

APPENDIX E: MEETING SUMMARIES

Meeting Minutes

TO: Casey Smith
Project Manager
KYTC District #7 Office
800 Newtown Court
Lexington, KY 40511

Brent Sweger
Project Manager
KYTC Central Office Planning
200 Mero Street
Frankfort, KY 40622

FROM: Graham Winchester
Project Manager
Stantec Consulting Services Inc.

DATE: September 9, 2024

SUBJECT: US 68 Corridor Study
Jessamine and Mercer Counties
KYTC Item No. 7-80251.00
Project Team Meeting No. 1

The first Project Team Meeting for the subject project was held at the KYTC District 7 office and virtually via Microsoft Teams on August 28, 2024, at 10:00 a.m. EDT. The following individuals were in attendance:

| | |
|--------------------|-------------------------------------|
| Jayalakshmi Balaji | KYTC – Central Office Planning |
| Nick Beasmore | KYTC – District 7 |
| Catherine Davis | KYTC – Central Office Planning |
| David Gambrel | Bluegrass Area Development District |
| Dave Greenwell | KYTC – District 7 |
| Jared Jeffers | KYTC - Central Office Planning |
| Stuart Kearns | Lexington Area MPO |
| Daniel Kucela | KYTC – District 7 |
| Libbie Lowe | KYTC – Central Office Planning |
| Tony McGaha | KYTC – District 7 |
| Alex Mucci | KYTC – HSIP |
| Mikael Pelfrey | KYTC – Central Office Planning |
| Connor Schurman | KYTC – Central Office Planning |
| Casey Smith | KYTC – District 7 |
| Rob Sprague | KYTC – District 7 |
| Brent Sweger | KYTC – Central Office Planning |
| Jonathan Taylor | KYTC – District 7 |
| Adam Ulrich | KYTC – Central Office Design |
| Thomas Witt | KYTC – Central Office Planning |
| | |
| Brian Aldridge | Stantec Consulting Services Inc. |
| Len Harper | Stantec Consulting Services Inc. |
| Graham Winchester | Stantec Consulting Services Inc. |

Casey Smith welcomed everyone and led introductions. The purpose of the meeting was to discuss the existing conditions and preliminary improvement concepts for the US 68 Corridor Study. The study area is shown in **Figure 1**.

The following enumerated items were discussed.

1. Casey Smith will serve as the Project Manager representing KYTC District 7. Brent Sweger will serve as the KYTC Central Office Project Manager. Graham Winchester will serve as the Project Manager representing Stantec.
2. This project is funded utilizing Statewide Planning Priority (SPP) funds. This project is listed in Kentucky's 2024 – 2030 Enacted Highway Plan as Item No. 7-80251.00 with \$250,000 in Planning funds listed for 2024. Future phases of the project are not funded.
3. There are currently no active projects in the study area listed in Kentucky's 2024 – 2030 Enacted Highway Plan. There was a recent Highway Safety Improvement Program (HSIP) project to improve signing, striping, guardrail, and sightlines on US 68 in Jessamine County. This project was listed as KYTC Item No. 7-9009.00 and cost approximately \$4.5 million (completed in 2023).
4. The objective of the US 68 Corridor Study is to identify and evaluate potential concepts to improve safety, truck mobility, and provide consistent driver expectations (geometrics) on US 68 in Mercer County (BMP 14.45) and Jessamine County (EMP 1.38) and to determine the need and optimal location for a replacement Kentucky River crossing to provide better connectivity between Mercer County and Jessamine/Fayette Counties.
5. This study will be a pilot study to incorporate Road Safety Assessments (RSA's) from an independent team through the HSIP statewide contract. The project team will coordinate with the independent team through the concept development process.
 - The [Safe System Assessment Framework](#) will be used by Stantec and the Independent RSA team.
6. Highlights from the existing conditions analysis were discussed. US 68 is a two-lane rural minor arterial with 10-foot lanes in Mercer County, 11-foot lanes in Jessamine County, and one-foot paved shoulders throughout. While the posted speed limit is 55 miles per hour (MPH), the curvature of the road requires consistent advisory speeds between 20 and 45 mph.
7. The US 68 bridge across the Kentucky River was constructed in 1954 and has a maximum load posting of 40 tons. The deck and substructure are listed as being in fair condition with minor cracking and the superstructure is listed as being in poor condition with advanced deterioration.

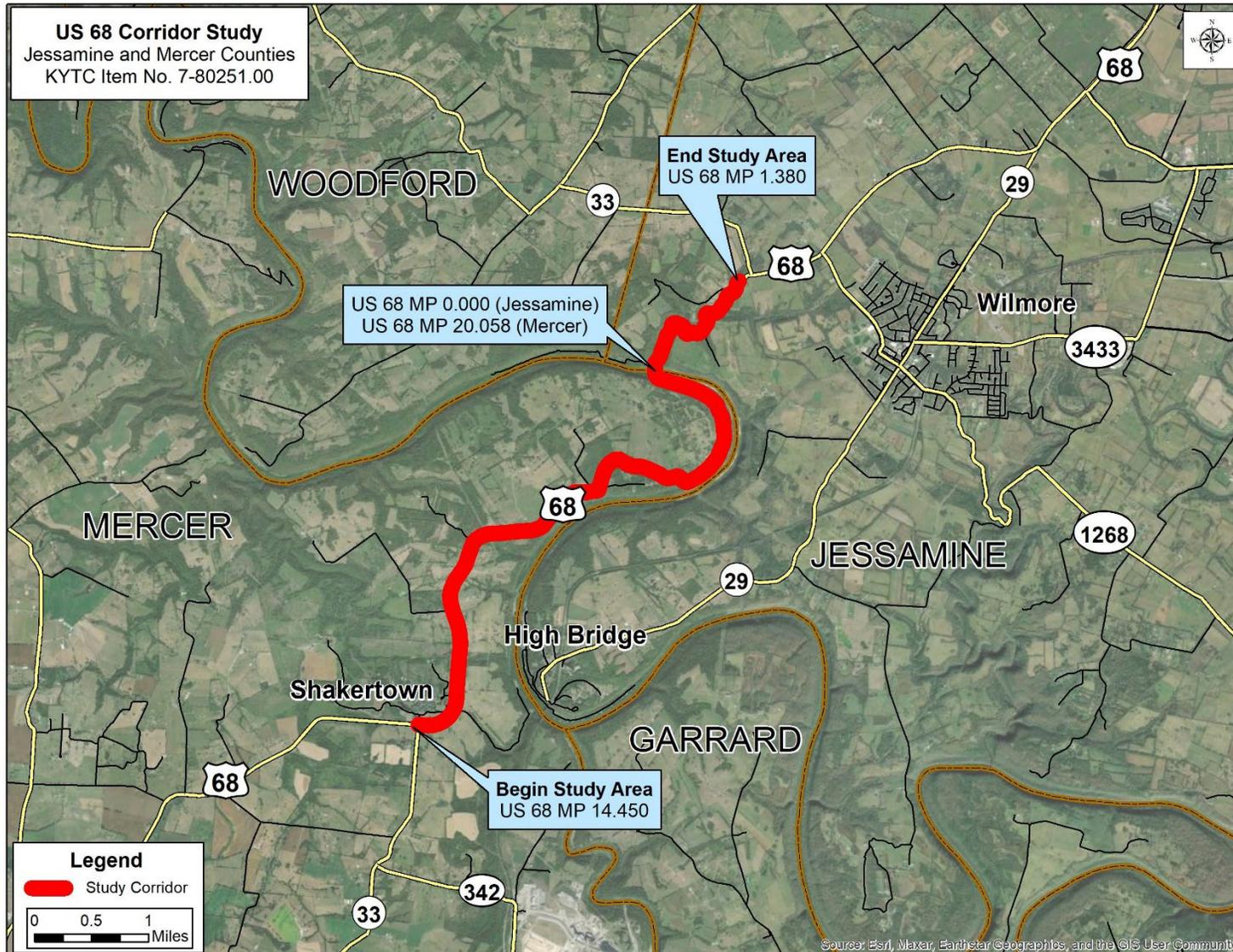


Figure 1: Study Area

8. Between 2019 and 2023, there were 109 reported crashes along the study portion of US 68. Of the 109 crashes, 21 (19 percent) resulted in an injury and 88 (81 percent) resulted in property damage only. Of the 21 injury collisions, five were suspected serious injury collisions, three of which involved motorcycles losing control on horizontal curves, one was a head on collision on wet pavement, and one was a collision with an animal.

The most common crash type was single vehicle (76 percent) followed by sideswipe (9 percent), angle (7 percent), and head on (6 percent).

Between 2019 and 2023, there were an average of 6.7 crashes per year per mile in Jessamine County and an average of 2.2 crashes per year per mile in Mercer County, as shown in **Table 1**. In the eight months since the HSIP project was completed in Jessamine County, there have been 3 property damage only collisions (3.3 crashes per year per mile).

Table 1: Crashes Per Year by County

| Year | Jessamine County (1.38 miles) | Mercer County (5.608 miles) |
|--------------|----------------------------------|--------------------------------|
| 2019 | 11 | 13 |
| 2020 | 8 | 11 |
| 2021 | 15 | 6 |
| 2022 | 7 | 17 |
| 2023 | 5 | 16 |
| Total | 46 | 63 |

A crash tree diagram was presented to help identify crash characteristics that are overrepresented on US 68. It was noted that 84 percent of non-animal, non-intersection single vehicle collisions occurred on horizontal curves. These collisions were more likely to result in an injury if they occurred on dry pavement than wet pavement. This could indicate that motorists are more likely to speed on curves during dry conditions. Head on collisions, on the other hand, were more likely to be severe on wet pavement.

A second crash tree diagram was created after the meeting only including the crashes that occurred in Mercer County, as shown in **Figure 2**. Similar to results from the analysis of both counties, single vehicle collisions on horizontal curves were more likely to result in an injury on dry pavement than on wet pavement in Mercer County.

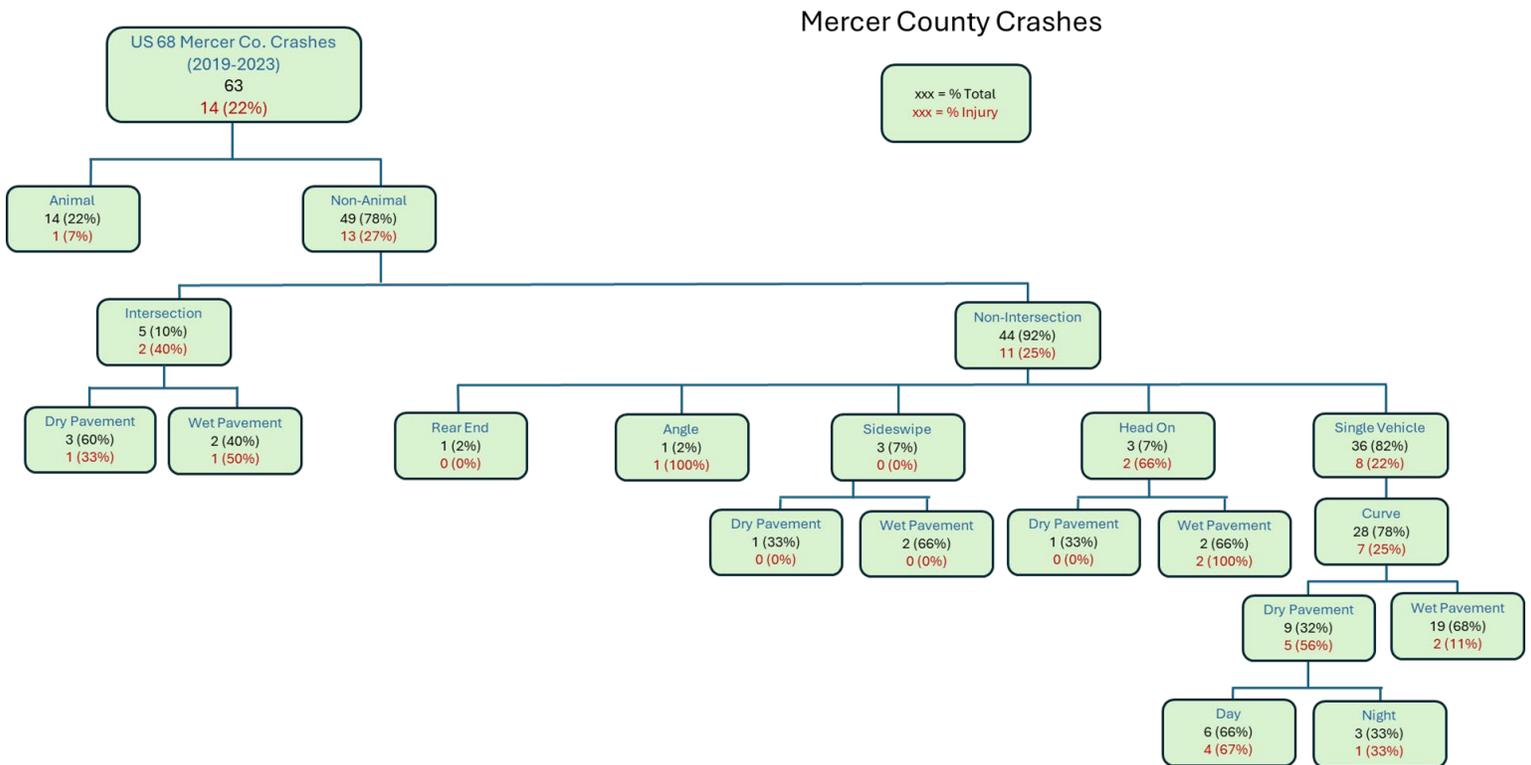


Figure 2: Crash Tree Diagram (Mercer County)

9. Traffic on US 68 ranges from 2,900 vehicles per day (VPD) in Mercer County with 9.6 percent trucks (2024) to 3,200 VPD in Jessamine County with 7.3 percent trucks (2018). There is an April 2021 count on US 68 in Jessamine County that was not used because it was likely impacted by the COVID shutdowns and does not reflect the historical traffic patterns. **Table 2** presents the historical daily traffic counts on US 68 from 2002 to 2024.
 - Question: Is there non-motorized traffic (horses / bicycles, pedestrians)?
Answer: Horses and pedestrians are not common on US 68. Shaker Village is mostly self-contained. There are, however, bicyclists that ride on US 68.
 - There is a push to connect Wilmore with the Asbury Trailheads along KY 29. The project team will coordinate with those efforts.

Streetlight data from 2021 – 2022 was used to determine origin and destination trip patterns for trips that travel through the entire study corridor, as shown in **Figure 3**. Using a middle filter on the US 68 bridge, it was determined that 31 percent of trips are coming from / going to Fayette County to the north and 33 percent of trips are coming from / going to Harrodsburg to the south.

- Question: Why are we using Streetlight data from 2022?
Answer: After 2022, Streetlight switched from location based services (LBS) data to connected vehicle data (CVD) which includes data from vehicles with location technology. Based on comparisons to recent counts and conversations with Streetlight, the CVD overestimates trips and it is recommended that LBS data be used for now.

Table 2: US 68 Historical Daily Traffic Counts

| Year | US 68 | |
|----------------|----------|----------|
| | Sta. 001 | Sta. 506 |
| 2002 | 3,010 | |
| 2003 | | 2,810 |
| 2004 | | |
| 2005 | | |
| 2006 | 2,860 | 2,980 |
| 2007 | | |
| 2008 | | |
| 2009 | 2,850 | 3,060 |
| 2010 | | |
| 2011 | | |
| 2012 | 2,942 | 2,886 |
| 2013 | | |
| 2014 | | |
| 2015 | 2,741 | |
| 2016 | | |
| 2017 | | |
| 2018 | 3,175 | 3,177 |
| 2019 | | |
| 2020 | | |
| 2021 | 2,641 | 2,811 |
| 2022 | | |
| 2023 | | |
| 2024 | 2,905 | |
| Long Term GR | 0.09% | 0.53% |
| Medium Term GR | -0.11% | 1.61% |

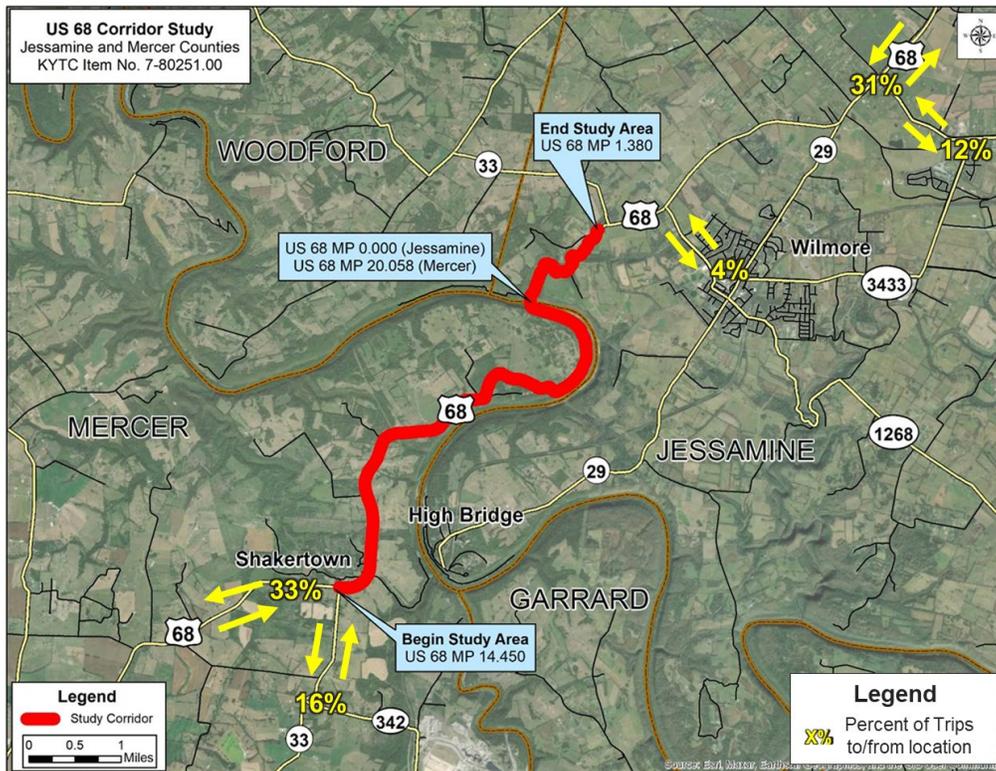


Figure 3: Streetlight Origin-Destination Data (2021 – 2022)

Streetlight data, along with KYTC hourly directional counts, was used to develop turning movement estimates at the US 68 intersections with KY 33, as shown in **Figure 4**. Results from a Highway Capacity Software (HCS) analysis showed that both intersections currently operate at LOS B or better during the AM and PM weekday peak hours.

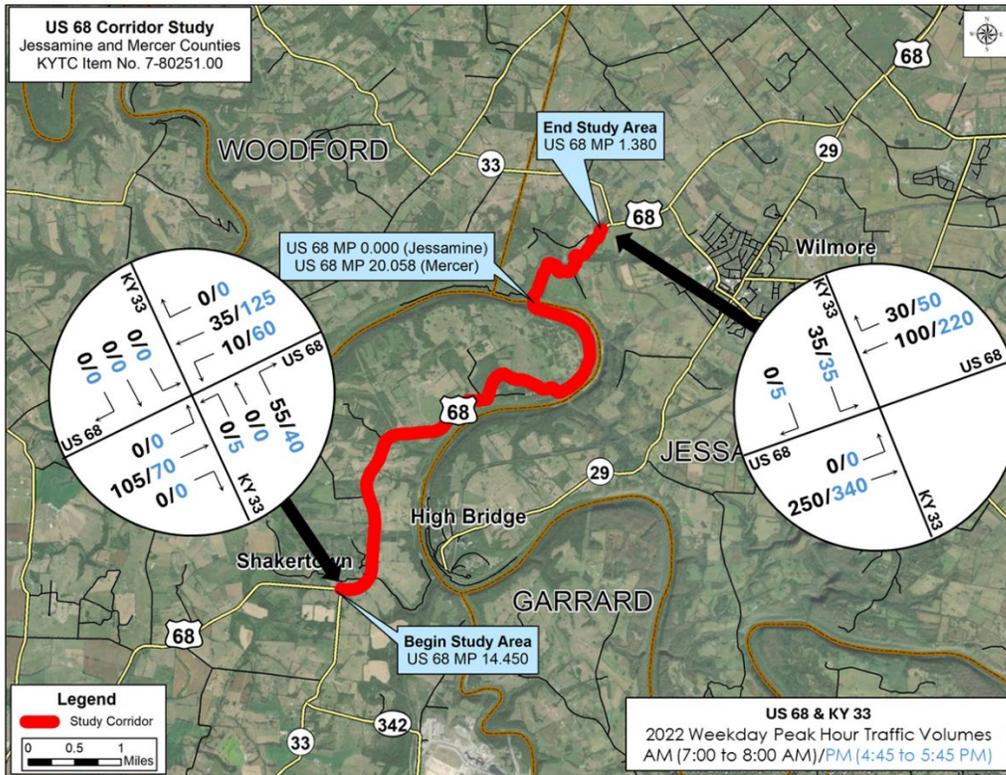


Figure 4: Turning Movement Estimates

10. Population in Jessamine County has grown 0.87 percent per year over the past 10 years while Mercer County has grown at a rate of 0.6 percent per year, both higher than the statewide average of 0.38 percent per year. Results from Kentucky State Data Center projections indicate that both counties are expected to continue to grow, as shown in **Table 3**.

Table 3: Population Estimates and Projections

| Area | Census Estimates | | Annual Growth | 2050 Projection | Annual Growth |
|------------------|------------------|-----------|---------------|-----------------|---------------|
| | 2010 | 2020 | 2010-2020 | | 2020-2050 |
| Kentucky | 4,339,367 | 4,505,836 | 0.38% | 4,785,233 | 0.20% |
| Jessamine County | 48,586 | 52,987 | 0.87% | 64,162 | 0.64% |
| Mercer County | 21,331 | 22,643 | 0.60% | 24,430 | 0.25% |

Source: KY State Data Center

The Kentucky Statewide Travel Demand Model (KYSTMv19) was used to estimate traffic growth on US 68 in the study area. Based on results from the model, daily traffic on US 68 is expected to grow 1.6 percent per year from 2019 to 2045 if there are no capacity improvements. This growth is likely due to the model expecting significant household and employment growth in both Jessamine and Mercer Counties. Since on-alignment safety improvements are not expected to increase travel time, traffic forecasts were developed based on a combination of historical traffic data, population trends, and results from the KYSTM to reflect a No-Build / On-Alignment Improvement Scenario. An annual growth rate of 1.0 percent was selected to grow the traffic. 2045 daily traffic forecasts on US 68 are shown in **Figure 5**.

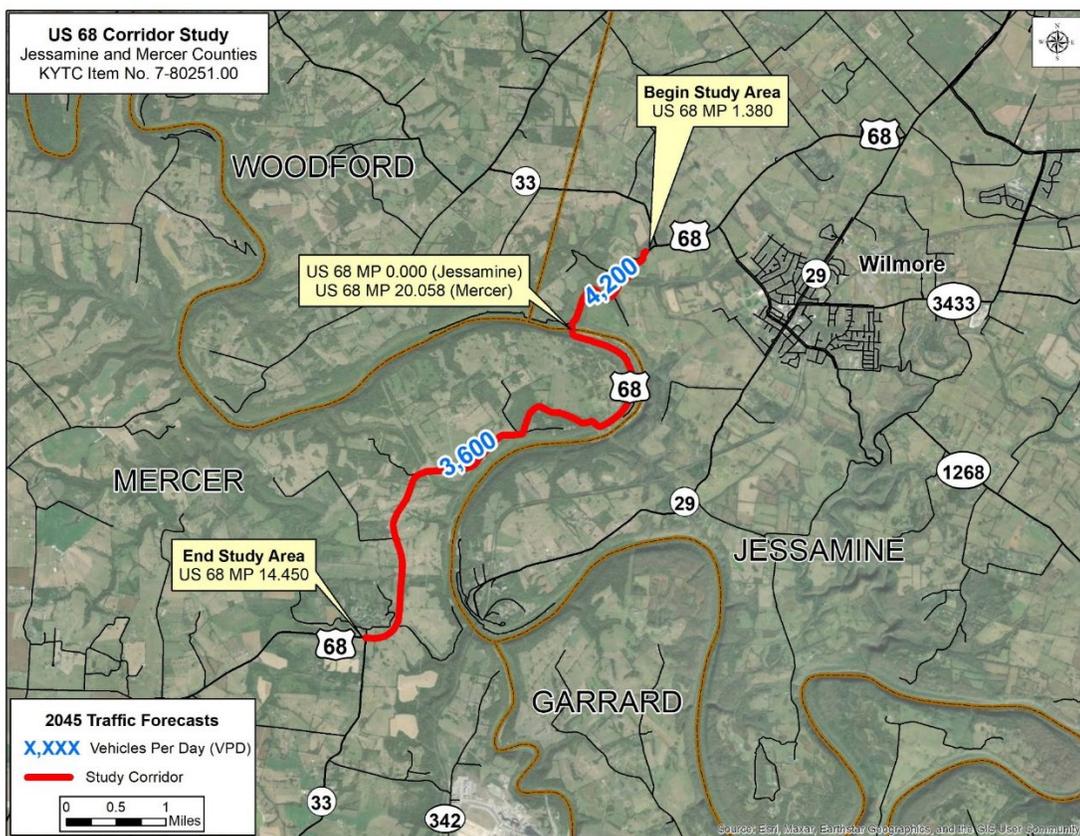


Figure 5: 2045 On-Alignment Daily Traffic Forecasts

11. The draft Environmental Overview (EO) was discussed. It was noted that the draft EO has not been sent to the Division of Environmental Analysis (DEA) for approval. Based on initial findings, much of the area surrounding Shakertown and High Bridge is protected. A new Kentucky River crossing will not be considered near Shakertown.
 - It was noted that the Kentucky River Palisades, a series of gorges and limestone outcroppings, are not in the study area. However, the project team will be sensitive to the existence of the Palisades and their proximity to the study area.

12. Preliminary improvement concepts were discussed. On-alignment safety improvements will be considered on US 68 in Mercer County to match what was completed as part of the HSIP project in Jessamine County. Long-term options include new Kentucky River crossings.

- Question: should we consider realigning US 68 in Mercer County by straightening the horizontal curves?
Answer: Yes, we will consider that as an option moving forward.

1) On-Alignment Safety Improvements

- US 68 in Mercer County
- Rather than individual spot improvements to fix high crash locations, corridor-wide safety improvements will be considered to ensure consistent driver expectations.

2) Realignment of US 68 with the new Kentucky River Bridge near Existing Location

- This concept was added during the meeting.

3) Relocate Kentucky River Crossings

- MP 18.6 (Chinn's curve)
- MP 16.9 (near Mt. Zion Church)

Based on results from the KYSTM, daily traffic on a new river crossing is expected to range from 8,000 to 14,000 VPD, as shown in **Figure 6**. Daily traffic volumes are expected to be higher for the crossing locations further south due to the greater travel time savings.

- It was noted that a new crossing would attract more trucks. The new river crossing options are currently showing a bypass around Wilmore to keep the increased truck traffic from traveling on KY 29 in downtown Wilmore.

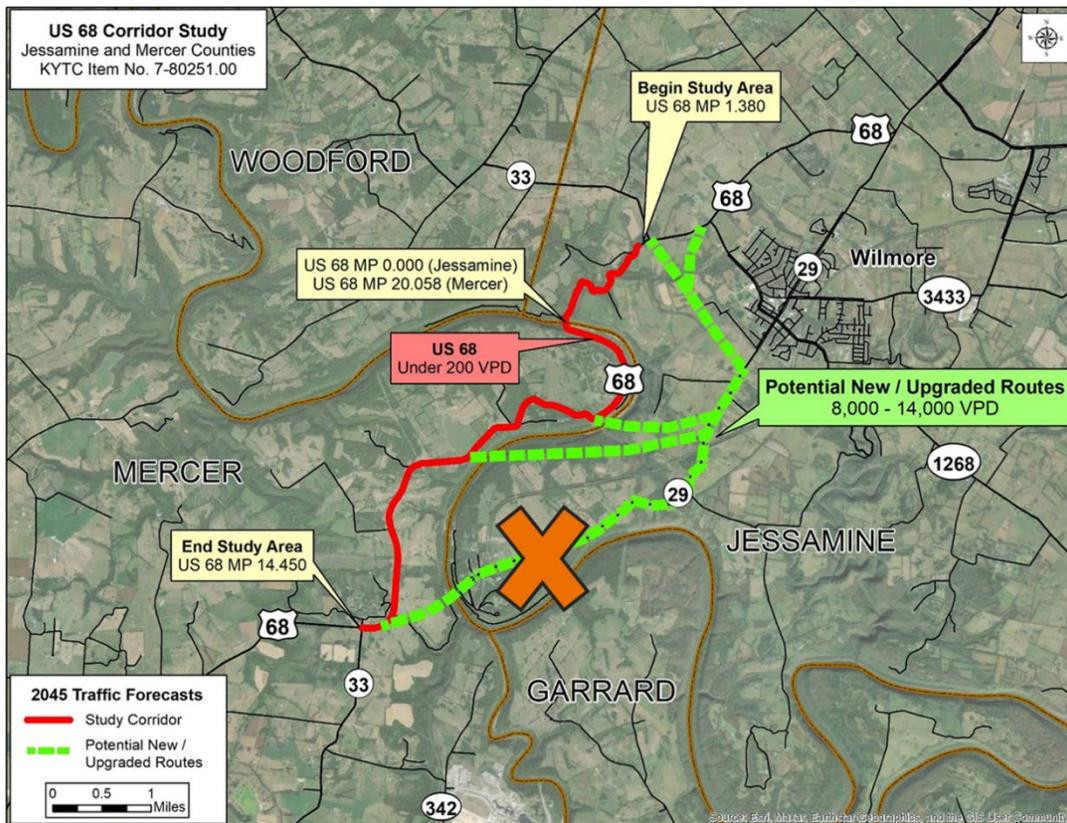


Figure 6: 2045 Off-Alignment Daily Traffic Forecasts

- The next steps are to refine the traffic forecasts, begin the improvement concept development process, and to prepare for the Local Officials Meeting and public outreach in October, which will include a MetroQuest survey. A coordination meeting with the independent HSIP team will be held in September.

The meeting ended at approximately 11:00 a.m. EDT.

Meeting Minutes

TO: Casey Smith
Project Manager
KYTC District #7 Office
800 Newtown Court
Lexington, KY 40511

Brent Sweger
Project Manager
KYTC Central Office Planning
200 Mero Street
Frankfort, KY 40622

FROM: Graham Winchester
Project Manager
Stantec Consulting Services Inc.

DATE: October 31, 2024

SUBJECT: US 68 Corridor Study
Jessamine and Mercer Counties
KYTC Item No. 7-80251.00
Local Officials / Stakeholder Meeting No. 1

The first Local Officials / Stakeholder Meeting for the subject project was held at Wilmore City Hall on October 17, 2024, at 1:30 p.m. EDT. The following individuals were in attendance:

| | |
|-------------------|---|
| Jason Booher | Mercer County Schools |
| Mike Brown | Shaker Village |
| Sara Crum | Jessamine County Schools |
| Jill Cutler | Mercer County Chamber of Commerce |
| Donald Douglas | Kentucky Legislature |
| Dan Fister | Kentucky Legislature |
| David Gambrel | Bluegrass Area Development District |
| Glenn Hamilton | Asbury University |
| Connor Hernandez | Bluegrass Energy |
| Brian Hobson | Asbury University |
| Stuart Kearns | Lexington Area MPO |
| Kim King | Kentucky Legislature |
| Dana Moutz | Asbury University |
| Harold Rainwater | City of Wilmore |
| Billy Rankin | Shaker Village |
| Charla Reed | Jessamine County Joint Tourism Commission |
| Nelson Shrout | Wilmore Police Department |
| Matthew Simpson | Jessamine County Schools |
| Sarah Steele | Mercer County Fiscal Court |
| David West | Jessamine County |
| Casey Smith | KYTC – District 7 |
| Rob Sprague | KYTC – District 7 |
| Len Harper | Stantec Consulting Services Inc. |
| Graham Winchester | Stantec Consulting Services Inc. |

Casey Smith welcomed everyone and led introductions. The purpose of the meeting was to discuss existing conditions and to solicit feedback for the US 68 Corridor Study.

The following enumerated items were discussed.

1. The objective of the US 68 Corridor Study is to identify and evaluate potential concepts to improve safety, truck mobility, and driver expectations (geometrics) on US 68 in Mercer and Jessamine Counties and to determine the need for and optimal location of a replacement Kentucky River bridge.
2. This project is funded utilizing Statewide Planning Priority (SPP) funds. This project is listed in Kentucky's 2024 – 2030 Enacted Highway Plan as Item No. 7-80251.00 with \$250,000 in Planning funds listed for 2024. Future phases of the project are not funded.
3. There are currently no active projects in the study area listed in Kentucky's 2024 – 2030 Enacted Highway Plan. There was a recent Highway Safety Improvement Program (HSIP) project to improve signing, striping, guardrail, and sightlines on US 68 in Jessamine County. This project was listed as KYTC Item No. 7-9009.00 and cost approximately \$4.5 million (completed in 2023).
4. The Mercer County Comprehensive Plan lists realigning US 68 as the fourth priority under Local Improvement Projects. The goal is to realign US 68 using Paris Pike as a model. Additionally, establishing a greenway and Scenic US 68 overlay district is a goal of the plan.

US 68 from just north of Shaker Village to Harrodsburg is designated as the Lexington, Harrodsburg & Perryville Rural Historic District. This was noted in the US 68 Environmental Overview.

5. The Jessamine County Comprehensive Plan lists US 68 from KY 29 to the Kentucky River as needing spot improvements. The plan also identifies the US 68 Scenic Byway and lists preservation, protection, and enhancement of valuable features as goals along US 68.
6. Highlights from the existing conditions analysis were discussed. US 68 is a two-lane rural minor arterial with 10-foot lanes in Mercer County, 11-foot lanes in Jessamine County, and one-foot paved shoulders throughout. While the posted speed limit is 55 miles per hour (MPH), the curvature of the road requires consistent advisory speeds between 20 and 45 mph. Results from a Streetlight analysis show that average speeds slow to 30 – 45 mph near the Kentucky River, as shown in **Figure 1**.

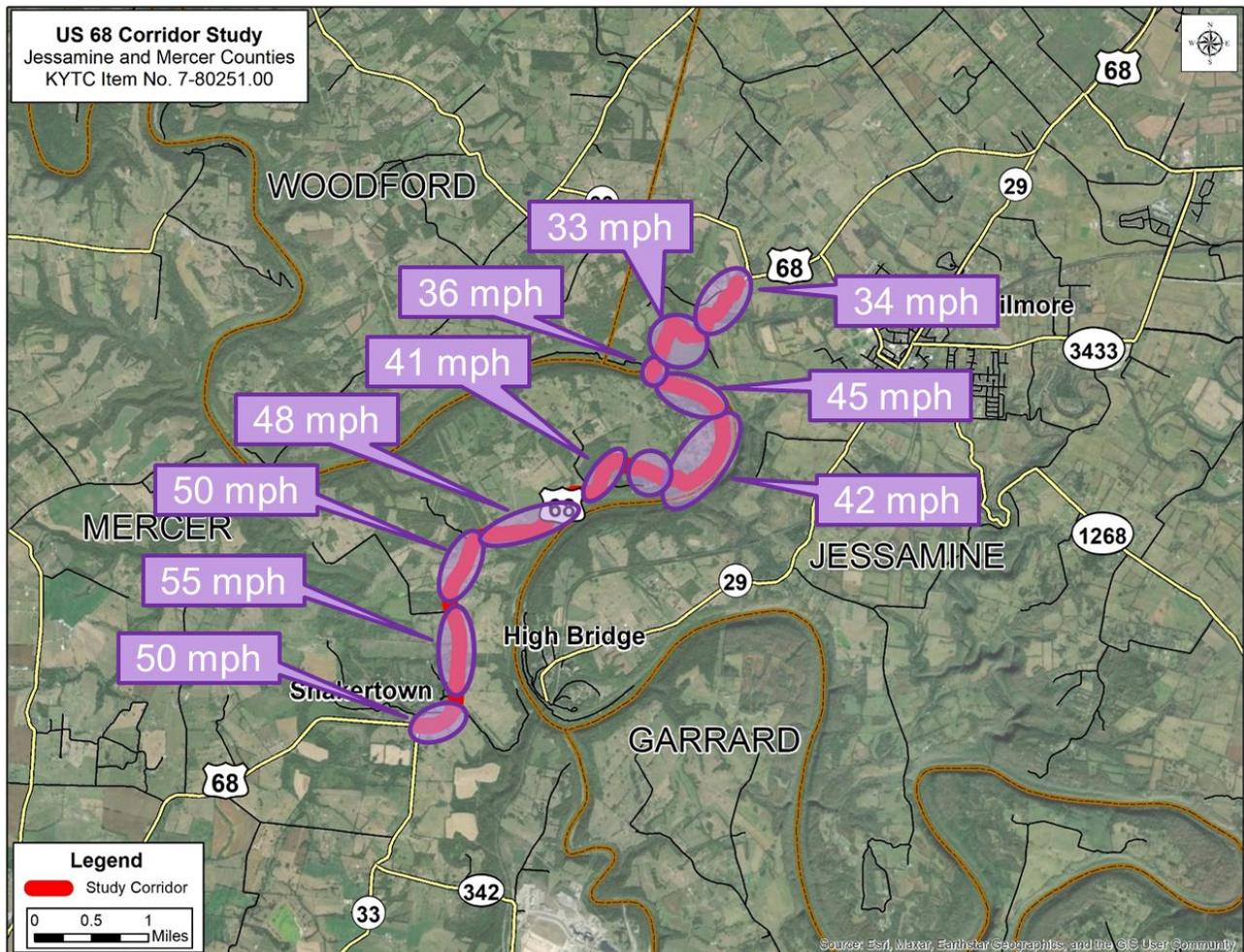


Figure 1: US 68 Average Speeds (Source: Streetlight)

7. Between 2019 and 2023, there were 109 reported crashes along the study portion of US 68. Of the 109 crashes, 21 (19 percent) resulted in an injury and 88 (81 percent) resulted in property damage only. Of the 21 injury collisions, five were suspected serious injury collisions, three of which involved motorcycles losing control on horizontal curves, one was a head on collision on wet pavement, and one was a collision with an animal.

The most common crash type was single vehicle (76 percent) followed by sideswipe (9 percent), angle (7 percent), and head on (6 percent).

Between 2019 and 2023, there were an average of 6.7 crashes per year per mile in Jessamine County and an average of 2.2 crashes per year per mile in Mercer County, as shown in **Table 1**. In the eight months since the HSIP project was completed in Jessamine County, there have been 3 property damage only collisions (3.3 crashes per year per mile).

Table 1: Crashes Per Year by County

| Year | Jessamine County (1.38 miles) | Mercer County (5.608 miles) |
|--------------|--|--|
| 2019 | 11 | 13 |
| 2020 | 8 | 11 |
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| 2023 | 5 | 16 |
| Total | 46 | 63 |

8. Traffic on US 68 ranges from 2,900 vehicles per day (VPD) in Mercer County with 9.6 percent trucks (2024) to 3,200 VPD in Jessamine County with 7.3 percent trucks (2018). There is an April 2021 count on US 68 in Jessamine County that was not used because it was likely impacted by the COVID shutdowns and does not reflect the historical traffic patterns.

Population in Jessamine County has grown 0.87 percent per year over the past 10 years while Mercer County has grown at a rate of 0.60 percent per year, both higher than the statewide average of 0.38 percent per year. Results from Kentucky State Data Center projections indicate that both counties are expected to continue to grow.

On-alignment safety improvements are not expected to increase travel time, therefore traffic forecasts were developed based on a combination of historical traffic data, population trends, and results from the Kentucky Statewide Travel Demand Model (KYSTM) to reflect an On-Alignment Improvement Scenario. An annual growth rate of 1.0 percent was selected to grow the traffic. 2045 daily traffic forecasts on US 68 are shown in **Figure 2**.

Off-alignment traffic forecasts were also developed for new Kentucky River crossing options. As shown in **Figure 3**, daily traffic is expected to range from 8,000 to 12,000 VPD depending on the location of the new river crossing.

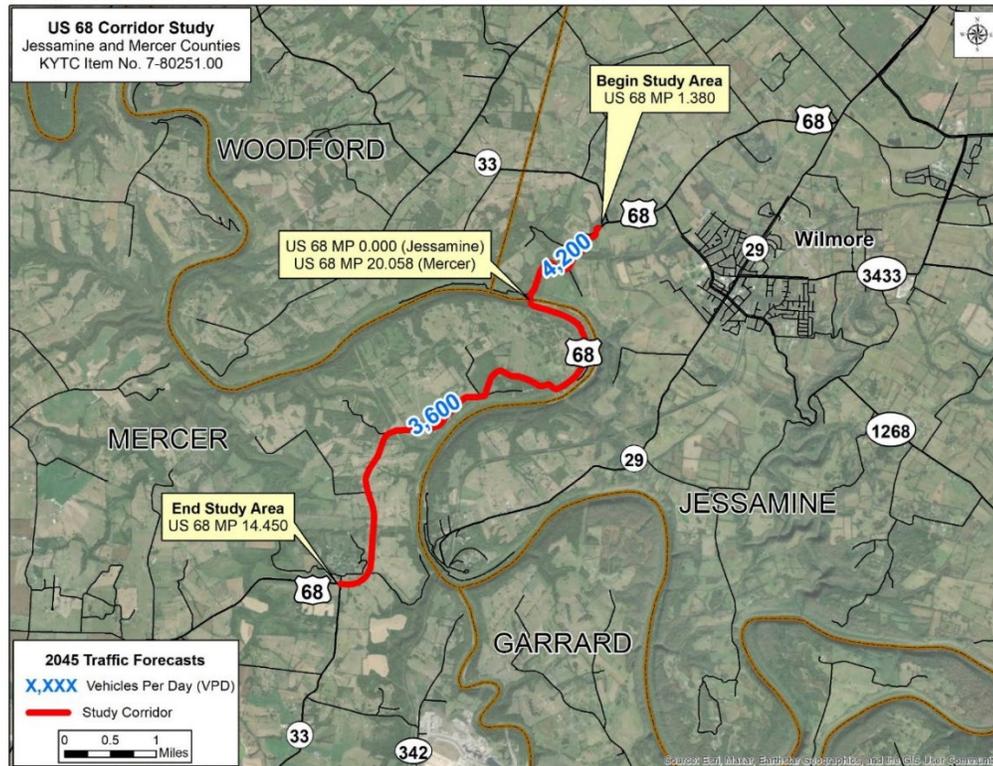


Figure 2: 2045 On-Alignment Daily Traffic Forecasts

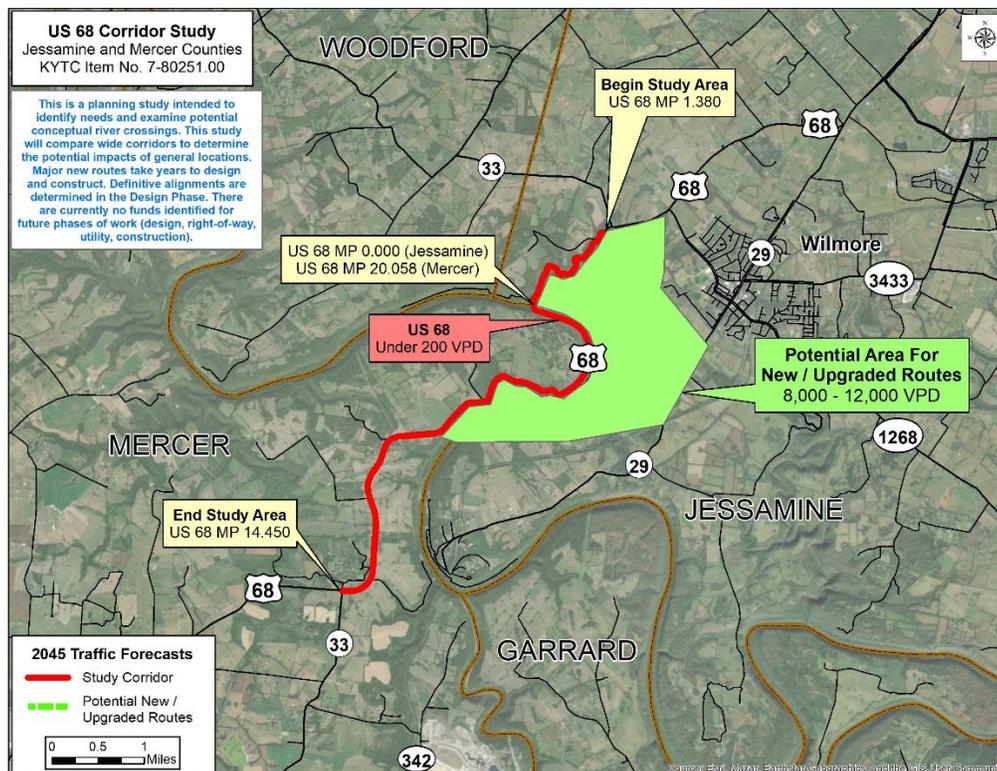


Figure 3: 2045 Off-Alignment Daily Traffic Forecasts

9. The draft Environmental Overview (EO) was discussed. Maps depicting the Human Environment and Water Resources were presented.
10. Preliminary improvement concepts were discussed. On-alignment safety improvements will be considered on US 68 in Mercer County to match what was completed as part of the HSIP project in Jessamine County. Long-term options include new Kentucky River crossings.

1) On-Alignment Safety Improvements

2) New Kentucky River Crossings

3) Realignment of US 68

11. Attendees were then asked to fill out a survey to provide feedback regarding transportation issues on US 68. Nineteen local officials and stakeholders completed the survey. The results are summarized below.

When asked if they live or work in the study area, nine participants indicated they work in the study area and six indicated they live and work in the study area, as shown in **Figure 4**. Of the participants that live in the study area, four live in Harrodsburg, four live in Wilmore, and two live in Nicholasville. Of the participants that work in the study area, six work in Wilmore, five work in Nicholasville, and four work in Harrodsburg.

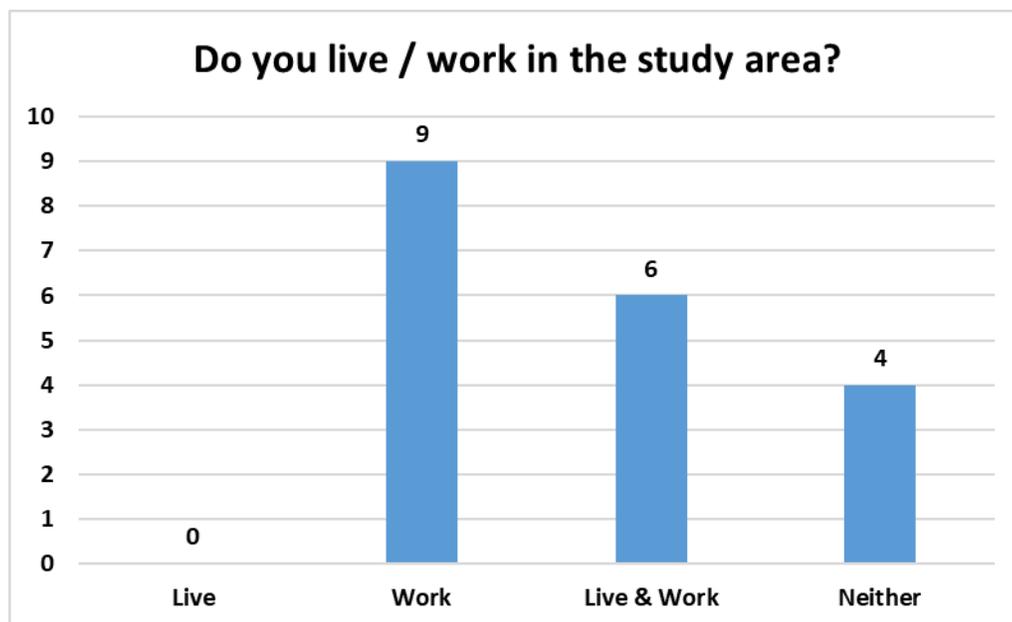


Figure 4: Local Officials Survey No. 1 – Do you live / work in the study area?

When asked how often they travel through the study area, 12 of the 19 participants (63 percent) responded that they travel through the study area at least once per week, as shown in **Figure 5**.

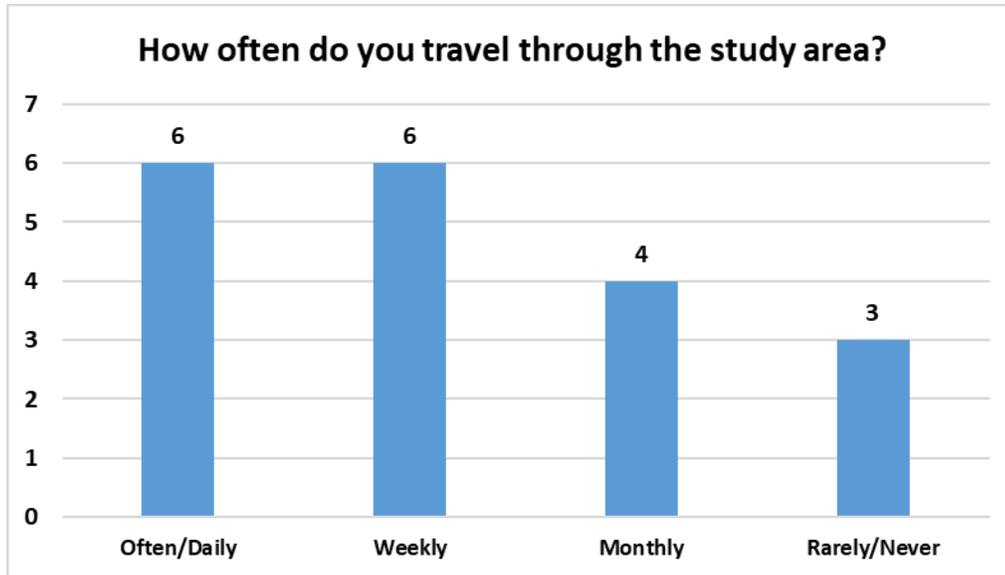


Figure 5: Local Officials Survey No. 1 – How often do you travel through the study area?

Survey participants were then asked what type of vehicle they operate on US 68. 16 of the 19 (84 percent) indicated they drive a passenger vehicle while three (16 percent) indicated they drive a single- or multi-unit truck. Additionally, two respondents (11 percent) indicated that they own or rent property in the study area.

Respondents were then asked to rank their top five transportation issues in the study area in order of #1 - #5 with #1 being the highest priority. The ranking system was assigned a point scale, with a #1 ranking receiving five points, a #2 ranking receiving four points, a #3 ranking receiving three points, a #4 ranking receiving two points, and a #5 ranking receiving one point. Sharp curves were ranked as the highest priority, followed by steep grades and truck traffic, as shown in **Figure 6**.

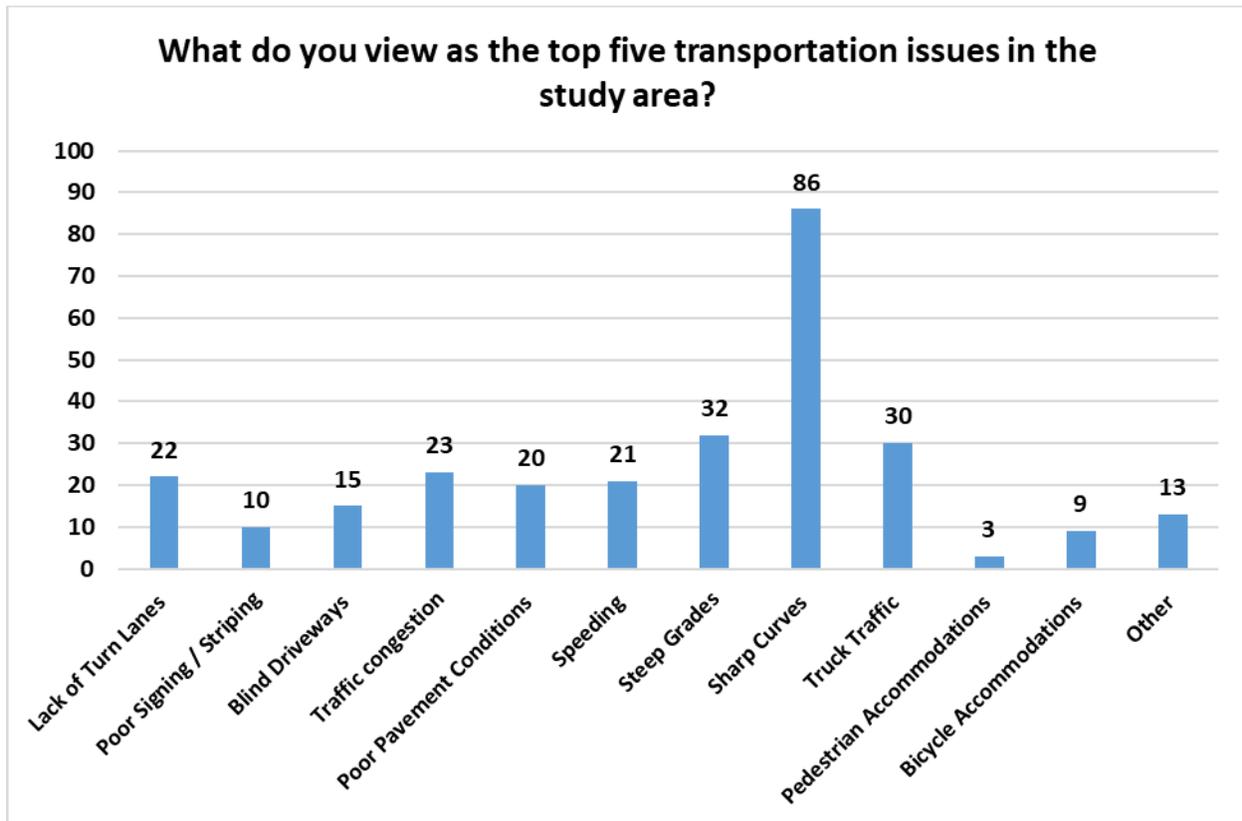


Figure 6: Local Officials Survey No. 1 – Ranking Transportation Issues

The next question asked participants to indicate on a study area map trouble spots related to safety and congestion along with any potential improvements. The following is a summary of responses:

- Horizontal curves are an issue on both sides of the river.
 - This was the most mentioned issue (x4).
- US 68 at KY 33 in Mercer County is challenging for sightlines and speeding.
- Drainage during storms down the hill.
- Bluegrass Energy has facilities in the study area on both sides of the river. KU also has territory in this area.
- Slow traffic affecting commuters.
- If a collision occurs it can back up traffic for long periods of time.

Respondents were then asked to indicate on a study area map historic or environmental concerns not shown in the Environmental Overview map. The following summarizes responses:

- The entrance of Shaker Village.
- Any impact to the Asbury University farm should be considered.
 - Stantec will follow up to determine the exact location of the entrance.
- The locks on the river have tourist potential but access is difficult and dangerous.

The final question asked respondents if they have any other general suggestions for improvements along US 68. The following summarizes the responses:

- Straighten the road and keep the beauty and historic integrity of the Palisades
- School bus stops being safe places to pick up / drop off students. Add school bus turnaround spots.
- Keep US 68 a scenic corridor.
- Would love to see a better lane for cyclists and option for hikers. A new bridge would be best and use old bridge for pedestrian pathway. New road will increase tourism.
- We instruct field trip and sporting event school bus drivers to go through Danville and avoid this portion of US 68.
- Wider road from the bridge to Shaker Village. Connecting KY 29 over the river is intriguing though it would be expensive. High Bridge is insulated.
- Even if just two lanes, widen the proposed roads.

12. The next steps are to perform online public outreach and to begin improvement concept development.

The meeting ended at approximately 2:30 p.m. EDT.

Meeting Minutes

TO: Casey Smith
Project Manager
KYTC District #7 Office
800 Newtown Court
Lexington, KY 40511

Stephen De Witte
Project Manager
KYTC Central Office Planning
200 Mero Street
Frankfort, KY 40622

FROM: Graham Winchester
Project Manager
Stantec Consulting Services Inc.

DATE: March 5, 2025

SUBJECT: US 68 Corridor Study
Jessamine and Mercer Counties
KYTC Item No. 7-80251.00
Project Team Meeting No. 2

The second Project Team Meeting for the subject project was held virtually via Microsoft Teams on February 19, 2025, at 1:30 p.m. EST. The following individuals were in attendance:

| | |
|-------------------|-------------------------------------|
| Nick Beasmore | KYTC – District 7 |
| Stephen De Witte | KYTC - Central Office Planning |
| David Gambrel | Bluegrass Area Development District |
| Dave Greenwell | KYTC – District 7 |
| Dave Heil | KYTC – Central Office Planning |
| Stuart Kearns | Lexington Area MPO |
| Daniel Kucela | KYTC – District 7 |
| Tony McGaha | KYTC – District 7 |
| Lauren Meighan | KYTC – District 7 |
| Madison Morris | KYTC – District 7 |
| Alex Mucci | KYTC – HSIP |
| Mikael Pelfrey | KYTC – Central Office Planning |
| Connor Schurman | KYTC – Central Office Planning |
| Casey Smith | KYTC – District 7 |
| Jonathan Taylor | KYTC – District 7 |
| Mike Vaughn | KYTC – HSIP |
| Thomas Witt | KYTC – Central Office Planning |
| | |
| Brian Aldridge | Stantec Consulting Services Inc. |
| Len Harper | Stantec Consulting Services Inc. |
| Graham Winchester | Stantec Consulting Services Inc. |

Casey Smith welcomed everyone and led introductions. The purpose of the meeting was to discuss results from the local officials and public survey, the Highway Safety Improvement Program (HSIP) Road Safety Assessment (RSA), and preliminary improvement concepts for the US 68 Corridor Study.

The following enumerated items were discussed.

1. The study area, shown in **Figure 1**, includes US 68 from KY 33 in Mercer County (MP 14.45) to the Jessamine County line (MP 20.058) and from the county line (MP 0.000) to KY 33 in Jessamine County (MP 1.380).
2. The objective of the US 68 Corridor Study is to identify and evaluate potential concepts to improve safety, truck mobility, and driver expectations (geometrics) on US 68 in Mercer and Jessamine Counties and to determine the need and optimal location for a replacement Kentucky River crossing.
3. There are currently no active projects in the study area listed in Kentucky's 2024 – 2030 Enacted Highway Plan. There was a recent Highway Safety Improvement Program (HSIP) project to improve signing, striping, guardrail, and sightlines on US 68 in Jessamine County. This project was listed as KYTC Item No. 7-9009.00 and cost approximately \$4.5 million (completed in 2023).
4. Highlights from the existing conditions analysis were briefly discussed. US 68 is a two-lane rural minor arterial with 10-foot lanes in Mercer County, 11-foot lanes in Jessamine County, and one-foot paved shoulders throughout. Streetlight average daily speeds on US 68 were analyzed from 2023 to 2024, as shown in **Figure 2**. On average, vehicles travel close to the 55 mile per hour (mph) speed limit near the KY 33 intersection in Mercer County. Speeds decline to 40 to 45 mph as vehicles approach the more severe horizontal and vertical curvature near the Kentucky River. Speeds are slowest in Jessamine County, at 36 mph and under.
5. The US 68 bridge across the Kentucky River was constructed in 1954 and has a maximum load posting of 40 tons. Based on a 2024 inspection, the bridge was rated with a poor health index (71.98) with the superstructure rated as poor.
6. Between 2019 and 2023, there were 109 reported crashes along the study portion of US 68. Of the 109 crashes, 21 (19 percent) resulted in an injury and 88 (81 percent) resulted in property damage only. Of the 21 injury collisions, five were suspected serious injury collisions, three of which involved motorcycles losing control on horizontal curves, one was a head on collision on wet pavement, and one was a collision with an animal.

The most common crash type was single vehicle collisions (76 percent) followed by sideswipe (9 percent), angle (7 percent), and head on (6 percent). Between 2019 and 2023, there were an average of 6.7 crashes per year per mile in Jessamine County and an average of 2.2 crashes per year per mile in Mercer County. Since the 2023 HSIP project, there have been 3.3 crashes per year per mile on US 68 in Jessamine County.

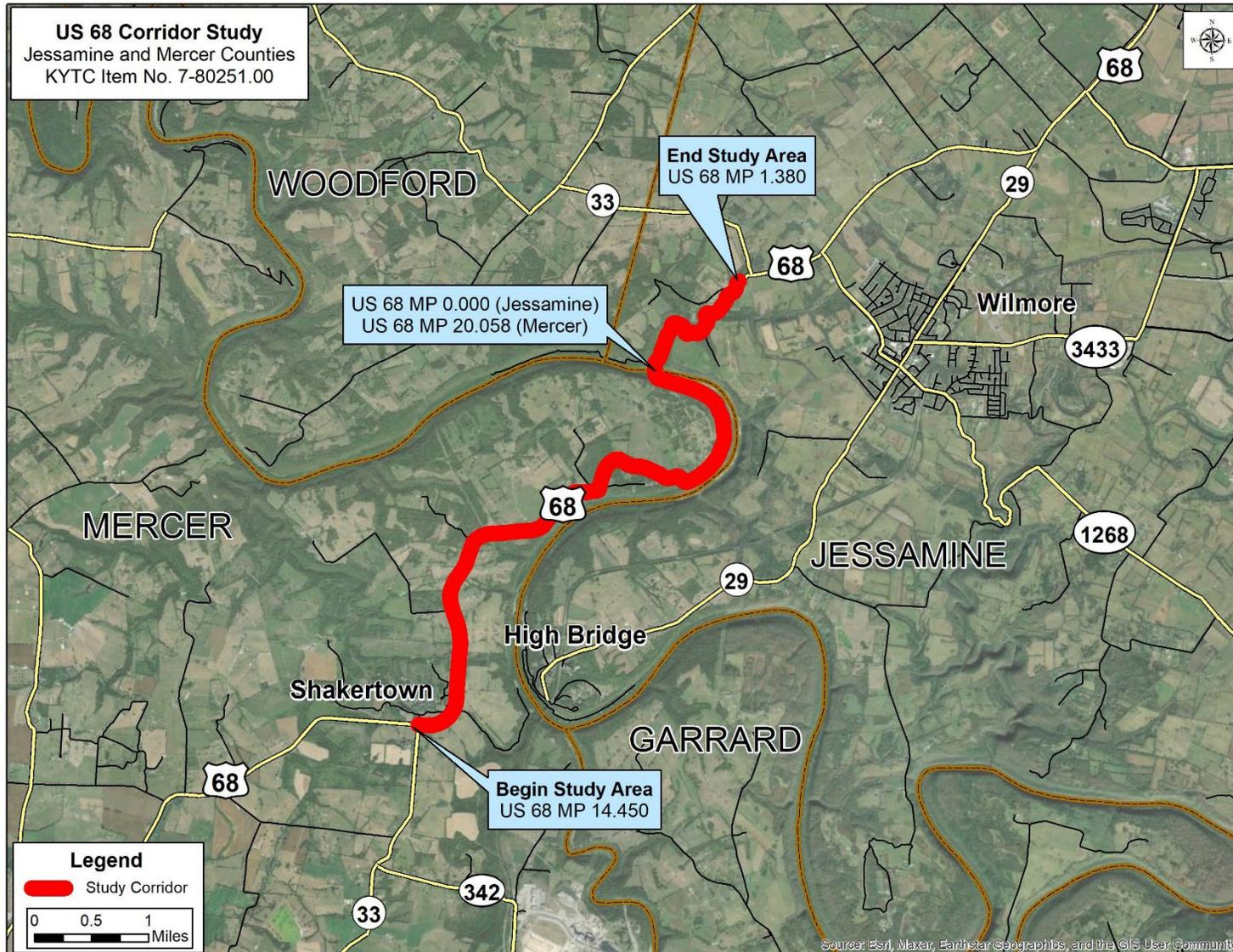


Figure 1: Study Area

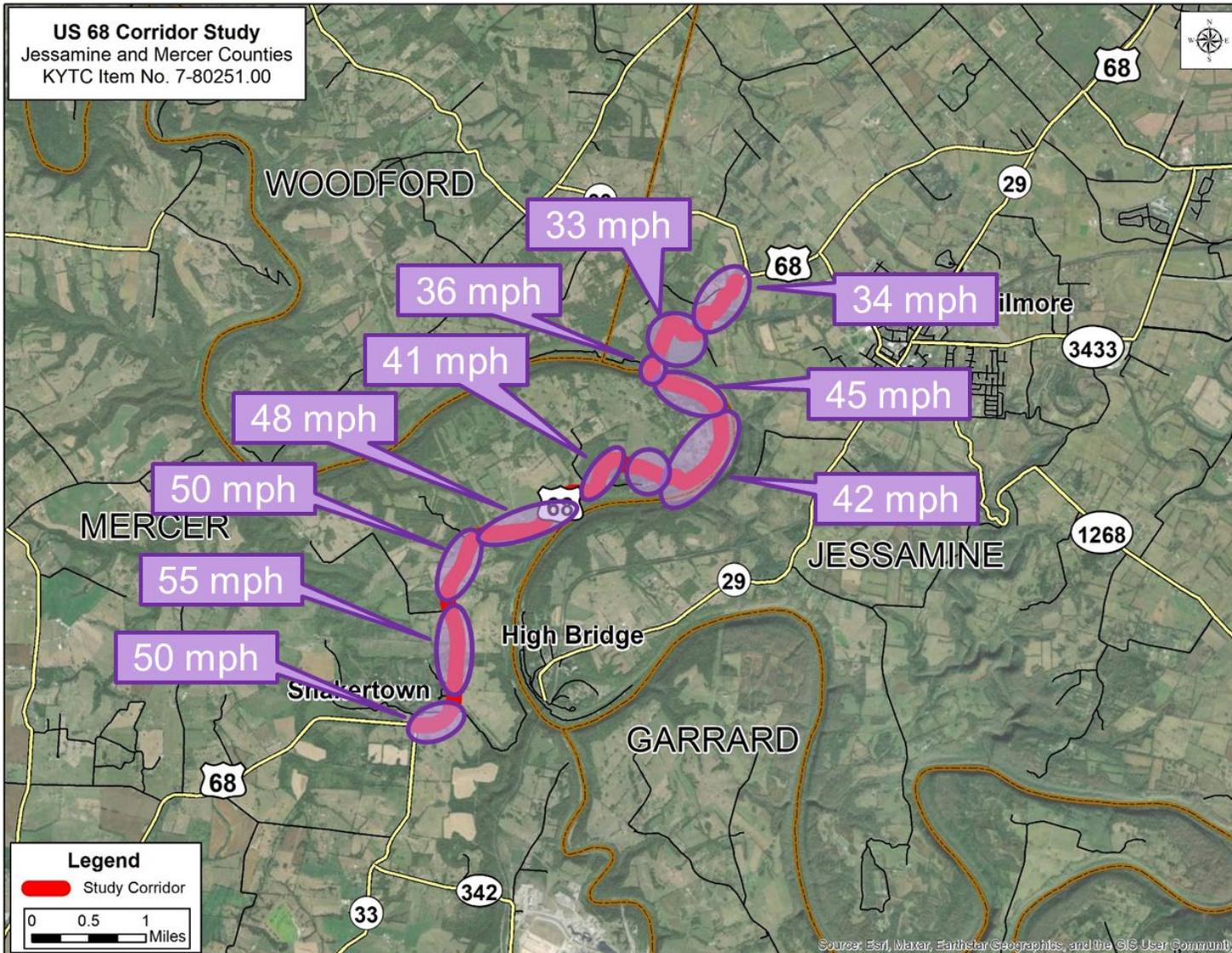


Figure 2: Streetlight Average Speeds (2023 – 2024)

The Crash Data Analysis Tool (CDAT) was used to perform an excess expected crashes (EEC) analysis. An EEC greater than zero indicates more crashes occurred than what is expected based on similar routes in Kentucky. US 68 has a positive EEC on the entire study corridor and a Level of Service of Safety (LOSS) of three, which indicates moderate to high potential for crash reduction. Several intersections also had positive EEC's, including both intersections with KY 33.

7. Based on the most recent KYTC counts, daily traffic on US 68 ranges from 2,900 vehicles per day (VPD) in Mercer County with 9.6 percent trucks (2024) to 3,200 VPD in Jessamine County with 7.3 percent trucks (2018).
8. 2045 daily traffic forecasts were developed for the no-build and on-alignment improvements based on a combination of population growth, KYTC count station trends, and results from the Kentucky Statewide Travel Demand Model. Based on a growth rate of 1.0 percent per year, US 68 is expected to carry 3,600 VPD in Mercer County and 4,200 VPD in Jessamine County

2045 daily traffic forecasts were also developed for off-alignment improvements using the KYSTM. As shown in **Figure 3**, daily traffic for off-alignment US 68 concepts is expected to range from 8,000 to 15,000 VPD in 2045.

9. The first local officials meeting was held on October 17, 2024 at Wilmore City Hall. At the conclusion of the meeting, attendees were asked to fill out a survey and rank transportation issues in the study area. The rankings were scored using a point system with a #1 ranking receiving five points, #2 receiving four points, and so on. **Figure 4** presents the results from the survey. Sharp curves were the highest priority transportation issue on US 68 for the local officials, followed by steep grades and truck traffic. The following summarizes the feedback received from the local officials:
 - Horizontal curves are the biggest concern.
 - A better option is needed for cyclists and hikers.
 - The KY 33 intersection near Shakertown has poor sightlines and speeding.
 - Jessamine County school busses are directed to use other routes because US 68 is unsafe.
 - There was a notion to keep US 68 a scenic corridor as mentioned in the Mercer County and Jessamine County Comprehensive Plans.
 - Preserve Chinn's Cave and Boone Tunnel.

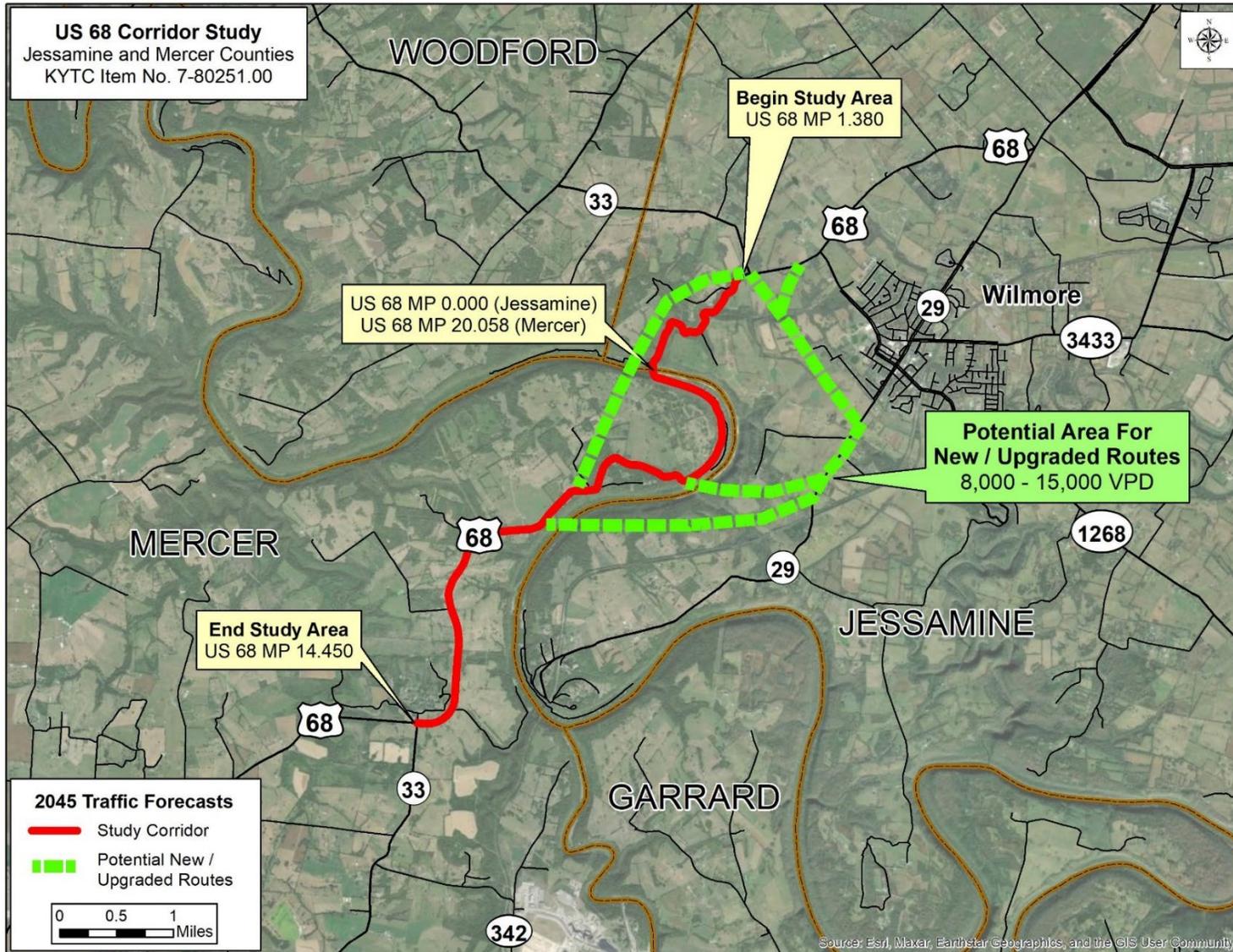


Figure 3: 2045 Off-Alignment Daily Traffic Forecasts

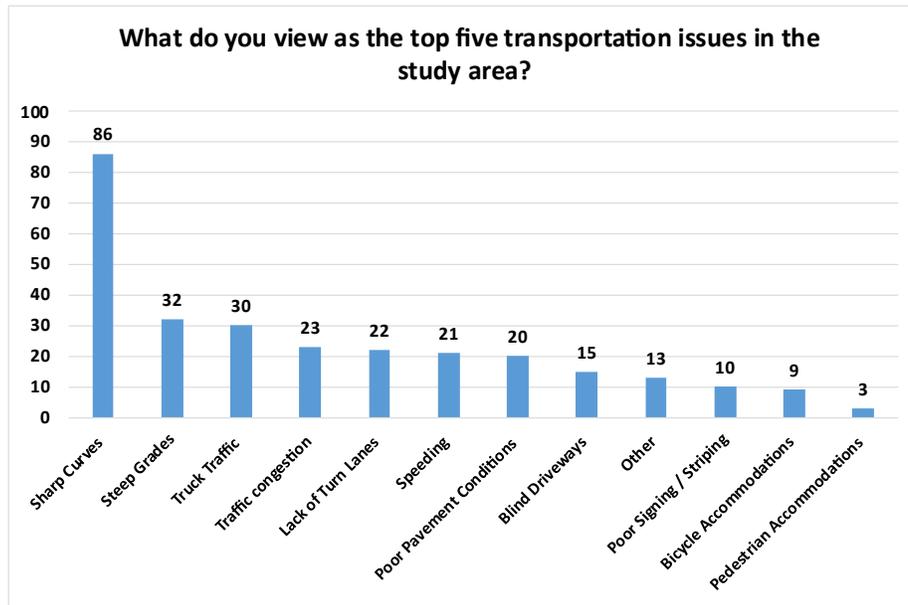


Figure 4: Local Officials Survey – Ranking Transportation Issues

10. After the Local Officials meeting, a public MetroQuest survey was released online and made available from October 17, 2024 to November 22, 2024. A link to the survey was made available on KYTC District 7’s website, mailed to study area property owners, and disseminated by the local officials. Of the 1,319 respondents, 50 percent drive US 68 at least two to three times per week. Harrodsburg was the most common home location and Lexington was the most common work destination for those who utilize US 68 to get to work. Respondents were also asked to rank transportation issues on US 68. As shown in **Figure 5**, lack of shoulders/recovery area and sharp curves were the highest ranked transportation issues.

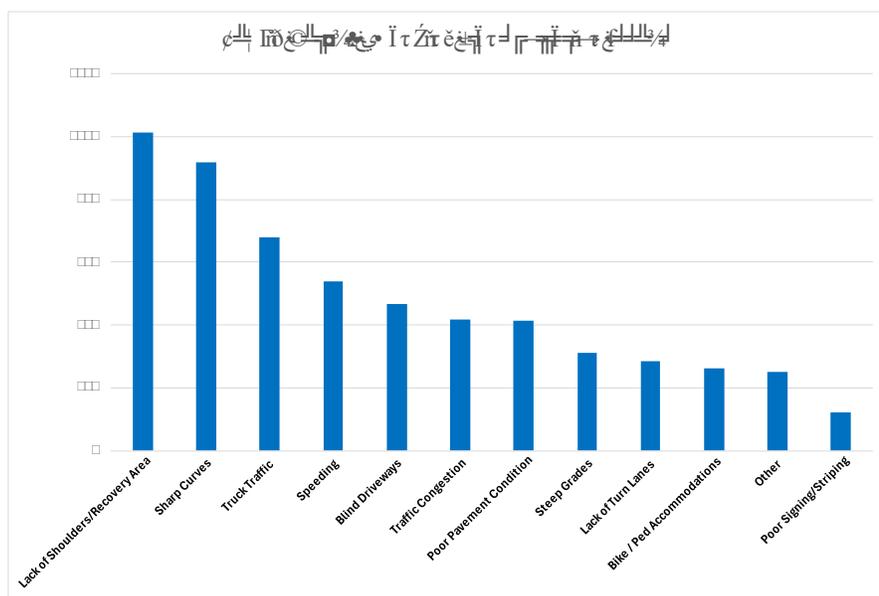


Figure 5: Public Survey – Ranking Transportation Issues

Survey respondents were then asked to identify safety and congestion concerns in the study area by placing markers on an interactive map. Dangerous curves were the most identified safety concern, with 900 individual points, followed by sight distance (300 points) and speeding (160 points). **Figure 6** presents a map of the safety concerns in the study area. The most common congestion concern was the lack of passing lanes (96 points) followed by vehicles slowing to turn (88 points).

The next question asked participants to identify potential improvement ideas. The most common improvement idea was the construction of a new Kentucky River bridge and a new route / bypass to eliminate the horizontal and vertical curves. Improved passing opportunities and pull over areas were the second most identified improvements.

- Question: What was the main reason the public wanted a new bridge?
Answer: The horizontal and vertical curvature of the roadway approaches were the major complaint.

Respondents were provided an interactive map showing environmental and historical features within the study area and asked to identify missing features. The most common environmental concern was deer crossing US 68, followed by preserving the Kentucky river and the watershed. Historical concerns included preserving Chinn Cave, Boone Tunnel, and Shaker Village.

The following presents a summary of the public survey results:

- Most respondents want a new road and river crossing with fewer curves.
- Lack of recovery areas, no passing opportunities, and horizontal curves are the biggest challenges.
- Safety is compromised when vehicles drive too slow around curves and impatient drivers pass.
- Many respondents want truck traffic diverted to another route.
- The US 68 intersection with KY 33 in Jessamine County has poor sight distance. Flashing lights are a potential improvement.
- Many drivers do not want bicycles using existing US 68.
- The biggest environmental concern is the number of deer crossing US 68.
- Preserving Chinn Cave, Boone Tunnel, Shakertown, and the Palisades are priorities.

11. The US 68 Corridor Study is a pilot study to incorporate Road Safety Assessments (RSA's) from an independent team through the HSIP contract. The project team has coordinated with the independent team to develop a Safe System Assessment Framework for rural two-lane roads in Kentucky. The Safe System Approach prioritizes the elimination of crashes that result in death and serious injuries and includes:

- Safe People
- Safe Vehicles
- Safe Roads
- Safe Speeds
- Post-Crash Care
- Partnership

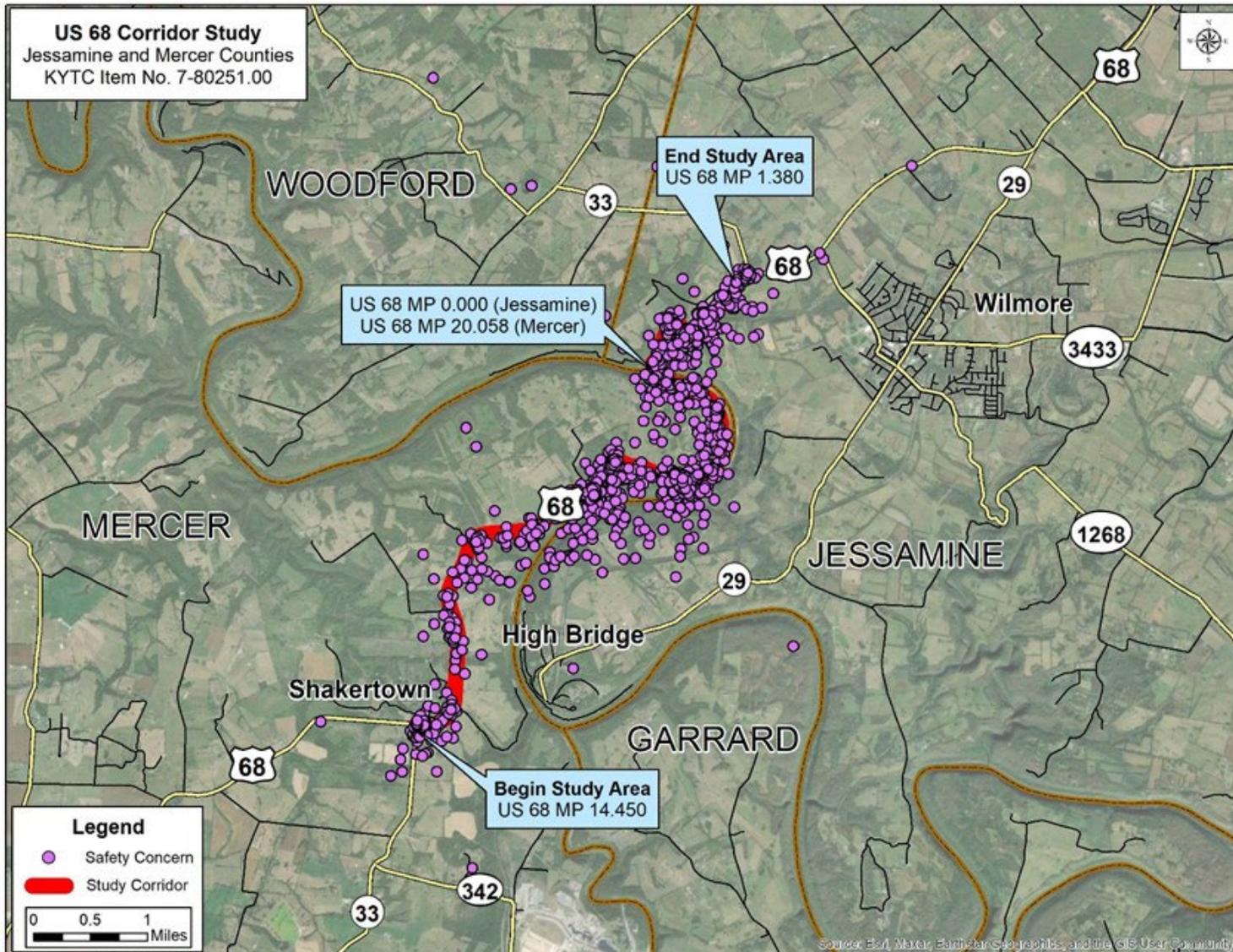


Figure 6: Public Survey – Safety Concern Map

To ensure that Safe System elements are considered and to measure how well a project aligns with the Safe System approach, a spreadsheet tool was developed to score potential improvement concepts. The Austroads and Federal Highway Administration (FHWA) Safe System Frameworks were used as the basis for this new framework. The tool grades roads on three principles: exposure (the number of road users), likelihood (the probability that a crash occurs), and severity (the probability that a fatality or severe injury will occur). Within each principle, roads are scored for different crash and user types, including run-off road, head on, corridor approaches, other (sideswipe, rear end, etc.), trucks, pedestrians, bicycles, and motorcycles. KYTC Highway Information System (HIS) data was used to develop Kentucky-specific thresholds for each of the crash and road types specifically for rural two-lane roadways.

Exposure is scored based on the number of users on the roadway. Likelihood is scored based on the roadway typical section, existence of safety features like rumble stripes, clear zone, curvature, speed, and sight distance among others. Severity is scored based on speed, clear zone, and curvature.

- Comment: Exposure is not bad by itself, it's the combination of exposure, likelihood, and severity that create a high score.
- Comment: The scores are not linear. A score of five in each category results in a score of 1,000. A different scoring system may be easier to understand.
- Comment: The lower speeds in Jessamine County lower the overall score.

US 68 was divided into three sections for the Safe System analysis. A summary of the scoring results is shown in **Table 1**.

- Section 1 – Mercer County (MP 14.45 – MP 17.5)
- Section 2 – Mercer County (MP 17.5 – 20.058)
- Section 3 – Jessamine County (MP 0.0 – 1.38)

Table 1: Existing US 68 Safe System Scoring Results

| SECTION 1 | Run-Off Road | Head On | Corridor Approaches | Other | Trucks | Pedestrian | Bicycles | Motorcycles |
|------------|--------------|---------|---------------------|-------|--------|------------|----------|-------------|
| Exposure | 6 | 6 | 6 | 6 | 4 | 1 | 1 | 6 |
| Likelihood | 3.5 | 4.5 | 6 | 3.5 | 3 | 10 | 10 | 3.5 |
| Severity | 8 | 6 | 6 | 8 | 8 | 10 | 10 | 10 |
| Product | 168 | 162 | 216 | 168 | 96 | 100 | 100 | 210 |

Total Score:
1220

| SECTION 2 | Run-Off Road | Head On | Corridor Approaches | Other | Trucks | Pedestrian | Bicycles | Motorcycles |
|------------|--------------|---------|---------------------|-------|--------|------------|----------|-------------|
| Exposure | 6 | 6 | 6 | 6 | 4 | 1 | 1 | 6 |
| Likelihood | 4.5 | 8 | 6.5 | 6 | 5.5 | 10 | 10 | 6 |
| Severity | 8 | 8 | 8 | 8 | 8 | 10 | 10 | 10 |
| Product | 216 | 384 | 312 | 288 | 176 | 100 | 100 | 360 |

Total Score:
1936

| SECTION 3 | Run-Off Road | Head On | Corridor Approaches | Other | Trucks | Pedestrian | Bicycles | Motorcycles |
|------------|--------------|---------|---------------------|-------|--------|------------|----------|-------------|
| Exposure | 6 | 6 | 6 | 6 | 4 | 1 | 1 | 6 |
| Likelihood | 7 | 9.5 | 6.5 | 7.5 | 6.5 | 10 | 10 | 8 |
| Severity | 6 | 8 | 8 | 6 | 6 | 8 | 8 | 8 |
| Product | 252 | 456 | 312 | 270 | 156 | 80 | 80 | 384 |

Total Score:
1990

12. Preliminary improvement concepts were presented for project team discussion. Conceptual corridors were explored within the study area as shown below to serve as a screening tool for identifying environmental red flags and to better assess the potential benefits and impacts. Major new routes take years to design and construct. Definitive alignments are determined in the design phase. There are no funds currently identified for future phases of work (design, right-of-way, utilities, construction).

1) Concept 1

Concept 1 includes two new Kentucky River crossings, Concept 1 and Concept 1B, both with crossings located south of the existing US 68 river crossing, as shown in **Figure 7**. Improvements to existing US 68 are assumed from the KY 33 intersection in Mercer County to the start of the off-alignment section.

- Question: Will the new river crossing alternatives reduce traffic on KY 29 or impact other streets in Wilmore? If so, we should note those impacts.

Answer: US 68 already bypasses Wilmore so the new river crossing options will not introduce a new bypass around Wilmore. Impacts to adjacent roadways based on KYSTM results will be documented.

2) Concept 2

Concept 2 includes realigning US 68 in Mercer County to eliminate the severe vertical and horizontal curvature, along with a new Kentucky River crossing just west of the existing bridge. As shown in **Figure 8**, Concepts 2 and 2B bypass the ‘reverse c’ in Mercer County.

- Question: Do the Kentucky River bridge concepts cross at the same height as the existing bridge?

Answer: No, the new river crossing options cross higher than the existing bridge to minimize horizontal and vertical curvature on the approaches.

3) Concept 3

Concept 3 includes options to realign Chinn’s Curve and improve the existing alignment from MP 13.5 to MP 14.7 in Mercer County, as shown in **Figure 9**.

4) Concept 4

Concept 4 includes on-alignment corridor-wide safety improvements, rather than individual spot improvements, in Mercer County to match the recent HSIP project in Jessamine County. Potential improvements include signing, striping, guardrail, repaving, edgeline / centerline rumble stripes, and high friction surface treatment (HFST) at horizontal curves.

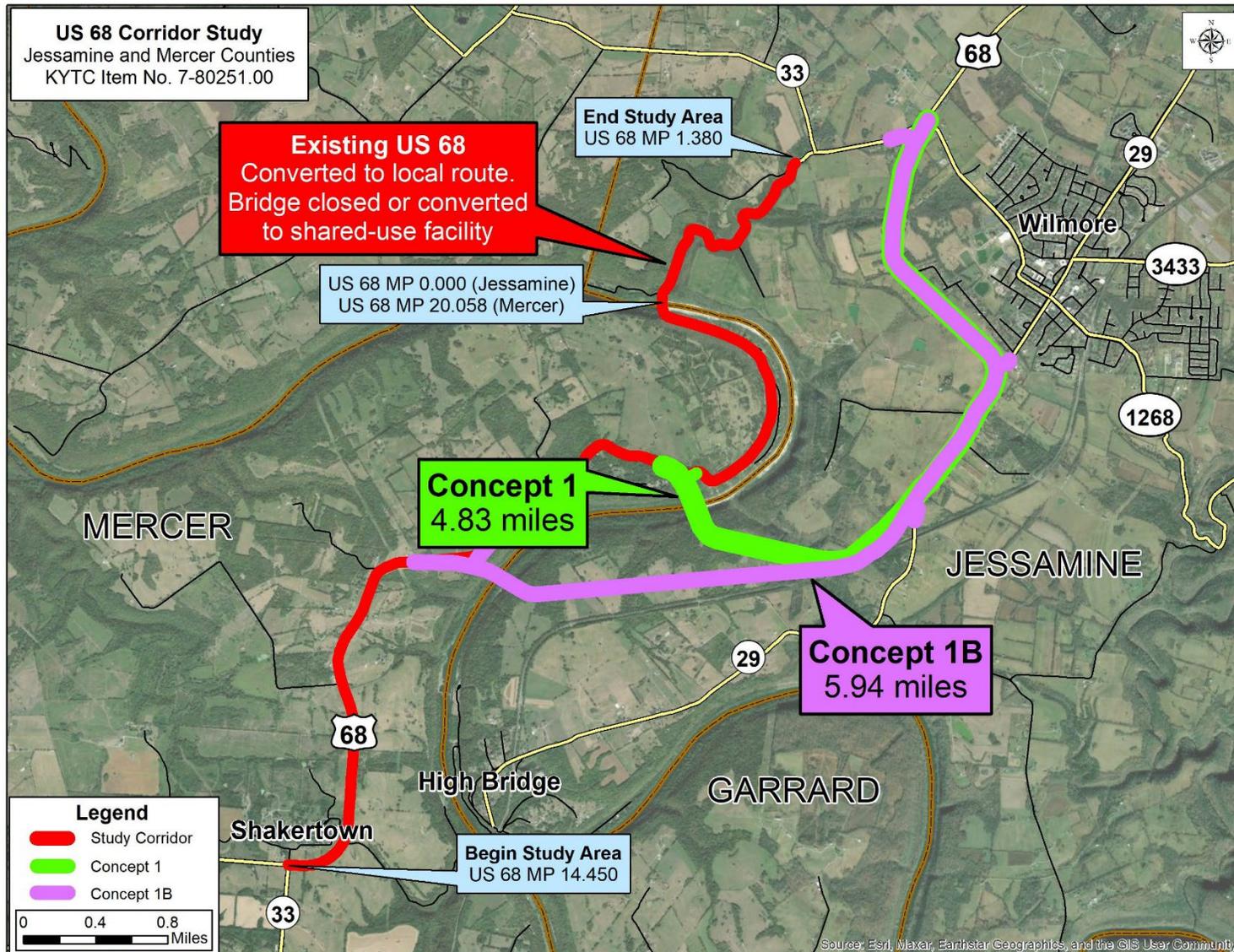


Figure 7: Concepts 1 & 1B

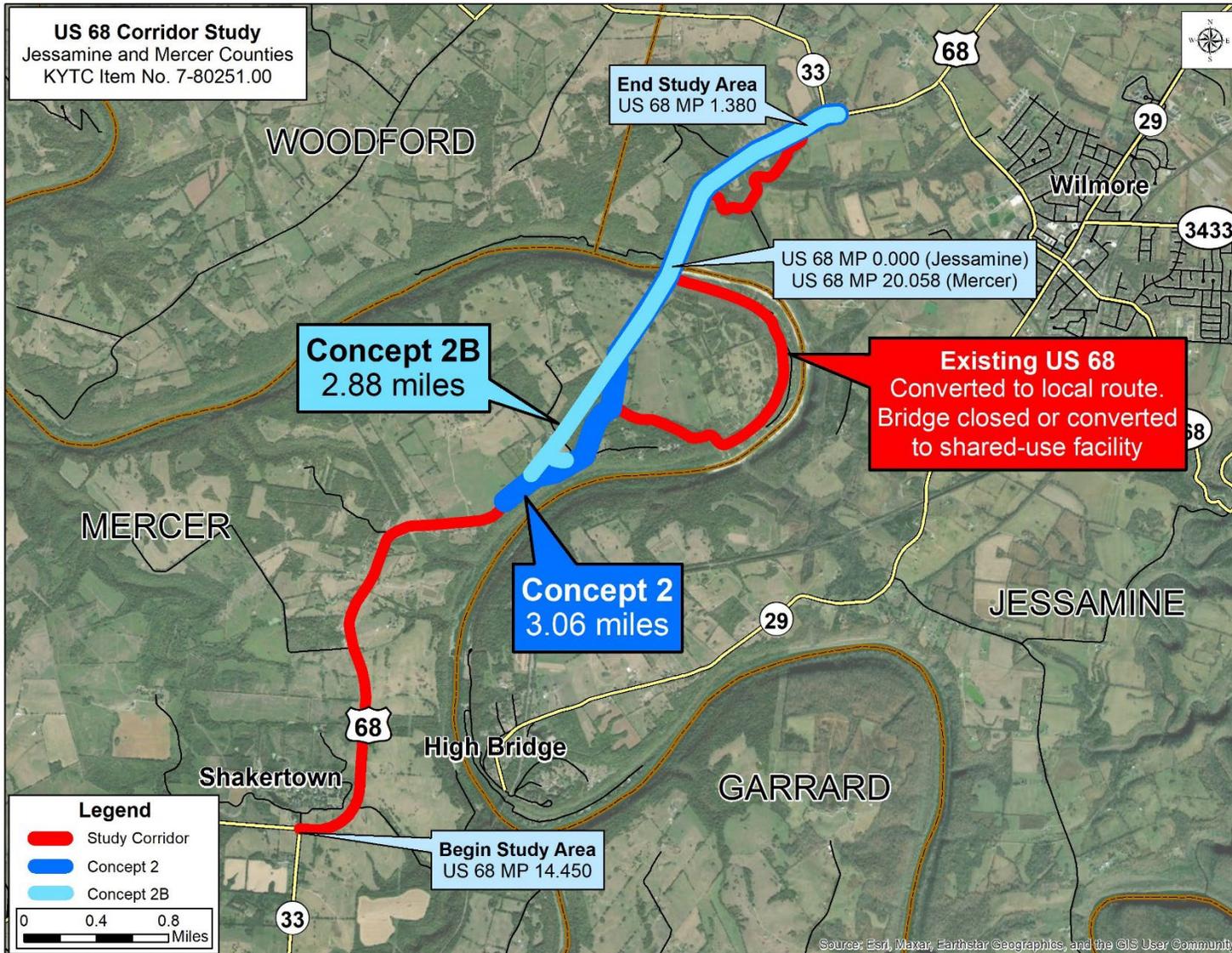


Figure 8: Concepts 2 & 2B

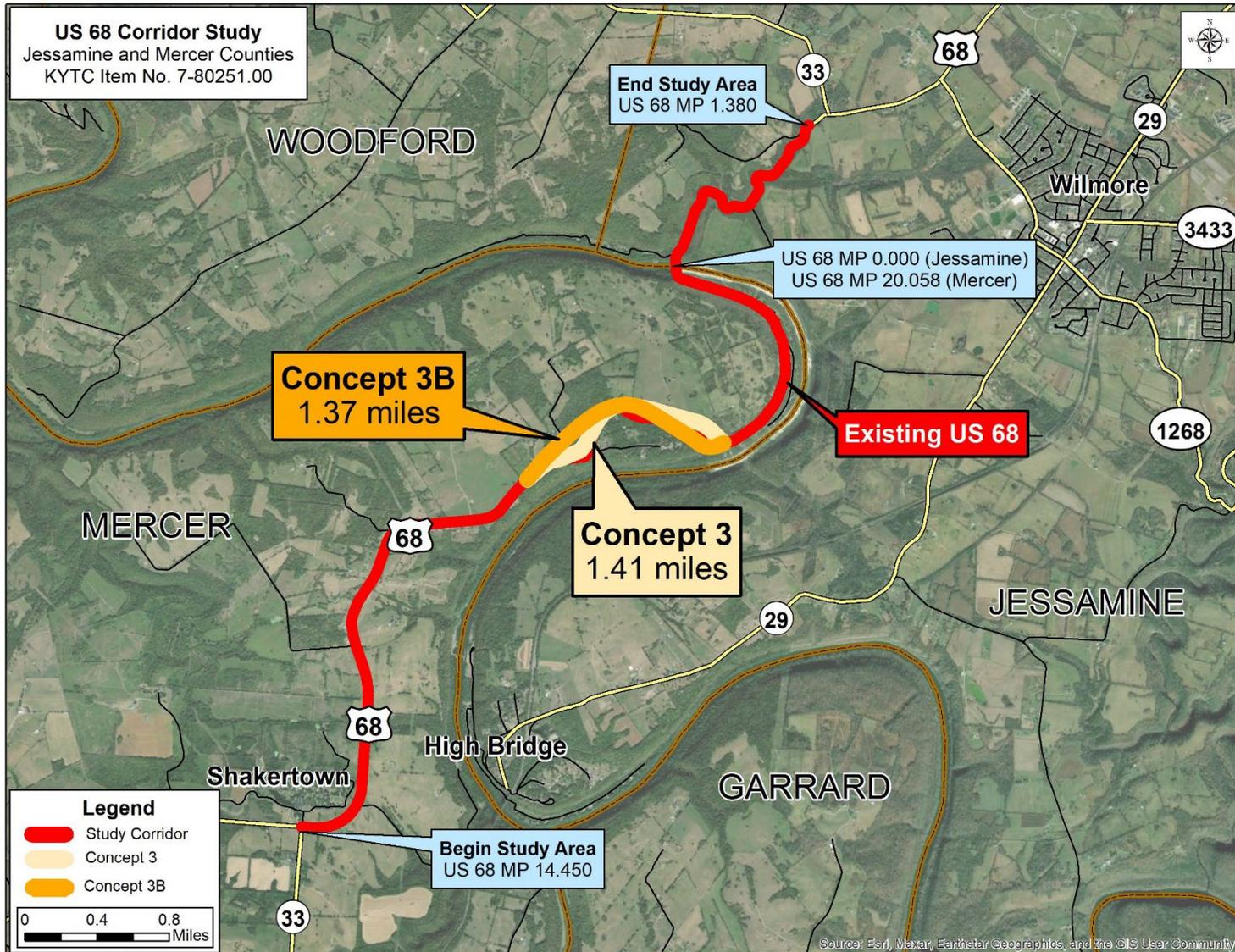


Figure 9: Concepts 3 & 3B

13. Graham then presented the preliminary construction costs for the improvement concepts. **Table 2** presents a summary of the estimated costs and safe system scores.

Table 2: US 68 Improvement Concept Summary

| Concept | Length (mi.) | Travel Time | Safe System Score | | Construction Cost |
|------------|--------------|-------------|-------------------|--------|-------------------|
| No-Build | 6.988 | 14.2 | 5,146 | | \$0 |
| Concept 1 | 8.68 | 8.7 | 3,224 | -37.3% | \$139,200,000 |
| Concept 1B | 8.29 | 8.3 | | | \$137,500,000 |
| Concept 2 | 5.81 | 7 | 3,926 | -23.7% | \$133,400,000 |
| Concept 2B | 5.73 | 7 | | | \$142,000,000 |
| Concept 3 | 1.41 | 13.4 | 4,676 | -9.1% | \$18,000,000 |
| Concept 3B | 1.37 | 13.4 | | | \$20,900,000 |
| Concept 4 | 5.608 | 14.2 | 5,122 | -0.5% | \$5,608,000 |

14. There was a discussion of potential typical sections for the improvement concepts.

Figure 10 was presented as the initial typical section for Concepts 1, 1B, 2, and 2B. Concepts 3 and 3B do not include a shared use path.

- Comment: The KYTC Complete Streets, Roads, and Highways Manual recommends a lateral offset of five feet from the edge of the travel lane to a shared use path.
- Question: Should the paved shoulder width be reduced to align closer with the Safe Systems Approach?
Answer: This will be considered moving forward. District 7 will check with Operations and their experience with earth shoulders on Paris Pike to determine if there are any issues.
- Comment: A typical section with a four-foot striped median and reduced paved shoulders will be considered, as shown in **Figure 11**.
- Comment: The KYTC Design Manual allows a minimum of two-foot paved shoulders.

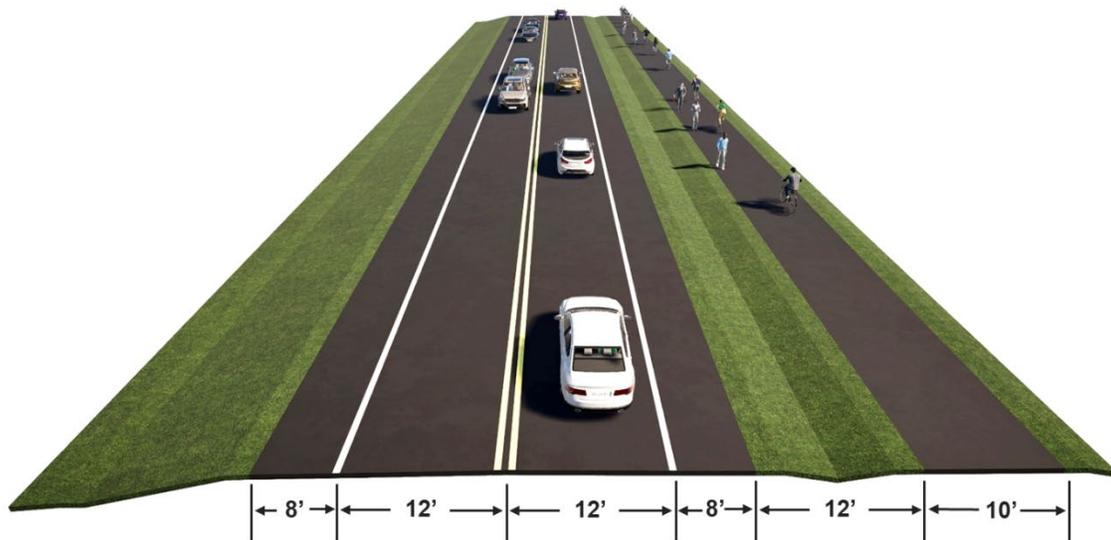


Figure 10: Improvement Concept Typical Section (Undivided)



Figure 11: Initial Improvement Concept Typical Section (Flush Median)

15. There was a discussion of Intersection Control Evaluation (ICE) and potential intersection improvements. Stage 1 ICE was performed for the US 68 intersections with KY 33 in Jessamine and Mercer Counties. **Table 3** presents the ICE summary for the US 68 / KY 33 intersection in Jessamine County. A traffic signal is not warranted based on the existing and future traffic and was therefore not moved forward. An all-way stop-controlled intersection does not fit within the context of existing US 68 as vehicles currently do not stop in the study area and was therefore not moved forward for consideration.

Table 3: Intersection Control Evaluation (ICE) – US 68 at KY (Jessamine County)

| Intersection Control Alternative Screening | | | | | | | | | |
|--|-----------------------|--|---------------------------------------|-----------------|--|--|--|---|--|
| Intersection or Interchange Alternative | a.) CAP-X v/c Ratio * | b.) CAP-X Pedestrian Accommodation Score | c.) CAP-X Bicycle Accommodation Score | d.) SB score ** | e.) Impractical to implement (considering cost, potential /w and environmental impacts)? | f.) Meets the transportation purpose and need? | g.) Addresses the key system performance criteria (safety, all roadway users, operations, etc.)? | h.) Alternative is selected to advance to Stage 2 for further evaluation. | Justification: |
| Signalized Control | 0.27 | 3.34 | 4.42 | 96 | No | No | No | No | Not warranted; Does not fit within context of road |
| Two-Way Stop-Controlled | 0.24 | 2.23 | 3.67 | 96 | No | Yes | Yes | Yes | |
| All-Way Stop-Controlled | 0.55 | 3.58 | 4.42 | 100 | No | No | No | No | Does not fit within context of road |
| RCUT (Unsignalized) | 0.07 | 2.19 | 3.35 | 99 | No | Yes | Yes | Yes | |
| Roundabout (1-lane) | 0.33 | 5.51 | 4.58 | 100 | No | Yes | Yes | Yes | |

16. The next steps are to further develop the improvement concepts and finalize the safe system framework. The second local officials meeting is scheduled for March 24, 2025 at Wilmore City Hall.

The meeting ended at approximately 3:00 p.m. EST.

Meeting Minutes

TO: Casey Smith
Project Manager
KYTC District #7 Office
800 Newtown Court
Lexington, KY 40511

Stephen DeWitte
Project Manager
KYTC Central Office Planning
200 Mero Street
Frankfort, KY 40622

FROM: Graham Winchester
Project Manager
Stantec Consulting Services Inc.

DATE: April 4, 2025

SUBJECT: US 68 Corridor Study
Jessamine and Mercer Counties
KYTC Item No. 7-80251.00
Local Officials / Stakeholder Meeting No. 2

The second Local Officials / Stakeholder Meeting for the subject project was held at Wilmore City Hall on March 24, 2025, at 1:30 p.m. EDT. The following individuals were in attendance:

| | |
|-------------------|-----------------------------------|
| Jason Booher | Mercer County Schools |
| Sara Crum | Jessamine County Schools |
| Jill Cutler | Mercer County Chamber of Commerce |
| Kylie Donnally | Mercer County |
| Dan Fister | Kentucky Legislature |
| Steve Johnson | Windstream |
| Stuart Kearns | Lexington Area MPO |
| Kim King | Kentucky Legislature |
| Jeff Moberly | City of Wilmore |
| Terry Meckstroth | Jessamine County Fiscal Court |
| Billy Rankin | Shaker Village |
| Nelson Shrout | Wilmore Police Department |
| Matthew Simpson | Jessamine County Schools |
| Sarah Steele | Mercer County Fiscal Court |
| David West | Jessamine County |
| James Zweifel | City of Wilmore |
| Stephen DeWitte | KYTC – Central Office Planning |
| Casey Smith | KYTC – District 7 |
| Len Harper | Stantec Consulting Services Inc. |
| Graham Winchester | Stantec Consulting Services Inc. |

Graham Winchester welcomed everyone and led introductions. The purpose of the meeting was to discuss results from the local officials and public survey, the Highway Safety Improvement Program (HSIP) Road Safety Assessment (RSA), and improvement concepts for the US 68 Corridor Study.

The following enumerated items were discussed.

1. The study area, shown in **Figure 1**, includes US 68 from KY 33 in Mercer County (MP 14.45) to the Jessamine County line (MP 20.058) and from the county line (MP 0.000) to KY 33 in Jessamine County (MP 1.380).
2. The objective of the US 68 Corridor Study is to identify and evaluate potential concepts to improve safety, truck mobility, and driver expectations (geometrics) on US 68 in Mercer and Jessamine Counties and to determine the need and optimal location for a replacement Kentucky River crossing.
3. There are currently no active projects in the study area listed in Kentucky’s 2024 – 2030 Enacted Highway Plan. There was a recent Highway Safety Improvement Program (HSIP) project to improve signing, striping, guardrail, and sightlines on US 68 in Jessamine County. This project was listed as KYTC Item No. 7-9009.00 and cost approximately \$4.5 million (completed in 2023).
4. Highlights from the existing conditions analysis were briefly discussed. US 68 is a two-lane rural minor arterial with 10-foot lanes in Mercer County, 11-foot lanes in Jessamine County, and one-foot paved shoulders throughout. Streetlight average daily speeds on US 68 were analyzed from 2023 to 2024 and showed that on average, vehicles travel close to the 55 mile per hour (mph) speed limit near the KY 33 intersection in Mercer County. Speeds decline to 40 to 45 mph as vehicles approach the more severe horizontal and vertical curvature near the Kentucky River. Speeds are slowest in Jessamine County, at 36 mph and under.
5. The US 68 bridge across the Kentucky River was constructed in 1954 and has a maximum load posting of 40 tons. Based on a 2024 inspection, the bridge was rated with a poor health index (71.98) with the superstructure rated as poor.
6. Between 2019 and 2023, there were 109 reported crashes along the study portion of US 68. Of the 109 crashes, 21 (19 percent) resulted in an injury and 88 (81 percent) resulted in property damage only. Of the 21 injury collisions, five were suspected serious injury collisions, three of which involved motorcycles losing control on horizontal curves, one was a head on collision on wet pavement, and one was a collision with an animal.

The most common crash type were single vehicle run off the road collisions (76 percent) followed by sideswipe (9 percent), angle (7 percent), and head on (6 percent). Between 2019 and 2023, there were an average of 6.7 crashes per year per mile in Jessamine County and an average of 2.2 crashes per year per mile in Mercer County. Since the 2023 HSIP project, there have been 3.3 crashes per year per mile on US 68 in Jessamine County.

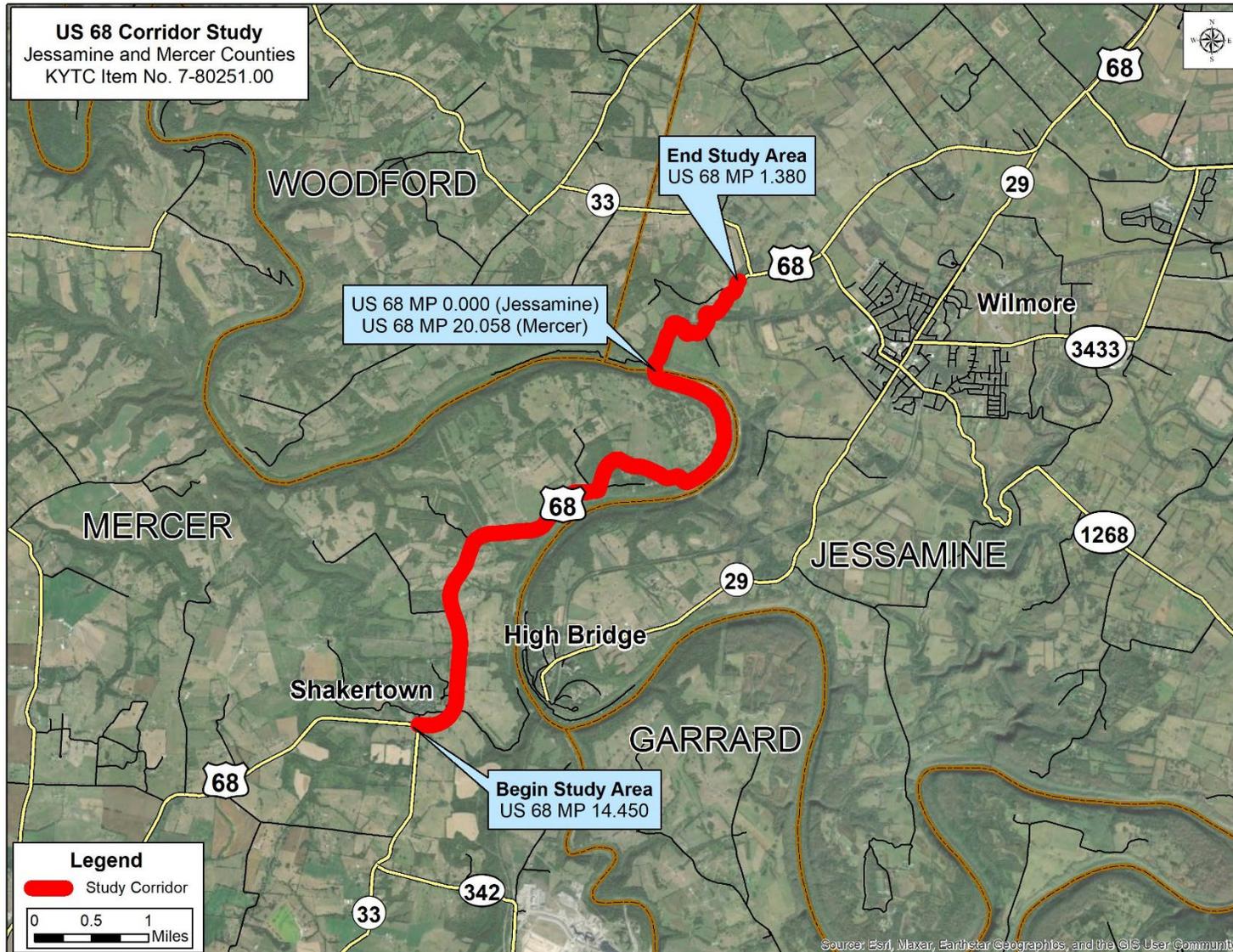


Figure 1: Study Area

The Crash Data Analysis Tool (CDAT) was used to perform an excess expected crashes (EEC) analysis. An EEC greater than zero indicates more crashes occurred than what is expected based on similar routes in Kentucky. US 68 has a positive EEC on the entire study corridor and a Level of Service of Safety (LOSS) of three, which indicates moderate to high potential for crash reduction. Several intersections also had positive EEC's, including both intersections with KY 33.

7. Based on the most recent KYTC counts, daily traffic on US 68 ranges from 2,900 vehicles per day (VPD) in Mercer County with 9.6 percent trucks (2024) to 3,200 VPD in Jessamine County with 7.3 percent trucks (2018).
8. 2045 daily traffic forecasts were developed for the no-build and on-alignment improvements based on a combination of population growth, KYTC count station trends, and results from the Kentucky Statewide Travel Demand Model. Based on a growth rate of 1.0 percent per year, US 68 is expected to carry 3,600 VPD in Mercer County and 4,200 VPD in Jessamine County

2045 daily traffic forecasts were also developed for off-alignment improvements using the KYSTM. As shown in **Figure 2**, daily traffic for off-alignment US 68 concepts is expected to range from 8,000 to 14,000 VPD in 2045.

9. The US 68 Corridor Study is a pilot study to incorporate Road Safety Assessments (RSA's) from an independent team through the HSIP contract. The project team has coordinated with the independent team to develop a Safe System Assessment Framework for rural two-lane roads in Kentucky. The Safe System Approach prioritizes the elimination of crashes that result in death and serious injuries and includes:
 - Safe People
 - Safe Vehicles
 - Safe Roads
 - Safe Speeds
 - Post-Crash Care
 - Partnership

To ensure that Safe System elements are considered and to measure how well a project aligns with the Safe System approach, a scoring system was developed to score potential improvement concepts on rural two-lane roads in Kentucky. The scoring system grades roads on three principles: exposure (the number of road users), likelihood (the probability that a crash occurs), and severity (the probability that a fatality or severe injury will occur). Within each principle, roads are scored for different crash and user types, including run-off road, head on, corridor approaches, other (sideswipe, rear end, etc.), trucks, pedestrians, bicycles, and motorcycles. KYTC Highway Information System (HIS) data was used to develop Kentucky-specific thresholds for each of the crash and road types specifically for rural two-lane roadways.

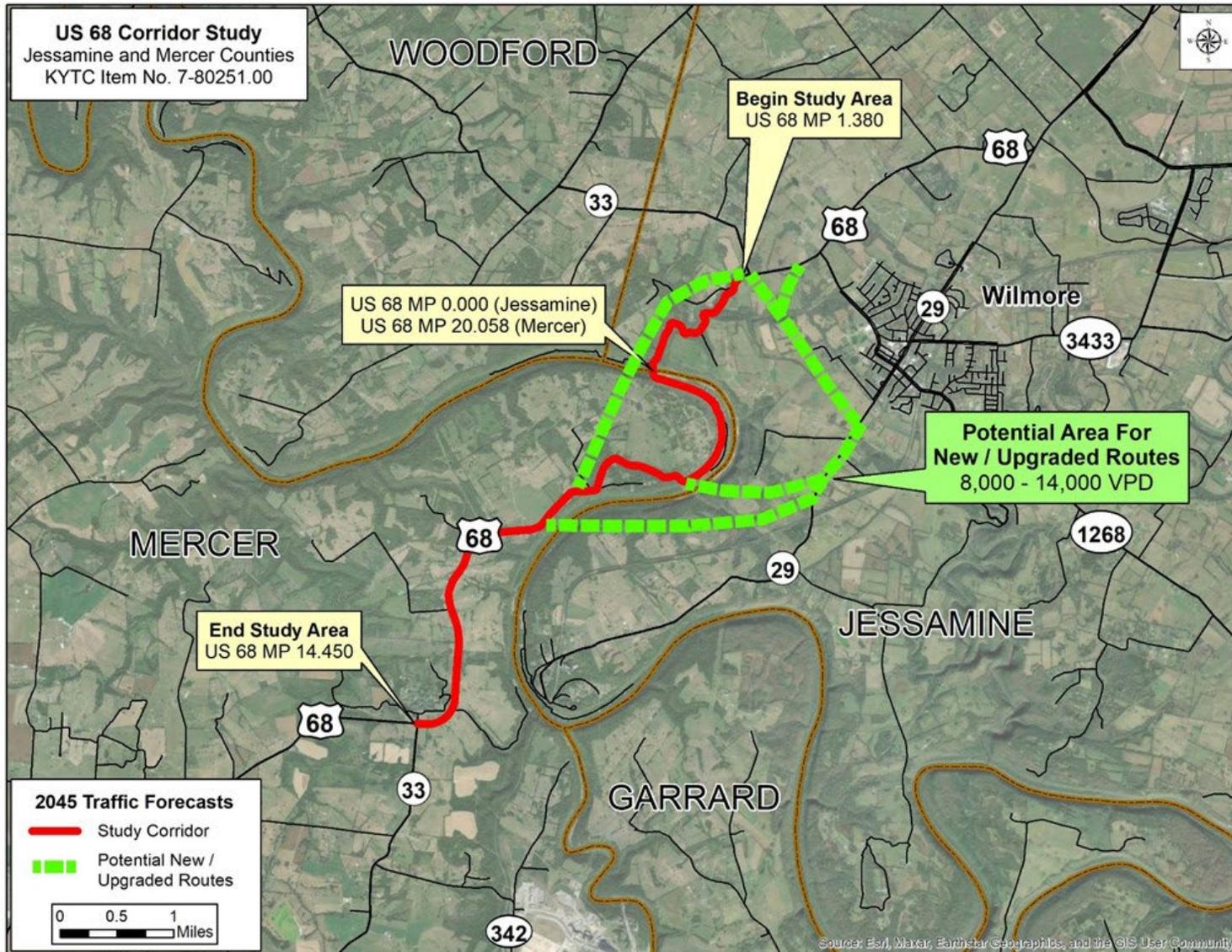


Figure 2: 2045 Off-Alignment Daily Traffic Forecasts

10. Improvement concepts were presented for project team discussion. Conceptual corridors were explored within the study area as shown below to serve as a screening tool for identifying environmental red flags and to better assess the potential benefits and impacts. Major new routes take years to design and construct. Definitive alignments are determined in the design phase. There are no funds currently identified for future phases of work (design, right-of-way, utilities, construction).

1) Concept 1

Concept 1 includes a new Kentucky River crossing south of the existing US 68 river crossing, as shown in **Figure 3**. Improvements to existing US 68 are assumed from the KY 33 intersection in Mercer County to the start of the off-alignment section.

2) Concept 2

Concept 2 includes realigning US 68 in Mercer County to eliminate the severe vertical and horizontal curvature, along with a new Kentucky River crossing just west of the existing bridge, as shown in **Figure 3**.

3) Concept 3

Concept 3 includes an option to realign Chinn's Curve and improve the existing alignment from MP 13.5 to MP 14.7 in Mercer County, as shown in **Figure 3**.

4) Concept 4

Concept 4 includes on-alignment corridor-wide safety improvements, rather than individual spot improvements, in Mercer County to match the recent HSIP project in Jessamine County. Potential improvements include signing, striping, guardrail, repaving, edgeline / centerline rumble stripes, and high friction surface treatment (HFST) at horizontal curves.

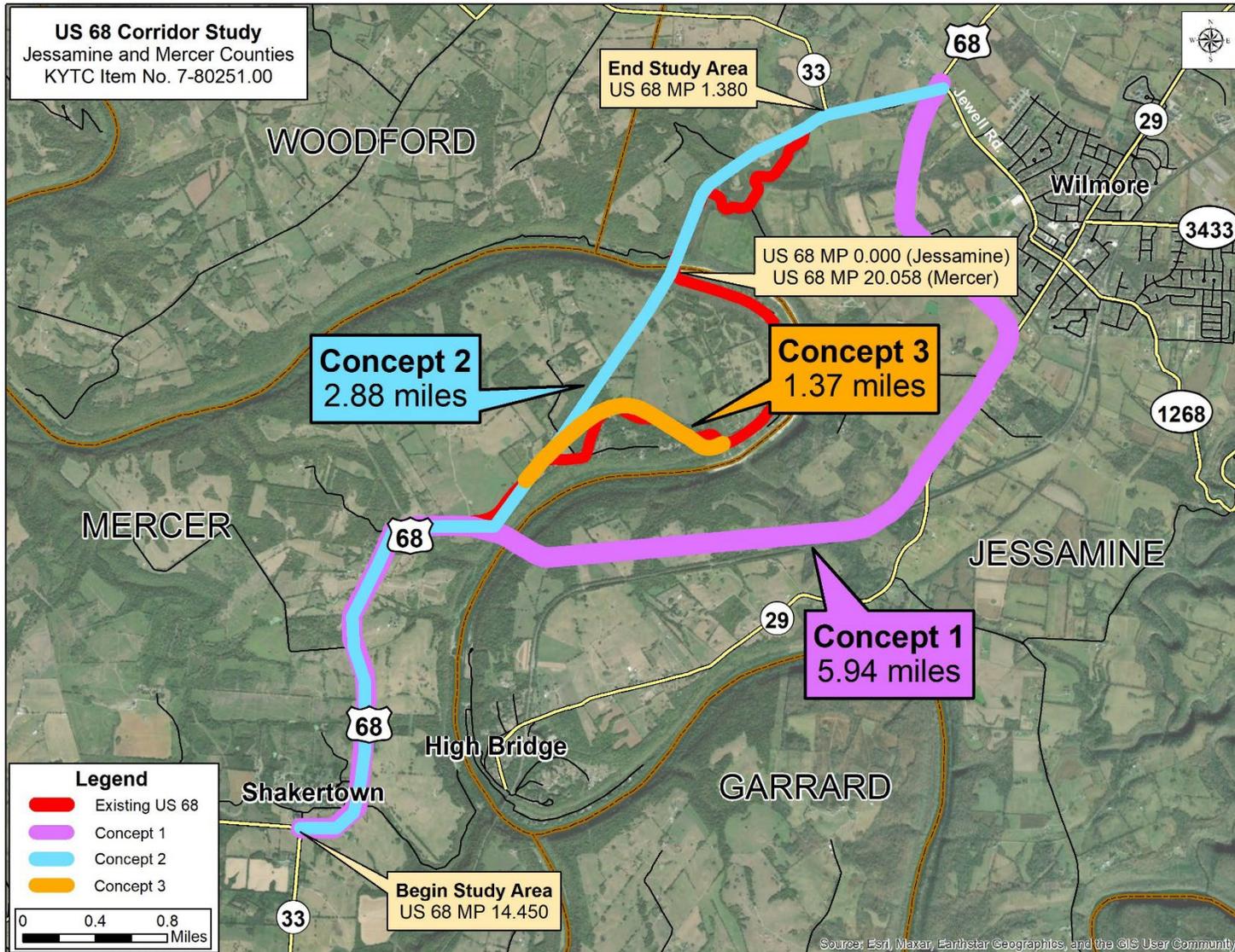


Figure 3: Off-Alignment Concepts

11. There was a discussion of potential typical sections for the improvement concepts. **Figure 4** was presented as the initial typical section for Concepts 1 and 2. Concepts 3 and 3B do not include a shared use path. The four foot flush median is intended to reduce the likelihood of head on collisions.

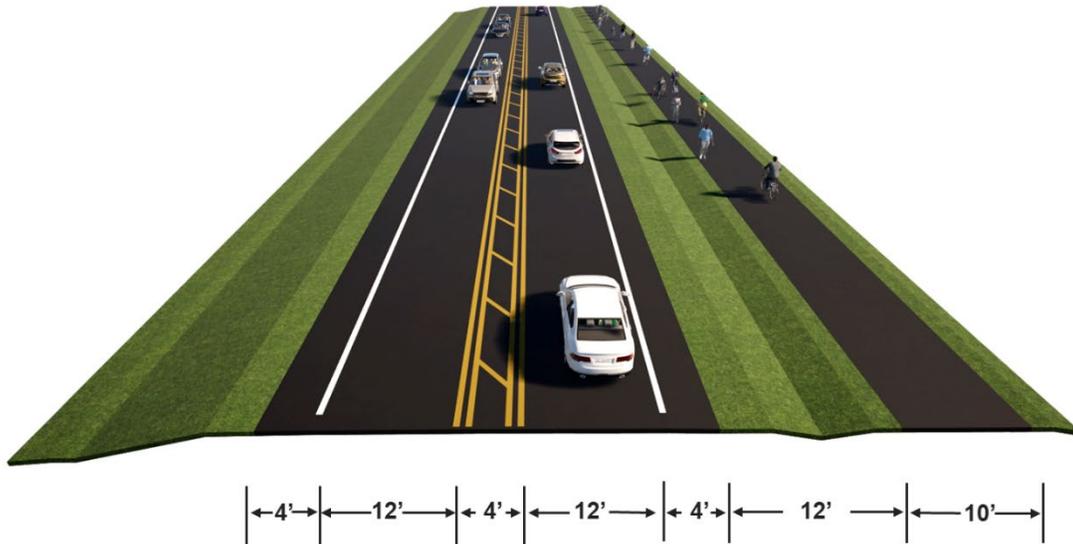


Figure 4: Improvement Concept Typical Section (Undivided)

12. Graham then presented an evaluation matrix to compare the improvement concepts, shown in **Table 2**.

Table 2: US 68 Improvement Concept Summary

| Concept | No-Build | Concept 1 Realignment of US 68 w/ New Southern River Crossing | Concept 2 Realignment of US 68 w/ New Central River Crossing | Concept 3 Chinns Curve Realignment | Concept 4 Mercer County On- Alignment Improvements |
|------------------------------|------------|--|---|--|---|
| Length (mi.) | 6.988 | 7.36 | 6.16 | 1.37 | 5.608 |
| Traffic | | | | | |
| Travel Time (min.) | 14.2 | 8.7 | 7.0 | 13.4 | 14.2 |
| 2045 ADT (VPD) | 3,600 | 12,800 | 13,700 | 4,200 | 3,600 |
| Safe System Framework | | | | | |
| Rank | #5 | #1 | #2 | #3 | #4 |
| Cost | | | | | |
| Design | \$0 | \$20,600,000 | \$21,300,000 | \$3,100,000 | \$800,000 |
| Right of Way | \$0 | \$2,100,000 | \$3,400,000 | \$400,000 | \$0 |
| Utility Cost | \$0 | \$5,500,000 | \$5,500,000 | \$400,000 | \$0 |
| Construction | \$0 | \$137,500,000 | \$142,000,000 | \$20,900,000 | \$5,600,000 |
| Total | \$0 | \$165,700,000 | \$172,200,000 | \$24,800,000 | \$6,400,000 |
| Benefit | | | | | |
| Safety Benefit | \$0 | \$8,600,000 | \$8,600,000 | \$1,000,000 | \$6,600,000 |
| Travel Time Savings | \$0 | \$186,300,000 | \$246,200,000 | \$11,900,000 | \$0 |
| Benefit-Cost Ratio | 0.0 | 1.2 | 1.5 | 0.5 | 1.0 |

13. After the presentation, local officials were asked to complete a survey to solicit feedback on the improvement concepts. 15 attendees filled out the survey. The first question asked respondents to rank the corridor improvement concepts #1 through #4, with a #1 ranking worth four points, a #2 ranking worth three points, a #3 ranking worth two points, and a #4 ranking worth one point. Concept 2 received the highest ranking, followed by Concept 3 and Concept 1, as shown in **Figure 5**.

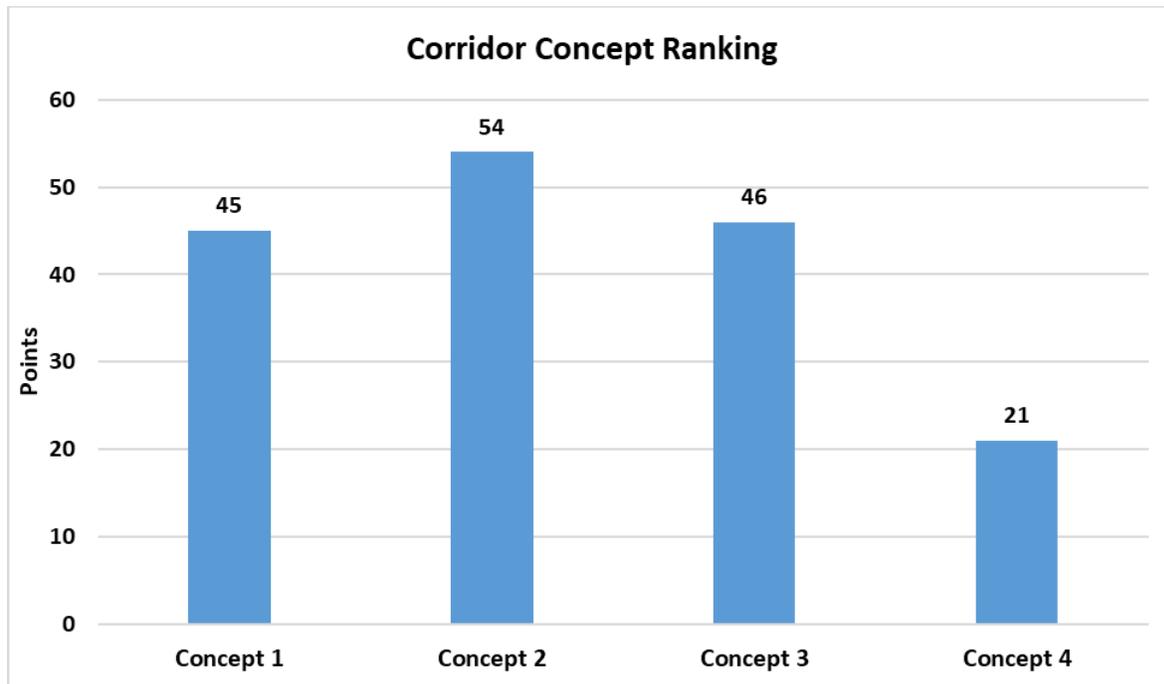


Figure 5: Local Official Survey No. 2 – Corridor Concept Ranking

The second question asked respondents if they agree with the proposed typical section. Nine respondents indicated they agree with the typical section, three do not agree, and three were unsure, as shown in **Figure 6**. Reasons for not agreeing with the typical section included that the multi-use path is unnecessary, it would require the acquisition of too much right of way, and that recovery areas are more important than a multi-use path. Those who were unsure want more information on cost and the impact to private land. Comments included:

- This typical section leaves room for a utility corridor.
- Multi-use path isn't necessary for safe commuters, uses too much private property, unnecessary expense.
- I like the idea of space for pedestrians, but I think recovery areas are more important.
- Concept 2 total distance is much better.
- Takes too much private land.

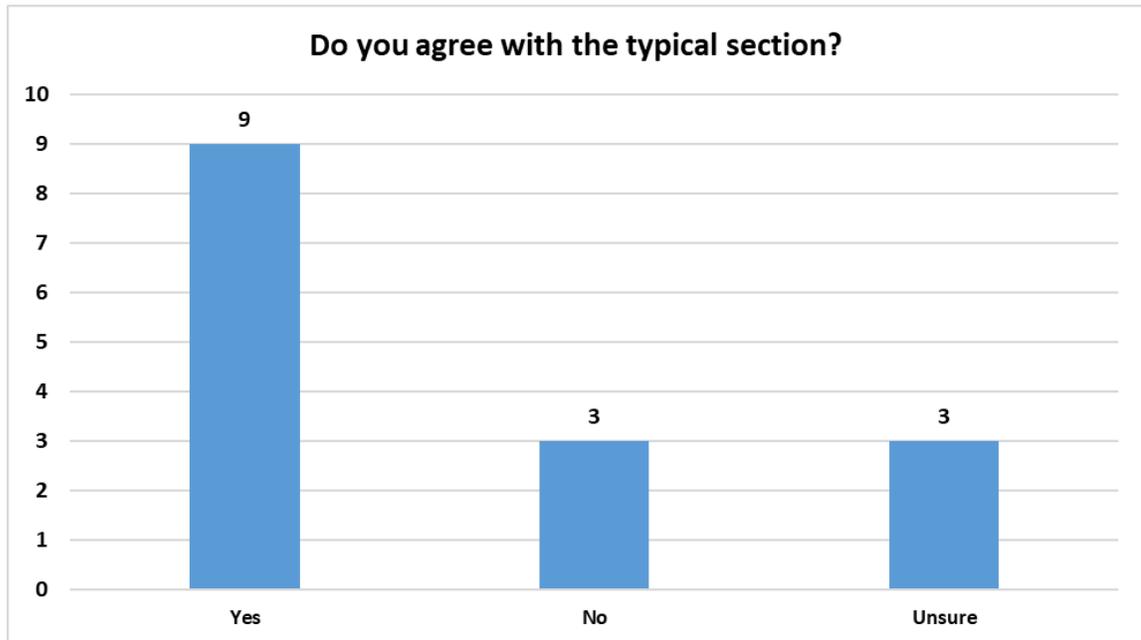


Figure 6: Local Official Survey No. 2 – Typical Section

- Bike and pedestrian lanes would help with safety by getting them off the roadway. Also, it helps with keeping people living a healthy lifestyle.
- One attendee mentioned that recreation bicycling companies that facilitate group bicycle rides do not allow riders to cycle on the study portion of US 68. The cyclists ride in a van between KY 33 in Jessamine County and KY 33 in Mercer County.
- There was discussion over the project goals and if they include bicycles and pedestrians. KYTC designs roads with safety in mind for all users, not just motor vehicles.
- Question: Can we consider a typical section without a shared-use path?
Answer: The decision to eliminate the shared-use path as a cost/land-saving measure will be considered in the Design phase.

Respondents were then asked if there are any other improvement concepts that the study team should consider or if there are any concerns with the conceptual corridors. The comments are summarized below:

- Concerns with maintaining agricultural and historic nature of corridors.
- Concern with Concept 1 drawing traffic to KY 29, High Bridge, and Wilmore.
- There is a potential megasite in Mercer County that could bring 2,000 jobs to the area within 5-10 years. This could increase traffic projections.
 - Stantec ran the Kentucky Statewide Travel Demand Model (KYSTM) with 2,000 additional non-retail jobs northwest of Harrodsburg to replicate the megasite. Traffic on the off-alignment corridors did not change significantly.

- The US 68/KY 33 intersection needs improvements for better visibility, like a flashing light.
- Use the old US 68 bridge for hikers and bicyclists.
- There was a discussion of impacts to Shakertown. The current typical section, which includes a shared-use path, would likely impact historically sensitive land near Shakertown, along with a stone fence. The representatives from Shakertown are in favor of improvements to US 68 but would like to be involved during the Design phase to coordinate with KYTC on mitigating impacts.

14. The next steps are to finalize and prioritize the improvement concepts and then begin work on a draft report to summarize the study.

The meeting ended at approximately 2:30 p.m. EDT.

Meeting Minutes

TO: Casey Smith
Project Manager
KYTC District #7 Office
800 Newtown Court
Lexington, KY 40511

Stephen De Witte
Project Manager
KYTC Central Office Planning
200 Mero Street
Frankfort, KY 40622

FROM: Graham Winchester
Project Manager
Stantec Consulting Services Inc.

DATE: May 29, 2025

SUBJECT: US 68 Corridor Study
Jessamine and Mercer Counties
KYTC Item No. 7-80251.00
Project Team Meeting No. 3

The third Project Team Meeting for the subject project was held at the KYTC District 7 office and virtually via Microsoft Teams on April 30, 2025, at 10:30 a.m. EDT. The following individuals were in attendance:

| | |
|---------------------|-------------------------------------|
| Jayalakshmi Balaji* | KYTC – Central Office Planning |
| Nick Beasmore* | KYTC – District 7 |
| Catherine Davis* | KYTC - Central Office Planning |
| Stephen De Witte | KYTC - Central Office Planning |
| David Gambrel* | Bluegrass Area Development District |
| David Greenwell* | KYTC – District 7 |
| Stuart Kearns | Lexington Area MPO |
| Libbie Lowe* | KYTC – Central Office Planning |
| Tony McGaha | KYTC – District 7 |
| Lauren Meighan | KYTC – District 7 |
| Alex Mucci* | KYTC – HSIP |
| Mikael Pelfrey* | KYTC – Central Office Planning |
| Connor Schurman* | KYTC – Central Office Planning |
| Casey Smith | KYTC – District 7 |
| Jonathan Taylor* | KYTC – District 7 |
| Adam Ulrich* | KYTC – Central Office Design |
| Mike Vaughn* | KYTC – HSIP |
| Thomas Witt | KYTC – Central Office Planning |
| | |
| Brian Aldridge* | Stantec Consulting Services Inc. |
| Len Harper | Stantec Consulting Services Inc. |
| Graham Winchester | Stantec Consulting Services Inc. |

*Joined via Microsoft Teams

Graham Winchester welcomed everyone and led introductions. The purpose of the meeting was to discuss results from the second local officials survey, the Highway Safety Improvement Program (HSIP) Road Safety Assessment (RSA), and revised improvement concepts for the US 68 Corridor Study.

The following enumerated items were discussed.

1. The objective of the US 68 Corridor Study is to identify and evaluate potential concepts to improve safety, truck mobility, driver expectations (geometrics), and resiliency on US 68 in Mercer and Jessamine Counties and to determine the need and optimal location for a replacement Kentucky River crossing.
 - The US 68 Mercer County approach to the Kentucky River crossing flooded in April 2025 due to a 500-year flood and was closed to traffic for several days. This closure initiated a discussion to add resiliency to the Study Objective. The US 68 river crossing is a vital crossing and impacts thousands of road users when it is closed.
 - It was noted that the bridge was also closed due to flooding in 2010.
 - Question: How much of US 68 is in the 100-year floodplain?
Answer: The Mercer County approach is the only section of US 68 within the 100-year floodplain, as shown in **Figure 1**.
2. The US 68 bridge across the Kentucky River was constructed in 1954 and has a maximum load posting of 40 tons. Based on a 2024 inspection, the bridge was rated with a poor health index (71.98) with the superstructure rated as poor.
3. The second local officials meeting was held on March 24, 2025 at Wilmore City Hall. At the conclusion of the meeting, attendees were asked to fill out a survey and rank improvement concepts. The corridor concepts were ranked using a point system with a #1 ranking receiving four points, #2 receiving three points, and so on. **Figure 2** presents the results from the survey. Concept 2, realignment of US 68 with a new bridge just west of the existing bridge, received the highest ranking, followed by Concept 3, realignment of Chinn's Curve, and Concept 1, realignment of US 68 with a new bridge to the south, which were only separated by one point. It is likely that Concept 3 received a high score because of the minimal right of way compared to Concepts 1 and 2.

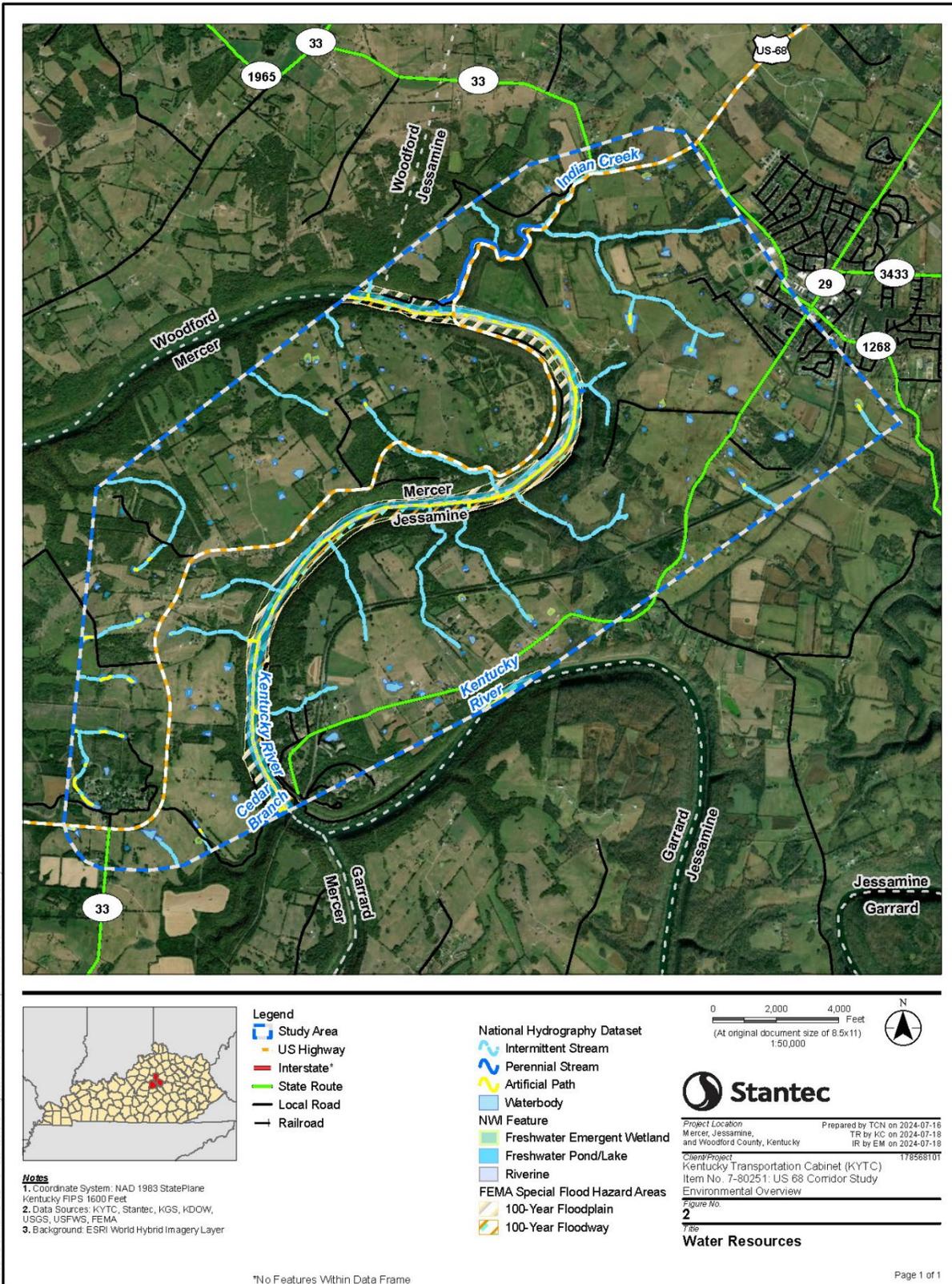


Figure 1: US 68 Water Resources

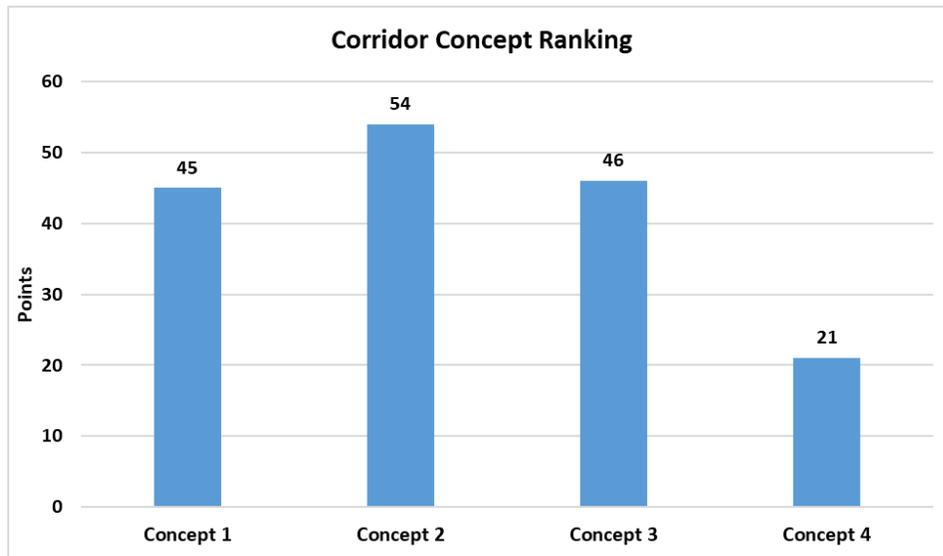


Figure 2: Local Officials Survey No. 2 – Corridor Concept Ranking

Respondents were then asked if they agree with the typical section for Concepts 1 and 2, shown in **Figure 3**, that includes a flush median and a shared use path. Nine (60 percent) of the respondents indicated that they agree with the typical section while three disagreed and three were unsure. Reasons for disagreeing with the typical section included that the addition of the shared use path is not necessary because commuters will not use it, it takes too much private land, and it is not as important as recovery areas. Attendees who were unsure noted that they would like to better understand impacts to private property and to see the cost with and without the shared use path.

- Question: Can we quantify commuter bicycle and pedestrian demand?
Answer: There is likely very little bicycle and pedestrian commuter demand. The US 68 corridor is seven miles long and does not have significant bike/ped attractors, such as grocery stores, schools, hospitals, employment, etc. However, the recreational demand for bicyclists and pedestrians could be significant given the scenic nature of the corridor and Shaker Village as a tourist destination.
- Question: Is the shared use path in the clear zone?
Answer: Yes, this is acceptable based on guidance from the KYTC Complete Streets, Roads, and Highways Manual.
- Replica data shows an average of fewer than 10 pedestrians and fewer than 10 bicycles on US 68 per day 2024. This may reflect the unsafe conditions on US 68 rather than the lack of users. At the second local officials meeting, it was noted that bike clubs pick up riders in vans to cross the study section of US 68.



Figure 3: Concepts 1 and 2 Typical Section

Key takeaways from the second Local Officials survey are as follows:

- Most respondents like the safety benefits from separating modes of travel while some respondents believe the shared use path is unnecessary.
 - Several want to keep the existing US 68 bridge as a pedestrian crossing. This would require Mercer County or Jessamine County to take ownership.
 - Respondents want to maintain the agricultural and historic nature of the corridor.
 - Several want to better understand the impact to private property. Right of way impacts will be analyzed during the design phase.
 - There is a potential Megasite in Harrodsburg that could bring thousands of jobs to the region. There is some concern that it could increase traffic on US 68 in the future and require a four-lane typical section.
 - Stantec added 2,000 jobs to the traffic analysis zone (TAZ) in the Kentucky Statewide Travel Demand Model (KYSTM) northwest of Harrodsburg to represent the Megasite. Based on results from the model, most trips from the Megasite will use US 127 and the Bluegrass Parkway. Fewer than 1,000 vehicles per day (VPD) from the Megasite are expected to use US 68.
 - Stantec will share the KYSTM model runs with KYTC Modal Branch.
4. The US 68 Corridor Study is a pilot study to incorporate Road Safety Assessments (RSA's) from an independent team through the HSIP contract. Stantec coordinated with the independent team to develop a Safe System Assessment Framework for rural two-lane roads in Kentucky. The Safe System Approach prioritizes the elimination of crashes that result in death and serious injuries.

To ensure that Safe System elements are considered and to measure how well a project aligns with the Safe System approach, a spreadsheet tool was developed to score potential improvement concepts. US 68 was divided into three sections: MP 14.45 – MP

17.5 in Mercer County, MP 17.5 – MP 20.058 in Mercer County, and MP 0.0 – MP 1.38 in Jessamine County. Each section of US 68 was scored from 0 to 8,000 with a lower score more closely aligned with Safe System principles. This scoring system is not linear, but rather parabolic, which can make it challenging to interpret results. **Table 1** presents several options to present the scoring, including by percent Safe System score reduction, a normalized score, an index value, cost per Safe System point reduced, and cost per mile per Safe System percent reduced. The per mile scoring is preferred because it captures whether a concept only covers part of the corridor, like Concept 3, or a longer segment, like Concepts 1 and 2.

- Stantec will meet with the HSIP team to finalize the Safe System spreadsheet.

Table 1: Safe System Scoring

| Concept | No-Build | Concept 1 | Concept 2 | Concept 3 | Concept 4 |
|-------------------------------------|----------|---------------|---------------|--------------|-------------|
| Length (mi.) | 6.988 | 7.36 | 6.16 | 1.37 | 5.61 |
| Cost | \$0 | \$137,500,000 | \$142,000,000 | \$20,900,000 | \$5,600,000 |
| Cost per mi. | \$0 | \$18,682,000 | \$23,052,000 | \$15,255,000 | \$998,000 |
| SS Score (Section 1) | 1,276 | 948 | 946 | 1,276 | 992 |
| SS Score (Section 2) | 1,998 | 712 | 844 | 1,466 | 1,454 |
| SS Score (Section 3) | 2,050 | 848 | 1,004 | 2,050 | 2,050 |
| SS Score (Total) | 5,324 | 2,508 | 2,794 | 4,792 | 4,496 |
| % Reduction | 0.0% | 52.9% | 47.5% | 10.0% | 15.6% |
| Normalized Score | 0.222 | 0.105 | 0.116 | 0.2 | 0.187 |
| SS Alignment Index | 0.778 | 0.896 | 0.884 | 0.8 | 0.813 |
| Cost per point reduced | | \$48,828 | \$56,126 | \$39,286 | \$6,763 |
| Cost per mi. per % Reduction | | \$353,000 | \$485,000 | \$1,526,000 | \$64,000 |

5. There was a discussion of potential intersection improvements for the KY 33 intersections in Mercer and Jessamine Counties. The KY 33 intersection in Mercer County currently has static flashing lights. There was a request in the public survey to install similar lights to the KY 33 intersection in Jessamine County to warn drivers of the upcoming intersection. It was noted that the static intersection warning lights have not been shown to significantly decrease the likelihood of crashes. Intersection Conflict Warning Systems (ICWS), however, have been shown to be much more effective in reducing crashes. ICWS use vehicle detectors under the pavement to alert drivers of approaching traffic. This study will recommend that District 7 traffic consider installing ICWS at both intersections.
 - Alternative intersections, such as roundabouts, will be considered during the design phase.
6. Graham then presented an evaluation matrix to summarize the corridor concepts, as shown in **Table 2**. Concepts 1, 2, and 4 have benefit-to-cost ratios greater than or equal to one, indicating the benefit outweighs the cost.

- KYTC requested costs for Concepts 1 and 2 with and without the shared use path. These costs were added to Table 2
- KYTC requested a cost and life cycle for rehabilitation of the existing bridge. Stantec completed this analysis which is summarized below.

Table 2: Evaluation Matrix

| Concept | No-Build | Concept 1 Realignment of US 68 w/ New Southern River Crossing | Concept 2 Realignment of US 68 w/ New Central River Crossing | Concept 3 Chinns Curve Realignment | Concept 4 Mercer County On- Alignment Improvements |
|-------------------------------------|------------|--|---|--|---|
| Length (mi.) | 6.988 | 7.36 | 6.16 | 1.37 | 5.608 |
| Traffic | | | | | |
| Travel Time (min.) | 14.2 | 8.7 | 7.0 | 13.4 | 14.2 |
| 2045 ADT (VPD) | 3,600 | 12,800 | 13,700 | 4,200 | 3,600 |
| Safe System Framework | | | | | |
| Rank | #5 | #1 | #2 | #3 | #4 |
| Cost | | | | | |
| Design | \$0 | \$21,200,000 | \$21,700,000 | \$3,200,000 | \$800,000 |
| Right of Way | \$0 | \$2,100,000 | \$3,400,000 | \$400,000 | \$0 |
| Utility Cost | \$0 | \$5,500,000 | \$5,500,000 | \$400,000 | \$0 |
| Construction | \$0 | \$141,600,000 | \$144,900,000 | \$21,000,000 | \$5,600,000 |
| Construction w/out SUP | \$0 | \$115,800,000 | \$115,900,000 | | |
| Total | \$0 | \$170,400,000 | \$175,500,000 | \$25,000,000 | \$6,400,000 |
| Total w/out SUP | \$0 | \$144,600,000 | \$146,500,000 | | |
| Benefit | | | | | |
| Safety Benefit | \$0 | \$8,600,000 | \$8,600,000 | \$1,000,000 | \$6,600,000 |
| Travel Time Savings | \$0 | \$186,300,000 | \$246,200,000 | \$11,900,000 | \$0 |
| Benefit-Cost Ratio | 0.0 | 1.1 | 1.5 | 0.5 | 1.0 |
| Benefit-Cost Ratio w/out SUP | 0.0 | 1.3 | 1.5 | | |

A fifty percent contingency was added to the construction costs of Concepts 1, 2, and 3 to account for the fact that a long-term US 68 project does not have future funding in the Highway Plan. These costs, shown in **Table 3**, will be used moving forward.

Table 3: Long-Term Concept Cost Estimates

| Concept | Length (mi.) | Design | Right of Way | Utility | Construction | Total Cost | Total Cost (50% Contingency) |
|-----------|--------------|--------------|--------------|-------------|---------------|---------------|------------------------------|
| Concept 1 | 7.36 | \$21,200,000 | \$2,100,000 | \$5,500,000 | \$141,600,000 | \$170,400,000 | \$255,600,000 |
| Concept 2 | 6.16 | \$21,700,000 | \$3,400,000 | \$5,500,000 | \$144,900,000 | \$175,500,000 | \$263,250,000 |
| Concept 3 | 1.37 | \$3,200,000 | \$400,000 | \$400,000 | \$21,000,000 | \$25,000,000 | \$37,500,000 |

A Study Objectives matrix was also presented, as shown in **Table 4**, to demonstrate if the concepts satisfy each of the study objectives. Concepts 1 and 2 satisfy all of the study objectives while Concepts 3 and 4 satisfy or somewhat satisfy three of the five objectives.

Table 4: Study Objectives Matrix

| Issues / Project Goals | Existing (No Build) | Concept 1 Southern River Crossing | Concept 2 Realignment of US 68 w/ New River Crossing | Concept 3 Chinns Curve Realignment | Concept 4 Mercer County On-Alignment Improvements |
|--------------------------------|---------------------|-----------------------------------|--|------------------------------------|---|
| Estimated Total Cost | \$0 | \$165,700,000 | \$172,200,000 | \$24,800,000 | \$6,400,000 |
| Improves Safety | ✘ | ✔ | ✔ | ✔ | ✔ |
| Improves Truck Mobility | ✘ | ✔ | ✔ | ● | ● |
| Improves Driver Expectations | ✘ | ✔ | ✔ | ● | ● |
| Improves Resiliency | ✘ | ✔ | ✔ | ✘ | ✘ |
| Provides New KY River Crossing | ✘ | ✔ | ✔ | ✘ | ✘ |

| Key: | |
|------|--------------------|
| ✘ | Not addressed |
| ● | Somewhat addressed |
| ✔ | Addressed |

- Stantec structural engineers performed a planning-level evaluation of the US 68 Kentucky River bridge to determine short-term rehabilitation needs, extending the lift of the bridge five to 15 years. Any long-term solutions would require a bridge replacement due to the existing curved alignment, which would make a superstructure replacement challenging. The following summarizes the results from the evaluation:

Option 1

Rehabilitation items in Option 1 are of immediate concern and will likely extend the structure life for five or more years. Option 1 rehab includes:

- Replacing the deteriorated steel bearings with elastomeric bearing assemblies.
- Installing crack monitoring gauges at critical shear crack locations and performing routing monitoring for continued crack development.
- Cost estimate = \$570,000

Option 2

The second rehabilitation option includes the items from Option 1, along with additional measures that could extend the life of the structure an estimated 10 to 15 years or more. Option 2 rehab includes:

- Option 1 rehabilitation measures.

- Installation of fiber reinforced polymer (FRP) if the shear cracking continues to develop.
 - Replace the existing barrier rail with standard mono-slope bridge rail.
 - Blast cleaning, hydrodemolition, and partial depth patching.
 - Concrete patching of spall areas. This assumes five percent of the superstructure and substructure surface area.
 - Galvanic anode to control the corrosion of metal surfaces.
 - Cleaning and repairing expansion joints.
 - Cost estimate = \$3,600,000
8. The next step is for Stantec to finalize the improvement concepts, meet with the HSIP team to finalize the Safe System spreadsheet, and write the draft report.

The meeting ended at approximately 11:30 a.m. EDT.