is exploring upgrades to interchanges along I-264. While this is not within the limits of this project, a desire to extend the shared-use path to connect to Wyandotte Park was expressed by local officials. Coordination was completed between the two projects, and the KY 1865 project team shared a suggested layout to connect to Wyandotte Park, which can be seen in Appendix B.

In 2023, the I-264 EB off-ramp was reconfigured to remove the slip lane onto southbound KY 1865. This intersection was identified in the Vision Zero Louisville Safety Report (2021) as a priority for improving safety by encouraging slower speeds and yielding to pedestrians.

F. Existing Land Uses & Zoning

The land use immediately adjacent to the corridor is comprised of residential areas, schools, businesses, and some industrial and recreational uses. Iroquois Park and Iroquois Golf Course are located along the western side of the corridor. Along KY 1865, there are also religious institutions, commercial retail, and restaurants. Louisville Muhammad Ali International Airport (SDF) is located approximately two miles to the east of the corridor. The overall land uses of the corridor can be found in Figure 2.

E. Existing Plans & Studies

Existing plans and studies were identified and considered for this corridor study:

- New Cut Road Plans (Item No. 5-248.00)
- New Cut Road Plans (SP-56-73-5, dated 06/25/78)
- New Cut Road / Taylor Boulevard Corridor Study (City Solutions Center and KLC)
- High Injury Network (HIN)
- Urban Services District Lighting Study (2022) identified multiple intersections near and around the corridor needing additional lighting:
  - Taylor Boulevard and Longfield Avenue
  - New Cut Road and 3rd Street Road/Southside Drive
  - Taylor Boulevard and W Ashland Avenue/I-264 Eastbound Ramps
  - Taylor Boulevard and Bluegrass Avenue

Figure 2: Land Use

H. Environmental Impact

Iroquois Park

Environmental impacts have been considered for the proposed improvements. The Environmental Scoping Document considers the physical and biological environment, hazardous materials, socioeconomics, and historic resources. It determines the areas of potential impact and recommends measures to reduce or avoid them. The environmental scoping document can be found in Appendix C.

I. Crash Analysis

Existing crash data was compiled and analyzed over the five-year period from 2017 to 2021. This analysis helped to identify trends and areas where safety challenges currently exist within the study corridor.

A total of 1,685 crashes occurred in the project limits during the specified analysis period. Ten fatal crashes and 32 suspected serious injury crashes occurred in the project limits within the study period. While these 42 crashes are distributed throughout the corridor, trends are discernible. Angle or Opposing Left-Turn collisions make up 50% of the fatal and suspected serious injury crashes. These crash types are characterized by large difference in vehicle direction that more often result in worse crash outcomes. 12% of the fatal and suspected serious injury crashes were rear-end collisions. This indicates higher speeds may be occurring, as rear-end crashes are less likely to result in severe outcomes due to the same direction of travel. Crash diagrams showing fatal and suspected serious injury crashes are provided in Appendix D.

Due to the mixed-use nature of the corridor, accounting for non-motorized vehicle users is vital. Vulnerable road users (VRUs), including pedestrians and bicyclists, were involved in 32 of the 1,685 crashes during the study period. There were also 30 crashes involving motorcycles. While these 62 crashes are a small percentage – only 4% – of total crashes occurring within the period, they constitute 42% of the fatal and serious injury crashes. As little to no protection is provided to these more vulnerable users, improvements should focus on separating these users from vehicular traffic, providing better visibility for crossings that are to remain, and lowering vehicle speeds to lessen severity of crash outcomes. Crash diagrams showing VRU involved crashes are included in Appendix D.

Heat maps in Appendix E indicate densest areas of crashes. In the densest crash areas, crash diagrams were developed showing all crashes. The areas shown to have the densest grouping of crashes are at the intersection of KY 1865 at Outer Loop (KY 1065) and from Lynnhurst Avenue to Bicknell Avenue. These crash diagrams can be found in Appendix D.

Potential improvements should have a focus on addressing fatal and serious injury crashes but should also address all crashes where possible. Throughout the corridor, angle and rear-end collisions are the most prominent manners of crash type. Angle crashes account for 29.79% of total crashes and 38.07% of all injury crashes. Rear-end crashes make up 37.80% of total crashes and 26.75% of all injury crashes. While opposing left turn crashes only account for 6.71% of the crashes, they account for 9.88% of those resulting in injury along the corridor. These types of crashes present the highest risk on the corridor and countermeasures should be applied to mitigate angle, opposing left turn, and rear-end collisions. Preventing these types of crashes along the study corridor would have the greatest impact on user safety.

Detailed crash inventory data can be found in Appendix F.

J. Safety Analysis

The Highway Safety Manual (HSM) is used to determine how an intersection or roadway segment performs compared to similar intersections and roadways and assess the safety benefit of countermeasures. AASHTO's 2010 HSM methodologies were used to measure the safety performance of roadways, allowing for more informed decision-making during the project development process. The Excess Expected Crashes (EEC) is a measurement that estimates the number of crashes above what is predicted by a crash prediction model of roadways or intersections of similar type, length, and characteristics in Kentucky.

The EEC for each of the signalized and unsignalized intersections with positive EECs are summarized in Appendix G.

The intersection of KY 1865 and Bluegrass Avenue has the highest potential for safety improvement, with an EEC of 3.49 fatal and serious injury crashes per year and 15.61 total crashes per year compared to intersections with similar traffic control, geometry, and traffic volumes. The intersection of KY 1865 and KY 1065 (Outer Loop) has the second highest potential for safety improvement, with an EEC of 2.93 fatal and serious injury crashes per year and 17.51 total crashes per year compared to similar intersections. The following locations had a fatal and serious injury EEC over 0.50 crashes per year:

- KY 1865 and Old New Cut Road
- KY 1865 and KY 1065 (Outer Loop)
- KY 1865 and Harpers Ferry Road
- KY 1865 and KY 907 (Southside Drive / 3rd Street Road)
- KY 1865 and Iroquois Park/W. Kenwood Drive
- KY 1865 and Walter Avenue
- KY 1865 and Bluegrass Avenue
- KY 1865 and Woodlawn Avenue

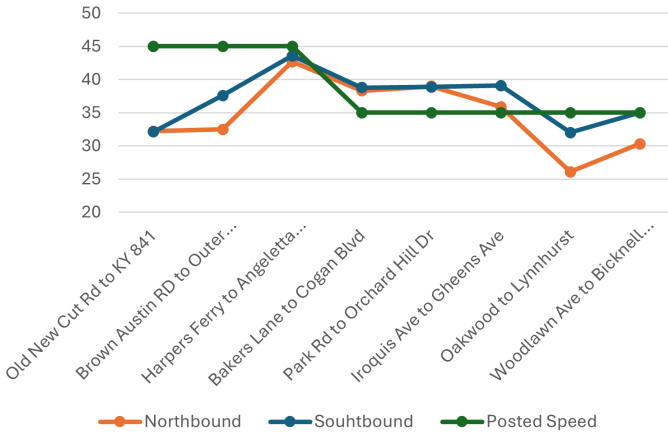
The following locations had a total EEC over 3.0 crashes per year:

- KY 1865 and KY 1065 (Outer Loop)
- KY 1865 and KY 907 (Southside Drive / 3rd Street Road)
- KY 1865 and Iroquois Park/W. Kenwood Drive
- KY 1865 and Bluegrass Avenue
- KY 1865 and Woodlawn Avenue
- KY 1865 and Bicknell Avenue

K. Speed Analysis

Two speed limits are present within the project limits. The southern portion of the corridor, from Old New Cut Road to Bakers Lane (just south of the CSX railroad tracks), has a speed limit of 45 mph. This area is largely residential.

Average Speed along KY 1865 **Figure 3**

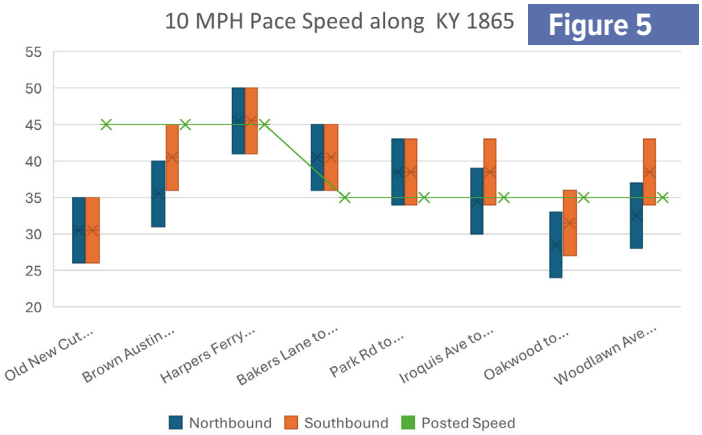


The northern portion of the corridor, from Bakers Lane to I-264, has a speed limit of 35 mph. This section of the corridor has a mix of uses that changes throughout.

Speed data was gathered along the corridor during data collection efforts. As shown in Figure 4, 85th percentile speeds largely exceed the speed limit, in some areas by up to 10 mph. The 85th percentile speed is the speed at or below which 85% of vehicles are traveling at the monitored location. While average speeds are often near the posted speeds, outliers are a major concern, as hundreds of vehicles were observed traveling over 55 mph, and multiple vehicles were observed in excess of 70 mph during the observation period. Raw speed data can be found in Appendix H.

Figure 4: Speed Data

LOCATION		POSTED SPEED LIMIT	PERCENTILE			
			15TH	50TH	85TH	100TH
Old New Cut Road to KY 841	NB	45	25	30	38	>70
	SB	45	26	31	36	>60
Brown Austin Road to Outer Loop	NB	45	24	32	38	>70
	SB	45	31	38	42	>55
Harpers Ferry Road to Angeletta Way	NB	45	34	41	49	>70
	SB	45	36	42	48	>70
Bakers Lane to Cogan Boulevard	NB	35	30	37	43	>70
	SB	35	31	38	43	>70
Park Road to Orchard Hill Drive	NB	35	33.5	38.4	45.3	77
	SB	35	33.5	38.4	44.6	85.6
Iroquois Avenue to Gheens Avenue	NB	35	29.1	35.3	42.8	85.6
	SB	35	34.7	39	44	58.9
Oakwood Avenue to Lynnhurst Avenue	NB	35	16.1	27.2	34.1	62
	SB	35	27.2	31.6	36.6	64.5
Woodlawn Avenue to Bicknell Avenue	NB	35	20.4	31.6	38.4	68.9
	SB	35	27.2	35.3	42.8	79.4



Pace speed is defined as the 10 mph speed range in which the highest percentage of vehicles are traveling, giving an indication of the speeds most people are driving. Figure 5 shows the pace speed along KY 1865 at the locations where data was collected.

Speeds are a significant contributing factor to crash risk and severity. Crashes can be especially catastrophic at higher speeds, and, as Figure 6 shows, a pedestrian hit at 58 mph only has a 10% chance of survival. Speeds also narrow the cone of vision, limiting what drivers see and increasing crash risk (see Figure 7).

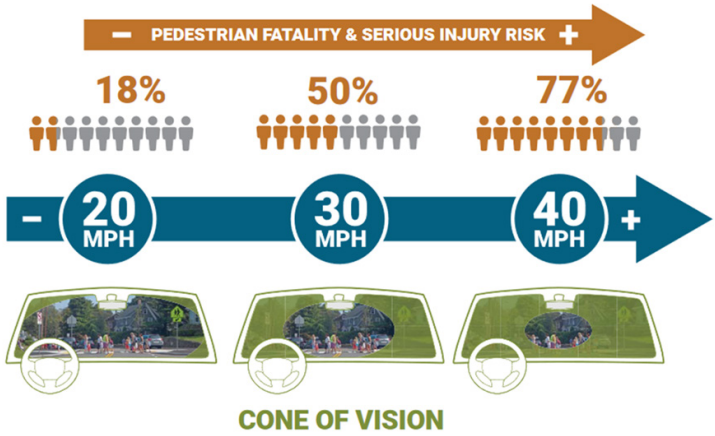


Figure 7: Speed Impact on Cone of Vision. ***Image Source: AARP.***

L. Traffic Forecasting & Capacity Analysis

Traffic counts were collected over the course of several days in April 2022, December 2022, and September 2023. Counts were collected on different dates as the project area was expanded. All counts were taken when school was in session in the middle of the week. Raw count data can be found in Appendix I.

Utilizing the count data, KYTC's Traffic Impact Study (TIS) Simplified Traffic Forecast form (see Appendix J) was used to complete traffic forecasting and determine growth rate. Utilizing historical traffic count data along KY 1865, a growth rate of 0.35% was identified. To be conservative, the study uses a 0.5% growth rate.

Capacity analysis was conducted utilizing the traffic modeling software Signalized Intersection Design and Research Aid (SIDRA) to investigate the potential for reducing the number of lanes and converting intersections along the corridor to roundabouts. This was found to be infeasible due to excessive queuing back to previous intersections and the potential for gridlock during the peak hours.

Additional capacity analysis was conducted for the design year for ten different alternatives as the team worked through options for the corridor. Alternatives investigated are described below. The Synchro traffic modeling software package was utilized for these scenarios.

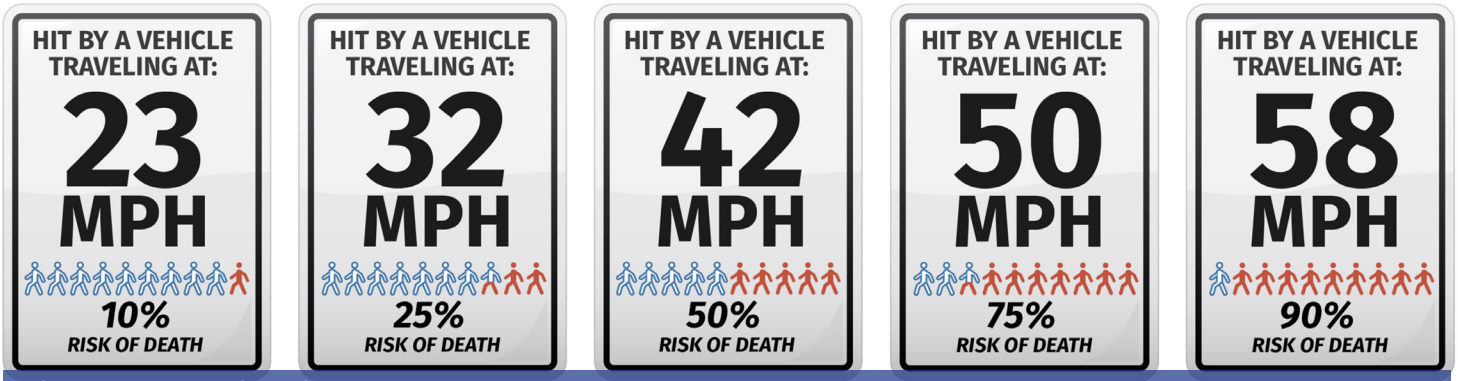


Figure 6: Pedestrian Risk by Speed. ***Image Source: AAA Foundation for Traffic Safety.***

Synchro Analysis:

- **Existing conditions analysis** – Existing traffic volumes and forecasted design year volumes.
- **Alternative 1** – Proposed conversion to a three-lane section with no additional intersection improvements for the entire length of the corridor.
- **Alternative 2** – Proposed conversion to a three-lane section for the entire length of the corridor with select intersection improvements.
- **Alternative 3** – Proposed conversion to a three-lane section with four-lane section from Southern to Kenwood only.
- **Alternative 4** – Conversion to three-lane section only between Southern Parkway and Brookline Avenue – with a northbound lane drop into Iroquois High School.
- **Alternative 5** – Existing cross section of KY 1865 with select intersection improvements.
- **Alternative 6** – Focused on Southern Parkway with only one westbound left turn lane off of Southern Parkway onto KY 1865 and with Marret Street included in the signal timings.
- **Alternative 7** – Same as Alt 6 with dual westbound left turn lanes from Southern Parkway to KY 1865 and with Marret included in the signal timings.
- **Alternative 8** – Five-lane section between Southern Parkway and Brookline Avenue.
- **Alternative 9** – Recommended Improvement Concept. Three-lane section from Old New Cut Road to south of Southside Drive/3rd Street Road. Four-to-five lane section from south of Southside Drive/3rd Street Road to Southern Parkway. Three-lane section from Southern Parkway to Bluegrass Avenue. Four-to-five lane section from Bluegrass Avenue to Watterson Expressway (I-264).
    - See Appendix K for analysis of recommended improvement concept.
    - See Section 4: Recommended Improvement Concept for further discussion of the details of the recommended improvement concept.
    - See Appendix L for layouts of the recommended improvement concept.
- **Alternative 10** – Proposed two lanes northbound and one lane southbound from Bluegrass Avenue to Southern Parkway – with and without dual westbound left turn lanes at Southern Parkway.

3. Community Engagement

A. Public Meetings

Two public meetings were held:

- **September 20, 2023:** This first public meeting introduced the project and allowed attendees to give feedback as to what they felt were the greatest concerns and needs for the corridor. The project information and a survey were also available online following the meeting for those who could not attend or preferred to give feedback online Information from the first public meeting and a summary of comments can be found in Appendix M.
- **April 24, 2024:** This second public meeting continued to introduce the recommended improvement concept. Attendees were invited to view the layouts and typical sections and provide feedback. The project information and a survey were also available online following the meeting for those who could not attend or preferred to give feedback online. Information for the second public meeting and a summary of comments can be found in Appendix M.

Public Meeting Materials

B. Online Surveys

A survey was conducted for 30 days following each public meeting. The surveys were available to those who attended the meeting and those who were unable to attend the meeting to give the best possible opportunity for everyone to give their feedback.

The survey for the first meeting asked how people use the corridor as well as what they would fix and any additional comments. The public comment summaries were compiled with responses received via written comment at the public meeting.

The survey for the second meeting was broken into six corridor segments with the goal of determining what aspects of the recommended concept improvements respondents liked within each segment. The responses were compiled and generalized to determine the respondent's consensus. The public comment summaries were compiled with responses received via written comment at the public meeting.

The most common positive comment from the second public meeting was that the respondents felt the recommended improvement concept improved road safety for all modes of transportation. The most common concerns with the proposed improvements were that the respondents felt the decrease in road lanes could cause congestion and that they disliked the median which prevents left turns at various areas in the corridor. In all segments, 54% or more of respondents were supportive of the improvements, with 73% of respondents supportive of two areas of improvement – Southside Drive/3rd Street Road to Palatka Road and the intersection of Southern Parkway at KY 1865.

4. Recommended Improvement Concept

The recommended improvement concept was developed based on available information at the time this study was completed. Traffic analysis, safety analysis, environmental impact analysis and public engagement (previously discussed in this document) were combined with site observations, geometric analysis, connectivity needs, land use and utility and right-of-way considerations to develop the recommended improvement concept. As this project continues to progress toward implementation, additional information may necessitate adjustments or changes to the recommended concept.

Recommended improvement concept graphics can be found in Appendix M.

A. Corridor Travel Speeds

Slowing speeds along this corridor is a pillar of the Safe System Approach and must be a focus for this project. Through changes in context along the roadway itself, this project can complement the context of the adjacent land use, encouraging safer speeds both for those in vehicles and vulnerable road users. Slower speeds will expand the cone of vision for drivers, allowing them to better perceive those around them both in vehicles and on foot.

The change in context may also be able to facilitate an evaluation of speed limits on the southern section of the corridor. The existing 45 mph speed limit does not reflect the residential context of this area. There are several schools in this portion of the corridor, and slower speeds will be paramount to safety for those traveling this area.

B. Lane Widths

10 and 11-foot lanes are proposed throughout the corridor. 11-foot lanes are used for outside lanes (to accommodate transit and larger freight and delivery vehicles) and turn lanes. 10-foot lanes are used for inside lanes in areas with a four-or-five-lane section to encourage slower speeds and minimize typical section width.

Colonial Gardens

C. Corridor Access Management/Medians

Raised medians are proposed throughout the corridor to encourage slower speeds and discourage driving in the center turn lane to pass stopped/slow vehicles. Raised medians prevent rear-end and left-turn/angle crashes, as vehicles would no longer be able to turn left at some locations and will no longer be stopping in the through lane to make turns. These are currently two of the largest types of crashes on the corridor.

- Access management is desirable along the corridor due to the prevalence of rear-end and angle crashes along the corridor and frequent curb cuts. Consolidating or clarifying the limits of access points can have a significant impact on user expectation and decision-making.

Medians may be mountable or non-mountable in nature.

- Non-mountable medians may be hardscaped or landscaped. Design details will be further developed in later stages of the project.
- Mountable medians are proposed in three-lane sections of the corridor to meet current fire code and needs of emergency vehicles to have 20-foot clear roadway width to either pass stopped vehicles or set up fire implements.
    - Several options were discussed for median treatments at mid-block crossing locations in three-lane segments. Having mountable medians at mid-block crossings is less desirable, as pedestrians may be standing in this area.
    - City of Oakland, CA Department of Transportation and the Oakland Fire Department collaborated to develop a detail that was agreed to meet fire code requirements and accommodate a non-mountable refuge island. City of Oakland's details have been included for reference in Appendix N as an option for potential implementation following further coordination with Metro Fire and Fairdale Fire Departments.

Concerns from the public and business owners along the corridor were expressed at the second public meeting and in the second online survey related to access management along the corridor.

- Residents may have to use alternate routes due to the proposed medians. Potential options for re-routes were studied, and a graphic showing these options can be found in Appendix O.
- There was concern specific to the Colonial Gardens access. Due to the proximity to the W. Kenwood Drive signalized intersection, the recommended concept proposes a median in this area that would prevent lefts in or out of the Colonial Gardens driveway on KY 1865. Colonial Gardens has a secondary access point on W. Kenwood Drive. Coordination related to this location is ongoing.

- Concern was raised about access out of Frisbee Way at the Iroquois Park parking lot. Based on the proposed design, vehicles wanting to turn left out of the parking lot would have to use internal Iroquois Park roads and exit at either the W. Kenwood Drive or Iroquois Park Road signals. This was of particular concern during larger events. Coordination is ongoing at this location, but it has been suggested that a larger event traffic planning effort be completed by those hosting events to mitigate concerns.

D. Multimodal Connectivity

Many areas of the corridor have existing sidewalk of four to five feet in width. Many areas do not have ADA-compliant ramps. There are no existing bicycle facilities along the corridor.

Iroquois Park has existing multimodal accommodations, both on-road and as a separate path within the park. The existing path in the park is in various states of condition/disrepair.

Existing origins and destinations along the corridor, as well as observed usage of existing facilities, shows a need for consistent multimodal connectivity. Public feedback was supportive of multimodal facilities being included in the project.

Several options were discussed for implementation of multimodal facilities.

- Initial discussions determined that any improvements along the frontage of Iroquois Park would be too impactful. Since Iroquois Park has existing multimodal connections within the park, it was determined that proposed facilities would tie to these facilities at both the northern and southern ends of the park, and the park itself would be utilized for through connectivity.
- Bike lane and sidewalk on each side of the road:
  - Protected bike lanes would give cyclists a dedicated facility but would require additional right-of-way width to accommodate both the bicycle and pedestrian facilities (sidewalk) themselves, along with buffers.
  - Options were evaluated with the bike lane and sidewalk raised and with the bike lane at roadway grade. User compliance is a concern for separated facilities, especially those at the same grade. Side-by-side facilities at the same grade may pose a safety concern if pedestrians walk in the bike facility and are not expected by cyclists. Both options proposed one-way bike facilities on each side of the road.
  - Total typical section width in five-lane sections would be a minimum of 90 feet, resulting in significant impacts to both existing curb lines, drainage systems and adjacent property owners.
  - This option was not selected for the recommended concept.
- Shared-use path and sidewalk:
  - The implementation of a shared-use path would have bikes and pedestrians using the same space. The width should consider the need to accommodate all users in two-way operation. A width of 10 feet was chosen for the shared-use path and five feet for the sidewalk.
  - The shared-use path was chosen to be on only one side of the roadway due to the urban context of the corridor and limited space available.
  - A five-foot offset was chosen for both sides of the roadway to provide a more comfortable environment compared to a minimum two-foot offset.
  - These changes resulted in a total typical section within the five-lane section of 83 feet.
  - This option was selected for the recommended concept.

E. Lane Configurations

Specific lane configuration analyses can be found in the traffic analysis section Appendix K.

Old New Cut Road/Commerce Park Ct to Gene Snyder Freeway (KY 841) Westbound Ramps

- This segment would keep its existing three-lane section, with one lane in each direction and a center turn lane.
  - This option was selected for the recommended concept.

Gene Snyder Freeway (KY 841) Westbound Ramps to Outer Loop (KY 1065)

- This segment would keep its existing five-lane section, with two lanes in each direction and a center turn lane.
  - Periodic non-mountable medians are proposed to discourage driving in the center turn lanes for the purpose of passing stopped/slow vehicles and encourage safer speeds.

Outer Loop (KY 1065) to Auburn Oaks Drive

- This segment is proposed as a three-lane section beginning just north of Outer Loop, with one lane in each direction with a center turn lane.
  - Medians would be installed to discourage vehicles traveling in the center lane, encourage safer speeds, and help separate turn lanes. These medians would be mountable to meet fire code and accommodate emergency vehicles.
  - A right turn lane is proposed at Auburndale Elementary School to help accommodate carpool queues.

Figure 8: Existing Gene Snyder Fwy (KY 841) to Southside Dr/3rd Street Road (KY 907)

Figure 9: Proposed Gene Snyder Fwy (KY 841) to Southside Drive/3rd Street Road (KY 907)

Auburn Oaks Drive to Palatka Road (KY 1142)

- Non-mountable medians would be utilized in this segment for access management, to encourage safer speeds, to discourage vehicles traveling in the center lane, and to help separate turn lanes.
  - Non-mountable medians would be utilized in this segment for access management, to encourage safer speeds, to discourage vehicles traveling in the center lane, and to help separate turn lanes.
  - The additional southbound thru lane from this segment would end at Auburn Oaks Drive as a right turn only lane.

Figure 10: Existing Southside Drive/3rd Street Road (KY 907) to Palatka Road (KY 1142)

Figure 11: Proposed Southside Drive/3rd Street Road (KY 907) to Palatka Road (KY 1142)

Palatka Road (KY 1142) to Southern Parkway/ Iroquois Park Road/W. Southland Boulevard

- This segment is a proposed five-lane section, with two lanes each direction and a center turn lane. Iroquois Park abuts the corridor for much of the western side within this segment.
  - Non-mountable medians would be utilized in this segment. This segment utilizes longer continuous medians for access management purposes. Vehicles wanting to make left turning movements in this area would be required to reroute or make U-turns. Additional widening for U-turns is not proposed, as distances to reroute to these parcels are relatively short.
    - Medians will also encourage slower speeds and discourage driving in the center lane.
  - One northbound thru lane becomes a right turn only lane at Southern Parkway.

Figure 12: Existing Palatka Road (KY 1142) to Southern Parkway/Iroquois Park Road

Figure 13: Proposed Palatka Road (KY 1142) to Southern Parkway/Iroquois Park Road

Southern Parkway/Iroquois Park Road/W. Southland Boulevard to Bluegrass Avenue

- This segment is proposed as a three-lane section, with one lane each direction and a center turn lane.
  - Medians would be installed to discourage vehicles traveling in the center lane, encourage safer speeds, and help separate turn lanes. These medians would be mountable to meet fire code and accommodate emergency vehicles.
  - An additional northbound thru lane develops just south of Bluegrass Avenue.

Figure 14: Existing Southern Parkway/Iroquois Park Road to Bluegrass Avenue.

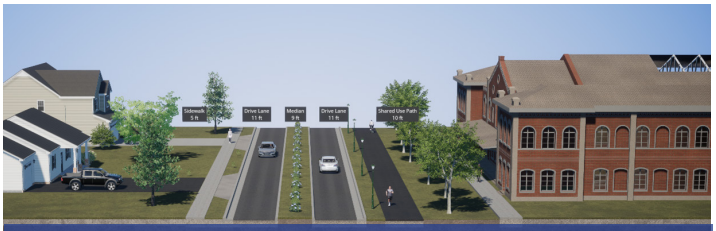


Figure 15: Proposed Southern Parkway/Iroquois Park Road to Bluegrass Avenue.

Bluegrass Avenue to Watterson Expressway (I-264) Eastbound Ramps/W. Ashland Avenue

- This segment is proposed as a five-lane section, with two lanes each direction and a center turn lane.
  - Non-mountable medians would be utilized in this segment. This segment utilizes longer continuous medians for access management purposes. Vehicles wanting to make left turns in this area would be required to reroute or make U-turns. Additional widening for U-turns is not proposed, as distances to reroute to these parcels are relatively short.
    - Medians will also encourage slower speeds and discourage driving in the center turn lane.

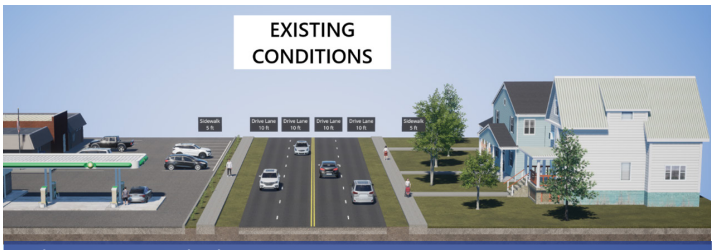


Figure 16: Existing Bluegrass Avenue to Watterson Expressway (I-264)/W. Ashland Avenue

Figure 17: Proposed Bluegrass Avenue to Watterson Expressway (I-264)/W. Ashland Avenue

F. Intersection Reconfigurations

In addition to the traffic and safety analysis, intersection reconfigurations were studied for each location related to existing geometry and potential impacts. The recommended concept proposes the following configurations:

KY 1865 at Old New Cut Road/Commerce Park Court (Signalized)

- This intersection would remain in the existing configuration related to vehicular lanes. Sidewalk and shared use path crossing ramps and crosswalks would be added.

KY 1865 at Gene Snyder Freeway (KY 841) Eastbound Ramps (Signalized)

- Both existing on- and off-ramps encourage higher speeds and have limited sight lines.
- The off-ramp approach to KY 1865 would be realigned to intersect at a 90-degree angle and require that right turners stop at the signal before proceeding.
- The right turn lane to the on-ramp would be pulled in closer to the intersection, reinforcing that these vehicles must yield to those already on the ramp, providing better sight lines for them to see those vehicles and slowing traffic as they cross the new crosswalk.

Figure 18: Proposed KY 1865 at KY 841 Eastbound Ramps

KY 1865 at Gene Snyder Freeway (KY 841) Westbound Ramps (Signalized)

- Both existing on- and off-ramps encourage higher speeds and have limited sight lines.
- The off-ramp approach to KY 1865 would be realigned to intersect at a 90-degree angle and require right turners to stop at the signal before proceeding.
  - The existing right turn slip lane also proceeds directly into its own lane. This would be changed to move right-turning vehicles into the thru lane from the south, eliminating the need for vehicles to weave in this area.
- The radius on the right turn lane to the on-ramp would be tightened to slow speeds as vehicles cross the new crosswalk.

KY 1865 at Outer Loop (KY 1065) (Signalized)

- This intersection would remain in the existing configuration related to number of vehicular lanes.
- To encourage slower speeds and provide space for pedestrian and bicycle facilities, lanes would be restriped to narrower widths to match the rest of the corridor.
  - To prevent turning movements from the driveway nearest the intersection, a narrow median is proposed along the centerline, as well as a right-in, right-out median at that driveway. At the next driveway on KY 1865, left-outs would be prohibited. Both parcels also have access along Outer Loop.
    - Lane separator curb may be further investigated for use at this location should adequate width not be feasible for a physical median.

KY 1865 at Kroger/Auburndale Village (Signalized)

- The existing five-lane configuration would remain at this intersection, with lane widths being updated to match proposed lane widths for the corridor.
- Medians are proposed in order to not allow lefts in or out of secondary driveways in close proximity to this intersection.

- Lane separator curb may be further investigated for use at this location should adequate width not be feasible for a physical median.

KY 1865 at 3rd Street Road/Southside Drive (KY 907) (Signalized)

- The existing five-lane configuration would remain at this intersection, with lane widths being updated to match proposed lane widths for the corridor.
- Medians are proposed in order to not allow lefts in or out of secondary driveways in close proximity to this intersection.
  - Lane separator curb may be further investigated for use at this location should adequate width not be feasible for a physical median.
  - Special accommodations will be necessary at this location for funerals. Removable bollards and a directional median opening can be used to facilitate this movement.

KY 1865 at Palatka Road (KY 1142) (Signalized)

- The existing five-lane configuration would remain at this intersection, with lane widths being updated to match proposed lane widths for the corridor.
- A median is proposed to not allow lefts in or out of secondary driveways in close proximity to this intersection.
  - Lane separator curb may be further investigated for use at this location should adequate width not be feasible for a physical median.

KY 1865 at Park Road (Signalized)

- The southern leg of this intersection was recently restriped to a five-lane section as part of a repaving project. This new lane configuration would remain.
- The northern leg of this intersection would retain its existing configuration of four lanes. A median would be constructed in the existing hatched area and extended to the north.

KY 1865 at Frisbee Way/Orchard Hill Drive (at Iroquois Park) (Unsignalized)

- The relocation of Frisbee Way to Orchard Hill Drive was explored to eliminate the offset intersections at this location. This improvement would reconfigure the existing parking lot at Frisbee Drive. Ultimately, realigning the intersection within the park was found to be too impactful and undesirable.
- To mitigate concerns related to the offset intersections, Frisbee Way and Orchard Hill Drive are proposed to be reconfigured to three-quarter movement intersection, both of which would prohibit left turns from the side streets. A three-quarter movement intersection allows three movements – right turns in, right turns out, and left turns in.

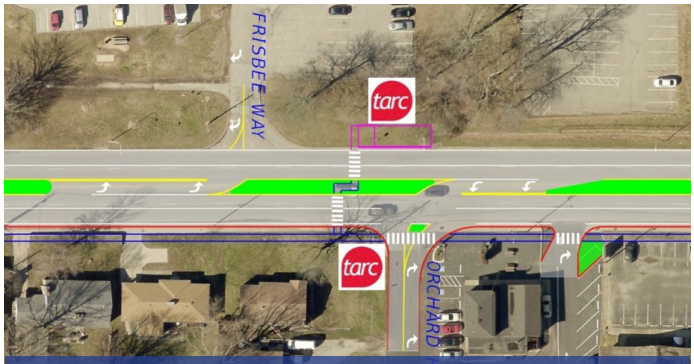


Figure 19: Proposed Pedestrian Crossing KY 1865 at Frisbee Way/Orchard Hill Drive

KY 1865 at W. Kenwood Drive (at Iroquois Park) (Signalized)

- The relocation of this intersection to Gheens Avenue to provide better intersection spacing was explored. Ultimately, realigning the intersection within Iroquois Park was found to be too impactful and was removed from consideration.
- Improvements within Iroquois Park were discussed to reinforce allowable movements and promote better driver expectancy when entering the park:
  - An option was presented for restriping the intersection interior to the park to establish two lanes, one to exit to the signal and one to continue onto Knoll Gate Road. This would establish clearer striping and signing in the area to help traffic navigate the currently wide, unmarked area.
  - Two additional options were discussed. First, the realignment of Amphitheater Road within the park to W. Kenwood Drive; establishing Knoll Gate Road as a side road that would have two-way operation. Alternatively, further reinforcement of one-way operation along Knoll Gate Road by narrowing the roadway and restriping parking to angled (or back-in configuration).
  - Ultimately, it was determined that due to potential environmental impacts, improvements within Iroquois Park would not be completed by the Project. Sketches of potential improvements were shared with Louisville Metro Parks and Olmsted Parks Conversancy for their consideration for potential future implementation.

KY 1865 at Southern Parkway/Iroquois Park Road/W. Southland Boulevard (Signalized)

- This existing complex signalized intersection is a safety concern and can be confusing for drivers. The intersection has six legs, five of which are signalized.
  - Marret Place connects to five single family homes and is unsignalized. It is expected to remain unsignalized.
    - A connection to Iroquois Park Road (Option 1) would allow Marret Place traffic to exit onto KY 1865 at the existing traffic signal. This option would be on Iroquois Park property. This option was found more desirable by the public. In the online survey, 91% of those who shared an opinion chose this option.
    - A more northern connection (Option 2) to KY 1865/Taylor Boulevard would be a right-in, right-out only and would not allow for entrance into the left turn lane onto Southern Parkway from Marrett Place. This option would also be on Iroquois Park property. This option was found more desirable to Olmsted Parks Conservancy.

Figure 20: Marret Place Alternatives

    - Two potential connections were explored to Carol Jean Court. Both eastern and western connections would require the acquisition of two residences, so this option was determined to be undesirable and was removed from consideration.
    - Due to ongoing coordination with Louisville Metro Parks and Olmsted Parks Conservancy, options for Marret Place should continue to be investigated until a solution can be agreed upon.
  - The five signalized legs of the intersection require inefficient signal phasing/split phasing. It's also confusing for vehicles who may want to right turn on red and would conflict with other vehicles by doing so. W. Southland Boulevard is a smaller, neighborhood street that experiences cut-thru traffic for vehicles traveling from KY 1865 to destinations to the east. Reconfiguring W. Southland Boulevard to a cul-de-sac will allow more efficient, less confusing signal phasing, while also encouraging vehicles to use arterial and collector streets for travel to the east.
- Based on the traffic model, it was recommended that the dual left turn lanes be utilized on Southern Parkway at KY 1865. No widening will be required to stripe the dual left turn lanes.
  - This improvement was coordinated with the Southern Parkway right-sizing project and Olmsted Parkways Shared-Use Path System project. Modifications to both projects were proposed to allow for bike connectivity while allowing for the dual left turn lanes.
- It is recommended that the left turn lanes along KY 1865 at Southern Parkway use a positive offset for better sight distance.

KY 1865 at Brookline Avenue (Signalized)

- This intersection is proposed to be updated based on a three-lane section (one lane northbound, one lane southbound, and a two-way-left-turn-lane) in this segment. A mountable median would be installed on the southern leg of the intersection to reinforce the existing out-only movement from the western leg.

KY 1865 at Bluegrass Avenue (Signalized)

- On the western leg of the intersection, dual left turn lanes are proposed from Bluegrass Avenue eastbound to KY 1865 northbound. This movement has high turn volumes, and the dual lanes will facilitate more desirable signal timing.
    - A single left turn lane on Bluegrass Avenue to KY 1865/Taylor Boulevard was discussed, with the desire to minimize pedestrian crossing distances and promote pedestrian safety. A single left will cause excessive queueing, allow for permissive lefts, and create additional congestions at this location that could be mitigated with the dual lefts.
- On the eastern leg of the intersection, the existing pavement is 28 to 30 feet wide and striped as one lane in each direction. To better facilitate movements on Bluegrass Avenue, a left turn lane and right turn lane are proposed to be added.
- The northern leg of KY 1865 would be updated to a single southbound thru lane with the other existing lane becoming a right turn drop lane onto Bluegrass Avenue. This will allow a single thru lane to continue south along KY 1865.
- The southern leg of this intersection would have two northbound thru lanes. The second northbound thru lane is proposed to develop 150 to 200 feet south of the intersection to allow for better thruput for the northbound movement.

KY 1865 at Bicknell Avenue (Signalized)

- The existing lane configuration at Bicknell Avenue is four lanes (two in each direction). It is proposed to widen this to five lanes to allow for left turn lanes in both directions.
- A median is proposed to prevent left turns in or out of secondary driveways in close proximity to this intersection.
    - Lane separator curb may be further investigated for use at this location should adequate width not be feasible for a physical median.

KY 1865 at Watterson Expressway (I-264) Eastbound Ramps/W. Ashland Avenue (Signalized)

- KYTC recently reconfigured this off-ramp to remove the slip lane, requiring vehicles to stop at the signal prior to proceeding for all movements.
- The existing five-lane configuration at this location is proposed to remain. Based on traffic analysis, the queues for the left turn onto the I-264 ramp reach 450 feet. The left turn lane has been designed to meet this length. A median is proposed along the centerline for the length of this turn lane to prevent left turns in or out of secondary driveways in close proximity to the intersection.
    - Lane separator curb may be further investigated for use at this location should adequate width not be feasible for a physical median.

G. Alternative Intersection Types Considered

Traffic analysis found that a multi-lane roundabout would be beneficial in many locations as a standalone improvement. Each roundabout would impact two to four corners of each intersection, requiring potential relocation of businesses and residences. Multi-lane roundabouts are not as desirable as single lane roundabouts as a traffic safety countermeasure, due to a higher risk of crashes in multi-lane roundabouts. Multi-lane roundabouts typically reduce fatal and injury crashes in comparison to traffic signals but may see a significant increase in overall crashes of up to 230%. Due to the limited expected safety benefit and the high level of property impacts, multi-lane roundabouts were determined to be undesirable for the corridor.

Restricted Crossing U-Turns (RCUT) were explored for the corridor. As this is a highly developed corridor, RCUTs have large footprints and would require relocation of businesses and residences at or near each major intersection. Due to this high level of property impacts, RCUTs were removed from consideration.

H. Pedestrian Crossings

Pedestrian refuge islands are an important safety countermeasure. By allowing pedestrians to cross one direction of travel at a time, pedestrian travel time, and by association exposure to vehicular traffic, is drastically reduced. Furthermore, visibility of pedestrians is enhanced, which can contribute to enhanced yielding compliance. Pedestrian refuge islands should be installed at all pedestrian crossings where feasible.

Palatka Road (KY 1142) to Watterson Expressway (I-264) Eastbound Ramps/W. Ashland Avenue

This area of the corridor largely has frequent crossing opportunities due to the denser spacing of existing traffic signals in this area. All signalized intersections are proposed to have high visibility, ladder-style crosswalks on all legs.

Figure 21: Proposed Iroquois High School Pedestrian Crossing

- There is an existing crossing on the corridor in front of Iroquois High School. This crossing is near the existing intersection of Arling Avenue.
  - A staggered crossing was considered with additional space for bikes to stage in the center median. Ultimately, the additional widening to provide this additional width for bikes was found undesirable and created lane configuration issues approaching the crossing. A staggered crossing without additional width in the center is proposed with minimal offset to allow for bikes to easily traverse the stagger.
  - The proposed crossing would have a raised median for pedestrian refuge and high visibility crosswalk markings. Additional treatments, such as a rectangular rapid flashing beacon (RRFB), should be further studied for this location.
- The addition of new mid-block crossings along the frontage of Iroquois Park was discussed. This was largely related to existing TARC stops where there was no sidewalk and no connectivity to existing sidewalk. Through coordination with TARC, the stops in this area have since been relocated to locations with better connectivity and new crossings along the frontage of Iroquois Park are no longer necessary.
  - Frisbee Way/Orchard Hill Drive – A relocated TARC stop is now at this location. Since Frisbee Way and Orchard Hill Drive are both proposed not to allow lefts-out, the median between these roads could be used for a pedestrian crossing. A staggered crossing to connect TARC stops and for more convenient access to Iroquois Park is proposed at this location.

Old New Cut Road/Commerce Park Court to Palatka Road (KY 1142)

Crosswalks are proposed at all signalized intersections. There is a 1.3-mile stretch from Outer Loop to the Auburndale Village shopping center with no signalized intersection and thus no existing pedestrian crossings. To provide access to the proposed shared-use path, as well as multimodal access between neighborhoods and to destinations along the corridor, three mid-block crossings are proposed in this area.

- Candlelight Lane – From Outer Loop to Candlelight Lane is approximately 1500 feet. A proposed crossing at this location is in a tangent for visibility and would help reinforce that drivers are entering a residential area. A proposed center median will mean that pedestrians only have to cross one lane of traffic at a time. The crossing is proposed to be staggered.
- Auburndale Elementary School – From Candlelight Lane to Auburndale Elementary School is approximately 1700 feet. A proposed crossing at this location would provide access to students walking or riding their bikes to school, access to Auburndale Church of Christ, and connect two TARC stops. The median will provide refuge for a staggered crossing.
- Scottsdale Boulevard – From Auburndale Elementary School to Scottsdale Boulevard is approximately 1680 feet. From Scottsdale Boulevard to the next signalized intersection at Auburndale Village shopping center is approximately 1840 feet. A proposed crossing at this location would provide access to Valiant Christian Academy and Kenwood Heights Christian Church, as well as connect two TARC stops. The proposed median will provide refuge for a staggered crossing

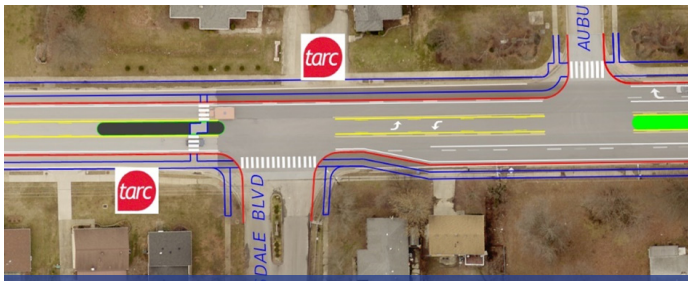


Figure 22: Proposed Pedestrian Crossing near Scottsdale Boulevard

Crossings at Signalized Intersections

- Proposed pedestrian crossings at intersections should provide pedestrian refuge where medians are proposed and turning movements can accommodate.
- Crossings should be configured to provide a perpendicular crossing where possible. If a perpendicular crossing is not feasible, crossings distances should be minimized as much as possible.

I. Transit

- It is recommended that existing mid-block TARC stops on the west side of KY 1865 along Iroquois Park be relocated to areas with pedestrian connectivity. TARC has adjusted bus stops in this area since the study began and is in the process of additional service adjustments.
- It is recommended that TARC stops along the corridor be consolidated to provide for a more efficient route and allow for the project to provide better connectivity across KY 1865 between stop locations.
- Stop locations at intersections are recommended to be far-side stops where feasible.
- Recommended TARC stop locations can be found on the plan layouts included in Appendix L.
- TARC coordination should be ongoing throughout the project development, as TARC is currently developing TARC 2025, which proposes three potential updated Draft Networks for the TARC system, which will impact TARC stops and access to transit along KY 1865.

J. Iroquois Park

Iroquois Park is a community resource and an environmentally eligible resource under 4(f) and 6(f) laws that relate to protection of natural sources and historic sites. Efforts were made to avoid direct impacts to Iroquois Park. The corridor segment in front of the park was designed to hold the existing western curb along the park, and any adjustments to curb lines would be made to the east side of the corridor.

Iroquois Park Asphalt Path

- The project would provide logical termini for multimodal improvements by tying into Iroquois Park on both the north and south ends of Iroquois Park, as well as provide logical termini for the roadway based on safety concerns and lane configurations.
- To provide connectivity along the entirety of KY 1865, it is recommended that the existing paths within the park be improved for use by bikes and pedestrians to connect to the proposed shared-use path. These recommended improvements were shared with Louisville Metro Parks and Olmsted Parks Conservancy and would need to be completed under separate efforts by those entities.
- Connectivity can be made with minor improvements through much of the park, but it is more challenging between Frisbee Way and Park Road due to the narrow asphalt path currently in poor condition.
- To provide better clarity to drivers within Iroquois Park, striping and signage improvements within the park could be beneficial. These recommended improvements were shared with Louisville Metro Parks and Olmsted Parks Conservancy for their consideration.
- Traffic calming may be desirable throughout the park. Traffic calming options were shared with Louisville Metro Parks and Olmsted Parks Conservancy for their consideration.

K. School Connectivity and Coordination

Iroquois High School

Discussions were held with Jefferson County Public Schools (JCPS) related to bus circulation at Iroquois High School. Proposed medians along school frontage would not hinder bus operations into and out of existing driveways. However, a new connection to Brookline Avenue may make it easier for buses to exit the school property and use the traffic signal to turn onto KY 1865.

JCPS requested that the mid-block crossing in front of the school directly align with the exit door to encourage students to use the crossing.

Auburndale Elementary School

A long queue from the school pick-up line was observed backing up onto KY 1865 at Auburndale Elementary School. A right turn lane is proposed at this location to help accommodate this line without hindering travel along KY 1865.

A new pedestrian crossing is proposed near the school on KY 1865.

Vehicular Queue at Auburndale Elementary School

St. Nicholas Academy

St. Nicholas Academy is located in close proximity to the major signalized intersection at Southside Drive/3rd Street Road (KY 907). A median is proposed in this location and would not allow lefts into or out of this driveway (except in the special case of a funeral). Any traffic needing to turn left onto KY 1865 or left into St. Nicholas Academy will need to use the secondary access point on Southside Drive (KY 907).

L. Additional Coordination Efforts

Fire Department

Louisville Metro Fire was coordinated with regarding emergency access along the corridor.

- Vehicle specifications require a 43-foot 5-inch radius for their equipment to turn around in the proposed cul-de-sac on W. Southland Boulevard at KY 1865. Therefore, the cul-de-sac features a radius of 45 feet.
- Current Fire Code requires a 20-foot clear roadway width for emergency vehicles to pass other traffic and to set up their apparatus.
    - The four- and five-lane sections of roadway accommodate this requirement and could have a non-mountable raised median.
    - There were various options explored to accommodate this in the three-lane section:
        - Mountable medians throughout the three-lane corridor:
            - There was concern about drivers driving on them and causing additional conflicts due to traversing the medians slower than the rest of the flow of traffic.
        - No medians (two-way-left-turn lane throughout).
        - Periodic mountable medians within these segments was found to be most desirable option. This would not impede left turns but would discourage drivers from driving in the turn lanes for longer distances.
            - City of Oakland, CA and the Oakland Fire Department collaborated to develop a detail that was agreed to meet fire code requirements and accommodate a non-mountable pedestrian refuge island. City of Oakland's details have been included for reference in Appendix N as an option for potential implementation following further coordination with Metro Fire and Fairdale Fire Departments.

CSX Railroad

Direct coordination with CSX has not started, but railroad coordination should begin early in the next phase.

Between Southside Drive/3rd Street Road and the railroad, the sidewalk/shared-use path would be shifted in to stay within the existing crossing limits over the railroad. The sidewalk/shared-use path would also be adjusted to not impact existing crossing equipment.

TreesLouisville

Initial contact has been made with TreesLouisville. The organization requested that medians and street tree spaces be installed with good, deep topsoil and designed with maintenance in mind. Coordination with TreesLouisville should continue in future phases.

5. Project Phasing

Due to the built-up nature of the surrounding corridor context, full implementation of the project improvements requires significant resources and time. With many design details and coordination efforts still outstanding, the project may not be fully implemented within the next decade. In that same time, the safety concerns identified will continue to exist and present a risk to the traveling public. Mid-term and long-term improvements have been identified for segments throughout the corridor.

KYTC District 5 defines short-term improvements as improvements that can be implemented by KYTC forces or existing master agreements, which would only include signage, pavement markings, signal modifications and similar improvements. The construction of medians is crucial to meet the goals of this project, and as such, no short-term improvements were identified.

The extents of each segment are identified in Appendix P.

A. Mid-Term Improvements

Mid-term improvements are a means to progress towards a safer corridor utilizing programs in place today while ensuring a cohesive vision. Mid-term improvements require no right-of-way acquisition (assuming the existing roadway is within existing right-of-way), no utility relocations, and no pavement widening. Identified mid-term improvements consist of pavement resurfacing, striping, concrete and/or landscape medians, and lane separator curb.

Each segment identified below could be implemented standalone with striping tie-ins at the end of the segment to tie to adjacent segment(s). The recommended order of segments considers both implementation feasibility as well as the impact on safety. It is not recommended to build these segments without the medians and/or lane separator curbs, as these elements reflect recommended access management and are crucial to reducing the risk along the corridor and the long-term success of the project. If mid-term improvements are completed first, it may be feasible to construct longer-term improvements in larger combined segments. If mid-term improvements are selected for implementation, it is recommended that a separate traffic analysis and signal retiming effort be completed for each separate implementation. Cost estimates for each mid-term improvement can be found in Appendix Q.

SEGMENT F – Southern Parkway (inclusive) to Lynnhurst Avenue (MP 4.28 to 4.99)

- Approximately 3700 feet in length. This mid-term improvement would reconfigure the roadway in this segment to three lanes – one lane in each direction and a center turn lane. Medians would also be installed to discourage driving in the center turn lane and provide refuge for the pedestrian crossing near Iroquois High School.
- Would require tapers/tie-in to tie to existing section at Bluegrass Avenue.
- Striping/medians can be done within existing pavement.
    - Would require realignment of signal heads and detection.

SEGMENT B – Taco Bell/Marathon Gas Station Driveway to Scottsdale Boulevard/Auburn Oaks Drive (MP 1.39 to 2.26)

- Approximately 2800 feet in length. This mid-term improvement would reconfigure the roadway in this segment to three lanes – one lane in each direction and a center turn lane. Medians would also be installed to discourage driving in the center turn lane and provide refuge for the proposed pedestrian crossings.
- Striping/medians can be accomplished within existing pavement.

SEGMENT C – Scottsdale Boulevard/Auburn Oaks Drive to Palatka Road (KY 1142) (MP 2.26 to 2.98)

- Approximately 4200 feet in length. This mid-term improvement would retain the existing five-lane section but make lane widths consistent. It would also allow for installation of medians and lane separator curb for access management.
- Striping/medians can be done within existing pavement.
    - Would not require signal modifications at Kroger (unless physical detection is paved over and must be re-cut).
    - Would require realignment of signal heads and detection at 3rd Street Road/Southside Drive and Palatka Road.

SEGMENT A – South of Old New Cut/ Commerce Park Ct to Taco Bell/Marathon Gas Station Driveway (MP 0.60 to 1.39)

- Approximately 4500 feet in length. This mid-term improvement would retain the existing cross sections but make lane widths consistent. It would also allow for installation of medians and lane separator curb for access management.
- Mainline Striping/medians can be done within existing pavement.
    - Would require realignment of signal heads and detection at Outer Loop.

SEGMENT D – Palatka Road (inclusive) to Park Road (MP 2.98 to 3.40)

- Approximately 2000 feet in length. Mid-term improvements would install proposed medians in this segment. This segment has already been paved and restriped as a part of a maintenance project.
- Medians can be done within existing pavement.
- May require realignment of signal heads and radar detection.

KY 1865 Segment E at Park Road

B. Long-Term Improvements

Long-term improvements may build on the mid-term improvements in applicable segments, or they may be installed in their entirety if mid-term improvements are not completed first. In segments where mid-term improvements are completed first, paving and working within the curbs of KY 1865 (Taylor Boulevard/New Cut Road) will have already been completed and work from the edge of lane out can be completed separately. The order of the segments below is as recommended to achieve both implementation of safety improvements, multimodal connectivity and logical termini. Cost estimates for long-term improvements can be found in Appendix Q.

Utilities – Phasing Coordination

- Discuss relocations with each owner for the entire project and for each segment to ensure that work won't have to be duplicated unless absolutely necessary.
- Overall relocation discussions especially important with pole owners (likely LGE/KU).
- Railroad – begin discussions early.

SEGMENT F – Southern Parkway (inclusive) to Lynnhurst Avenue (MP 4.28 to 4.99)

- Approximately 3700 feet in length. Improvements consist of reconfiguration of this segment to three lanes – one lane in each direction and a center turn lane, installation of medians, installation of new curb and gutter on both sides of the road, with sidewalk on the western side and a shared-use path on the eastern side. At the KY 1865/Southern Parkway intersection, additional improvements would consist of realignment of Marret Place, creating a cul-de-sac on W. Southland Boulevard, and reconfiguring the lanes on Southern Parkway to dual left turn lanes and a shared thru/right.
- Has a mid-term improvement option.
- Requires tapers/tie-in to tie to existing section at Bluegrass Avenue.
- Will require strip take fee simple right-of-way and construction easements for construction of sidewalk/shared-use path.
- Will require significant utility relocations.

SEGMENT E – North of Park Road to Southern Parkway (MP 3.40 to 4.28)

- Approximately 5200 feet in length. This segment consists of striping of five lanes (two lanes in each direction and a center turn lane), medians for access management, curb and gutter, and sidewalk on the eastern side of the road. This segment would also include tying the pedestrian crossing at W. Kenwood Drive to the existing path within Iroquois Park.
- Could be further split at W. Kenwood Drive.
- Will require strip take fee simple right-of-way and construction easements for construction of roadway and sidewalk/shared-use path.
- Cannot be done as a mid-term improvement due to need for widening to construct roadway.
- Will require significant utility relocations.

SEGMENT D – Palatka Road (inclusive if first) to Park Road (+ tie to Iroquois Park path) (MP 2.98 to 3.40)

- Approximately 2000 feet in length. Improvements in this segment consist of medians within the existing two-way-left-turn lane for access management, curb and gutter on both sides of the road, sidewalk on the eastern side of the road and a shared-use path on the western side. This segment would include tying the proposed shared-use path to the existing path in Iroquois Park.
- Has a mid-term improvement option.

- Will require strip take fee simple right-of-way and construction easements for construction of sidewalk/shared-use path.
- Striping has already been completed under a separate paving project.
- Will require overhead utility relocations.

SEGMENT C – Scottsdale Boulevard/Auburn Oaks Drive to Palatka Road (KY 1142) (MP 2.26 to 2.98)

- Approximately 4200 feet in length. This segment would retain the existing five-lane section (two lanes in each direction and left turn lanes) but would make lane widths consistent and allow for installation of medians and lane separator curb for access management and safety improvements. This segment would also install curb and gutter with sidewalk on the eastern side of the road and a shared-use path on the western side of the road.
- Will likely require strip take fee simple right-of-way and construction easements.
- Has a mid-term improvement option.
- Will require overhead utility relocations.

SEGMENT B – Taco Bell/Marathon Gas Station Driveway to Scottsdale Boulevard/Auburndale Oaks Drive (MP 1.39 to 2.26)

- Approximately 2800 feet in length. This mid-term improvement would reconfigure the roadway in this segment to three lanes – one lane in each direction and a center turn lane. Medians would also be installed to discourage driving in the center turn lane and provide refuge for the proposed pedestrian crossings. This segment would also install curb and gutter with sidewalk on the eastern side of the road and a shared-use path on the western side of the road.
- Can largely be completed within existing footprint.
- Has a mid-term improvement option.
- May require minimal right-of-way (in curve) and will likely require easements to complete.
- Will require minor utility relocations.

SEGMENT A – South of Old New Cut/Commerce Park Ct to Taco Bell/Marathon Gas Station Driveway (MP 0.60 to 1.39)

- Approximately 4500 feet in length. Existing lane configurations would remain in this area. Restriping would make lane widths consistent and allow for installation of medians for access management and to discourage driving in the center turn lanes. Both interstate ramps would be realigned to better create a 90-degree intersection and slip lanes removed to slow drivers on the off-ramps. New curb and gutter would be installed on both sides, with sidewalk proposed on the eastern side and shared-use path on the western side.
- Has a mid-term improvement option.
- Includes all interchange work.
  - Will need full signal rebuilds for both ramps.
- Could be further split to just interchange/just Outer Loop areas.
- Will likely require easements to build sidewalk.
- Will require relocation of two or three lighting poles and four or five utility poles. May be possible to avoid larger utility pole relocation if willing to curve shared-use path around.

SEGMENT G – Lynnhurst Avenue to Watterson Expressway (I-264)/W. Ashland Avenue (MP 4.99 to 5.60)

- Approximately 3100 feet in length. This segment would widen to five lanes (two lanes in each direction and a center turn lane), with medians and lane separator curb for access management. Curb and gutter would be installed on both sides, with sidewalk on the western side of the road and shared-use path on the eastern side. Bluegrass Avenue would be updated to two left turn lanes from eastbound Bluegrass Avenue to northbound Taylor Boulevard. Westbound Bluegrass Avenue approaching the intersection would be updated to a left turn lane, a through lane, and a right turn lane.
- Must be after Segment F. Recommend this be final segment but can be built at any time after Segment F.
- Requires more significant widening than any other segment.
- May require more significant fee simple right-of-way.
  - PVA and initial plat research shows wide right-of-way in this area, showing only construction easements to be necessary. Recommend additional deed research to confirm.
- Will require significant utility relocations.
- This may tie into other improvements at the Watterson Expressway interchange being studied by others.