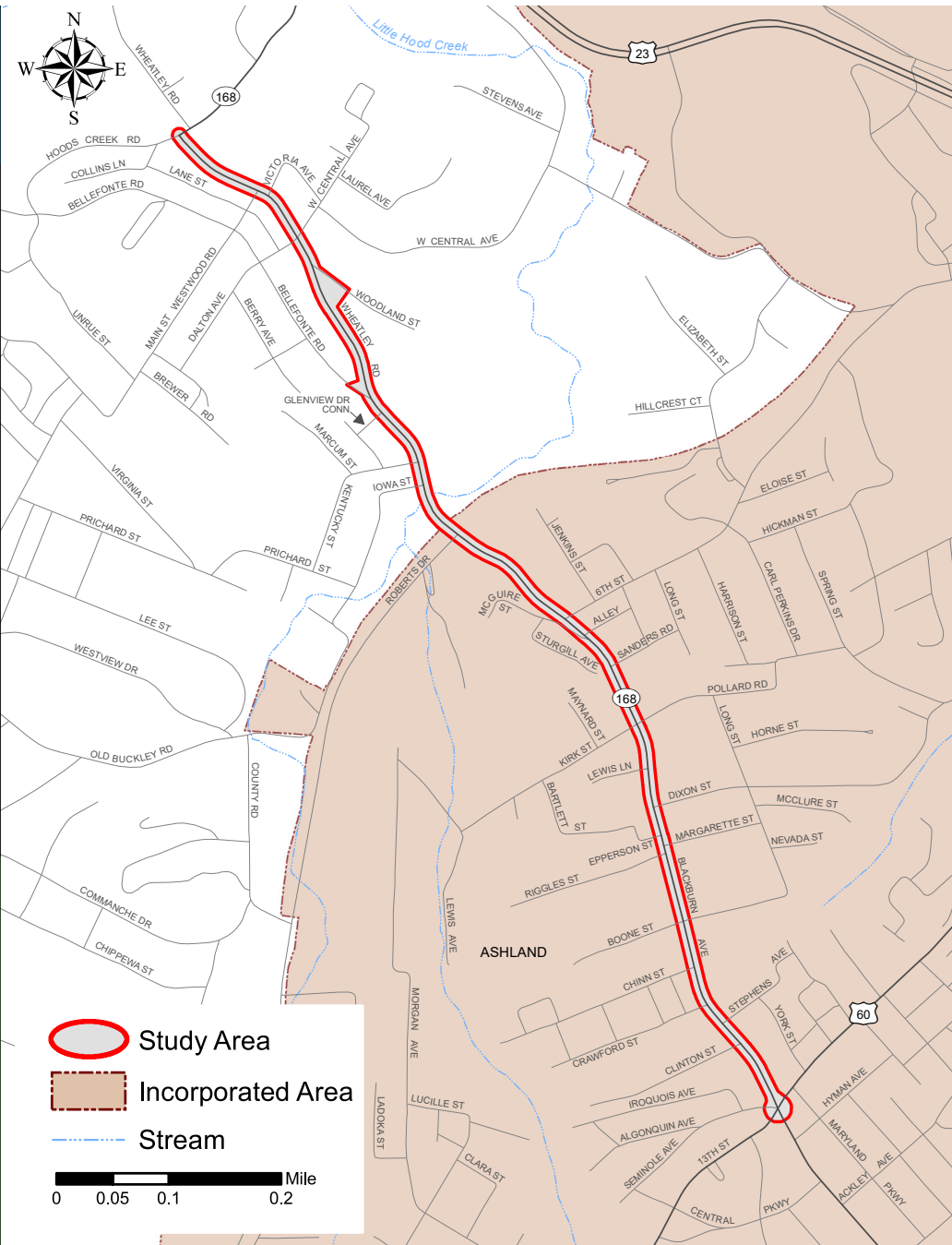


# KY 168 Corridor Study

BOYD COUNTY, KY; KYTC ITEM NO. 9-125

FINAL REPORT | MARCH 2024



PREPARED BY

**TEAM KENTUCKY**  
TRANSPORTATION CABINET

IN PARTNERSHIP WITH

**Q4**  
Engineering Planning

## EXECUTIVE SUMMARY

The Kentucky Transportation Cabinet (KYTC) initiated a corridor study for KY 168 (Blackburn Avenue/Wheatley Road) between US 60 (13th Street) in Ashland and Hoods Creek Road in Westwood. The 1.65-mile-long segment includes areas within the city of Ashland and rural Boyd County. The goal of the study is to support increased safety and mobility for all modal users—including transit riders, bicyclists, and pedestrians.

### Existing Conditions

KY 168 has two 10-foot lanes, narrow shoulders, some sidewalks, and a 35-MPH posted speed limit. It is an urban minor arterial with several sharp curves and steep hills through a primarily residential area. Paired with 6th Street and Roberts Drive, KY 168 acts as a “cut-through” route for drivers avoiding the more congested US 60, US 23, and downtown Ashland streets. Over 30 cross-streets and numerous driveways intersect KY 168 within the study limits. The highway carried 5,800-9,200 vehicles per day (vpd) in 2023, forecast to grow to 6,600-10,400 vpd by 2045. The corridor operates at Level of Service (LOS) D or better today, with only the stop-controlled Roberts Drive approach over capacity in the 2023 PM peak hour. By 2045, intersections with 6<sup>th</sup> Street and US 60 are projected to reach LOS E/F in the PM peak.

There were 99 crashes reported during 2018-2022, including no fatalities and 12 injury collisions. By type, most were angle collisions (34%), rear end crashes (21%), and single vehicle crashes (17%). There is one at-grade rail crossing that limits visibility, just north of Roberts Drive, resulting in a cluster of crashes.

Sidewalks exist on at least one side of KY 168 through the Ashland city limits; there are noncontiguous sidewalk segments through Westwood. Sidewalk width, condition, and treatments approaching cross streets vary by location, so some sites do not satisfy American Disabilities Act (ADA) standards. Ashland Bus Service operates fixed-route transit services with seven stops along the west edge of the corridor.

Land use along the study corridor is mainly residential, with most homes clustered in established neighborhoods. A few small-scale commercial businesses are interspersed, with the highest concentration approaching the US 60 intersection. Additional community resources include six churches, a Hospice Care Center, two parks, and a cemetery abutting the corridor. A fire station and high school on Main Street in Westwood also rely on KY 168 for access. Nearly half the study area includes low-income populations, suggesting consideration may be necessary to minimize impacts on environmental justice (EJ) populations should a project advance. Pollard Cemetery and a building west of the US 60/KY 168 intersection were noted as potential historic concerns, but no potential districts or other resources were noted during windshield surveys.

## Coordination Meetings

Coordination occurred throughout the study process to inform decision-making, including meetings with the project team, local officials and stakeholders, and a public website/survey.



Of 112 public surveys collected online during November 2023, 96% of participants agreed improvements to the corridor are needed. Top concerns with KY 168 were stopped cars waiting to turn, poor visibility, narrow lanes/shoulders, and the at-grade railroad crossing.

## Concepts

Build concepts focused primarily on intersections, areas with existing safety concerns identified by documented crash records, and community input. Summarized in **Figure ES-1**, improvement options were identified at four intersections and a fifth concept for corridor-wide improvements. Concepts ranged from small-scale maintenance activities up to large-scale corridor reconstruction. Some were dismissed as they would provide limited benefits to traffic and result in high costs and property impacts. Other concepts were developed in greater detail, with costs in 2023 dollars, associated impacts, and community input for each. **Table ES-1** summarizes key facts for each of the detailed Build Concepts.

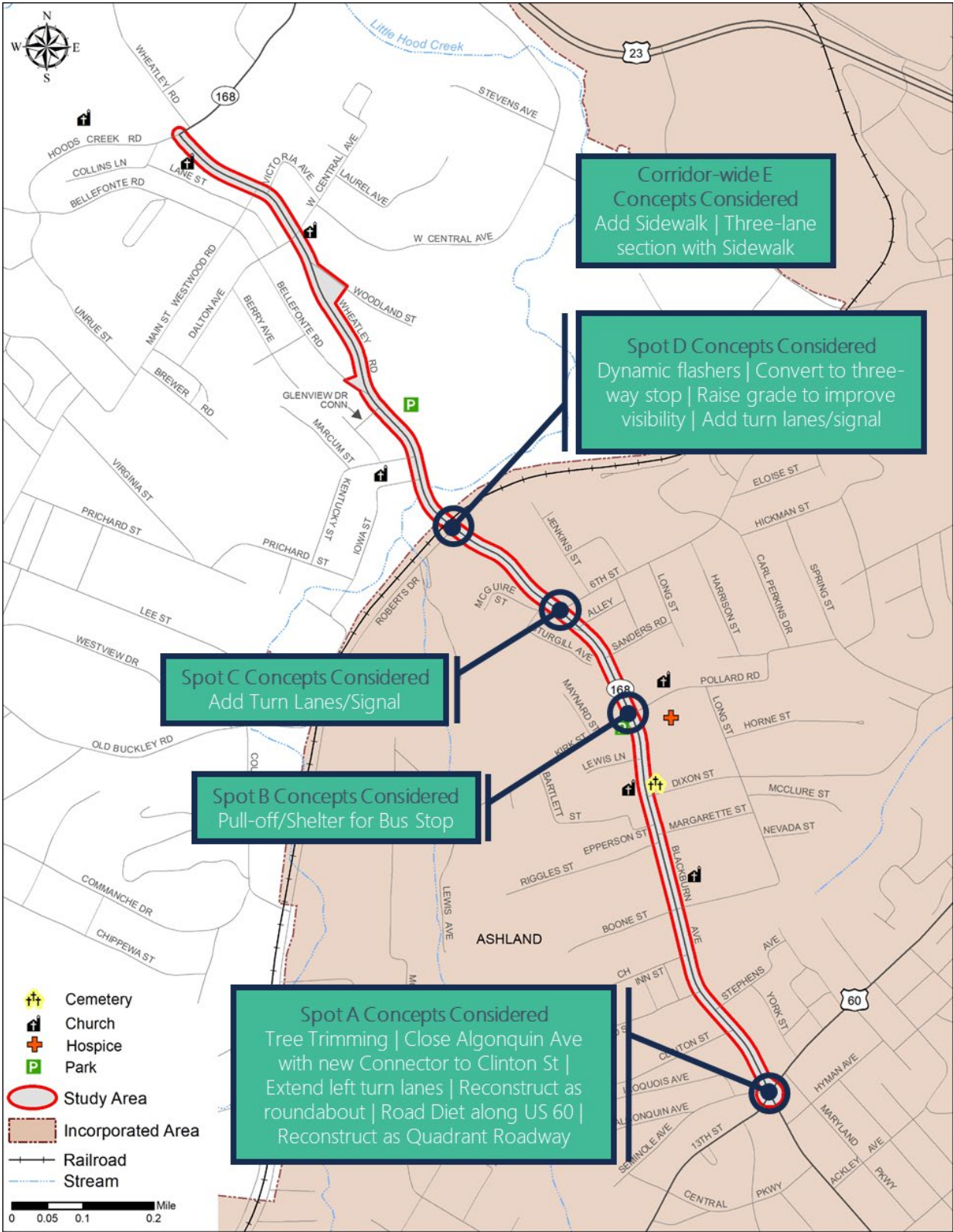


Figure ES-1: Build Concepts Considered

Table ES-1: Comparison of Build Concepts, Costs, Benefits, and Impacts

ID	Concept	Cost	Benefits	Impacts	Community Input	Priority
A.1	Tree Trimming	\$10k	Safety	Within existing right-of-way	US 60/KY 168 rated third priority from public surveys	Medium
A.2	Close Algonquin <i>Optional Connector to Clinton</i>	\$1.3M - \$1.9M*	Capacity	0-2 relocations		Low/Long-Term
A.3	Eastbound US 60 Turn Lane	\$3.0M	Safety + Capacity	4 relocations	Third priority from public surveys; turn lanes preferred over other A options	High
A.3	Southbound KY 168 Turn Lane	\$4.9M	Safety + Capacity	3 relocations		High
B	Pollard/Kirk Bus Pull Off	\$150k*	Safety + Capacity	New right-of-way within park	Lowest priority from public surveys	Combine with E.1
C	6 <sup>th</sup> Street Turn Lanes	\$6.5M	Capacity	Additional right-of-way but no relocations	Fourth priority from public surveys	Medium
D.1	Conflict Warning System	\$50k	Safety	Within existing right-of-way		Dismissed
D.2	3-way Stop	\$20k	Safety	Within existing right-of-way	Top priority from public surveys	Highest/Quick Hit
D.3	Raise Grade/Turn Lanes	\$7.4M - \$7.9M	Safety + Capacity	4 relocations; Potential EJ; Floodplain		Long-Term
E.1	Reconstruct/Add Sidewalk	\$13.3M	Safety	Strip takings with 0-1 relocations	Second priority from public surveys;	High
E.2	Three-Lane with Sidewalk	\$43.2M	Safety + Capacity	40-50 relocations; Potential EJ; Impacts church or cemetery; Floodplain; Hazmats	support divided over three-lane	Dismissed

\* Costs/impacts driven by optional new connection to Clinton St; \* excludes cost of shelter

Overall, Concept D.2 (three-way stop at Roberts) is the highest priority, representing a low-cost, easy-to-implement solution to a demonstrable crash problem garnering substantial public interest. Stopping KY 168 thru traffic reduces travel speeds, increasing visibility and response times approaching the Roberts Drive intersection. Concept D.3 (turn lanes and grade change with potential signalization once volumes meet warrants) is a long-term priority as increasing traffic volumes degrade operations.

Concept A.3 (extending turn lanes on two approaches at US 60/KY 168 intersection) is also a high priority for implementation to help address capacity and safety concerns at the five-leg intersection. During future design phases, opportunities to improve access management for adjacent businesses should be examined. Concepts A.1 (tree trimming) and A.2 (close/connect Algonquin Avenue) were rated as medium and low/long-term priorities, respectively.

Concept E.1 (consistent 5-foot-wide sidewalk) is another high priority for implementation, divided into manageable construction sections: US 60 to Boone Street, Boone Street to Roberts Drive, and Roberts Drive to Hoods Creek Road. Concept B (bus stop) can also be folded into the central section of Concept E.1 but Concept E.2 (three lanes with sidewalk) is not recommended for further consideration due to the high costs and impacts.

Concept C (turn lanes at 6th Street) is a medium priority; signalization should be considered as increasing traffic volumes warrant increasing capacity.

**Figure ES-2** presents a visual summary of high priority concepts.

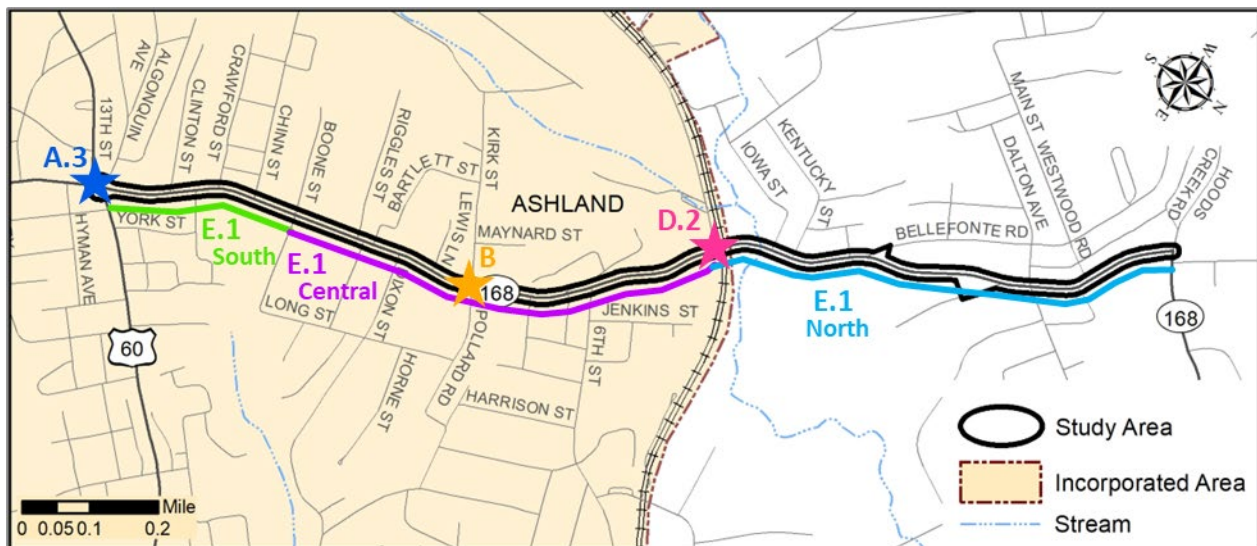


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**Acronyms**

ABS	Ashland Bus Service
ACE	Ashland Cyclist Enthusiasts
ADA	Americans with Disabilities Act
ADD	Area Development District
ATIIP	Active Transportation Infrastructure Investment Program
CDAT	Crash Data Analysis Tool
CHAF	Continuous Highway Analysis Framework
CMAQ	Congestion Mitigation and Air Quality Improvement
CMF	Crash Modification Factor
CRP	Carbon Reduction Program
EJ	Environmental Justice
HCM	Highway Capacity Manual
HDM	Highway Design Manual
HIS	Highway Information System

HSIP	Highway Safety Improvement Program
IJA	Infrastructure Investment and Jobs Act
KGS	Kentucky Geological Survey
KYTC	Kentucky Transportation Cabinet
LEP	Limited English Proficiency
LO/S	Local Officials/Stakeholders
LOS	Level of Service
LOSS	Level of Service of Safety
LWCF	Land and Water Conservation Fund
MP	Milepoint
MPO	Metropolitan Planning Organization
MSAT	Mobile Source Air Toxics
MTP	Metropolitan Transportation Plan
NAAQS	National Ambient Air Quality Standards
NBI	National Bridge Inspection
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
PDO	Property Damage Only
RAISE	Rebuilding American Infrastructure with Sustainability and Equity
RCRA	Resource Conservation and Recovery Act
SHIFT	Strategic Highway Investment Formula for Tomorrow
SHPO	State Historic Preservation Office
SS4A	Safe Streets and Roads for All
STBG	Surface Transportation Block Grant Program
STIP	Statewide Transportation Improvement Program
SUA	Small Urban Area
TED	Transportation Enterprise Database
TIP	Transportation Improvement Program
TWLTL	Two-Way Left-Turn Lane
USEPA	US Environmental Protection Agency
USFWS	US Fish and Wildlife Service
v/c	Volume-to-Capacity Ratio
vpd	Vehicles per day

## 1.0 INTRODUCTION

The Kentucky Transportation Cabinet (KYTC) initiated a corridor study for KY 168 (Blackburn Avenue/Wheatley Road) in Boyd County from its intersection with US 60 (13th Street) in Ashland to Hoods Creek Road. The southeastern section of this 1.65-mile-long road segment lies in the Ashland city limits, and the northwestern section is in rural Boyd County in the community of Westwood.

The goal of this study is to identify transportation needs, and then develop and evaluate conceptual improvements to KY 168 to support increased safety and mobility performance for all modal users—including transit riders, bicyclists, and pedestrians. Study efforts generated a list of short- and long-term improvement concepts that KYTC (or other agencies) may use to pursue funding for future project development efforts.

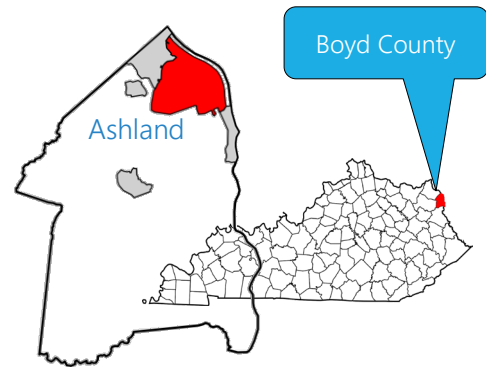


Figure 1: Vicinity Map

### 1.1 STUDY AREA ATTRIBUTES

The study area (**Figure 2**) follows KY 168 from its intersection with US 60 (13<sup>th</sup> Street) at milepoint (MP) 5.80 in Ashland to Hoods Creek Road (MP 7.45) in Westwood. The 1.65-mile-long corridor intersects 30 cross-streets and numerous driveways.

An array of road users including automobile drivers, pedestrians, bicyclists, and public transit riders travel KY 168. The surrounding area is a mix of developed land uses, primarily residential, with scattered

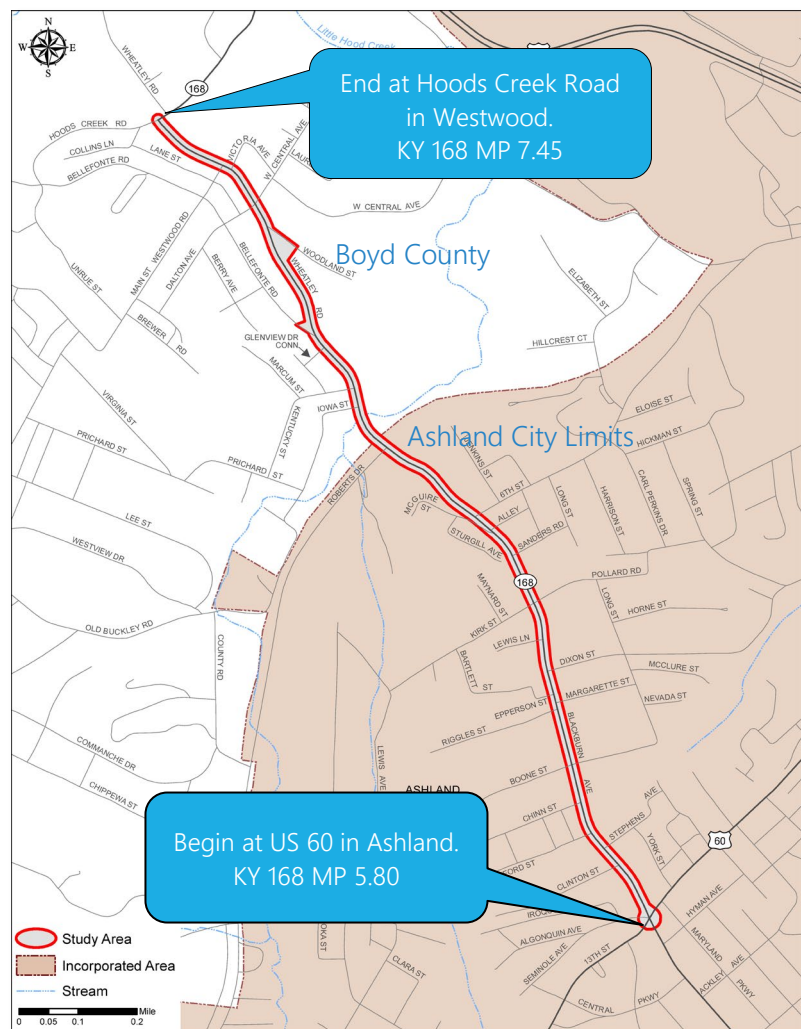


Figure 2: Study Area Limits

commercial, recreational, and wooded spaces as well. The study area is within the Kentucky-Ohio-West Virginia (KYOVA) Interstate Planning Commission's tri-state region. KYOVA is the metropolitan planning organization (MPO) for five counties: Boyd and Greenup in Kentucky, Cabell and Wayne in West Virginia, and Lawrence in Ohio.

Paired with 6<sup>th</sup> Street and Roberts Drive, KY 168 acts as a "cut-through" route for drivers avoiding the more congested US 60, US 23, and downtown Ashland streets to access the area's largest shopping mall, Walmart, and popular restaurant chains.

## 1.2 PREVIOUS STUDIES

The current study area overlaps several previous planning efforts. Notable in each study, the public's comments consistently identified similar areas on KY 168 as having transportation issues. Four of the most recent studies include:

- In 2022, Boyd County completed a planning study to estimate costs and impacts to add and/or improve KY 168 sidewalks between Kentucky Street and US 23 (Item No. 9-247).
- In 2020, the *Boyd-Greenup Small Urban Area Study*<sup>1</sup> examined safety and mobility needs throughout the region to identify short- and long-term projects. Public comments from this study identified safety concerns at the KY 168/Roberts Drive intersection and the US 60/KY 168 intersection. The US 60/KY 168 intersection was identified as a long-term, high priority intersection improvement with a variety of reconstruction options considered.
- In 2016, KYOVA completed its *Non-motorized Transportation Plan for Boyd County*<sup>2</sup>, which recommended improvements throughout Ashland and Boyd County to expand accommodations for cyclists and pedestrians. The plan recommended installing "Share the Road" signs north of 6<sup>th</sup> Street.
- In 2009, KYTC's *Ashland Connector Study*<sup>1</sup> considered the need for an improved transportation corridor between I-64 and downtown Ashland to relieve congestion on US 60 and improve connectivity to US 23. Several projects were recommended, including reconstructing KY 168 intersections with both US 60 and Roberts Drive.

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<sup>1</sup> Online at <https://transportation.ky.gov/Planning/Pages/Planning-Studies-and-Reports.aspx>

<sup>2</sup> Online at [https://www.kyovaipc.org/KYOVA\\_NM\\_Transportation\\_Plan\\_FINAL\\_June\\_16.pdf](https://www.kyovaipc.org/KYOVA_NM_Transportation_Plan_FINAL_June_16.pdf)

### 1.3 COMMITTED AND PLANNED PROJECTS

Every two years, the Commonwealth’s transportation budget is established by the state legislature in its biennial highway plan. In Kentucky’s current *2022–2028 Enacted Highway Plan*,<sup>3</sup> no committed projects are identified in the study vicinity.

Conceptual projects along the study area were compiled from the Continuous Highway Analysis Framework (CHAF) database and KYOVA’s *2050 Metropolitan Transportation Plan (MTP)*.<sup>4</sup>

- The CHAF database is the starting point for the biennial SHIFT process<sup>5</sup> that evolves into the two-year budget cycle identified in Kentucky’s Highway Plan.
- The MTP describes the metropolitan five-county region’s multimodal transportation priorities over a 20+ year planning horizon alongside anticipated funding streams.

CHAF and MTP concepts near the study area are shown in **Figure 3** with additional details summarized in **Table 1**. Three of four CHAF projects noted with asterisks were sponsored in the 2024 SHIFT process, which will help establish the state’s *2024–2030 Highway Plan*.

Table 1: Nearby CHAF and KYOVA MTP Projects along KY 168

CHAF MTP ID	BMP	EMP	Purpose	Total Cost
*IP20080512 BOY-10	5.80	7.46	Minor Widening: Improve safety and operational efficiency from US 60 to Hood Creek Road	\$44M
*IP20080515	3.87	5.80	Minor Widening: Improve safety and operational efficiency from KY 1012 to US 60	\$45M
*IP20200028 BOY-36	5.75	5.85	Spot Improvement: Improve safety and increase operational efficiency at the intersection	\$5M
IP20080513 BOY-09	7.46	8.18	Minor Widening: Improve safety and operational efficiency from Hoods Creek Road to US 23	\$16M

NOTE: BMP/ EMP = Beginning Mile Point / Ending Mile Point.

<sup>3</sup> Online at <https://transportation.ky.gov/Program-Management/Pages/2022-Enacted-Highway-Plan.aspx>

<sup>4</sup> Online at [https://www.kyovaipc.org/kyova\\_2050\\_final\\_mtp.php](https://www.kyovaipc.org/kyova_2050_final_mtp.php)

<sup>5</sup> SHIFT, or the Strategic Highway Investment Formula for Tomorrow, is a data-driven project scoring process to compare and prioritize statewide capital improvement projects to make better use of limited transportation funds in the Commonwealth’s biennial budget.

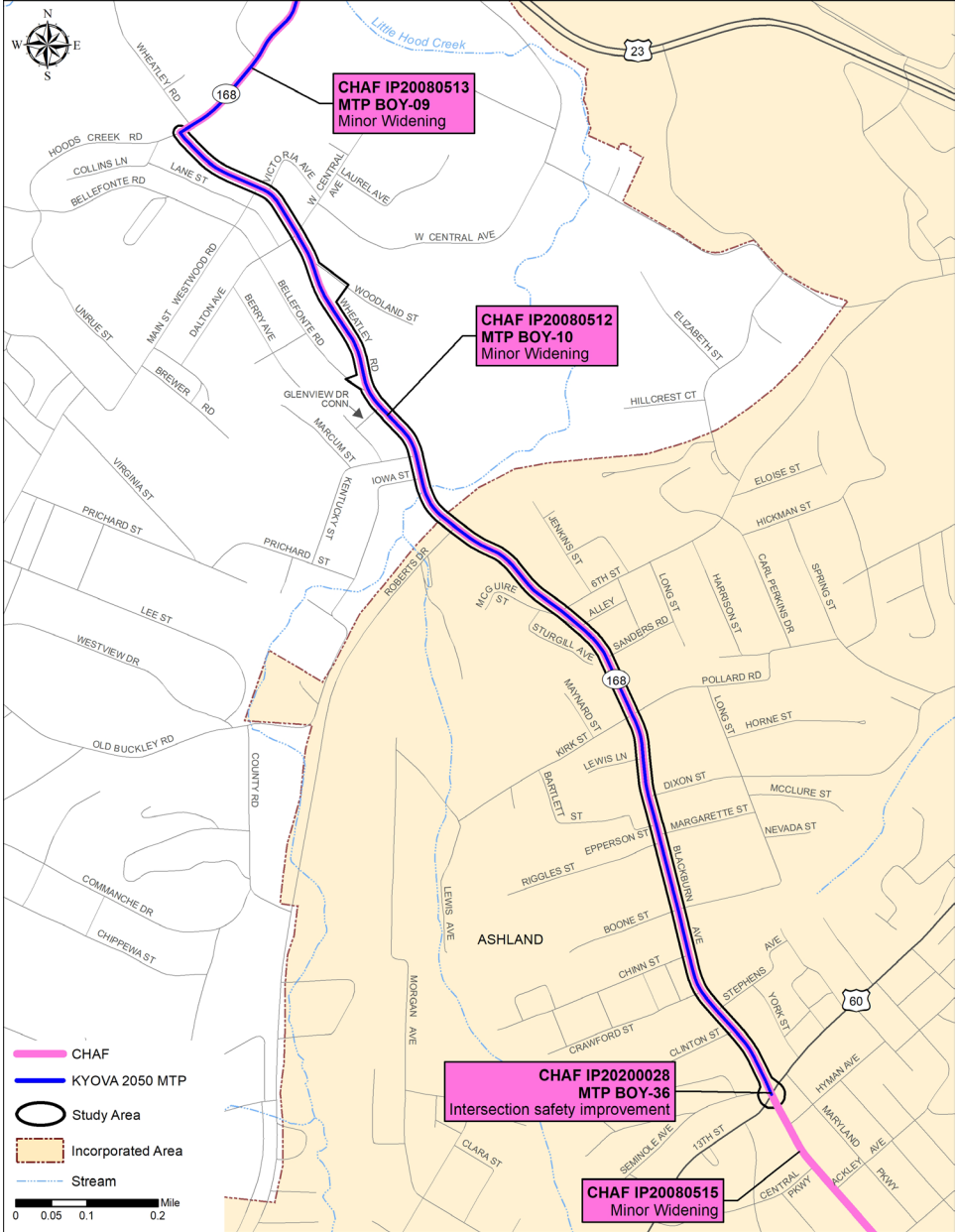


Figure 3: Area CHAF Projects

## 2.0 EXISTING CONDITIONS

Existing transportation conditions are described in the following sections. Data were obtained from KYTC’s Highway Information System (HIS) database, KYTC’s Transportation Enterprise Database (TED), the Federal Highway Administration’s (FHWA) National Bridge Inventory (NBI), traffic counts, and field reviews.

## 2.1 ROADWAY SYSTEMS

Functional Classification is a systemic grouping of streets and highways according to the character of travel service and access to adjacent land use they provide. This classification system recognizes that travel involves movement through a hierarchical system of facilities that progress from lower classifications handling short, locally oriented trips to higher classifications serving longer-distance travel at higher mobility levels. A roadway's classification is further designated as urban or rural based upon whether it is within FHWA's Adjusted Urban Area boundaries. The major functional classes with brief definitions are listed below.

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 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.

Additionally, functional classification is used as a tool for transportation agencies and designers. A roadway's functional class suggests expectations about roadway design: specifically, vehicle speed, capacity, and the roadway's relationship to land use development. Federal legislation uses functional classification in determining eligibility under the Federal-aid program. Transportation agencies typically describe roadway system performance, benchmarks, and goals by functional classification.

KY 168 is classified as an urban minor arterial; however, because it serves established neighborhoods and has narrow lanes, multiple intersections, and driveways, it operates more like an urban collector or local street.

KY 168 is listed in Kentucky's state secondary system, meaning it is a regionally significant route of shorter distance which provides mobility and access to land use activity, generally serving smaller cities and county seats within a region. It is not part of the National Highway System or a designated freight route.

## 2.2 ROADWAY GEOMETRY

KYTC's HIS database was queried to obtain geometric characteristics related to speed limits, driving lanes, shoulders, vertical grades, and horizontal curves. Existing KY 168 geometrics were compared to KYTC's *Highway Design Manual* (HDM)<sup>6</sup> to identify roadway characteristics that do not meet current practice guidelines.

**SPEED LIMITS.** The posted speed limit for KY 168 is 35 miles per hour (MPH). However, GPS-based travel speed data collected during a typical weekday in April 2023 (Figure 4) indicates driver speeds are less than 25 MPH for nearly a third of the corridor. Most delays occur at the US 60 signal, the Pollard Road/Kirk Street intersection (all-way stop), the 6th Street intersection (all-way stop), the Roberts Drive intersection near the at-grade CSX railroad crossing, and approaching Hoods Creek Road.

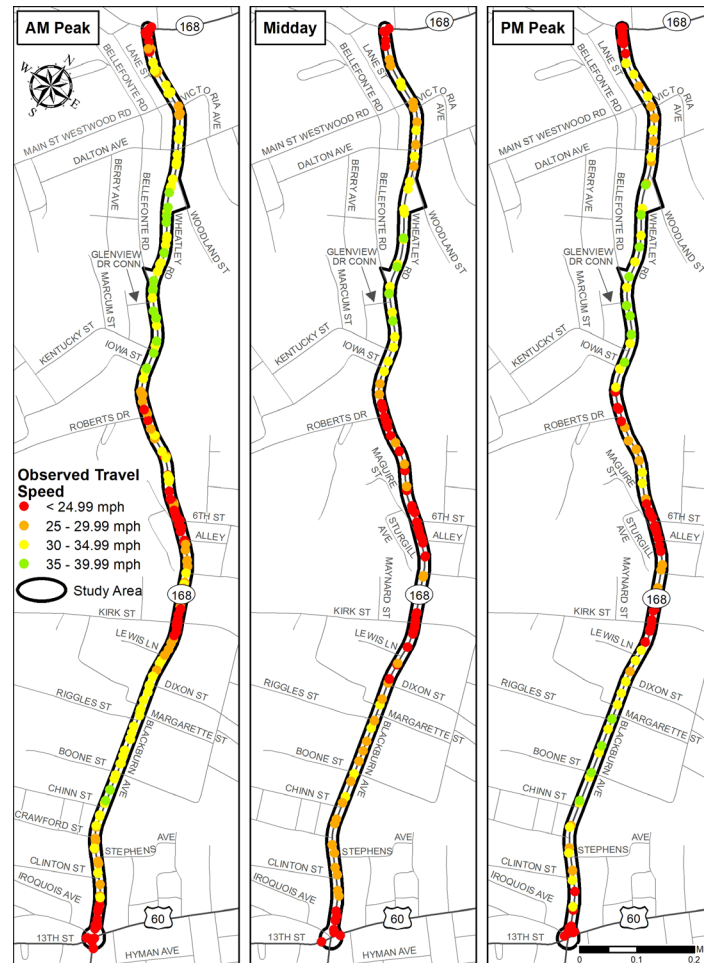


Figure 4: Data Logger Speed Results

<sup>6</sup> Online at <https://transportation.ky.gov/Highway-Design/Pages/default.aspx>



**LANES AND SHOULDERS.** HDM Exhibit 700-04 recommends 11-foot-wide lanes for urban arterial streets with speed limits between 35 and 45 MPH.

KY 168 has two 10-foot-wide driving lanes. Shoulders widths vary, with concrete curb-and-gutter in portions of the southern section near Ashland and 2- to 3-foot-wide shoulders (0 to 1 foot paved) from Roberts Drive into Westwood. **Figure 5** shows representative views of the typical section along the study corridor limits.



Figure 5: Representative Views of KY 168 Lanes and Shoulders

**SIDEWALKS.** Sidewalks are on at least one side of KY 168 through the Ashland city limits, though the width, condition, and treatments approaching cross-streets vary so some sites do not satisfy *American Disabilities Act* (ADA) standards. There are also noncontiguous sidewalks approaching Westwood except for a 0.44-mile gap from Roberts Drive to Woodland Street. There are limited crosswalks or other pedestrian amenities throughout. Representative photos are shown in **Figure 6**.



Figure 6: Representative Sidewalk Views

**VERTICAL GRADES.** HIS data were reviewed to identify substandard grades (i.e., steep hills) along the study route. Vertical grades are organized into six classes, graded A (flattest) through F (steepest), as shown in Table 2. HDM Exhibit 700-04 recommends 8% maximum grade for urban arterial streets in rolling terrain, i.e., Class E or better.

Table 2: Vertical Grade Class

Code	Description (percent)
A	0.0-0.4
B	0.5-2.4
C	2.5-4.4
D	4.5-6.4
E	6.5-8.4
F	8.5+

Two KY 168 segments are designated as Class F vertical grades:

- Sanders Road to just north of the CSX railroad crossing (MP 6.47–MP 6.78)
- Bellefonte Road to Woodland Street (MP 6.99 – MP 7.19)

Steep grades near the CSX railroad crossing limit sight distance, creating a recurring safety complaint among local drivers (discussed further in **Section 2.4**). **Figure 8** shows steep vertical grades and sharp horizontal curves along the study corridor.



Figure 7: Steep Vertical Curve Limits Visibility

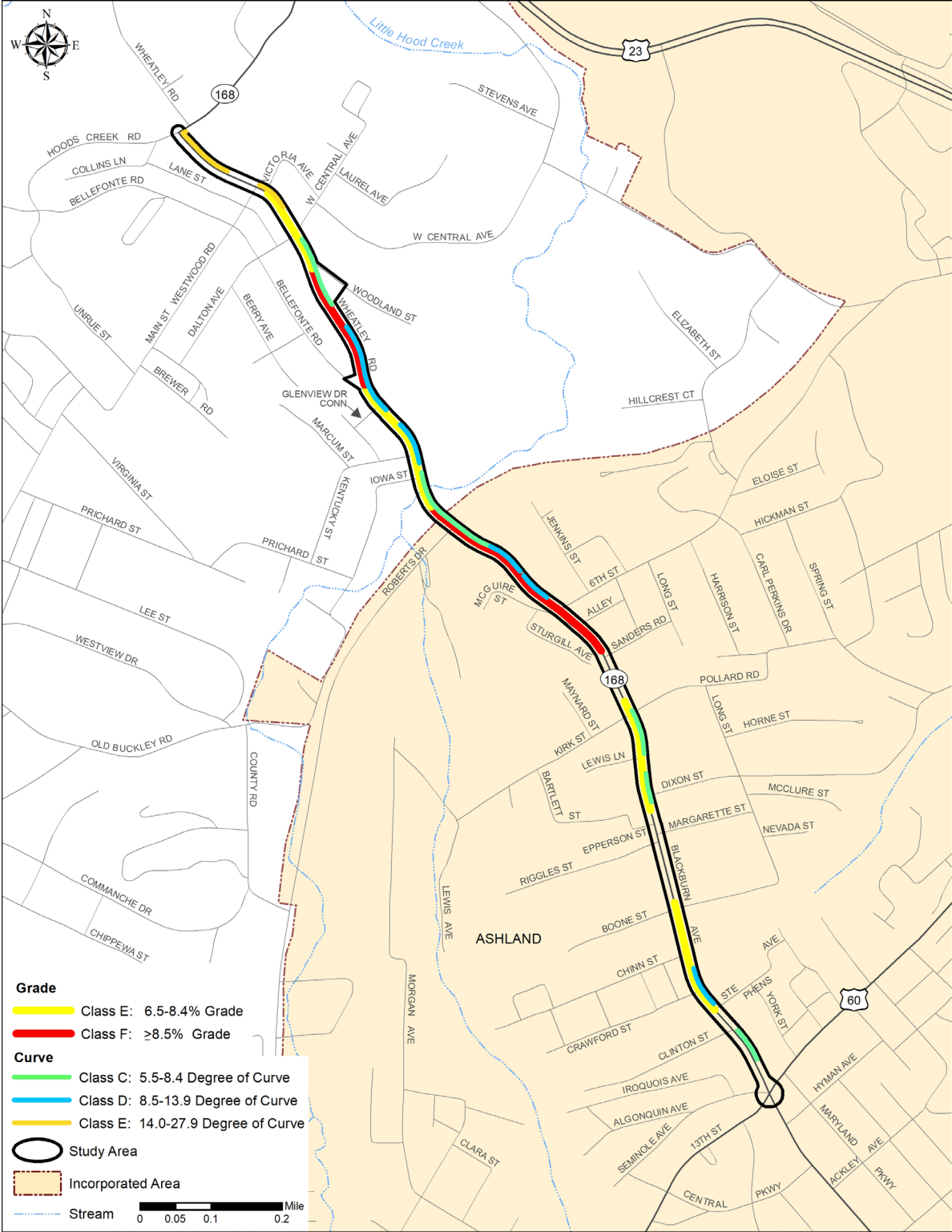


Figure 8: Steep Vertical Grades and Sharp Horizontal Curves

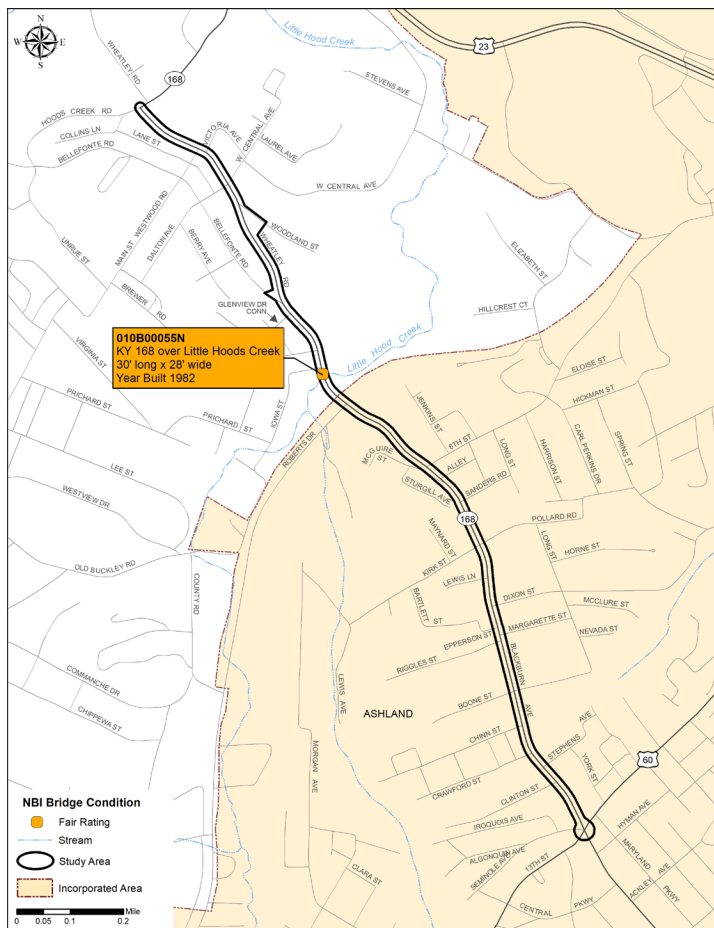
**HORIZONTAL CURVES.** HIS data were reviewed to identify horizontal curves along the study routes. At a planning level, KYTC organizes horizontal curves into six classes, graded A (most sweeping) through F (sharpest), as listed **Table 3**. Design guidelines vary by area type (rural versus urban), design speed, and superelevation, but the minimum radius for low-speed urban streets generally falls into Class E. Within study limits, KY 168 has no Class F horizontal curves but two locations are Class E: MP 7.274–7.319 at Victoria Avenue and MP 7.368–7.479 at the KY 168/Hoods Creek Road intersection, where the northbound KY 168 approach is stop-controlled.

Table 3: Horizontal Curve Class

Code	Degrees	Radius (ft)
A	0.0-3.4	≥1,680
B	3.5-5.4	1,640-1,060
C	5.5-8.4	1,040-680
D	8.5-13.9	670-410
E	14.0-27.9	410-205
F	28.0+	≤205

### 2.3 STRUCTURES

One bridge was identified in the study corridor: 010B00055N. Built in 1982, the prestressed box beam bridge carries KY 168 over Little Hood Creek at MP 6.829. KYTC inspected the structure in 2021 and found it in fair condition.



Year Built:	1982
Mile Point:	6.829
Inspection Date:	2021
Condition Rating:	Fair
Load Posting:	No Restriction
Detour Length:	8.7 miles
Lanes on Bridge:	2
Main Span:	Prestressed Concrete Box Beam
Bridge Length:	30 feet
Bridge Width:	28 feet
Wearing Surface:	Bituminous
Approach Roadway Width:	23 feet
Skew Angle:	0 degrees
*Historical Significance:	Not National Register eligible

\*(see Section 3.2.2)

Figure 9: Bridge 010B00055N over Little Hood Creek

## 2.4 RAIL CROSSING

CSX railroad tracks run along the banks of the Ohio River in Boyd and Greenup counties. One line runs adjacent to and north of Roberts Drive, featuring an at-grade crossing on KY 168 at MP 6.77, approximately 50 feet from Roberts Drive. Though rarely carrying train traffic, the crossing is listed on the Federal Railroad Administration’s inventory as an active rail line.

The steep grade along KY 168 and proximity between the tracks and intersection limit visibility for motorists. This contributes to elevated crash trends (see **Section 2.6.1**), a recurring public safety concern discussed in previous surveys. The location is challenging for school buses, which are required by state law to stop at every railroad crossing.

**Figure 10** illustrates the impact of the grade/crossing on visibility approaching Roberts Drive from the north. As shown, southbound motorists (represented by point A) coming from the left side of the image can see an object at point B (e.g., a car waiting to turn from Roberts Drive) from about 105 feet away before the hill blocks it from view. At 35 MPH, a moving vehicle covers this distance in two seconds—or in 3.5 seconds at 20 MPH. (The vertical scale of the image is exaggerated to illustrate the principle.)

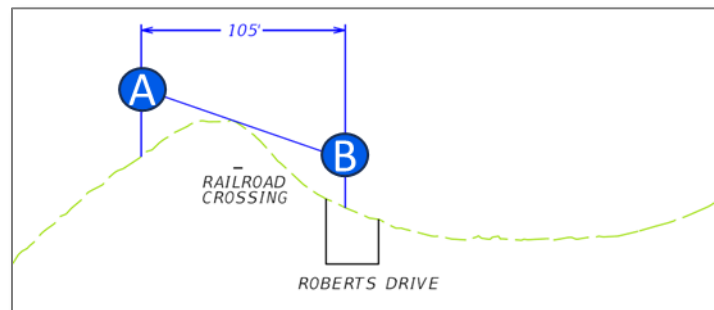


Figure 10: Stopping Sight Distance at Roberts Drive/CSX Crossing

Grades at the KY 168 crossing do not meet current American Association of State Highway and Transportation Officials’ (AASHTO) design standards. Specifically, a highway crossing railroad tracks should be level within 2 feet of the rails and should change by no more than 3 vertical inches for the first 30 feet in either direction from the crossing. This standard provides a flat platform for large or low-clearance vehicles to safely navigate the crossing. For comparison, the KY 168 crossing drops over 2.5 feet within the first 30 feet towards Roberts Drive.

## 2.5 2023 TRAFFIC

To understand current roadway users, video-based peak period turning movement counts were conducted at seven key intersections along the corridor during February 2022 and March 2023. Counts

classified vehicles into one of five categories—motorcycles, cars, buses, single-unit trucks, and articulated trucks—and identified pedestrians and bicyclists.

Analysts also reviewed historic KYTC volume data, including truck percentages, K-factors,<sup>7</sup> and peak-hour directional distributions. Additional information is in **Appendix A**. Daily, KY 168 carried 5,800-9,200 vehicles per day (vpd) in 2023, with the busiest stretch between 6<sup>th</sup> Street and Roberts Drive.

### 2.5.1 TRAFFIC OPERATIONS

Two commonly applied highway performance indicators, level of service (LOS) and volume-to-capacity (v/c) ratios, were calculated to describe traffic operations along the corridor. Computations were performed in accordance with current *Highway Capacity Manual* (HCM) procedures.

**LEVEL OF SERVICE.** LOS is a qualitative measure that describes traffic conditions based on metrics such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, and convenience. LOS typically represents a driver’s outlook on traffic conditions based on perceived congestion. As illustrated in **Figure 11**, LOS A is associated with free flow conditions, high freedom to maneuver, and little or no delay. Conditions at or near capacity typically are associated with LOS E; whereas LOS F represents oversaturated traffic conditions beyond capacity, with low travel speeds, little or no freedom to maneuver, and lengthy delays.







LEVEL OF SERVICE		DESCRIPTION
<b>A</b>		<ul style="list-style-type: none"> <li>Average Travel Speed.</li> <li>Free traffic flow with few restrictions on maneuverability or speed.</li> </ul> <p><b>NO DELAYS</b></p>
<b>B</b>		<ul style="list-style-type: none"> <li>Stable traffic flow.</li> <li>Speed becoming slightly restricted.</li> <li>Low restriction on maneuverability.</li> </ul> <p><b>NO DELAYS</b></p>
<b>C</b>		<ul style="list-style-type: none"> <li>Stable traffic flow, but less freedom to select speed, change lanes or pass.</li> </ul> <p><b>MINIMAL DELAYS</b></p>
<b>D</b>		<ul style="list-style-type: none"> <li>Traffic flow becoming unstable.</li> <li>Speeds subject to sudden change.</li> <li>Passing is difficult.</li> </ul> <p><b>MODERATE DELAYS</b></p>
<b>E</b>		<ul style="list-style-type: none"> <li>Unstable traffic flow.</li> <li>Speeds change quickly and maneuverability is low.</li> </ul> <p><b>MAJOR DELAYS</b></p>
<b>F</b>		<ul style="list-style-type: none"> <li>Heavily congested traffic.</li> <li>Demand exceeds capacity and speeds vary greatly.</li> </ul> <p><b>MAJOR DELAYS</b></p>

Figure 11: Level of Service Thresholds

LOS can be measured as an average for a highway segment or for any stop-controlled movement(s) at an intersection, though the delay thresholds vary based on whether the intersection is signalized or stop-controlled. As a general rule, LOS D is acceptable for urban areas and LOS C for rural areas.

<sup>7</sup> K-factor is defined as the proportion of annual average daily traffic occurring in the design hour.

**VOLUME-TO-CAPACITY.** Another measure, v/c, compares a facility's traffic volume to its theoretical capacity over a specific duration, one hour in this instance. A v/c ratio greater than 1.0 indicates a route has exceeded its theoretical capacity and additional improvements may be justified.

**INTERSECTION OPERATIONS.** Based on peak hour turning movement counts, operations were calculated at study intersections, illustrated in **Figure 12**. For simplicity, KY 168 approaches are described as north/south with cross streets as east/west.

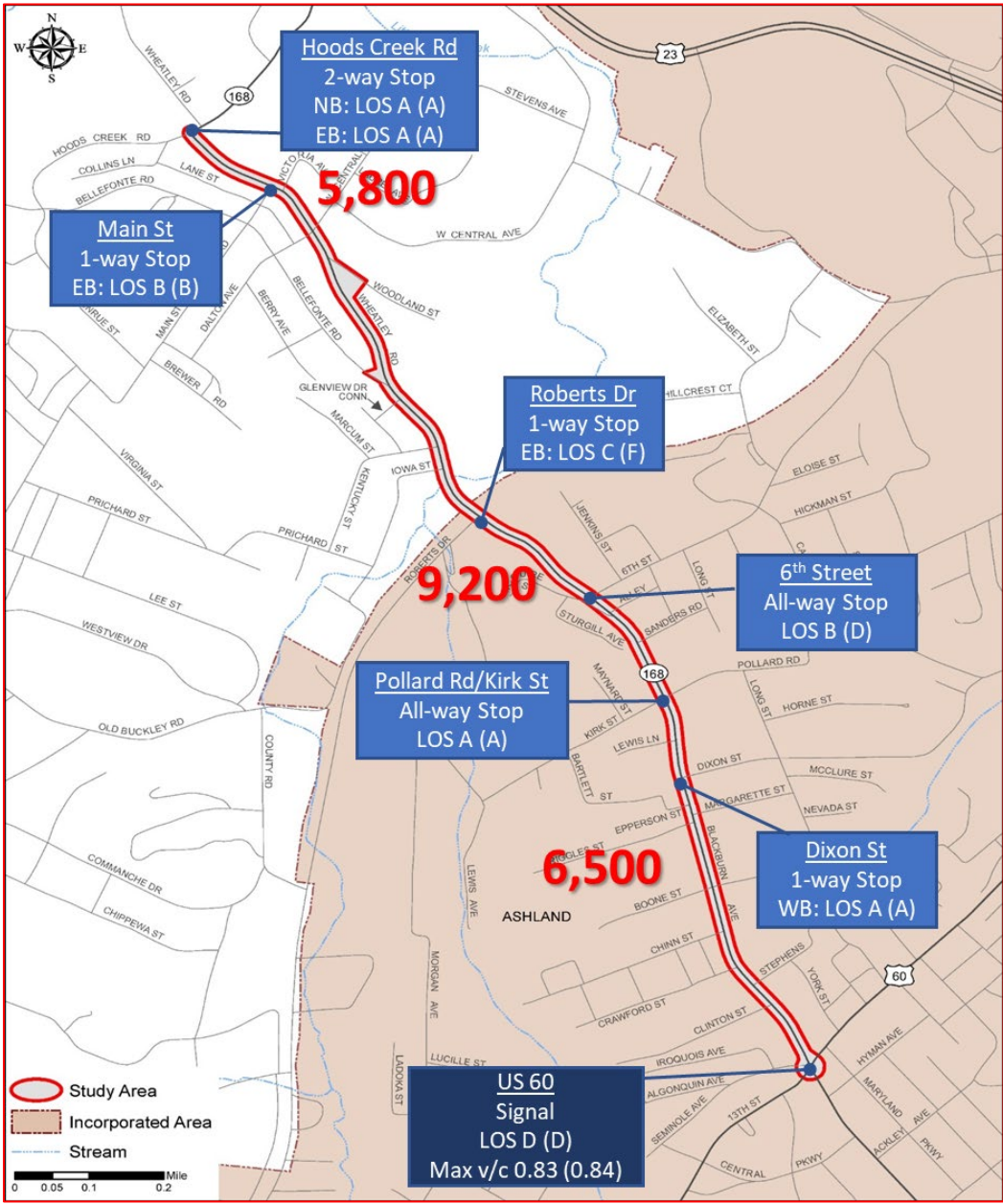


Figure 12: 2023 Daily Traffic and AM (PM) Peak Hour Traffic Operations

Analysis shows most intersections operate at a LOS C or better, with a few exceptions:

- During the PM peak hour, the stop-controlled eastbound Roberts Drive approach operates at LOS F with 79 seconds of delay and a 0.92 v/c.
- During the PM peak hour, the all-way stop-controlled intersection at KY 168/6<sup>th</sup> Street operates at LOS D overall. The heaviest movement is from the southbound KY 168 approach, which operates at LOS E with 44 seconds of delay or a 0.91 v/c.
- The five-leg signal at US 60/KY 168/Algonquin Avenue operates at LOS D in both peak hours based on the current signal timing plan, approaching its capacity.
  - The northbound left turn from KY 168 onto US 60 (towards I-64) operates at LOS F during the AM peak hour with a 1.05 v/c.
  - The US 60 thru movement towards Ashland operates at LOS E during the AM peak hour with a 1.12 v/c.
  - During the PM peak hour, both KY 168 approaches and Algonquin Avenue operate at LOS E to assign adequate green time for US 60 approaches.

## 2.5.2 ACTIVE TRANSPORTATION USERS

While limited volume data are available, the corridor represents an important link for cyclists and pedestrians. Turning movement counts identified pedestrians and/or cyclists at all seven study intersections although volumes were less than 1 or 2 per hour beyond US 60. Public housing, a hospice center, a daycare, and shopping malls are accessible from the KY 168 corridor. Based on the socioeconomic profile (see **Section 3.2.3**), the primary modes of transportation for a portion of nearby residents are biking, walking, or transit.

Members of the regional bicycle club, Ashland Cyclist Enthusiasts (ACE), routinely share the road with motorists when traveling local—official and unofficial—bicycle routes in the area. Though not an officially designated route, KY 168 sees consistent bicycle usage, but no dedicated bike facilities exist along the corridor.

## 2.5.3 TRANSIT

Ashland Bus Service (ABS) operates fixed-route transit services throughout Ashland and adjacent communities. ABS fixed routes include 13<sup>th</sup> Street, Crosstown, 29<sup>th</sup> Street, Catlettsburg, and Downtown. KY 168 is served by ABS's Crosstown Loop bus service with seven stops along the west edge of the corridor (**Figure 13**). The busiest stop is at Pollard Road/Kirk Street, which serves the hospice and childcare centers. No bus pull-offs or shelters serve the corridor but stops are located so adjacent parking lots provide informal waiting areas.



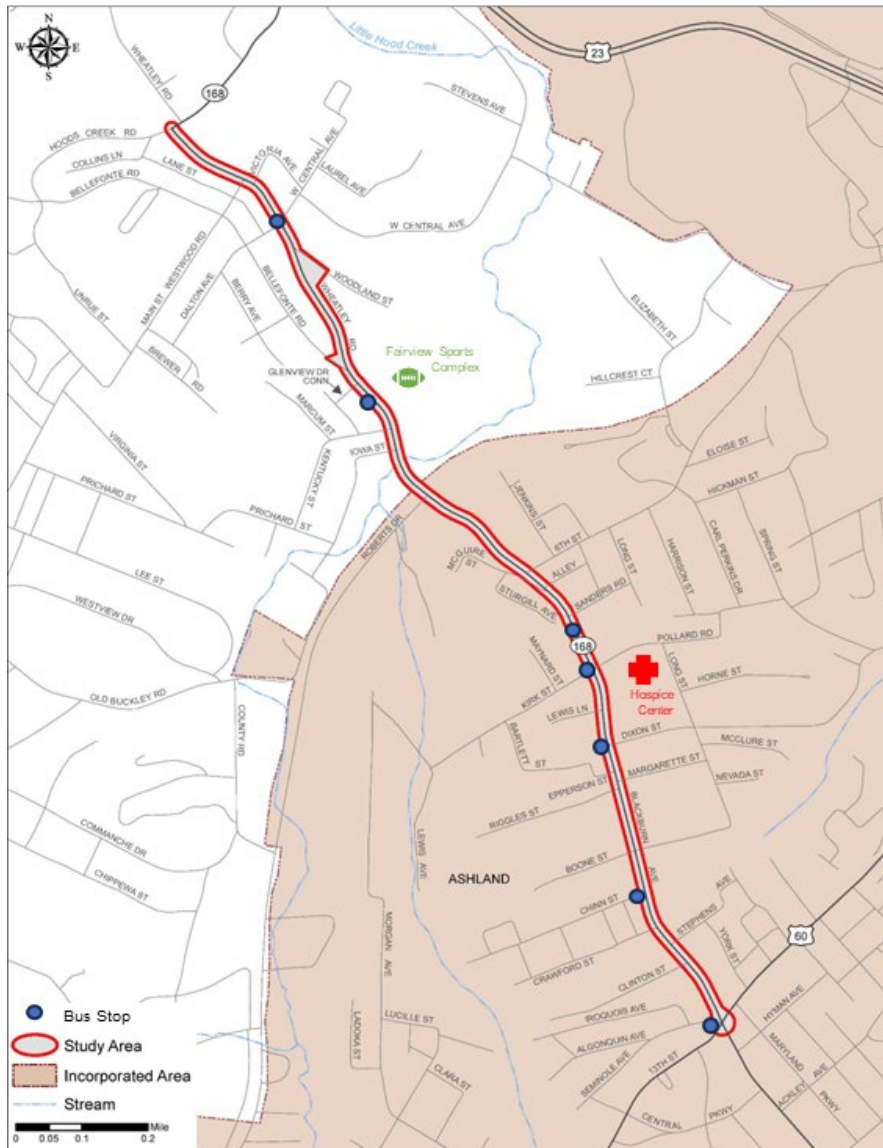


Figure 13: ABS Bus Stops in Study Area

## 2.6 CRASH HISTORY

Safety analyses were conducted using crash data retrieved from KYTC’s TED warehouse and the Crash Data Analysis Tool (CDAT). Historical crash data were evaluated for a five-year period (January 2018 through December 2022)<sup>8</sup> to determine trends (see **Appendix B**). A review of historic crash data and CDAT information revealed opportunities to improve safety and reduce crashes along the corridor and

<sup>8</sup> While traffic patterns were atypical during the 2020 pandemic, the distribution of crashes is comparable to other years in the analysis period.

at intersections. **Figure 14** shows crash locations by severity and type. During the analysis period, 99 crashes were reported along KY 168 in the study area.

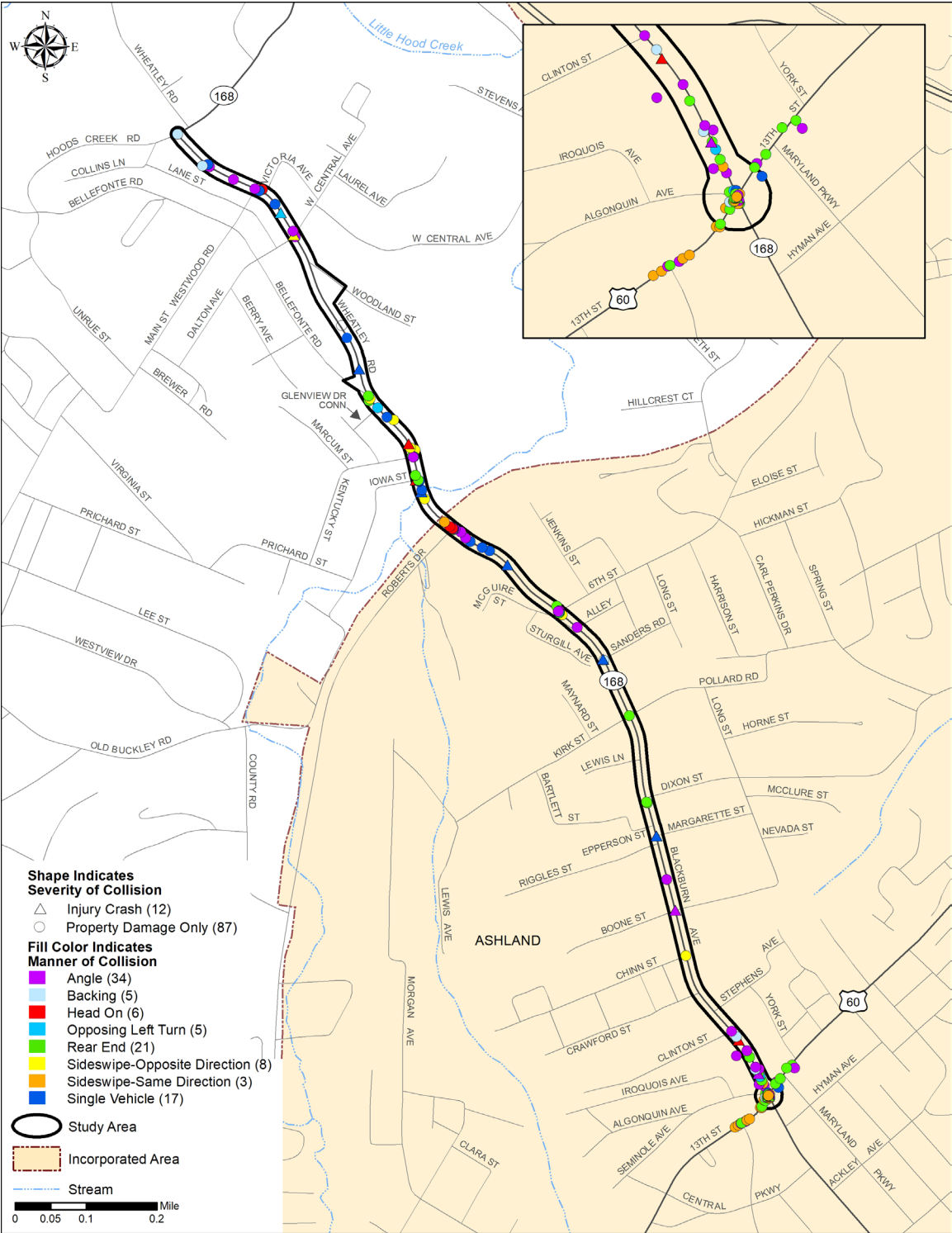
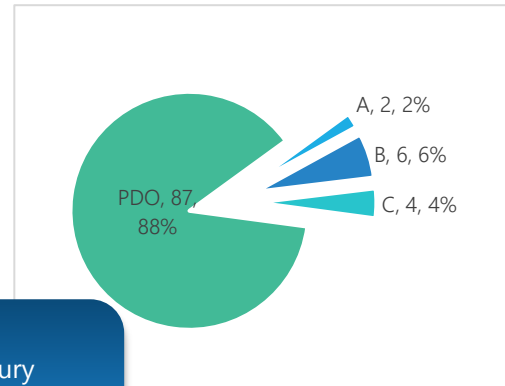


Figure 14: Crash Location, Severity, and Type

**BY SEVERITY.** The “KABCO” scale classifies crashes by severity with letters representing injury levels: K–fatality, A–suspected severe injury, B–suspected minor injury, C–possible injury, and O–no injury or property damage only (PDO). **Figure 15** summarizes crash severity in the study area. There were no fatalities but 12% resulted in injuries—including one pedestrian strike (B-Minor Injury) near Margarett Street. The remaining 88% were PDO.



**K**–Killed  
**A**–Serious Injury  
**B**–Minor Injury  
**C**–Possible Injury  
**O**–No injury or PDO

Figure 15: Crashes by Severity

**BY TYPE.** **Figure 16** summarizes crash type trends. Angle crashes are the leading crash type, accounting for 34% of all crashes, followed by rear end collisions (21%) and single vehicle crashes (17%).

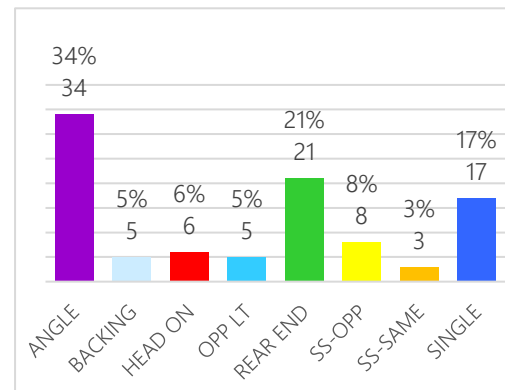


Figure 16: Crashes by Type

**OTHER CRASH TRENDS.** Further analysis identified crash trends along KY 168.

- Most crashes occurred during 3 PM to 4 PM and 5 PM to 6 PM, corresponding to school and work commuting hours.
- There is a directional skew—62% of crashes are associated with northbound motorists heading towards Westwood. The directional distribution is not restricted to a specific crash type, location, or time of day.
- 16% of crashes occurred during nighttime. Streetlights run along the highway within the city limits south of Roberts Drive.
- 22% of crashes occurred in wet or icy conditions.
- 28% of crashes were roadway departures, which tend to be more severe than other crash types. Roadway departure is one of the emphasis areas identified by the Office of Highway Safety.<sup>9</sup>
- The highest percentage of crashes (20%) involved 16- to 20-year-old drivers; drivers 65+ represent 12% of crashes.

<sup>9</sup> 2020–2024 Strategic Highway Safety Plan, online at <https://transportation.ky.gov/HighwaySafety/Pages/default.aspx>

### 2.6.1 CRASHES AT KEY INTERSECTIONS

Of the 99 crashes along KY 168, 89 occurred at one of the 30 intersections along the 1.65-mile corridor. The highest concentrations were at Roberts Drive and US 60.

- At Roberts Drive, there were 14 crashes during the five-year analysis period. Nearly half (7) were angle collisions, followed by rear end crashes (3). None resulted in fatalities or injuries. With the steep grades, sight distance for southbound vehicles is extremely limited.
- At the five-leg intersection with US 60, there were 36 crashes during five years. The most common types were rear end crashes (42%), same direction sideswipes (31%) and angle crashes (19%). While the majority were PDO crashes, one angle collision resulted in injuries.

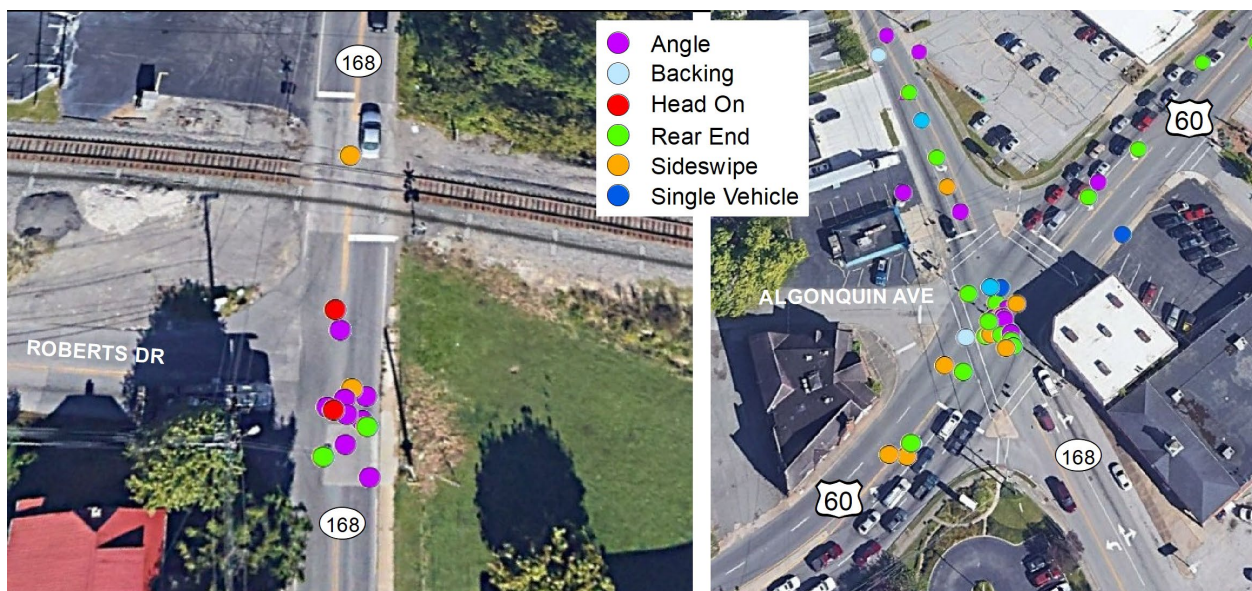


Figure 17: Crashes at Intersections with Roberts Drive (left) and US 60 (right)

### 2.6.2 STATISTICAL ANALYSIS: LEVEL OF SERVICE OF SAFETY

Statistical analyses were performed using the Kentucky Transportation Center's CDAT to find areas of crash concentrations. The measure is Level of Service of Safety (LOSS)—a refined statistical methodology in the *Highway Safety Manual* used to evaluate safety needs. LOSS categories 1 and 2 represent sites with fewer than anticipated crashes, while categories 3 and 4 represent sites with more than anticipated crashes. Because LOSS 4 sites experience such elevated crash rates, there is a higher probability that safety countermeasures at these locations will result in larger improvements.

**CDAT RESULTS FOR KY 168.** LOSS for the corridor was calculated for both severe (KAB) and non-severe (CO) crash distributions, considering both highway segments and intersections. Results are summarized in **Figure 18**.

As shown, the northwestern segment and many intersections exhibit LOSS 3 and 4 ratings, indicating crash frequencies greater than predicted by mathematical formulas. The Roberts Drive intersection exhibits LOSS 4 for both severe and non-severe crashes, suggesting a high potential for countermeasures at this location to reduce observed crash rates.

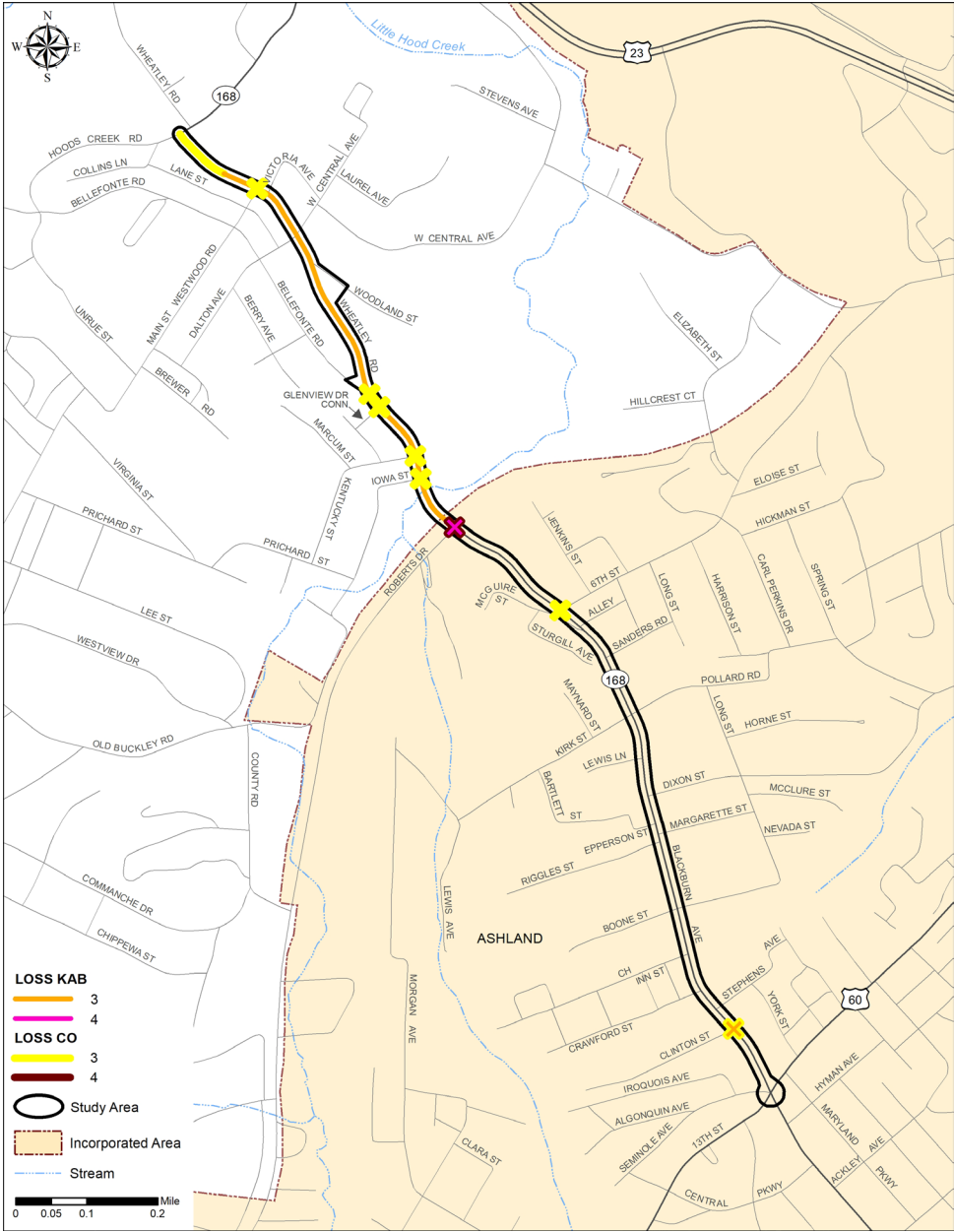


Figure 18: Segment and Intersection LOSS

## 3.0 ENVIRONMENTAL OVERVIEW

The purpose of this environmental overview is not to quantify environmental impacts, but instead to identify potential environmental issues to consider during the project development process. This information should aid the project team in making decisions to avoid, minimize, and/or plan for mitigation of potential project impacts, as appropriate. Should future projects develop following this study, additional environmental studies may be required.

If there is a federal nexus (e.g., federal funds, lands, permits, etc.) on a future project, then the procedures established from the *National Environmental Policy Act* (NEPA) must be followed. NEPA requires, to the fullest practicable extent, that federal actions be interpreted and administered in accordance with its environmental protection goals. It requires an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment. The potential environmental impacts and need for safe and efficient transportation must be weighed to reach a decision that is in the best overall public interest.

**Figure 19** provides a visual summary of environmental resources near the study corridor.

### 3.1 NATURAL ENVIRONMENT

The natural environment includes all living and non-living things occurring naturally (not artificial or human-built). This includes aquatic ecology, such as rivers, streams, and wetlands; threatened and endangered species; farmlands; and geotechnical resources.

#### 3.1.1 WATER RESOURCES

The most notable water resources in the region are the Ohio River and the Big Sandy River, which form the northeastern boundary of Kentucky. The study area contains one named stream, Little Hood Creek, which roughly follows the CSX railroad tracks before draining to the Ohio River. The stream crosses below KY 168 at the Little Hood Creek Bridge (**Figure 9**), surrounded by 100- and 500-year floodplains.

The *National Wetlands Inventory* records no wetlands beyond riverine habitat along the creek; Kentucky Geological Survey (KGS) records no springs or ponds within the study area. KGS records show one water well along the corridor, associated with a gas station in Westwood. No federally designated Wild or Scenic Rivers or Outstanding State Resource Waters exist in the study area.

Impacts to streams and wetlands require permit coordination with the US Army Corps of Engineers, US Coast Guard, and/or Kentucky Division of Water, depending on the scale of the water resource and potential disturbance.

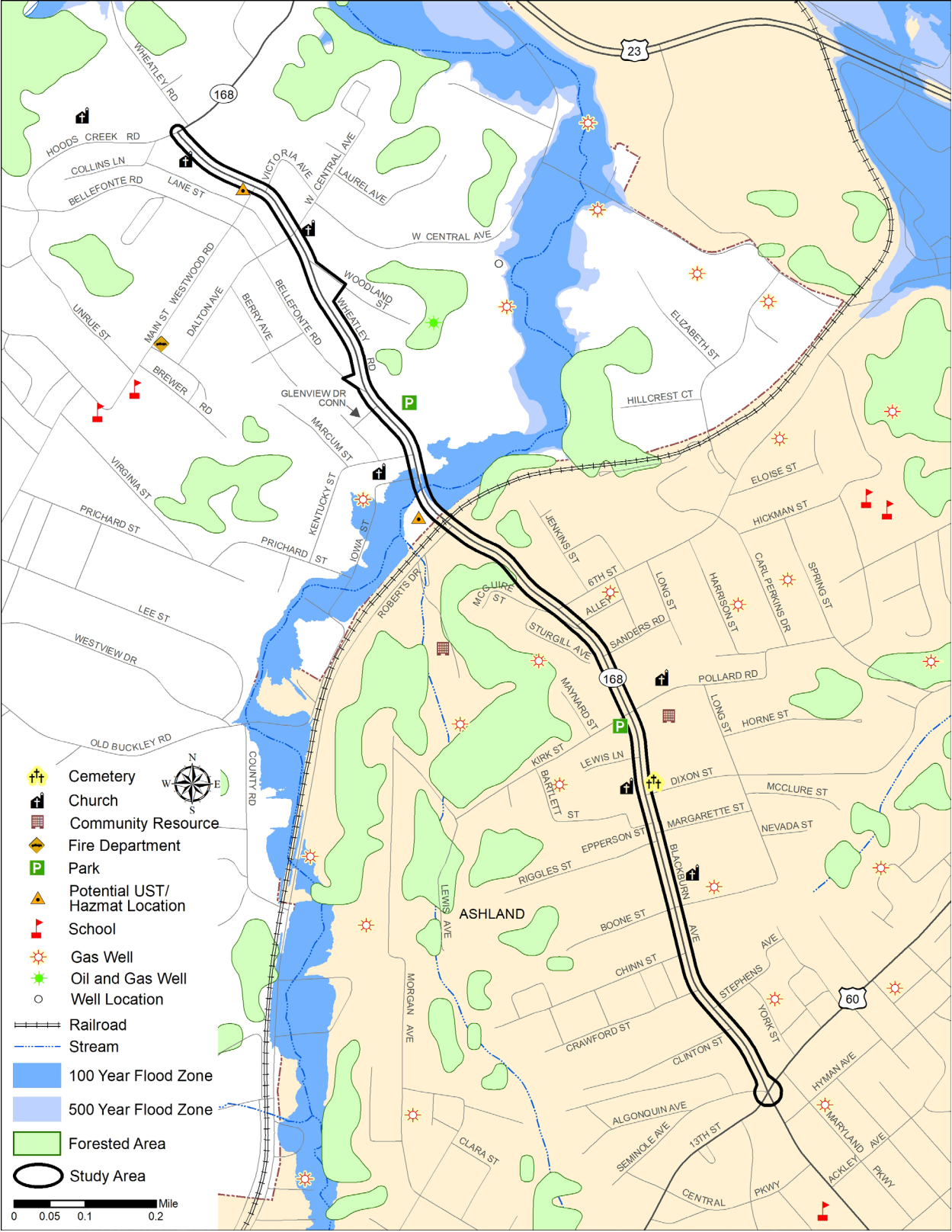


Figure 19: Environmental Overview

### 3.1.2 PROTECTED SPECIES

The US Fish and Wildlife Service (USFWS) maintained database of federally protected species are listed as endangered or threatened under the *Endangered Species Act*. Three listed bat and eleven mussel species potentially inhabit the study area. There is no critical habitat along the study corridor. **Table 4** lists potential threatened and endangered species in the area.

Table 4: Listed Threatened and Endangered Species

Group	Name	Scientific Name	Status
Mammals	Gray bat	<i>Myotis grisescens</i>	Endangered
	Indiana bat	<i>Myotis sodalis</i>	Endangered
	Northern long-eared	<i>Myotis septentrionalis</i>	Endangered
Mussels	Northern riffleshell	<i>Epioblasma rangiana</i>	Endangered
	Sheepnose	<i>Plethobasus cyphus</i>	Endangered
	Clubshell	<i>Pleurobema clava</i>	Endangered
	Fanshell	<i>Cyprogenia stegaria</i>	Endangered
	Orangefoot	<i>Plethobasus cooperianus</i>	Endangered
	Pink mucket	<i>Lampsilis abrupta</i>	Endangered
	Rabbitsfoot	<i>Quadrula cylindrica</i>	Threatened
	Ring pink	<i>Obovaria retusa</i>	Endangered
	Rough pigtoe	<i>Pleurobema plenum</i>	Endangered
	Snuffbox	<i>Epioblasma triquetra</i>	Endangered
	Salamander mussel	<i>Simpsonaias ambigua</i>	Proposed Endangered
Insect	Monarch butterfly	<i>Danaus plexippus</i>	Candidate

A habitat assessment may be needed in the early stages of project development for future project(s) to assess potential project impacts to threatened and endangered species. Projects that occur within an area of known bat habitat will require project-specific evaluation to assess appropriate minimization/mitigation measures. KYTC maintains a *Programmatic Conservation Memorandum of Agreement for Forest Dwelling Bats* to streamline measures to minimize impacts for Indiana and northern long-eared bats. For other federally listed species, specific ecological surveys may be required for projects that have the potential to impact habitat. Coordination with the USFWS Kentucky Field Office will be necessary to determine the need for future project-specific surveys.

### 3.1.3 FARMLAND CLASSIFICATIONS

While little of the study area is actively farmed, Natural Resource Conservation Service (NRCS) classifies farmlands based on soil type. As shown in **Figure 20**, 63% of study area soils qualify as farmlands of statewide importance, with another 16% classified as prime farmlands. No protected easements or



agricultural districts were identified within the study area. Should federal funds be used on future projects, the *Farmland Protection Policy Act* must be followed. If there is potential to convert farmland, coordination with the local NRCS office is required.

### 3.1.4 GEOTECHNICAL

KYTC did not complete a Geotechnical Overview for this study; however, several have been previously completed in the area:

- S-003-2005 (Roberts Drive)
- R-044-2003 (US 60)
- R-009-1998 (US 60)

Kentucky Geological Survey (KGS) records show the study area lies within the Eastern Coal Fields Physiographic Region of the state. The area is underlain by three Pennsylvanian formations—Princess, Alluvium, and Terrace deposits—mostly consisting of siltstone, sandstone, shale, gravel, and coal.

KGS mapping shows no sinkholes or karst potential in the area. No known landslides have occurred in the immediate vicinity, but two have been identified in the surrounding area, both on the river side of US 23. Oil and gas wells are common in Boyd County, particularly in and around Ashland. Known wells in the area are shown on **Figure 19**.

### 3.1.5 HAZARDOUS MATERIALS

While a detailed records search was not conducted at the planning level, US Environmental Protection Agency (USEPA) records and windshield surveys identified a few land uses abutting the corridor that may represent potential hazardous materials concerns for any future project development phases.

- Two RCRA<sup>10</sup> sites are mapped near the US 60/KY 168 intersection: Rite Aid and Family Dollar.

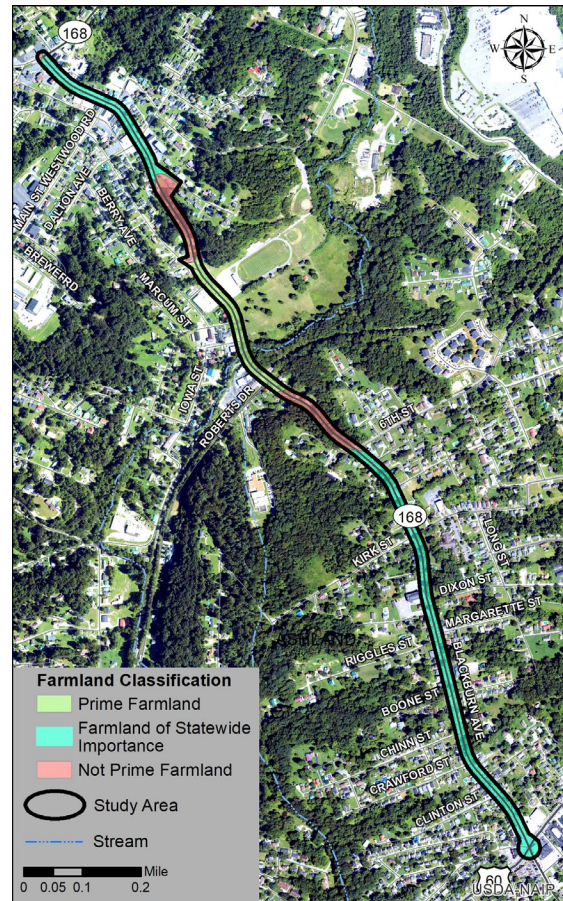


Figure 20: NRCS Farmland Soil Classifications

<sup>10</sup> Resource Conservation and Recovery Act, online at <https://www.epa.gov/rcra>

- A third RCRA site (Dollar General) is mapped near the KY 168/Hoods Creek Road intersection.
- An oil company northwest of the KY 168 railroad crossing may represent a concern.
- A gas station/convenience store is in the southeast quadrant of the KY 168/Main Street intersection in Westwood.

### 3.1.6 AIR QUALITY CONSIDERATIONS

USEPA has set up National Ambient Air Quality Standards (NAAQs) for six criteria pollutants: ozone, lead, nitrogen dioxide, sulfur dioxide, carbon monoxide, and particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>).

The region is currently in attainment for all criteria pollutants monitored by the USEPA. However, compliance is complicated by the multi-state jurisdiction and changing USEPA standards. A 2018 court ruling requires continuing conformity demonstrations for ozone emissions based on 1997 standards and KYOVA's transportation improvement program (TIP) development processes continue to incorporate performance measures and air quality conformity requirements. Maintenance plans for particulate matter (PM<sub>2.5</sub>) went into effect during 2011–2012 for each of the states forming the metropolitan region.

To prove air quality conformity, federally funded transportation projects recommended for further development should be modeled and included in KYOVA's TIP and the KYTC's statewide transportation improvement program (STIP) to ensure conformity requirements are satisfied.

Future federal projects may need to address potential Mobile Source Air Toxics (MSAT) impacts based on the project type. FHWA has developed a tiered approach for three categories to analyze MSATs in NEPA documents, each depending on specific project circumstances. The three tiers are no potential/exempt projects requiring no analysis, low potential requiring a qualitative analysis, and higher potential requiring quantitative analysis. Based on traffic volumes, any proposed improvements most likely fall into one of the lower two categories.

## 3.2 HUMAN ENVIRONMENT

The human environment includes people and the resources they define: land use, community features, cultural historic resources, etc. Each could potentially be affected by future projects. The following sections identify these resources for consideration during any future project development phases. **Figure 19** shows corresponding locations.

### 3.2.1 LAND USE AND COMMUNITY RESOURCES

The region's character is intricately connected to its historic mining of oil, coal, and iron. Ashland developed as a busy trade center with a robust transportation system—rail, river, and highway ties

supporting its industries. Regionally, land use is primarily residential, with pockets of commercial development along major highways, and a swath of industrial developments along the riverfront.

Land use along the study corridor is mainly residential, with most homes clustered in established neighborhoods. A few small-scale commercial businesses are interspersed, with the highest concentration approaching the US 60 intersection. Additional community resources include:

**CHURCHES.** Six churches about the study corridor (see **Figure 19**). Immediately north of Dixon Street, Gateway Church and Pollard Cemetery abut the existing highway, limiting open space available for improvements without impacting adjacent properties.



Figure 21: KY 168 between Gateway Church (left) and Pollard Cemetery (right)

**SCHOOLS.** Two school districts serve the study area: Boyd County Public Schools and Ashland Independent Schools. Buses for each district travel the corridor when school is in session. School facilities nearest the study corridor are Hager Elementary School on KY 168 south of US 60 and Fairview High School accessed from Main Street in Westwood.

The Boyd County Regional Juvenile Detention Center is just west of the study corridor off Roberts Drive.

**FIRE/POLICE.** Law enforcement is based in downtown Ashland. The nearest fire stations serving the corridor are in Westwood (off Main Street), downtown Ashland, and south of US 60.

**MEDICAL.** Kings Daughters Hospital in downtown Ashland provides medical services for the region. There is also a Community Hospice Care Center along the KY 168 corridor off Pollard Road.



Figure 22: Hospice Care Center

**PARKS.** KY 168 provides access to two parks:

- Fairview Sports Park contains athletic facilities for Fairview Independent Schools.
- Pollard Mills Park is a small, contemplative park on Kirk Street near the Community Hospice Care Center. The property features greenspace, benches, and a covered gazebo.



Figure 23: Fairview Sports Park (left) and Pollard Mills Park (right)

### 3.2.2 HISTORIC RESOURCES

Section 106 of the *National Historic Preservation Act of 1966* requires federal agencies to consider impacts to historic properties when making project decisions, in coordination with the State Historic Preservation Office (SHPO).

A *Cultural Historic Overview (Appendix C)* was completed for the study area to identify properties listed or eligible for listing on the National Register of Historic Places (NRHP). The building stock of the historic communities of Westwood (the study area north of Little Hood Creek) and Pollard (the study area south of Little Hood Creek) is representative of Ashland's growth and the rise of industry in the city during the twentieth century, as the members of the working and middle classes took up residence near employers such as the Armco Steel Corporation, Ashland Oil and Refining Company, and Allied Chemical and Dye Corporation. Based on a review of aerial photography and topographic maps, Westwood and Pollard were essentially developed to their current extent by the early 1950s. The building stock is in keeping with the period in which it was developed: a variety of vernacular housing types, including American Bungalows, American Foursquares, hip-roof cottages, front-gable dwellings, and ranch houses.

A records review found six previously surveyed resources within or adjacent to the study area, each listed with undetermined status. Windshield surveys during spring 2023 found nine potential resources over 50 years in age, including four of six previously surveyed resources (two since demolished), four concrete pipe culverts, and one undocumented cemetery. None are listed in the NRHP or recommended as potentially significant/eligible for listing based on architectural merits (NRHP

criterion C). Dwellings are common residential building types from the early twentieth century, which lack outstanding architectural features to distinguish themselves from the numerous examples of their types found throughout Boyd County and Kentucky. Moreover, they exhibit diminished integrity of design, materials, and workmanship. However, it should be noted that potential associations with historic events or persons (NRHP criterion A or B) were not evaluated.

**HISTORIC DISTRICT.** The potential for an NRHP-eligible historic district was considered but is not recommended. Despite the neighborhoods of Westwood and Pollard exhibiting a concentration of resources representative of Ashland’s early to mid-twentieth century development, the area as a whole lacks integrity of design, materials, workmanship, and feeling. Most resources in and near the study area that would otherwise add to a potential district’s historic character lack individual integrity of design, materials, and workmanship due to unsympathetic alterations, including incompatible additions, the loss of chimneys, and the enclosure of porches. Furthermore, replacement materials, such as vinyl siding, vinyl window sashes, porch columns, and doors are inconsistent with potential historic property elements.

**SITES TO NOTE.** Two properties (**Figure 24**) may warrant further consideration if they are likely to be affected by a transportation improvement project.



Figure 24: Resources Warranting Further Investigation for NRHP Determination

- Pollard Cemetery, in the northeast quadrant of the KY 168/Dixon Street intersection, contains approximately 200 graves, the earliest dating to 1837. Based on visual inspections, the cemetery does not appear to be eligible for NRHP listing under Criterion C or D; however, further investigation is warranted to confirm an association under Criterion A or B.
- A 1940s Tudor-style commercial building is southwest of the US 60/KY 168/Algonquin Avenue intersection. Although fenestration has been altered and some materials have been replaced, the building would still warrant additional examination and SHPO coordination to confirm potential NRHP eligibility.

Should federal monies or permits be included in future projects, field survey and coordination with SHPO will be required to assess project impacts to cultural historic resources.

### 3.2.3 SOCIOECONOMIC PROFILE

FIVCO Area Development District (ADD) completed a socioeconomic study for the corridor (**Appendix D**) to highlight potential areas statistically likely to contain elevated concentrations of minority, elderly, low-income, limited English proficiency (LEP), and/or disabled populations. The study area covers portions of five US Census block groups, shown in **Figure 25**. Statistics are summarized in **Table 5**, reported from 2020 American Community Survey five-year estimates. Concentrations for the encompassing county serve as the reference threshold, highlighting any block group populations exceeding this level.

As shown, four of five block groups exceed county thresholds for one or more categories. Nearly half the study area includes geographic areas that exceed the countywide concentration for low-income populations, suggesting consideration may be necessary to minimize impacts on environmental justice (EJ) populations should a project be recommended to advance. It should be noted that block groups encompass much larger areas than the study area limits, and population concentrations are largely beyond study area borders.

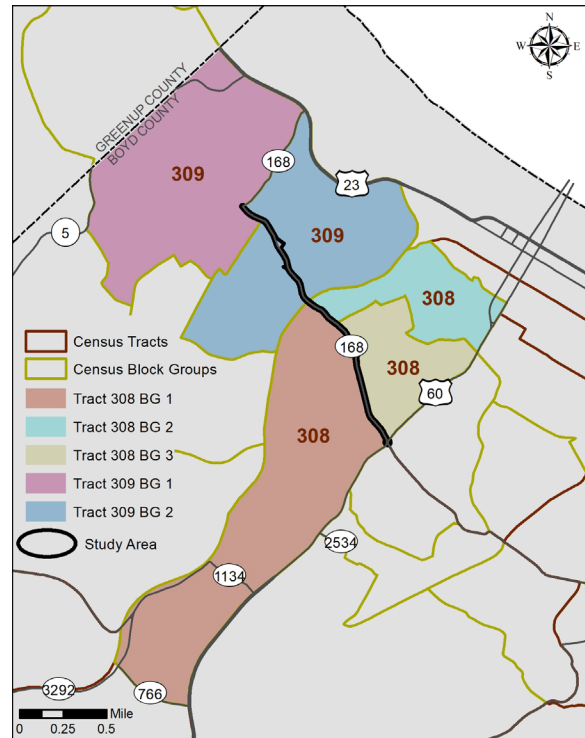


Figure 25: Census Geographies in Study Limits

Table 5: Socioeconomic Metrics for Study Area Block Groups

Geography	Population	Minority	Low-Income	Age 65+	Disabled	LEP
Kentucky	4,461,952	15.92%	16.61%	16.36%	21.19%	2.34%
Boyd Co.	<b>48,447</b>	<b>13.4%</b>	<b>18.5%</b>	<b>19.4%</b>	<b>21%</b>	<b>2%</b>
308 BG 1	1659	11.3%	<b>38.8%</b>	6.4%	21%	0%
308 BG 2	987	6%	<b>94%</b>	3.1%	<b>37%</b>	0%
308 BG 3	1365	10.6%	<b>38%</b>	2.5%	<b>26%</b>	0%
309 BG 1	1633	<b>20%</b>	15.7%	8.3%	17%	0%
309 BG 2	1522	2.7%	15.2%	5.8%	11%	0%

### 3.2.4 SECTION 4(F)

Section 4(f) of the *Department of Transportation Act of 1966* is a substantive law that applies to federally funded projects using land from publicly owned public parks, recreation areas, and wildlife

or waterfowl refuges; and publicly or privately owned historic sites eligible for or listed on the NRHP. Section 4(f) requires that transportation projects avoid use of such protected properties unless no feasible and prudent alternative exists and project planning minimizes harm to Section 4(f) sites.

Section 4(f) protected properties within the study area include the two parks and any historic resources that may meet NRHP criteria though none are recommended based on planning-level investigations to date. No wildlife and waterfowl refuges are found within the study area.

### 3.2.5 SECTION 6(F)

The *Land and Water Conservation Fund (LWCF) Act* was established to safeguard natural areas, water resources, and cultural heritage, and to provide recreation opportunities to all Americans. The fund helps strengthen communities, preserve history, and protect the national endowment of lands and waters. The LWCF provides federal grants to acquire land for outdoor recreation, protect important natural areas, and develop or renovate outdoor recreation facilities (e.g., campgrounds, picnic areas, swimming facilities, etc.). Section 6(f) of the LWCF Act addresses protection from permanent conversion of outdoor recreation property acquired or developed using LWCF funds. Impacts must be addressed when projects would result in permanent conversion of grant-assisted facilities.

No Section 6(f) investments lie along the study corridor.

### 3.2.6 NOISE CONSIDERATIONS

Federally funded transportation projects typically require consideration of noise impacts. Noise sensitive receptors include residential areas, parks, cemeteries, hospitals, churches, schools, etc. Commercial properties with exterior uses can also be considered noise sensitive. Specific traffic noise impact analyses may be needed as part of future project development activities if projects are shown to add capacity or shift traffic closer to sensitive receptors.

As the corridor has access by permit with numerous intersections and driveways providing access to adjacent land uses, it is unlikely that noise mitigation measures would be recommended even if noise increases were predicted.

## 4.0 INITIAL COORDINATION EFFORTS

The project team includes representatives from KYTC Central Office, KYTC District 9, KYOVA, FIVCO, and the consultant. The project team met over the course of the study to coordinate key tasks and held conversations with local officials and stakeholders (LO/S) to identify local plans and concerns. The following sections highlight the main discussion points. Detailed meeting summaries are arranged chronologically in **Appendix E**.

#### 4.1 PROJECT TEAM MEETING NO. 1

The project team met June 13, 2023, in Flemingsburg to review existing conditions information and prepare for the first local officials/stakeholders (LO/S) coordination meeting. The team reviewed area planned projects, previously completed studies, and existing conditions including roadway geometry, traffic flow, crash trends, and environmental resources as presented in **Chapters 2 and 3**.

#### 4.2 LOCAL OFFICIAL/STAKEHOLDER MEETING NO. 1

The project team met with local officials and other stakeholders July 1, 2023, at the Ashland Police Station. The purpose of the meeting was to present an overview of existing roadway conditions, and garner local insights needed to inform future No-Build growth scenarios and improvement concepts. An overview of group discussion topics is presented below.

- It is important to consider the needs of all travelers—including pedestrians and bus riders—using the corridor, not just cars.
- KY 168 has narrow lanes and has never been widened. Intersection radii are tight, especially for large vehicles.
- Southbound queues on KY 168 at US 60 lead drivers to cross the centerline to reach the short left-turn bay. Turns to/from the adjacent Pizza Hut/Walgreens driveway further complicate this approach, which can queue up to Clinton Street and beyond during peak periods.
- The eastbound US 60 left-turn storage lane onto KY 168 (toward Westwood) is too short. Drivers will hop up on the median to reach the turn bay.
- Sight distance is a problem at Roberts Drive.

### 5.0 2045 TRAFFIC AND OPERATIONS

KYOVA's regional travel demand model, along with 2023 weekday turning movement counts and input from community leaders, formed the basis of future year 2045 traffic projections. The complete *Traffic Forecast Report* is in **Appendix A**.

#### 5.1 FUTURE YEAR TRAFFIC GROWTH

KYOVA's regional travel demand model estimated future year growth for the study corridor. The model simulates a 24-hour period, relying on factors to derive peak hour traffic flows. From a high-level perspective, the model overlays the roadway network over predicted changes in household and



employment levels for geographic zones to project changes in traffic flows. It is built to examine typical weekday traffic patterns for a broad area.

Past KYTC traffic counts in the study area demonstrate negative growth. Population projections for Boyd County show flat to negative growth through 2045. Model assumptions project no changes in households in the region, but they demonstrate positive employment growth concentrated in areas near Walmart, Kings Daughters' Medical Center, downtown government buildings, and Ashland Community and Technical College. Stakeholder input in July noted additional employment growth along Winchester and Greenup avenues, new retail development near I-64, and a new horse racetrack and gaming center at Camp Landing along US 60.

A 0.6% annual growth rate was applied to KY 168 to forecast future No-Build traffic. KY 168 is expected to carry 6,600–10,400 vpd in 2045. The No-Build scenario applies future traffic volumes to the existing roadway network, without any improvements or changes in traffic control. No-Build operations were calculated at study intersections, as shown in **Figure 26**.

As in the existing scenario, most intersections operate at a LOS C or better, with a few exceptions:

- During the PM peak hour, the stop-controlled eastbound Roberts Drive approach operates at LOS F with 250 seconds of delay and a 1.39 v/c.
- During the PM peak hour, the all-way stop-controlled intersection at KY 168/6<sup>th</sup> Street operates at LOS F overall.
  - The heaviest movement is from the southbound KY 168 approach, which operates at LOS F with 96 seconds of delay or a 1.10 v/c.
  - The westbound 6<sup>th</sup> Street approach operates at LOS E with 42 seconds of delay or a 0.89 v/c.
- Based on the current signal timing plan, the five-leg signal at US 60/KY 168/Algonquin Avenue operates at LOS D–E, approaching its capacity.
  - During the AM peak hour, Algonquin Avenue and both KY 168 approaches operate at LOS E. Two movements are at LOS F: left turns from northbound KY 168 (towards I-64) and left turns from eastbound US 60 onto KY 168 (towards Westwood).
  - During the PM peak hour, Algonquin Avenue and northbound KY 168 operate at LOS E. The southbound KY 168 approach operates at LOS F. Three movements are at LOS F: left turns from northbound KY 168 (towards I-64), southbound KY 168 thru movements, and left turns from eastbound US 60 onto KY 168 (towards Westwood).

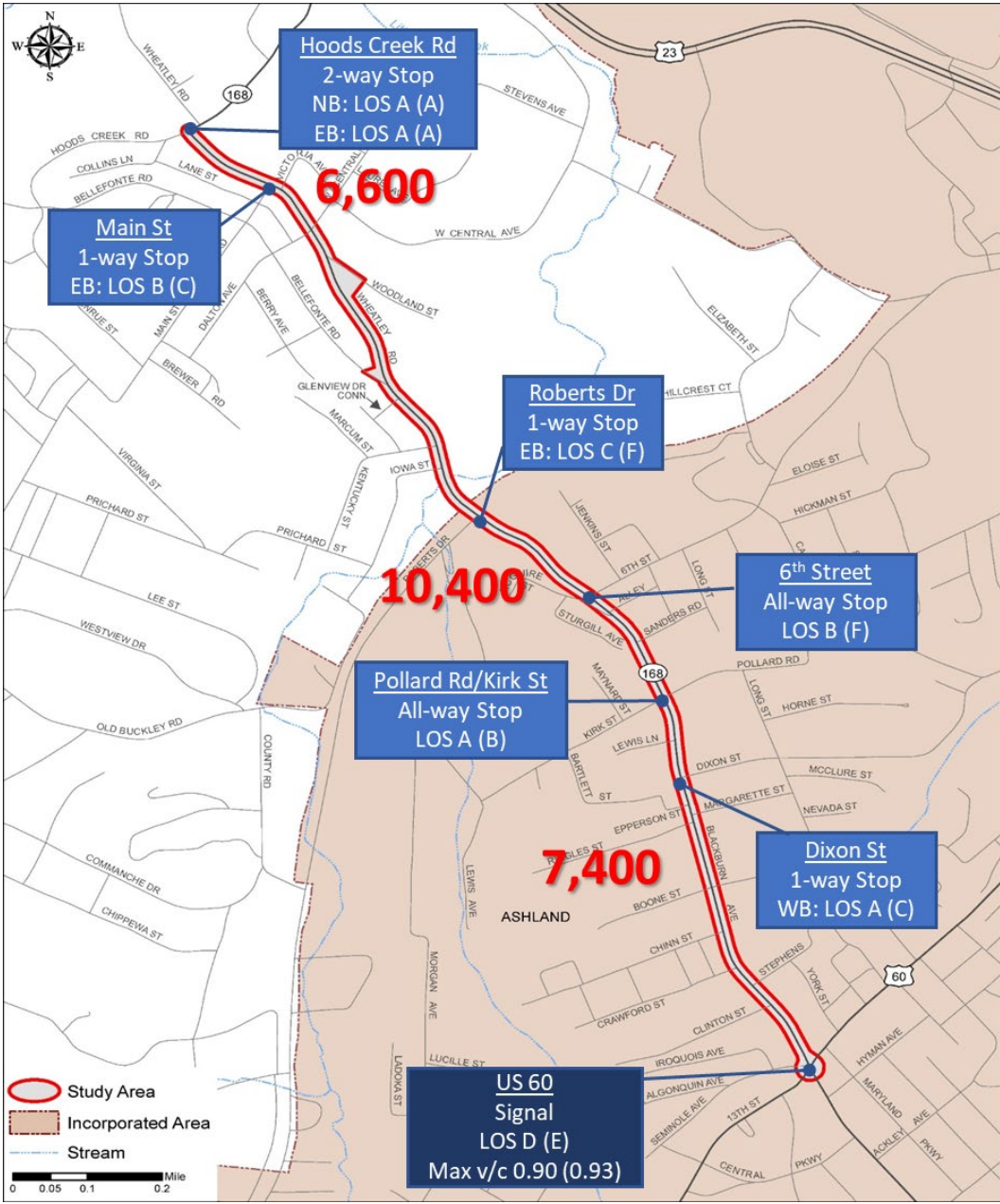


Figure 26: 2045 No-Build Daily Traffic and AM (PM) Peak Hour Traffic Operations

## 6.0 CONCEPT DEVELOPMENT

Relying on the data collection results described above, analysts were tasked to define a list of potential improvement concepts that could address observed needs. Concepts to improve safety and mobility were developed based on review of existing geometric deficiencies, existing and future traffic

operations, crash concentrations, field reconnaissance, and input from the project team and community leaders.

## 6.1 PROJECT TEAM MEETING NO. 2

The project team met September 13, 2023, to discuss initial Build concepts considered to date. The team reviewed existing conditions and environmental resources, focusing on potential short-term safety and mobility improvements. Long-term options such as intersection reconstruction and corridor widening were also presented. The team discussed unit cost assumptions and agreed to present cost estimates in consistent 2023 dollars. It was agreed all concepts will be presented to the stakeholders, along with an explanation regarding why some of those concepts have been dismissed.

## 6.2 INITIAL BUILD CONCEPTS

Build concepts were identified at four intersections and a fifth option considers corridor-wide improvements.

### 6.2.1 SPOT A: US 60/KY 168 INTERSECTION

At Spot A (US 60/KY 168 intersection), designers looked at several options to improve safety and traffic flow. The current layout has five approaches meeting at a signal, with short turn lanes that fill up during peak hours. Improvement options ranged from simple maintenance actions such as tree trimming to full reconstruction of the intersection.

- **Concept A.1** trims tree branches so drivers can better see the signal ahead.
- Shown in **Figure 27**, **Concept A.2** closes the Algonquin Avenue approach, routing this traffic to Cherokee Avenue or Clinton Street for access, and potentially constructs a new link between Iroquois Avenue and Clinton Street. Depending on the location, constructing this link could require a few residential relocations. Project costs are



Figure 27: Concept A.2 Closes Algonquin Avenue at Signal

estimated to be from \$1-\$2 million. This is consistent with one of the options considered in the 2020 *Boyd-Greenup SUA Study* and improves LOS to C at the signal during both peak hours. A new signal at US 60/Cherokee Avenue is not likely to meet warrants; therefore, the ±70 homes in this cluster may find it challenging to access US 60 during busy periods.

- **Concept A.3 (Figure 28)** lengthens the left-turn lanes on southbound KY 168 and eastbound US 60 to increase storage lengths. Either impacts 3 or 4 adjacent homes/businesses. Project costs are an estimated \$3 million along US 60 and \$5 million along KY 168.

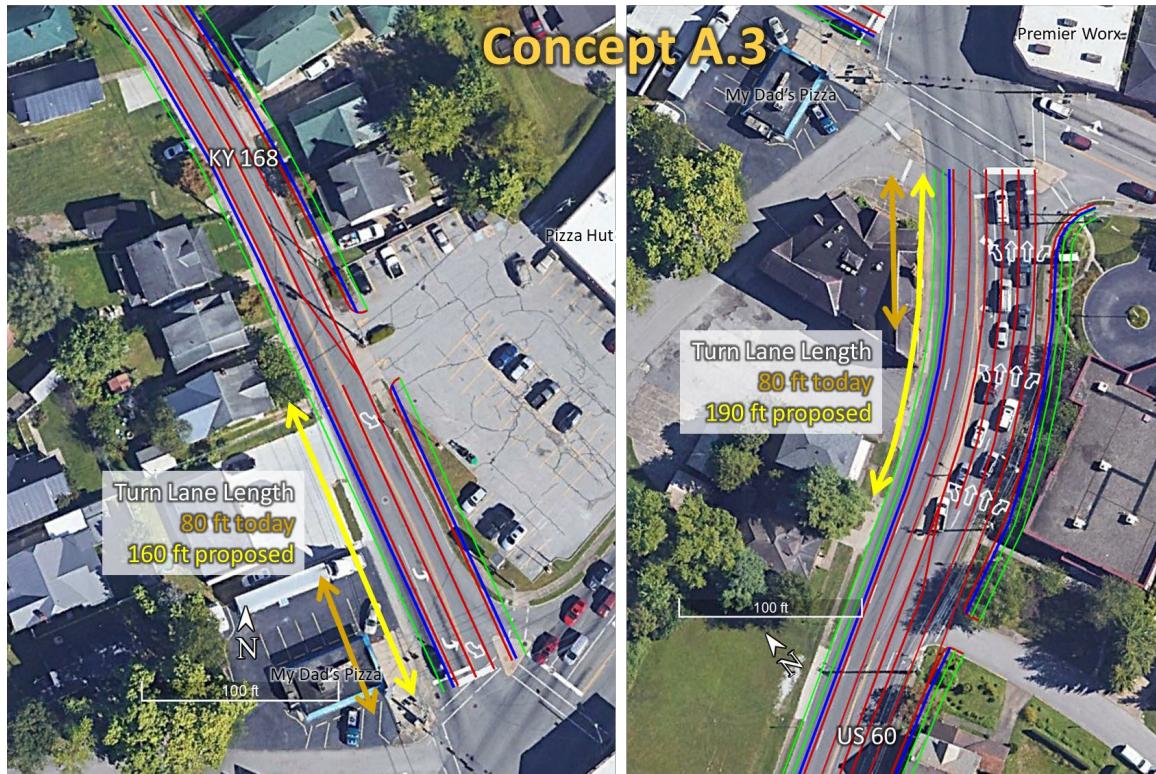


Figure 28: Concept A.3 Lengthens Turn Lanes

Other options were considered at Spot A but would provide limited benefits to traffic and result in high costs and property impacts. The team also considered but dismissed building a roundabout, realigning the curve on US 60, or creating a quadrant roadway system—which would optimize signal timing by eliminating left turns at the main US 60/KY 168 intersection, but would redirect traffic to an adjacent connector street thereby increasing traffic on that street. A road diet along US 60 was also considered but is not a viable solution as traffic volumes are too high.

### 6.2.2 SPOT B: KY 168/POLLARD ROAD/KIRK STREET INTERSECTION

**Concept B** adds a bus pull-off opposite the Hospice Care Center to provide a shelter for riders and keep the bus out of traffic during loading and unloading. The project is estimated to cost \$150,000

plus the shelter as costs vary depending on the type of shelter. Impacts to Pollard Mills Park will require consideration under Section 4(f) and coordination with the city.

### 6.2.3 SPOT C: KY 168/6<sup>TH</sup> STREET INTERSECTION

**Concept C** adds turn lanes to improve traffic flow at the KY 168/6<sup>th</sup> Street intersection, which is expected to back up with 2045 forecast volumes. An all-way stop control intersection with turn lanes operates at LOS B–C, compared to LOS F in the PM peak hour in the No-Build scenario. Although right-of-way will be needed, no relocations will be required. Project costs are estimated to be around \$6 million. Widening is assumed to add new pavement on the north/east, minimizing impacts to the hillside and McGuire Street, which provides sole access for several homes.

Based on traffic projections, a signal may be warranted by 2045 due to increasing volumes. With turn lanes and a signal, the intersection would operate at LOS B in the PM peak hour.

### 6.2.4 SPOT D: KY 168/ROBERTS DRIVE INTERSECTION

At Spot D (KY 168/Roberts Drive intersection), several options were considered to improve safety:

- **Concept D.1** adds an intersection conflict warning system (**Figure 29**) to the current one-way stop-control, with flashing lights to alert southbound KY 168 drivers that a motorist has pulled up to the stop sign on Roberts Drive. This improves safety but does not affect capacity.
- **Concept D.2** converts the intersection to all-way stop-control. Stopping southbound traffic just north of the CSX tracks will enable motorists to view traffic conditions down the hill—such as a stopped vehicle about to turn from Roberts Drive—before proceeding forward. This does not change the stopping sight distance illustrated in **Figure 10** but increases the reaction time available for drivers since speeds are lower.



Figure 29: Conflict Warning System

Operationally, the three-way stop operates slightly better than the 2045 No-Build scenario; however, the northbound KY 168 approach is over capacity (1.1 v/c) and operates at LOS F in the PM peak hour. Because the northbound stop sign would be south of Roberts Drive, school buses passing through the intersection would be required to stop a second time approaching the tracks. Concept D.2 could be quickly implemented with minimal costs/impacts to address current safety concerns; however, it may not be an adequate long-term solution.

- **Concept D.3** raises the grade along KY 168 and adds turn lanes for Roberts Drive and northbound KY 168. This improves visibility and safety at the intersection and addresses

capacity concerns as traffic continues to grow. **Figure 30** presents the proposed profile (red) compared to existing (green), which raises KY 168 about 1.7 feet at Roberts Drive and up to 5.3 feet north of the tracks. Sight distance increases from 105 feet today to 178 feet.

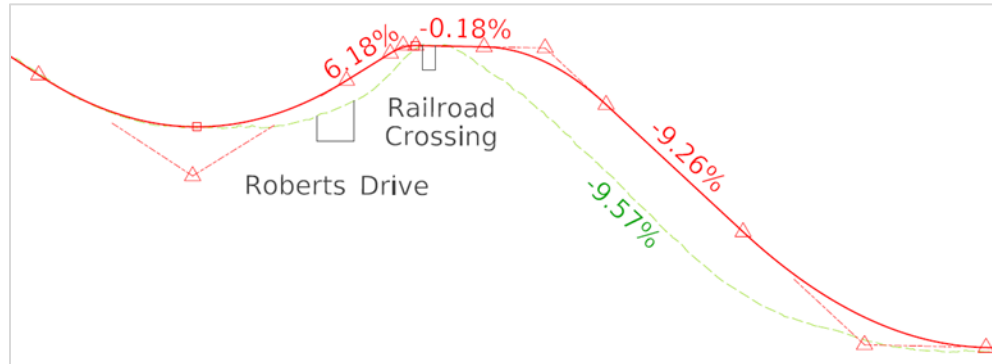


Figure 30: Change in Vertical Alignment at Roberts Drive

With turn lanes and a three-way stop, the intersection operates at LOS D in the PM peak hour although the southbound KY 168 approach reaches LOS F. A signal may be warranted by 2045 with traffic growth projections. Adding turn lanes and a signal, the intersection operates at LOS A during both peak hours.

As with Concept D.2, northbound school buses passing through the intersection would be required to stop mid-intersection approaching the tracks. Concept D.3 would impact 3 to 5 adjacent residences with project costs estimated to be around \$7-8 million.

#### 6.2.5 CORRIDOR-WIDE "E" IMPROVEMENTS

Two corridor-wide options were considered:

- **Concept E.1** adds/upgrades sidewalks on the east side along the entire 1.7-mile length. This includes a new, consistent 5-foot-wide sidewalk, with crosswalks, ADA pads, and lighting. "Share the Road" signs encourage motorists to watch for cyclists. Acquisition of right-of-way could result in 0 to 1 relocations; short retaining walls will likely be needed to minimize disturb limits. Project costs are estimated to be \$13 million.
- **Concept E.2** widens driving lanes, adds a two-way left-turn lane (TWLTL), and adds/upgrades sidewalks along the entire 1.7-mile length. This option has the largest footprint with the highest costs (\$40+ million) and would potentially impact 40 to 50 residences. The TWLTL adds storage space for turning cars, increasing throughput for the corridor beyond the six studied intersections.

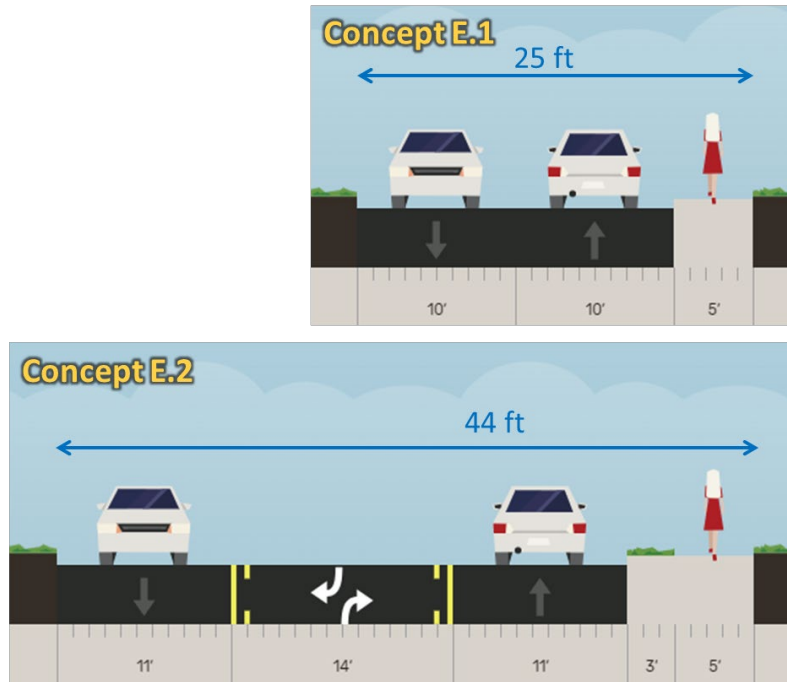


Figure 31: Typical Sections for Concepts E.1 (top) and E.2 (bottom)

## 7.0 FINAL COORDINATION MEETINGS

Following concept development, the project team reached out to local leaders to solicit feedback and then launched a public website and survey.

### 7.1 LOCAL OFFICIAL AND STAKEHOLDER MEETING NO. 2

The project team met with LO/S on November 3, 2023, at the Ashland Police Department. The purpose of the meeting was to present proposed improvement concepts (**Chapter 6.0**) and gather local input. Attendees were also asked to help promote the study website to engage with the larger community.

Group discussions related to Build concepts included:

- Numerous crashes were reported at the US 60/KY 168 intersection, but it is not among the top ten high-crash intersections throughout the city.
- School buses use the US 60/Algonquin Avenue link to serve special needs and preschool populations. Closing Algonquin Avenue would create transportation issues for both school districts.
- School buses are advised not to turn left from Roberts Drive onto KY 168.

- The group opposed corridor-level widening due to the extensive residential relocations required. However, adding sidewalks would be beneficial and would be easier to build in smaller segments.

## 7.2 ONLINE PUBLIC ENGAGEMENT

Online public engagement through an interactive StoryMap and public survey complemented LO/S outreach. Throughout November 2023, a study website shared basic information about the study corridor and Build concepts developed. An online survey provided the public an opportunity to share insights on existing transportation needs, concept priorities, and other issues. Throughout the four-week comment period, 112 surveys were collected. Of these, 40% of participants reported living and/or working along KY 168 and 44% reported living/working elsewhere in Boyd County. Almost all participants reported driving along the corridor and some noted they also occasionally walk (13) or bike (2).

The first question provided a multiple-choice checklist asking individuals to identify current concerns along the study corridor. As shown in **Figure 32**, the top concerns were stopped cars waiting to turn, poor visibility, narrow lanes/shoulders, and the railroad crossing—each having been selected by over 60% of participants. Overall, 96% of participants agreed improvements to the corridor are needed.

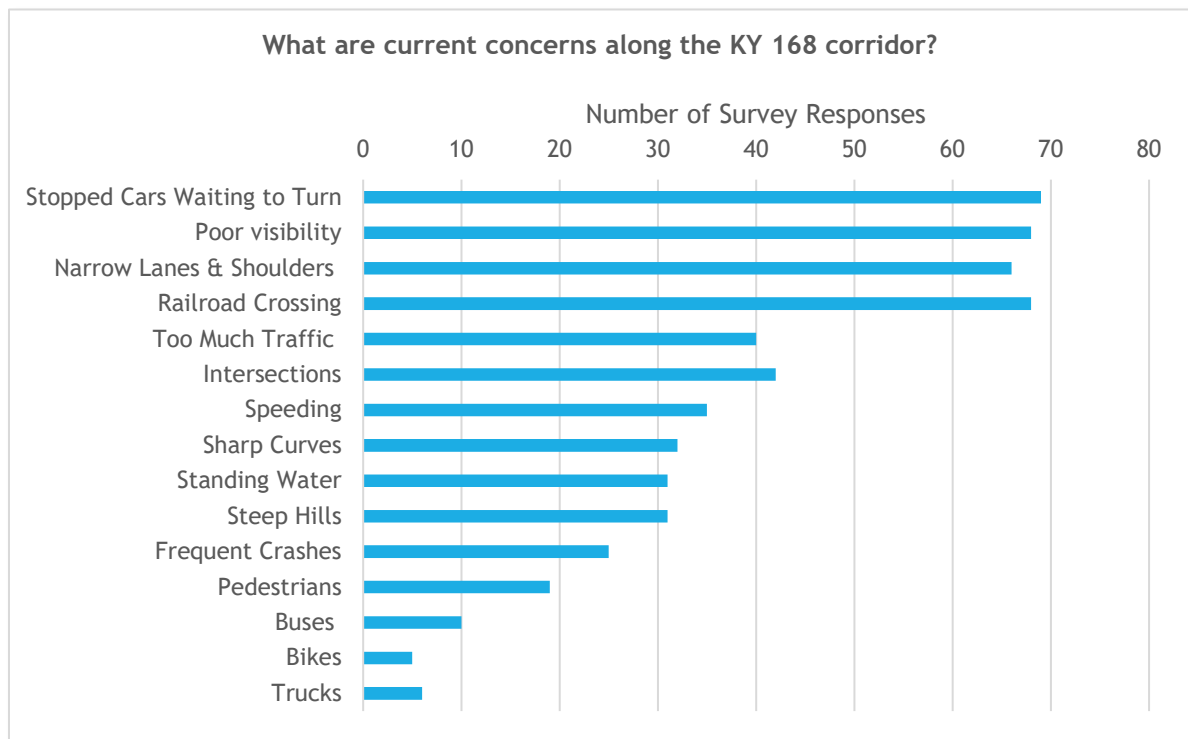


Figure 32: Survey Responses Regarding Existing Study Corridor Needs



Participants were asked to rank each of the Build concepts from highest to lowest priority. Shown in **Figure 33**, the darker colors represent a higher priority ranking. The number to the right of each bar is the average score: the lower the number, the higher the priority.

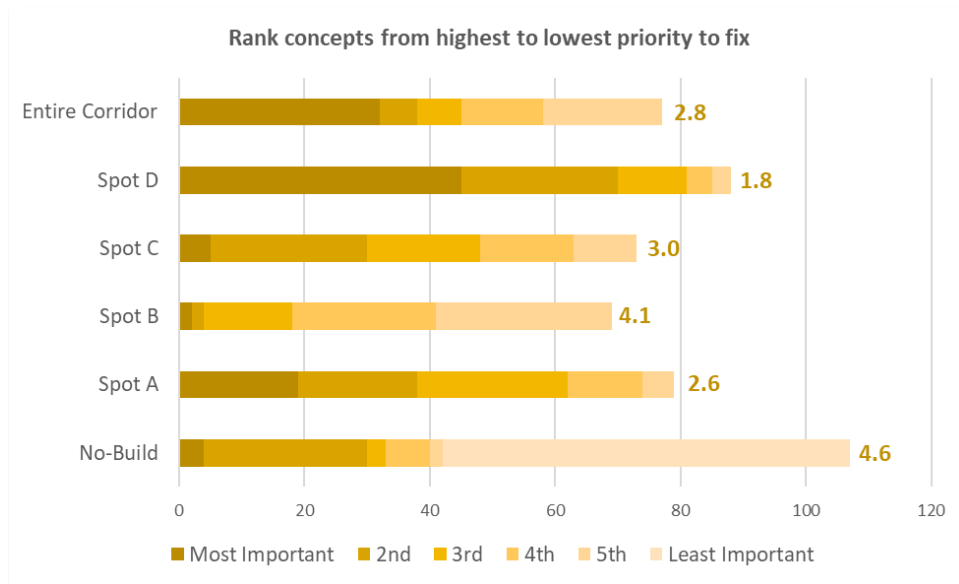


Figure 33: Survey Responses on Build Concept Priorities

As shown, improvements at KY 168/Roberts Drive were the highest priority. Corridor-level improvements were the next highest, closely followed by improvements at the US 60 intersection (Spot A). Spots B and C were less important, but both rated ahead of No-Build.

Participants were also asked which options at Spot A they preferred. Summarized in **Figure 34**, extending turn lanes was selected most often: 62% supported extending the turn lane on US 60 and 55% preferred extending the turn lane on KY 168. Tree trimming was the next favored (33%), followed by closing the Algonquin Avenue approach at the US 60 intersection (30%).

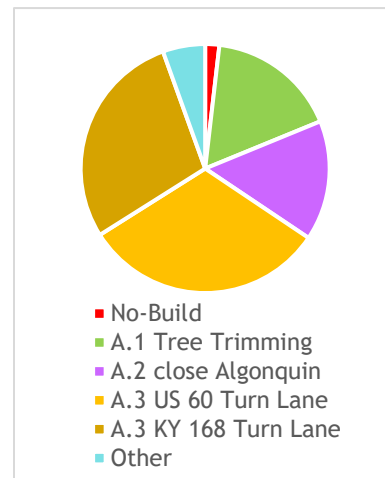


Figure 34: Spot A Preferences

After presenting costs and impacts associated with the Concept E.2 widening, the survey asked whether a three-lane KY 168 section should be advanced. Responses were divided: 26% in favor, 33% opposed, and 39% in favor of advancing only some sections of the route. Sections south of 6<sup>th</sup> Street and through Westwood were suggested as widening candidates.

A final open-ended comment box asked individuals to identify other Build concepts that should be considered. Many participants suggested concepts beyond the limits of the study area, including a

concentration of concerns farther south on KY 168 near the schools (approximate MP 4.8–5.8). Suggestions within the study area limits are summarized in **Table 6**.

Table 6: Other Build Concepts Suggested from Public Surveys

Suggestion	Response
Visibility and turn radii at KY 168/Dixon Street	Constrained by adjacent cemetery; minimal safety (2 crashes) or capacity (LOS C+ in 2045) concerns.
Visibility at KY 168/Pollard Road/Kirk Street	Constrained by adjacent building; minimal safety (1 crash) or capacity (LOS B+ in 2045) concerns.
Roundabout at KY 168/Roberts Drive	Not feasible with grades and proximity to rail line.
Realign KY 168 between 6 <sup>th</sup> Street and Dollar General (Approx. MP 6.56–6.95)	Length effectively covered between 6 <sup>th</sup> Street turn lanes and Roberts Drive profile change.
Visibility at KY 168/Bellefonte Road	Considered; minimal benefits due to minimal safety (3 crashes) or capacity concerns.
Safety at KY 168/Dalton Road	Slight skew/offset at existing intersection with limited visibility but few safety (4 crashes) concerns.
Three-way stop at KY 168/Main Street	Unrestricted access to adjacent gas station; few safety (4 crashes) or capacity (LOS C+ in 2045) concerns.

### 7.3 PROJECT TEAM MEETING NO. 3

A third and final project team meeting was held January 5, 2024; the purpose of the meeting was to review study findings to date and reach a consensus on recommendations.

Meeting discussions included the following items:

- In Concept E.1, a buffer strip to offset the sidewalk from the roadway would make the facility more comfortable for pedestrians. What are the associated costs and impacts?

For comparison, a variation of Concept E.1 adding a 3-foot-wide buffer strip inside the 5-foot-wide sidewalk was modeled. The added width would require 7 to 9 residential relocations, increasing project costs to an estimated \$14.2 million. For comparison, Concept E.1 without the buffer is estimated at \$13.3 million with 0-1 relocations.

- What crash savings or traffic benefits are associated with the three-lane widening option (Concept E.2)? Do these outweigh costs and impacts?

Safety benefits were estimated based on research to develop crash modification factors (CMF) for the CMF Clearinghouse.<sup>11</sup> CMFs are used in calculations to predict future crash reductions resulting from applied countermeasures. Comprehensive crash costs per the 2021 *Kentucky Traffic Collision Facts* report<sup>12</sup> were applied to monetize expected safety benefits. A range of four-star studies estimate potential crash reductions, ranging from 12% (CMF 2339) to 31% (CMF 2338) applied to all crash types and severities. Applying the most conservative 12% reduction, this results in 2.5 fewer crashes per year or a \$218,000 crash cost reduction.

Were crash rates to grow proportionally to traffic forecasts, this results in \$5.2 million in undiscounted savings through 2045—considerably less than the \$40+ million cost to build Concept E.2.

- There is a sight distance concern at Dixon Street for eastbound KY 168 and pulling out from Dixon. Perhaps the retaining wall at the cemetery could be shifted as part of a larger corridor improvement, e.g., Concept E.1.

Prioritization results are presented in the following chapter.

## 8.0 RECOMMENDATIONS

The KY 168 Corridor Study resulted in a range of conceptual improvements recommended for future implementation. Improvement concepts focused primarily on busy intersections, areas with existing safety concerns identified by documented crash records, and community input. The following subsections summarize prioritization results, incorporating traffic operations, safety considerations, project team input, and other factors.

### 8.1 COST ESTIMATES

Planning-level designs for Build concepts were used to estimate preliminary quantities of high-cost construction items including earthwork, concrete, asphalt, sewer, and lighting. Construction costs were tabulated using Bid Express<sup>13</sup> average unit bid prices for Boyd, Greenup, and Carter counties' construction bids since January 2021. Parametric factors were applied to account for drainage, traffic control, mobilization, and miscellanea. A 30% contingency factor was also applied to construction cost

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<sup>11</sup> Online at <https://www.cmfclearinghouse.org/>

<sup>12</sup> Online at <https://transportation.ky.gov/HighwaySafety/Pages/Resources.aspx>

<sup>13</sup> Online at <https://bidx.com/ky/main>

totals. KYTC District 9 provided right-of-way and utility cost estimates based on conceptual modeled disturb limits, aerial imagery, approximate locations of property lines, and utility records.

Planning-level cost estimates by phase (i.e., design, right-of-way acquisition, utility relocations, and construction) are presented in **Table 7** with details included as **Appendix F**. Costs are presented in 2023 dollars with no escalation factor.

Table 7: Cost Estimates by Phase (2023 Dollars)

ID	Concept	D	R	U	C	TOTAL
A.1	Tree Trimming	-	-	-	\$10,000	\$10,000
A.2	Algonquin Connector	\$60,000-\$100,000	\$700,000-\$1.1M	\$80,000-\$300,000	\$200,000-\$600,000	\$1.3M-\$1.9M
A.3	Lengthen Turn Lane eastbound US 60	\$100,000	\$1.4M	\$500,000	\$1.0M	\$3.0M
A.3	Lengthen Turn Lane southbound KY 168	\$140,000	\$2.3M	\$1.1M	\$1.4M	\$4.9M
B	Pollard/Kirk Bus Pull Off*	\$40,000	-	-	\$110,000	\$150,000
C	Add Turn Lanes: KY 168/6th Street	\$390,000	\$900,000	\$1.3M	\$3.9M	\$6.5M
D.1	Conflict Warning System	-	-	-	\$50,000	\$50,000
D.2	3-way Stop	-	-	-	\$20,000	\$20,000
D.3	Raise Grade/Turn Lanes	\$400,000	\$1.7M	\$1.2M	\$4.1M-\$4.5M	\$7.4M-\$7.9M
E.1	Reconstruct/Add Sidewalk	\$0.9M	\$1.0M	\$2.2M	\$9.2M	\$13.3M
E.2	Three-Lane with Sidewalk	\$1.9M	\$15.0M	\$7.3M	\$19.0M	\$43.2M

\* Excludes cost of shelter

## 8.2 ENVIRONMENTAL IMPACTS

Alongside costs, impacts to the human and natural environment are another consideration when evaluating Build options. As Build concepts follow an existing highway through a built-out urban area, minimal natural environmental impacts are expected beyond large-scale widening in Concept E.2. Concepts A.1, D.1, and D.2 are entirely contained within existing right-of-way and would have minimal impacts.

Table 8: Build Concept Summary Benefits and Impacts

ID	Concept	Benefits	Impacts
A.1	Tree Trimming	Safety	Within existing right-of-way
A.2	Algonquin Connector	Capacity	0-2 relocations
A.3	Lengthen Turn Lane eastbound US 60	Safety + Capacity	4 relocations
A.3	Lengthen Turn Lane southbound KY 168	Safety + Capacity	3 relocations
B	Pollard/Kirk Bus Pull Off*	Safety + Capacity	New right-of-way within park
C	Add Turn Lanes: KY 168/6th Street	Capacity	Additional right-of-way but no relocations
D.1	Conflict Warning System	Safety	Within existing right-of-way
D.2	3-way Stop	Safety	Within existing right-of-way

ID	Concept	Benefits	Impacts
D.3	Raise Grade/Turn Lanes	Safety + Capacity	4 relocations; Potential EJ; Floodplain
E.1	Reconstruct/Add Sidewalk	Safety	Strip takings with 0-1 relocations
E.2	Three-Lane with Sidewalk	Safety + Capacity	40-50 relocations; Potential EJ; Impacts church or cemetery; Floodplain; Hazmats

### 8.3 RECOMMENDATIONS AND PROJECT SHEETS

Figure 35 presents a visual summary of high priority concepts.

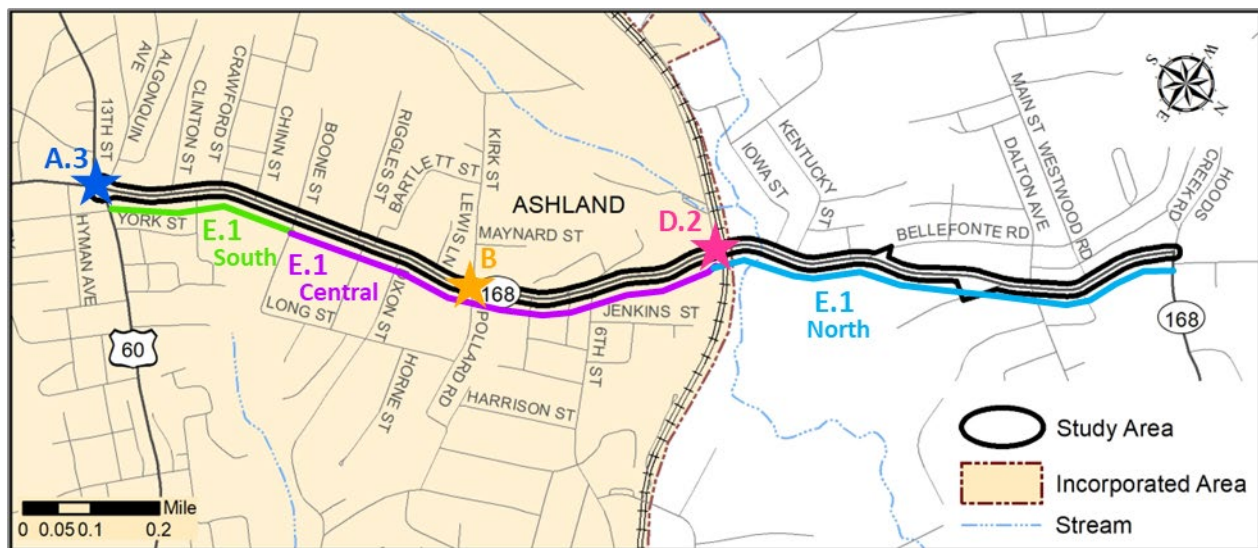


Figure 35: Recommended High Priority Concepts

Overall, **Concept D.2** (three-way stop at Roberts) is the **highest priority**, representing a low-cost, easy-to-implement solution to a demonstrable crash problem garnering substantial public interest. Stopping KY 168 thru traffic reduces travel speeds, increasing visibility and response times approaching the Roberts Drive intersection. With the simplicity and effectiveness of D.2, Concept D.1 (dynamic flashers) is not recommended for further consideration. However, Concept D.3 (turn lanes and grade change with potential signalization) is a long-term priority as increasing traffic volumes degrade operations.

**Concept A.3** (extending turn lanes on two approaches at US 60/KY 168 intersection) is also a **high priority** for implementation to help address capacity and safety concerns at the five-leg intersection. During future design phases, opportunities to improve access management for adjacent businesses should be examined. Concepts A.1 (tree trimming) and A.2 (close/connect Algonquin Avenue) were rated as medium and low/long-term priorities, respectively.

**Concept E.1** (consistent 5-foot-wide sidewalk on east side) is another **high priority** for implementation, divided into manageable construction sections:

- The southernmost 0.4 mile, between US 60 and Boone Street, has an urban character with more commercial land uses. This section currently has a sidewalk on the west side; a new facility would be added on the east. Some houses in this stretch sit close to the road, potentially requiring small retaining walls to minimize impacts. One potential relocation may fall in this section, approaching the Boone Street intersection.
- The center 0.65 mile, between Boone Street and Roberts Drive, is primarily residential but includes the pinch point between the church and cemetery (**Figure 21**). Sight distance at the adjacent intersection with Dixon Street should be evaluated as well. In this section, sidewalks exist on one or both sides of the road although width and condition varies.
- The northern 0.75 mile, from Roberts Drive to Hoods Creek Road, includes the existing gaps in sidewalk coverage as well as the railroad crossing. Some sections with a short retaining wall may be necessary to minimize residential impacts. The bridge over Hoods Creek will have to be replaced or widened to carry the sidewalk.

**Table 9** presents Concept E.1 costs divided between these constructible sections.

Table 9: Concept E.1 Costs by Section

Section	MP	D	R	U	C	TOTAL
<b>South</b> (US 60 Boone)	5.80-6.10	\$150k	\$230k	\$0.5M	\$1.5M	<b>\$2.4M</b>
<b>Central</b> (Boone to Roberts)	6.10-6.75	\$350k	\$370k	\$0.8M	\$3.5M	<b>\$5.0M</b>
<b>North</b> (Roberts to Hoods Creek)	6.75-7.45	\$420k	\$420k	\$0.9M	\$4.2M	<b>\$5.9M</b>

Concept B (bus stop) can also be folded into the central section of Concept E.1 although costs will be presented separately as transit projects have different funding streams available.

Concept E.2 (three lanes with sidewalk) is not recommended for further consideration due to the high costs and impacts.

Finally, Concept C (turn lanes at 6<sup>th</sup> Street) is a medium priority; signalization should be considered as increasing traffic volumes warrant increasing capacity.

Project sheets for each recommended concept follow. **Appendix G** contains large scale mapping combining high priority Concepts E.1, A.3, and B.

<b>BOYD</b>	<b>US 60/KY 168 Intersection</b> (Close Algonquin Avenue, new connection to Clinton Street)		<b>A.2</b>		
Low/Long-Term	<b>KY 168 MP 5.8 – MP 5.9</b>	PHASE	(2023 \$'s)		
<b>IMPROVEMENT DESCRIPTION:</b> Close the Algonquin Avenue approach to improve capacity at the KY 168/US 60 intersection and route traffic to Cherokee Avenue or Clinton Street for access. Construct a new connector between Iroquois Avenue and Clinton Street.		D	\$ 60K-100K		
		R	\$ 700K-1.1M		
		U	\$ 80K-300K		
		C	\$ 200K-600K		
		<b>TOTAL</b>	<b>\$ 1.3 - 1.9M</b>		
<b>TRAFFIC OPERATIONS AND SAFETY:</b>					
2023 Traffic:	Intersection operates at LOS D(D) in AM(PM) peak hours.				
2045 Traffic:	Current intersection projected to operate at LOS D(E) in AM(PM) peak hours; improves to LOS C(C) with four legs.				
2018-2022 Crashes:	36 crashes occurred: 42% rear end, 31% same direction sideswipe, and 19% angle collisions. One angle collision resulted in injury, all others were PDO.				
<b>WORK TYPE:</b>	Spot Improvement				
		↑ North			
		<input type="checkbox"/> Railroad			
		<input checked="" type="checkbox"/> R/W Required	<input checked="" type="checkbox"/> Relocations		
		<input type="checkbox"/> Shared Use Path			
		<input type="checkbox"/> Bike Facility			
		<input type="checkbox"/> Ped Facility			
		<input type="checkbox"/> Increased Connectivity			
		<input checked="" type="checkbox"/> Socioeconomic Impacts	Travel Patterns		
		<input type="checkbox"/> Environmental Impacts			
		<input checked="" type="checkbox"/> Utilities Affected	Gas	Power	Sewer
			Water		
Notes: Cost range reflects two representative Iroquois/Clinton connections shown					

<b>BOYD</b>	<b>Southbound KY 168</b> (Lengthen Turn Lane)		<b>A.3</b>		
High	<b>KY 168 MP 5.8 – 5.9</b>	PHASE	(2023 \$'s)		
<b>IMPROVEMENT DESCRIPTION:</b> Lengthen left-turn lanes on southbound KY 168 to increase storage lengths for improved safety and capacity.		D	\$ 140,000		
		R	\$ 2.3M		
		U	\$ 1.1M		
		C	\$ 1.4M		
		<b>TOTAL</b>	<b>\$ 4.9M</b>		
<b>TRAFFIC OPERATIONS AND SAFETY:</b>					
2023 Traffic:	KY 168 SB left turn carries 140 (120) vph in AM (PM) peak hours; intersection operates at LOS D(D).				
2045 Traffic:	KY 168 SB left turn is projected to carry 160 (140) vph in AM (PM) peak hours. Intersection operates at LOS D(E) with max SB left queue lengths of 150 feet.				
2018-2022 Crashes:	36 crashes occurred at intersection: 42% rear end, 31% same direction sideswipe, and 19% angle collisions. One angle collision resulted in injury.				
<b>WORK TYPE:</b>	Spot Improvement				
		↑ North			
		<input type="checkbox"/> Railroad			
		<input type="checkbox"/> R/W Required	<input checked="" type="checkbox"/> Relocations		
		<input type="checkbox"/> Shared Use Path			
		<input type="checkbox"/> Bike Facility			
		<input checked="" type="checkbox"/> Ped Facility	Improve Sidewalk		
		<input type="checkbox"/> Increased Connectivity			
		<input type="checkbox"/> Socioeconomic Impacts			
		<input type="checkbox"/> Environmental Impacts			
		<input checked="" type="checkbox"/> Utilities Affected	Gas		
	Power				
	Sewer				
	Water				
<b>Notes:</b>					



<b>BOYD</b>	<b>Eastbound US 60</b> (Lengthen Turn Lane)		<b>A.3</b>
High	<b>US 60 MP 10.7 – 10.8</b>	PHASE	(2023 \$'s)
<b>IMPROVEMENT DESCRIPTION:</b> Lengthen left-turn lanes on eastbound US 60 to increase storage length to improve safety and capacity.		D	\$ 100,000
		R	\$ 1.4M
		U	\$ 500,000
		C	\$ 1.0M
		<b>TOTAL</b>	<b>\$ 3.0M</b>
<b>TRAFFIC OPERATIONS AND SAFETY:</b>			
2023 Traffic:	US 60 EB left turn carries 90 (140) vph in AM(PM) peak hours. Intersection operates at LOS D(D).		
2045 Traffic:	US 60 left turn is projected to carry 100 (160) vph in AM (PM) peak hours. Intersection operates at LOS D(E) with EB left max queue length of 170 feet.		
2018-2022 Crashes:	36 crashes occurred at intersection: 42% rear end, 31% same direction sideswipe, and 19% angle collisions. One angle collision resulted in injury.		
<b>WORK TYPE:</b>	Spot Improvement		
		<input type="checkbox"/> Railroad	
		<input type="checkbox"/> R/W Required	<input checked="" type="checkbox"/> Relocations
		<input type="checkbox"/> Shared Use Path	
		<input type="checkbox"/> Bike Facility	
		<input checked="" type="checkbox"/> Ped Facility	Improve Sidewalk
		<input type="checkbox"/> Increased Connectivity	
		<input type="checkbox"/> Socioeconomic Impacts	
		<input type="checkbox"/> Environmental Impacts	
		<input checked="" type="checkbox"/> Utilities Affected	Gas
			Power
	Sewer		
	Water		
Notes:			

<b>BOYD</b>	<b>Pollard Road/Kirk Street Bus Pull-off</b>		<b>B</b>
High/with E.1	<b>KY 168 MP 6.38</b>	PHASE	(2023 \$'s)
<b>IMPROVEMENT DESCRIPTION:</b> Construct a bus pull-off opposite the Hospice Care Center to provide a shelter for riders and remove buses from traffic during loading and unloading.		D	\$ 40,000
		R	\$ 0
		U	\$ 0
		C	\$ 110,000
		<b>TOTAL</b>	<b>\$ 150,000</b>
<b>TRAFFIC OPERATIONS AND SAFETY:</b>			
2023 Traffic:	KY 168 carries 6,500 vpd. All-way stop-control intersection operates at LOS A(A) in AM (PM) peak hours.		
2045 Traffic:	KY 168 is projected to carry 7,400 vpd. Intersection operates at LOS A(B) in AM (PM) peak hours.		
2018-2022 Crashes:	1 rear end collision occurred at the intersection.		
<b>WORK TYPE:</b>	<b>Transportation Enhancement</b>		
		↑ North <input type="checkbox"/> Railroad <input type="checkbox"/> R/W Required <input type="checkbox"/> Relocations <input type="checkbox"/> Shared Use Path <input type="checkbox"/> Bike Facility <input type="checkbox"/> Ped Facility <input type="checkbox"/> Increased Connectivity <input checked="" type="checkbox"/> Socioeconomic Impacts Travel Patterns Non-Drivers Disabled Low-Income <input checked="" type="checkbox"/> Environmental Impacts Parks <input type="checkbox"/> Utilities Affected	
<b>Notes:</b> Impacts to Pollard Mills Park will require consideration under Section 4(f) and coordination with the city of Ashland. Estimate does not include cost of shelter.			

<b>BOYD</b>	<b>KY 168/6<sup>th</sup> Street</b> (Add Turn Lanes)		<b>C</b>		
Medium	<b>KY 168 MP 6.5 – MP 6.75</b>	<b>PHASE</b>	(2023 \$'s)		
<b>IMPROVEMENT DESCRIPTION:</b> Construct turn lanes on KY 168 and 6 <sup>th</sup> Street to improve traffic flow. Consider signalization as volumes increase to satisfy warrants.		D	\$ 390,000		
		R	\$ 900,000		
		U	\$ 1.3M		
		C	\$ 3.9M		
		<b>TOTAL</b>	<b>\$ 6.5M</b>		
<b>TRAFFIC OPERATIONS AND SAFETY:</b>					
2023 Traffic:	KY 168 carries between 6,500 and 9,200 vpd. WB 6 <sup>th</sup> Street operates at LOS B(D) in AM (PM) peak hours.				
2045 Traffic:	KY 168 is projected to carry between 7,400 and 10,400 vpd. WB 6 <sup>th</sup> Street without turn lanes operates at LOS B(F) in AM (PM) peak hours. With turn lanes, improves to LOS B(C).				
2018-2022 Crashes:	11 crashes occurred in the vicinity from Sanders Road to 6 <sup>th</sup> Street, including 3 angle, 3 single vehicle, and 2 rear end collisions.				
<b>WORK TYPE:</b>	<b>Spot Improvement</b>				
		↑ North			
		<input type="checkbox"/> Railroad			
		<input checked="" type="checkbox"/> R/W Required	<input type="checkbox"/> Relocations		
		<input type="checkbox"/> Shared Use Path			
		<input type="checkbox"/> Bike Facility			
		<input checked="" type="checkbox"/> Ped Facility	Improve Sidewalk		
		<input type="checkbox"/> Increased Connectivity			
		<input checked="" type="checkbox"/> Socioeconomic Impacts	Disabled		
			Low-Income		
			Non-Drivers		
<input checked="" type="checkbox"/> Environmental Impacts					
<input checked="" type="checkbox"/> Utilities Affected	Gas				
	Power				
	Sewer				
	Water				
<b>Notes:</b> Widening is assumed to the north and east, minimizing impacts to the hillside and McGuire Street.					

<b>BOYD</b>	<b>KY 168/Roberts Drive</b> (3-way stop)		<b>D.2</b>
High/Quick Hit	<b>KY 168 MP 6.75 – MP 6.77</b>	<b>PHASE</b>	(2023 \$'s)
<b>IMPROVEMENT DESCRIPTION:</b> Convert KY 168/Roberts Drive intersection from a one-way to an all-way stop to increase safety.		D	\$ 0
		R	\$ 0
		U	\$ 0
		C	\$ 20,000
		<b>TOTAL</b>	<b>\$ 20,000</b>
<b>TRAFFIC OPERATIONS AND SAFETY:</b>			
2023 Traffic:	KY 168 carries between 5,800 and 9,200 vpd. EB Roberts Drive operates at LOS C(F) in AM (PM) peak hour.		
2045 Traffic:	KY 168 is projected to carry between 6,600 and 10,400 vpd with all-way stop operating at LOS C(F) in AM (PM) peak hour.		
2018-2022 Crashes:	14 PDO crashes occurred at the intersection, including 7 angle and 3 rear end collisions.		
<b>WORK TYPE:</b>	<b>Safety</b>		
		↑ North	
		<input checked="" type="checkbox"/> Railroad	
		<input type="checkbox"/> R/W Required	<input type="checkbox"/> Relocations
		<input type="checkbox"/> Shared Use Path	
		<input type="checkbox"/> Bike Facility	
		<input type="checkbox"/> Ped Facility	
		<input type="checkbox"/> Increased Connectivity	
		<input type="checkbox"/> Socioeconomic Impacts	
		<input type="checkbox"/> Environmental Impacts	
		<input type="checkbox"/> Utilities Affected	
<b>Notes:</b> Buses must follow state laws governing stopping requirements at railroad crossings, requiring a second mid-intersection stop for northbound buses.			

<b>BOYD</b>	<b>KY 168/Roberts Drive</b> (Raise Grade and Add Turn Lanes)		<b>D.3</b>
Long-Term	<b>KY 168 MP 6.6 – MP 6.9</b>	PHASE	(2023 \$'s)
<b>IMPROVEMENT DESCRIPTION:</b> Raise the grade along KY 168 and construct turn lanes for Roberts Drive and northbound KY 168 to improve visibility, safety, and capacity. Consider signalization as volumes increase to satisfy warrants.		D	\$ 400,000
		R	\$ 1.7M
		U	\$ 1.2M
		C	\$ 4.1 - 4.5M
		<b>TOTAL</b>	<b>\$ 7.4 - 7.9M</b>
<b>TRAFFIC OPERATIONS AND SAFETY:</b>			
2023 Traffic:	KY 168 carries between 5,800 and 9,200 vpd and eastbound Roberts Drive operates at LOS C(F) in AM (PM) peak hours.		
2045 Traffic:	KY 168 is projected to carry between 6,600 and 10,400 vpd. As one-way stop, EB Roberts Drive operates at LOS C(F) in AM (PM) peak hours; as a signal, overall intersection operates at LOS A(A).		
2018-2022 Crashes:	14 PDO crashes occurred at the intersection, including 7 angle and 3 rear end collisions.		
<b>WORK TYPE:</b>	<b>Reconstruction</b>		
		↑ North	
		<input checked="" type="checkbox"/> Railroad	
		<input checked="" type="checkbox"/> R/W Required	<input checked="" type="checkbox"/> Relocations
		<input type="checkbox"/> Shared Use Path	
		<input type="checkbox"/> Bike Facility	
		<input type="checkbox"/> Ped Facility	
		<input type="checkbox"/> Increased Connectivity	
		<input checked="" type="checkbox"/> Socioeconomic Impacts	Disabled
			Low-Income
		<input checked="" type="checkbox"/> Environmental Impacts	Flood Plain
Blue-Line Streams			
<input checked="" type="checkbox"/> Utilities Affected	Gas		
	Power		
	Sewer		
	Water		
<b>Notes:</b> Requires coordination with CSX railroad. Potential environmental justice concerns associated with likely relocations.			

BOYD		KY 168 New Sidewalk South Segment: US 60 to Boone Street		E.1 South				
High	KY 168 MP 5.7 – MP 6.1		PHASE	(2023 \$'s)				
<b>IMPROVEMENT DESCRIPTION:</b> Construct a sidewalk on the east side of KY 168 along the 1.7-mile corridor to include a new ADA compliant, 5-foot-wide sidewalk with crosswalks and lighting. Install "Share the Road" signs to encourage motorists to watch for cyclists.			D	\$ 150,000				
			R	\$ 230,000				
			U	\$ 0.5M				
			C	\$ 1.5M				
			<b>TOTAL</b>	<b>\$ 2.4M</b>				
<b>TRAFFIC OPERATIONS AND SAFETY:</b>								
2023 Traffic:	KY 168 carries between 5,800 and 9,200 vpd.							
2045 Traffic:	KY 168 is projected to carry between 6,600 and 10,400 vpd.							
2018-2022 Crashes:	99 crashes occurred along KY 168, including 1 involving a pedestrian near Margarette Street.							
<b>WORK TYPE:</b>	<b>Transportation Enhancement</b>							
			↑ North					
			<input type="checkbox"/> Railroad			<input type="checkbox"/> Relocations		
			<input checked="" type="checkbox"/> R/W Required			<input type="checkbox"/> Shared Use Path		
			<input type="checkbox"/> Bike Facility			<input type="checkbox"/> Ped Facility		
			<input checked="" type="checkbox"/> Ped Facility			Ped Improvements		
			<input checked="" type="checkbox"/> Increased Connectivity			Shopping Centers		
			<input checked="" type="checkbox"/> Socioeconomic Impacts			Community Cohesion		
			<input checked="" type="checkbox"/> Socioeconomic Impacts			Non-Drivers		
			<input type="checkbox"/> Environmental Impacts					
			<input checked="" type="checkbox"/> Utilities Affected			Gas		
			Water					
			Sewer					
			Power					
			Notes:					

BOYD		KY 168 New Sidewalk Central Segment: Boone Street to Roberts Drive		E.1 Central	
High	KY 168 MP 6.1 – MP 6.75			PHASE	(2023 \$'s)
<b>IMPROVEMENT DESCRIPTION:</b> Construct a sidewalk on the east side of KY 168 along the 1.7-mile corridor to include a new ADA compliant, 5-foot-wide sidewalk with crosswalks and lighting. Install "Share the Road" signs to encourage motorists to watch for cyclists.				D	\$ 350,000
				R	\$ 370,000
				U	\$ 0.8M
				C	\$ 3.5M
				<b>TOTAL</b>	<b>\$ 5.0M</b>
<b>TRAFFIC OPERATIONS AND SAFETY:</b>					
2023 Traffic:	KY 168 carries between 5,800 and 9,200 vpd.				
2045 Traffic:	KY 168 is projected to carry between 6,600 and 10,400 vpd.				
2018-2022 Crashes:	99 crashes occurred along KY 168, including 1 involving a pedestrian near Margarette Street.				
<b>WORK TYPE:</b>	<b>Transportation Enhancement</b>				
				↑ North	
				<input type="checkbox"/> Railroad	
				<input checked="" type="checkbox"/> R/W Required <input type="checkbox"/> Relocations	
				<input type="checkbox"/> Shared Use Path	
				<input type="checkbox"/> Bike Facility	
				<input checked="" type="checkbox"/> Ped Facility    Ped Improvements	
				<input checked="" type="checkbox"/> Increased Connectivity    Shopping Centers	
				<input checked="" type="checkbox"/> Socioeconomic Impacts    Community Cohesion Non-Drivers	
				<input checked="" type="checkbox"/> Environmental Impacts    Parks Churches Public Land/Park Cemeteries	
				<input checked="" type="checkbox"/> Utilities Affected    Gas Water Sewer Power	
Notes:					

BOYD		KY 168 New Sidewalk		E.1 North	
		North Segment: Roberts Drive to Hoods Creek Road			
High	KY 168 MP 6.75 – MP 7.5			PHASE	(2023 \$'s)
<b>IMPROVEMENT DESCRIPTION:</b> Construct a new sidewalk on the east side of KY 168 along the 1.7-mile corridor to include an ADA compliant, 5-foot-wide sidewalk with crosswalks and lighting. Install "Share the Road" signs to encourage motorists to watch for cyclists.				D	\$ 420,000
				R	\$ 420,000
				U	\$ 0.9M
				C	\$ 4.2M
				<b>TOTAL</b>	<b>\$ 5.9M</b>
<b>TRAFFIC OPERATIONS AND SAFETY:</b>					
2023 Traffic:	KY 168 carries between 5,800 and 9,200 vpd.				
2045 Traffic:	KY 168 is projected to carry between 6,600 and 10,400 vpd.				
2018-2022 Crashes:	99 crashes occurred along KY 168, including 1 involving a pedestrian near Margarette Street.				
<b>WORK TYPE:</b>	<b>Transportation Enhancement</b>				
				↑ North	
				<input checked="" type="checkbox"/> Railroad	
				<input checked="" type="checkbox"/> R/W Required	<input type="checkbox"/> Relocations
				<input type="checkbox"/> Shared Use Path	
				<input type="checkbox"/> Bike Facility	
				<input checked="" type="checkbox"/> Ped Facility	Ped Improvements
				<input checked="" type="checkbox"/> Increased Connectivity	
				Shopping Centers	
				<input checked="" type="checkbox"/> Socioeconomic Impacts	
				Community Cohesion	
Non-Drivers					
<input checked="" type="checkbox"/> Environmental Impacts					
Parks					
Churches					
<input checked="" type="checkbox"/> Utilities Affected					
Gas					
Water					
Sewer					
Power					
Note:					



## 9.0 NEXT STEPS

No funding to date has been identified to advance any improvement concept beyond this initial planning phase. Some improvements (e.g., Concept A.1 or D.2) are low-cost actions requiring little advance preparation; these could be implemented relatively quickly by KYTC maintenance forces. Others (e.g., Concept D.3 or E.1) are higher-cost projects that will have to compete for funding then progress through the project development process: preliminary design/environmental, final design, right-of-way acquisition, utility relocation, then construction.

For those competing for traditional Highway Plan funds, CHAF forms should be created/modified so potential projects can compete for future funding via the next SHIFT cycle. Other funding streams may also be considered, discussed below.

Once funding is identified, KYOVA’s TIP and KYTC’s STIP should be amended to reflect any future project development phases.

Limited public involvement has occurred to date; engaging with key stakeholders and impacted property owners will be important during the design process.

### 9.1 AVAILABLE FUNDING OPTIONS

The *Infrastructure Investment and Jobs Act* (IIJA), also known as the *Bipartisan Infrastructure Law*<sup>14</sup>, provides federal highway programs more than \$350 billion over a five-year period (fiscal years 2022–2026). Most of this funding is distributed to states based on formulas spelled out in legacy programs such as the Federal-aid Highway Program and the Highway Safety Improvement Program (HSIP). However, funds may also be provided through competitive grant programs. The [Grants.gov](https://www.grants.gov) website provides a one-stop shop for information on available grant programs across multiple agencies, including a feature to search by keyword.

As of late 2023, available funding options for sidewalk projects include the following federal sources:

Figure 36: Federal Funding Opportunities

Program	Description
Active Transportation Infrastructure Investment Program (ATIIP)	Projects that provide safe and connected active transportation facilities in active transportation networks or active transportation spines.
Carbon Reduction Program (CRP)	Projects that support the reduction of transportation emissions, with programs divided based on area population.

<sup>14</sup> Online at <https://www.fhwa.dot.gov/bipartisan-infrastructure-law/funding.cfm>

Program	Description
Congestion Mitigation and Air Quality Improvement (CMAQ)	Projects that reduce mobile source emissions in both current and former NAAQS nonattainment and maintenance areas.
Surface Transportation Block Grant Program (STBG)	Projects that preserve and improve the conditions and performance on any Federal-aid highway, bridge, and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects.
STBG Transportation Alternatives Set-Aside	Smaller-scale transportation projects such as pedestrian and bicycle facilities; construction of turnouts, overlooks, and viewing areas; community improvements; environmental mitigation; recreational trails; safe routes to school projects; and vulnerable road user safety assessments.
Rebuilding American Infrastructure with Sustainability and Equity (RAISE)	Discretionary grant for critical freight and passenger transportation infrastructure projects that may be harder to support through other USDOT grant programs.
Safe Streets for All (SS4A)	Discretionary grant for regional, local, and tribal initiatives to prevent roadway deaths and serious injuries, including planning and implementation awards.

Transit-specific opportunities to fund Concept B's bus pull-off include competitive Grant for Buses and Bus Facilities<sup>15</sup> and formula 5339 Bus and Bus Facilities Program. The application for the 5339 funds can be submitted to the Office of Transportation Delivery by April 1, 2024.

KYOVA typically administers funding for STBG, CMAQ, and transit program funds for the metropolitan area, including Boyd County.

## 10.0 ADDITIONAL INFORMATION

Written requests for additional information should be sent to:

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

<sup>15</sup> Online at <https://www.transit.dot.gov/bus-program>