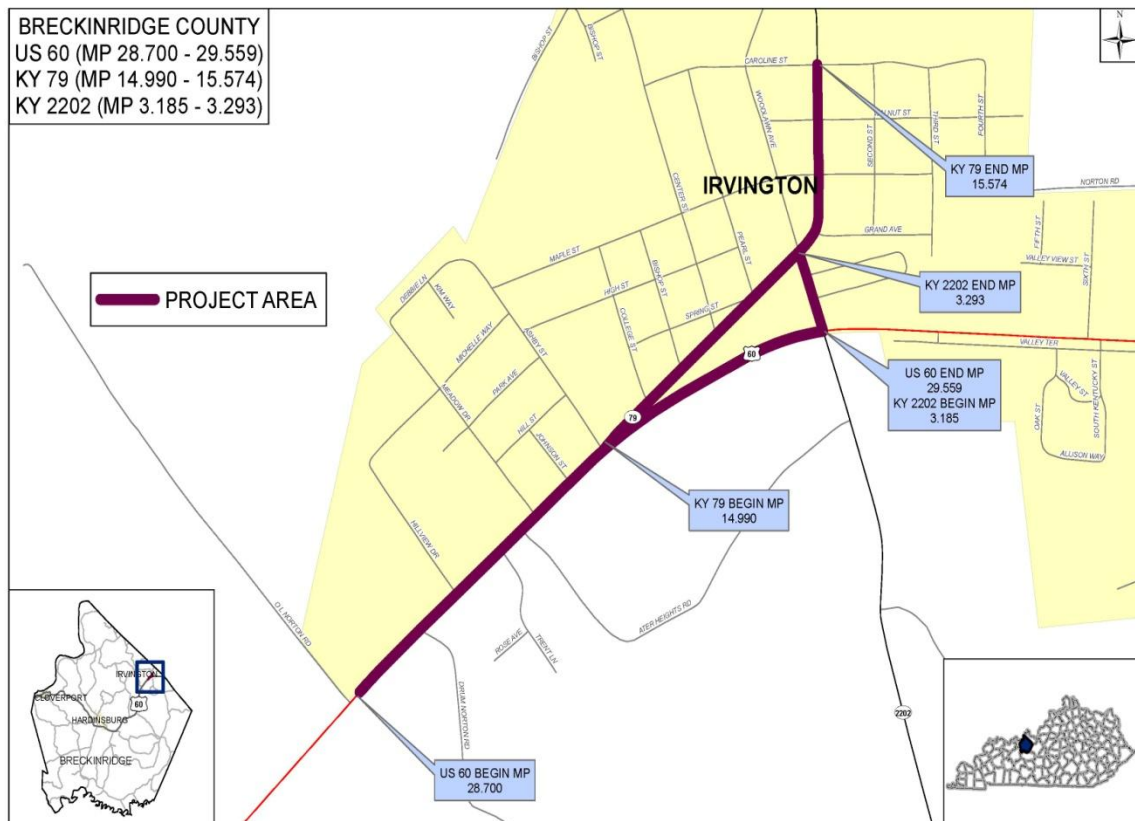


Data Needs Analysis



Scoping Study



US 60, Breckinridge County
 From O.L. Norton Road to
 Ky 2202 in Irvington
 Item No. 4-394.00

Prepared by KYTC
 District 4-Charlie Allen

July 2012



I. PRELIMINARY PROJECT INFORMATION

County: Breckinridge Item No.: 4-394.00
Route Number(s): US 60 Road Name: Hardinsburg-Irvington Road
Program No.: UPN: (Function) 014 0060 028-030
Federal Project No.: Type of Work: Minor Widening

2012 Highway Plan Project Description:

Add Center Turn Lane Along US 60 in Irvington (Phase 1) From West of Irvington to Ky 2202

Beginning MP: 28.679 Ending MP: 29.559 Project Length: 0.880

Functional Class.: ☐ Urban ☒ Rural
Arterial ☐ State Class.: ☒ Primary ☐ Secondary
Route is on: ☐ NHS ☐ NN ☐ Ext Wt

MPO Area: Not Applicable

In TIP: ☐ Yes ☐ No

ADT (current): 5567 2010

Access Control: ☐ None ☒ Permit ☐ Fully Controlled ☐ Partial Spacing: ☐

Median Type: ☒ Undivided ☐ Divided (Type):

Existing Bike Accommodations: Shared Lane ☐ Ped: ☒ Sidewalk

Posted Speed: ☐ 35 mph ☒ 45 mph ☒ 55 mph ☐ Other (Specify):

KYTC Guidelines Preliminarily Based on : 55 MPH Proposed Design Speed

COMMON GEOMETRIC

Roadway Data:	EXISTING	PRACTICES*
No. of Lanes	2	2
Lane Width	12'	12' minimum
Shoulder Width	6'	8' minimum
Max. Superelevation**	Field Measure	4 to 8%
Minimum Radius**	0.9 degrees	2050
Maximum Grade	4%	4%
Minimum Sight Dist.	Field Measure	910
Sidewalk Width(urban)		
Clear-zone***		

Existing Rdwy. Plans available? ☒ Yes ☐ No
Year of Plans: 1986
☒ Traffic Forecast Requested
Date Requested: May-12
☐ Mapping/Survey Requested
Date Requested:
Type: ☐

Project Notes/Design Exceptions?:

*Based on proposed Design Speed, **AASHTO's A Policy on Geometric Design of Highways and Streets, ***AASHTO's Roadside Design Guide

Bridge No.*: (Bridge #1) (Bridge #2)
Sufficiency Rating
Total Length
Width, curb to curb
Span Lengths
Year Built
Posted Weight Limit
Structurally Deficient?
Functionally Obsolete?

Existing Geotech data available?
☐ Yes ☐ No

*If more than two bridges are located on the project, include additions sheets.

II. PROJECT PURPOSE AND NEED

A. Legislation

The following funding was listed in the 2012 General Assembly's Enacted Highway Plan. The construction estimate in the 2012 Recommended Six Year Plan was \$1,200,000

<i>Funding</i>	<i>Phase</i>	<i>Year</i>	<i>Amount</i>
SPP	DN	2013	\$250,000
SPP	RW	2014	\$200,000
SPP	UT	2014	\$250,000
	CN		

B. Project Status

Design funds for this project has been requested. There is another section on the UNL to add a center turn lane from KY 2202 to 6th street (04 014 B0060 29.00). There is also a project on the UNL (04 014 B0060 28.30) to create a left turn lane at College Street and remove the slip ramp from KY 79.

C. System Linkage

This segment of US 60 connects the city of Hardinsburg to the city of Irvington and other communities west of Hardinsburg. It is also a direct access to Muldraugh and the Fort Knox region. It is classified as Rural Arterial and this classification is not likely to change as a result of this project. KY 79 connects Irvington to Brandenburg and on to Indiana and numerous trucks utilize this route.

D. Modal Interrelationships

This is not a designated bike route. There are no riverports directly associated with this route however there is the Owensboro Riverport Authority to the west and the Meade County Riverport Authority to the east. There are no railroad facilities in the area. This is part of the Freight Focus Network. There is a portion of sidewalk in the area connecting a housing development to the school property.

E. Social Demands & Economic Development

There has not been substantial economic growth in the area. The local officials indicate that the current school will be upgraded and an expansion to a recreational park is currently being planned.

F. Transportation Demand

The last actual traffic count on this roadway was 5567 in 2010 which is actually a slight decrease from the previous count of 5570. The turn movements need to be counted at College St and Ky 2202. It would also be beneficial to get a classification count on KY 79 to see how many trucks use the slip lane.

II. PROJECT PURPOSE AND NEED (cont.)

G. Capacity

There does not appear to be a capacity issue (VSF=0.33). The school traffic could cause some issues during peak times due to the school loop being short and exiting onto the slip ramp.

H. Safety

CRF = 0.2880 There were only 21 crashes over a 3 year period on this section of roadway with no fatalities. The majority of the crashes were rear end collisions at College St (KY 79) and KY 2202. KY 79 and Ky 2202 shows 4 additional crashes over this same time period. See **Section VI** and **Exhibit 2** for the collision map.

I. Roadway Deficiencies

The following were identified as roadway deficiencies:

1. "Y" Intersection creates unsafe entry onto US 60 from KY 79.
2. School entrances are within the slip lane of KY 79 creating unsafe conditions with merging school traffic onto KY 79 and US 60.
3. The internal storage for buses on school property is not adequate and buses stack on US 60 causing backups during peak hours.
4. Many log truck, lime trucks and rock trucks utilize the KY 79 slip ramp to travel west. East bound trucks utilize a short piece of pavement between KY 79 and US 60 or they utilize KY 2202 which is not adequate for truck traffic.
5. Site distance issues on KY 79 at Maple St.
6. Rear end crashes along US 60 due to numerous commercial entrances.
7. Pedestrian facilities needed along roadway.
8. Drainage issues near Dollar General.

Draft Purpose and Need Statement:

Need: US 60 is a primary route that links Hardinsburg to Irvington and provides direct access to the Muldraugh/Fort Knox area. The intersection of KY 79 and US 60 is a poorly designed intersection. Congestion in the area has resulted in an increase in collisions. Numerous trucks in the area utilize US 60, KY 79 and KY 2202 and there is poor connectivity between these routes.

Purpose: The purpose of this study is to address the potential congestion during peak periods and to improve the safety, mobility, and connectivity between surrounding communities and traffic generators.

III. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

Project is in: ☒ Attainment area ☐ Nonattainment or Maintenance Area ☐ PM 2.5 County

STIP Pg. #: TIP Pg. #:

Project will be included in STIP update for the 2012 Road Plan

B. Archeology/Historic Resources

☐ Known Archeological or Historic Resources are present

A SHPO/KAS site check will be required to comply with the State Antiquities Act to confirm the absence of known archaeological sites

C. Threatened and Endangered Species

The area is heavily disturbed and there is little if any habitat available for T/E species. This project is state funded and USACE permits will not be required therefore no biological studies will be needed

D. Hazardous Materials

☒ Potentially Contaminated Sites are present ☐ Potential Bridge or Structure Demolition

The south west corner of US 62 and KY2202 appears to be an ideal location for a service station. There is a flat lot with gravel overgrown by grass and weeds and there are obvious entrances to US62 and KY2202. A deed research should turn up the history of the site. If a former service station was located there a phase I site survey should be completed to determine if any petroleum contaminated soils are present. Another gas station is located at junction of US62 and KY 79 (Y intersection).

E. Permitting

Check all that may apply: ☐ Waters of the US ☐ MS4 area ☐ Floodplain Impacts ☐ Navigable Waters of the US Impacts
Are 401/404 Permits likely to be required? ☐ Yes ☐ No Impacts to: ☐ Wetlands ☐ Stream/Lake/Pond
☐ ACE LON ☐ ACE NW ☐ ACE IP ☐ DOW IWQC ☐ Special Use Waters

No permits should be necessary for this project.

F. Noise

Are existing or planned noise sensitive receptors adjacent to the proposed project? ☐ Yes ☐ No
Is this considered a "Type I Project" according to the [KYTC Noise Analysis and Abatement Policy?](#) ☐ Yes ☒ No

This is a state funded project therefore noise analysis will not be required.

G. Socioeconomic

Check all that may apply: ☐ Low Income/Minority Populations affected ☐ Relocations ☐ Local Land Use Plan available

There do not appear to be any socioeconomic issues within the project area

H. Section 4(f) or 6(f) Resources

The following are present on the project: ☐ Section 4(f) Resources ☐ Section 6(f) Resources

There are no Section 4(f) or 6(f) resource concerns since this project is state funded.

Anticipated Environmental Document:

None (Completely State funded)



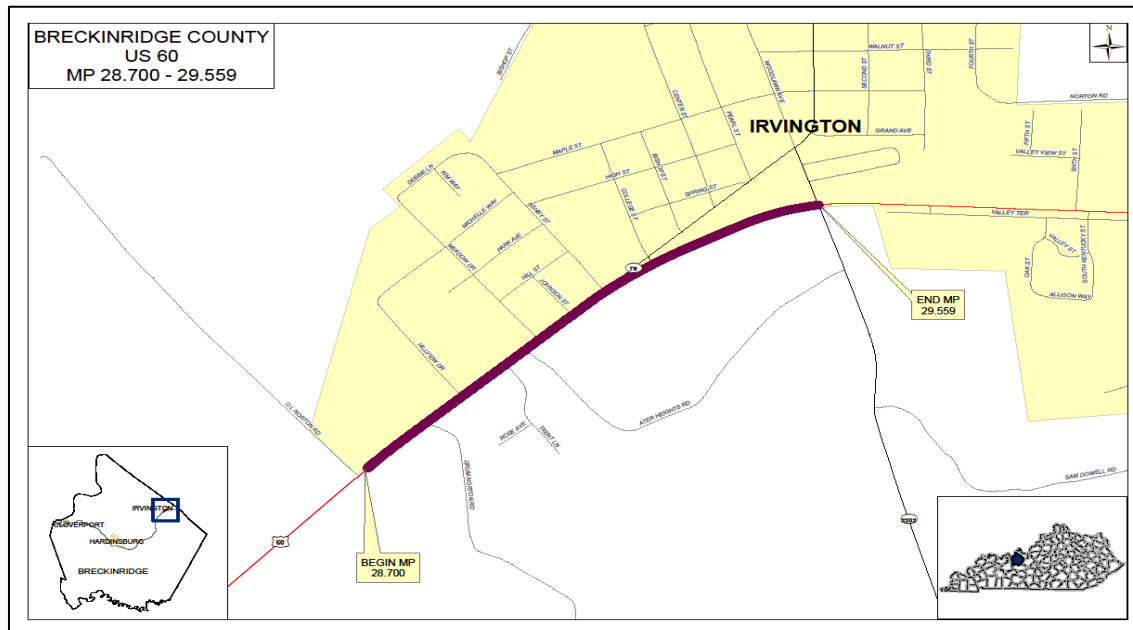
IV. POSSIBLE ALTERNATIVES

A. Alternative 1: No Build

This alternative should be carried forward, but does not address the needs identified.

B. Alternative 2

Widen US 60 to 3 lanes from MP 28.679 (OI Norton Road) to MP 29.559 (KY 2202) using a rural or urban template of 2-12' lanes with a 13' center turn lane. Existing sidewalk on the north side of US 60 from the entrance to IGA to Irvington Elementary School should be left undisturbed by widening on opposite side or should be replaced as part of the project. Consider extending the sidewalk to the east.



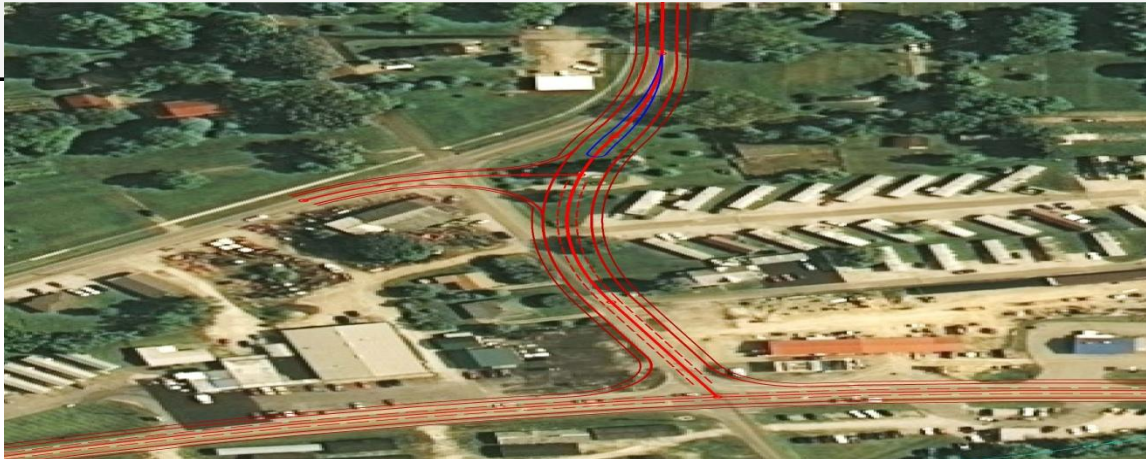
Planning Level Cost Estimate:

<u>Phase</u>	<u>Estimate</u>
Design	\$250,000
R/W	\$500,000
Utilities	\$400,000
Const	\$1,500,000
Total	\$2,650,000

IV. POSSIBLE ALTERNATIVES (cont.)

B. Alternative #3

Same as Alt #2 with addition of remove the existing slip ramp of KY 79. Realign Ky 79 starting near Grand Avenue extending South along existing KY 2202. School entrance to the west would be exit only and the school entry would be accessed along the remaining portion of KY 79 (city street). Consider a rural or urban template.



Planning Level Cost Estimate:

Discuss internal traffic flow
with the school officials.

<u>Phase</u>	<u>Estimate</u>
Design	\$400,000
R/W	\$1,000,000
Utilities	\$1,000,000
Const	\$3,000,000
Total	\$5,400,000

V. Summary

This study is a Data Needs Analysis (DNA) of a roadway project for the US 60 corridor in Breckinridge County, Item Number 4-394.00. Through analysis of the existing roadway geometrics, crash data, site visits, and discussion with the project team, several needs were identified within the project limits. The following were identified as project needs:

- 1) There are some patterns of collisions at the intersection of KY 2202 and also KY 79 and rear end collision on US 60.
- 2) US 60 connects the cities of Brandenburg and Irvington and onto Muldraugh/Ft Knox.
- 3) The "Y" intersection of KY 79 with US 60 is poorly designed.
- 4) Trucks need better access from KY 79 to US 60.

Purpose: The purpose of this study is to address the potential congestion during peak periods and to improve the safety, mobility, and connectivity between surrounding communities and traffic generators. Included in the alternates were a no build recommendation, a widening alternative, and a realignment of KY 79. After review of the data and discussion with the project team it was determined that design will look at Alternate #3 and make final recommendations based on available funds after better cost estimates are

Alt #	Description	D (\$)(Fund)	R (\$)(Fund)	U (\$)(Fund)	C (\$)(Fund)	Total (\$mil)
1	No Build	-	-	-	-	-
2	US 60 Center Turn Lane	250,000	500,000	400,000	1,200,000	2,350,000
3	Turn Lane Plus KY 79 Realignment	400,000	1,000,000	1,000,000	3,000,000	5,400,000
-	Current Hwy Plan Estimated Cost	250,000	200,000	250,000	1,200,000	1,900,000
-	Current Pre-Con Estimated Cost					

VI. Tables and Exhibits

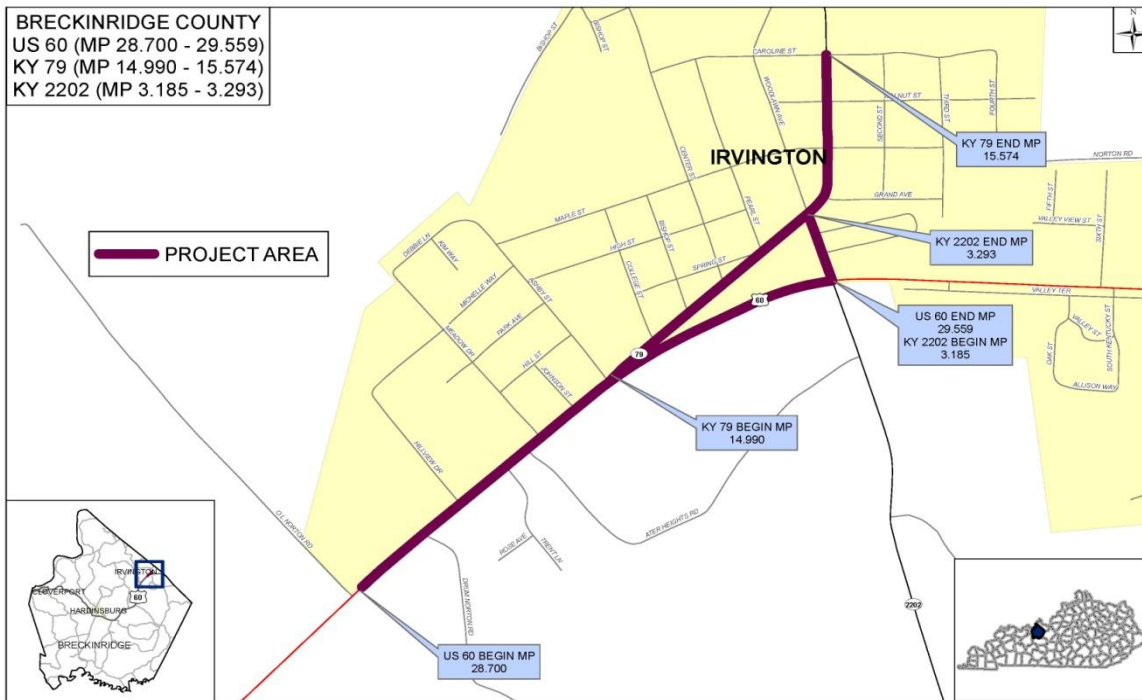


Exhibit 1: Project Location Map

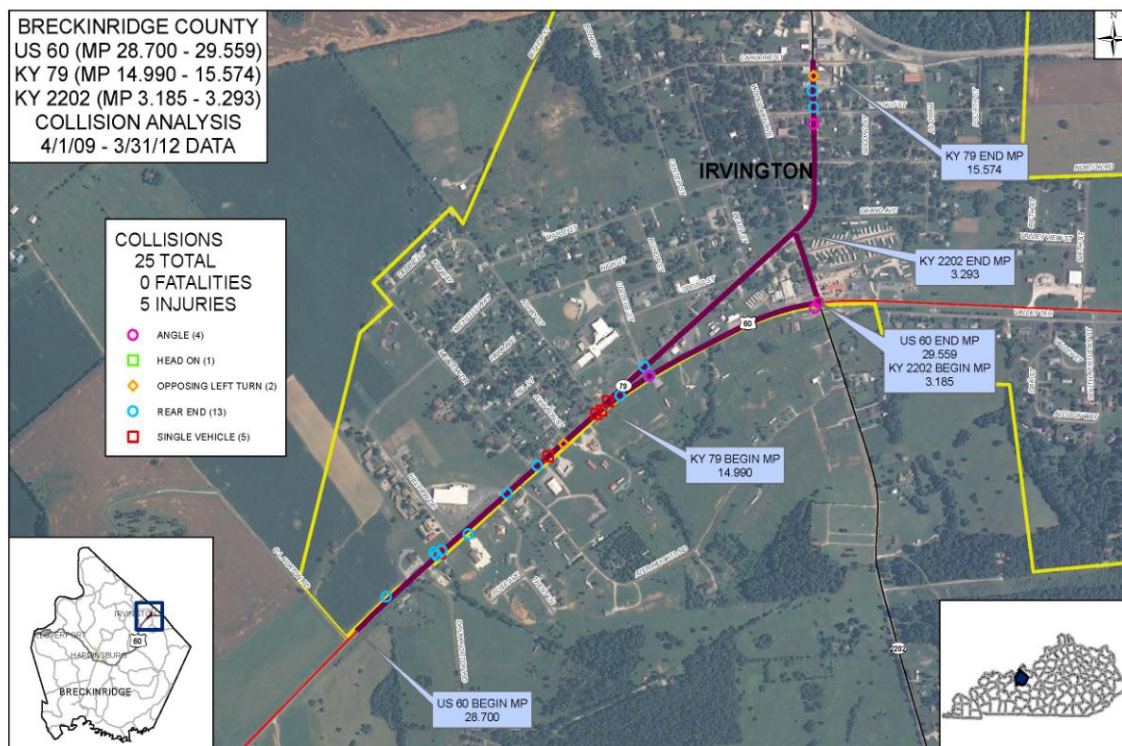


Exhibit 2: Collision Map

VII. Links

Links:

<http://maps.kytc.ky.gov/planarc/dms18971/Pj01682.pdf>

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