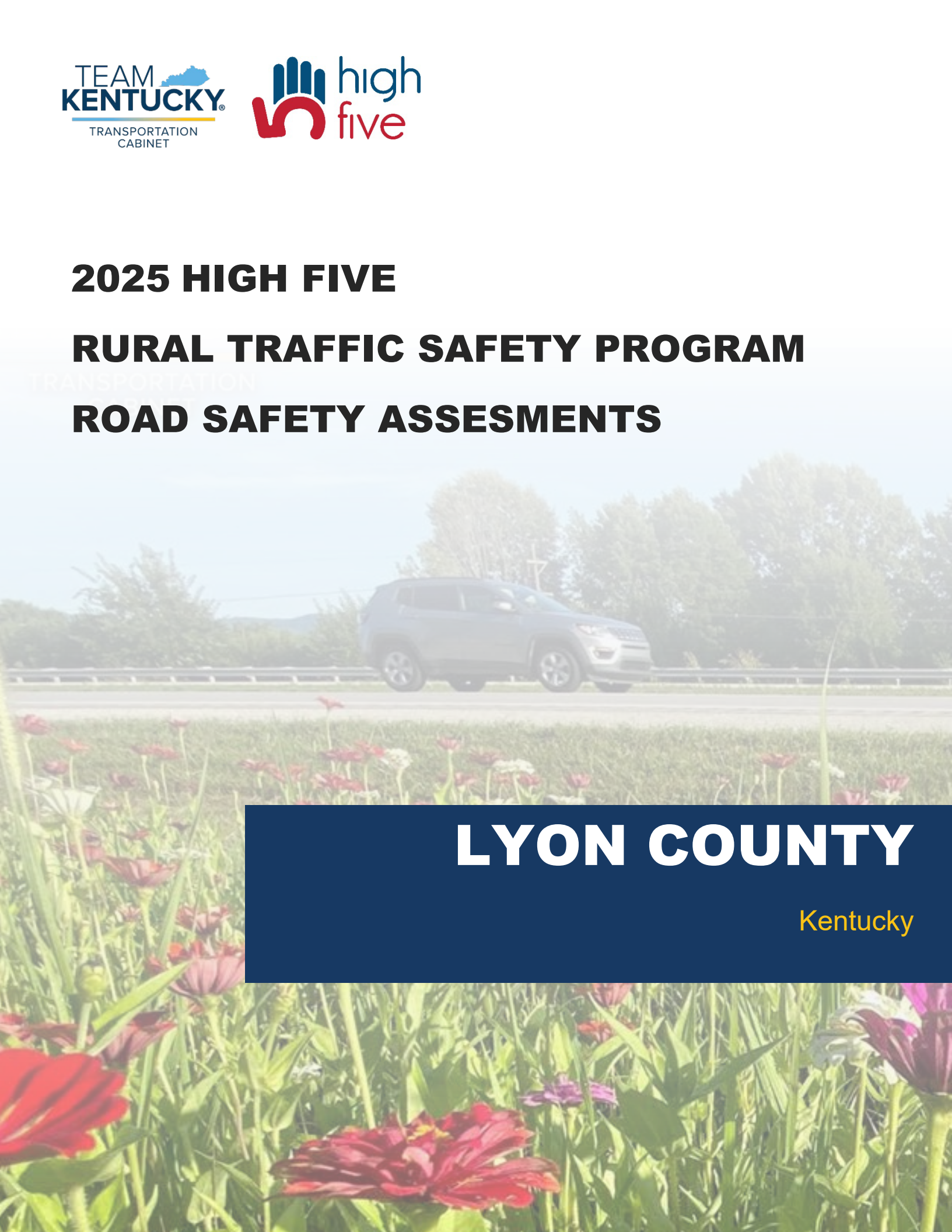
TEAM KENTUCKY
TRANSPORTATION CABINET

high five

# 2025 HIGH FIVE

# RURAL TRAFFIC SAFETY PROGRAM

# ROAD SAFETY ASSESMENTS



# LYON COUNTY

Kentucky

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# Introduction

## Overview

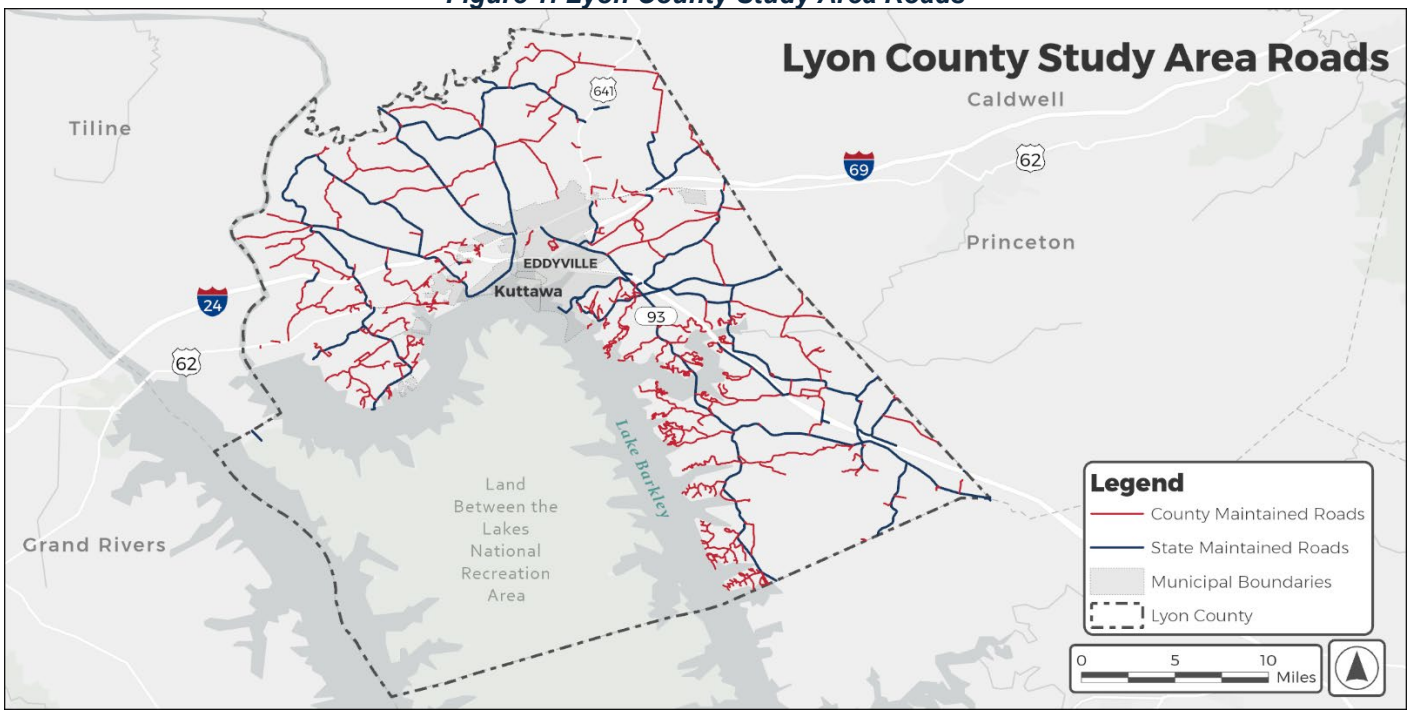
The High Five Rural Traffic Safety Program is a data-supported, multi-agency effort to reduce serious injury and fatal crashes on rural roads in Kentucky. The program is a partnership between the National Highway Traffic Safety Administration (NHTSA), Kentucky Office of Highway Safety (KOHS), Kentucky Transportation Cabinet (KYTC), Kentucky Transportation Center (KTC), and Kentucky State Police (KSP).

The program started in Kentucky in 2022 and was initially funded through NHTSA for fiscal year 2023 improvements. It is based on a pilot program NHTSA conducted in Iowa that focuses on improving seatbelt usage in rural areas. NHTSA wanted to verify the results from Iowa and document best practices. Kentucky and Arkansas were chosen to partner with the program. KOHS is continuing the program in Kentucky for the 2025 fiscal year using state funds.

The High Five Rural Traffic Safety project involves a three-part approach—engineering, education, and enforcement—with the goal of building safer communities. Based on crash data, **Lyon County** was selected to participate in the program along with **Grant County, Perry County, Pike County, and Taylor County.**

The project aims to develop engineering safety improvements based on road safety assessments (RSAs) of roads maintained by the county and state in Lyon County **(Figure 1)**.

***Figure 1: Lyon County Study Area Roads***



## RSA Methodology

### *Road Safety Assessments*

Road safety assessments (RSAs) are formal safety performance examinations of an existing or future road or intersection by an independent, multidisciplinary team.[1] An RSA qualitatively estimates and reports on safety-related roadside conditions and identifies opportunities for improvements in safety for all road users. RSAs align with a Safe System Approach, in that RSAs are a ***proactive*** tool to better understand potential safety issues in the transportation system, rather than waiting for crashes to occur and reacting afterward **(Figure 2)**.[2] RSAs are relatively low-cost to conduct yet can achieve significant crash reductions. Resources for more information about RSAs are available in **Appendix A**.

***Figure 2: Difference between an RSA and a traditional safety review***

| Road Safety Audit | Traditional Safety Review |
|---|---|
| Performed by a team independent of the project | The safety review team is usually not completely independent of the design team. |
| Performed by a multi-disciplinary team | Typically performed by a team with only design and/or safety expertise. |
| Considers all potential road users | Often concentrates on motorized traffic. |
| Accounting for road user capabilities and limitations is an essential element of an RSA | Safety Reviews do not normally consider human factor issues. |
| Always generates a formal RSA report | Often does not generate a formal report. |
| A formal response report is an essential element of an RSA | Often does not generate a formal response report. |

*Source: Federal Highway Administration, Road Safety Audits*

**Note: The RSA team has conducted this assessment based on professional standards within the given timeframe and by referencing accessible information. Efforts have been made to identify important safety concerns, but the design team and the project owner should note that responsibility for the design, construction, and performance of the project rests with the Engineer of record.*

[1] Road Safety Audits (RSA). U.S. Department of Transportation, Federal Highway Administration. (March 30, 2023). Accessed at https://highways.dot.gov/safety/data-analysis-tools/rsa/road-safety-audits-rsa.

[2] What is a Safe System Approach? U.S. Department of Transportation, Federal Highway Administration. (January 14, 2025). Accessed at https://www.transportation.gov/safe-system-approach.

## RSA Process

The RSA process consisted of the following steps:

- Data-Informed Identification of RSA corridors
- Multidisciplinary attended field visits to conduct RSAs
- Begin safety diagnosis by compiling observed roadside conditions and features
- Developing low-cost safety countermeasures, along with larger potential improvements
- Reviewing recommendations with local stakeholders

These steps are further described in **Corridor Selection**.

A field visit was conducted on January 21, 2025, to assess the conditions and surroundings of the roadway and roadside. The RSA process followed prompts created by the consultant team for KYTC, which included considerations from the previous High Five program counties. Observations from the field visits were organized based on the topics listed in the prompt sheet (refer to **Appendix B**). Potential countermeasures are proposed for factors that contribute to the potential for safety concerns. These countermeasures focus on cost-effective and impactful actions. Additionally, longer-term suggestions were provided where applicable and are detailed in the report.

## RSA Team

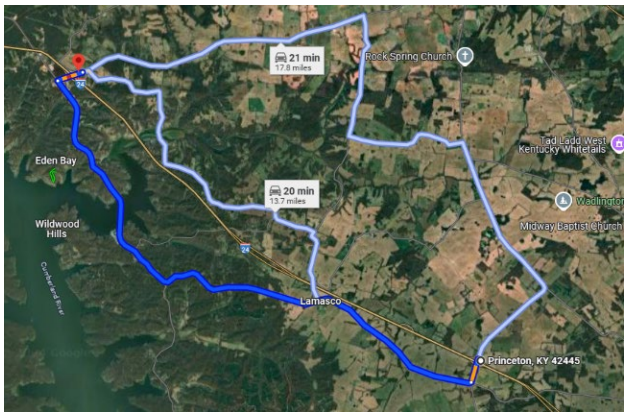
A multidisciplinary team with expertise in roadway design, traffic operations, and transportation safety conducted this RSA. The team included representatives from KYTC, local law enforcement, and the private sector, and the project was led by the consultant team. The insights provided by local law enforcement and district personnel were essential, offering first-hand knowledge on driver behavior, crash history, and common road conditions. The assessment team included:

| Name | Affiliation | Role/Expertise | Contribution to RSA |
|---|---|---|---|
| **Elizabeth Farc** | WSP | Transportation Planner | Reviewed crash data, identified RSA corridors, and contributed to countermeasure recommendations. Participated in field visit. |
| **Therese Wimsatt, PE** | WSP | Civil Engineer | Reviewed crash data, identified RSA corridors, and contributed to countermeasure recommendations. Participated in field visit. |
| **Austin Obenauf, PE** | WSP | Traffic/Safety Engineer | Reviewed crash data, identified RSA corridors, and contributed to countermeasure recommendations. |
| **Katie Hornback** | WSP | Traffic/Safety Engineer | Reviewed crash data, identified RSA corridors, and contributed to countermeasure recommendations. |
| **Andrew Ceifetz, PE** | WSP | Safety Specialist | Contributed to countermeasure recommendations. |
| **Kyle Poat, PE** | KYTC | District 1 Manager | Participated in field visit |
| **Matthew Holder, PE** | KYTC | KYTC/HSIP | Participated in field visit, alignment with HSIP |
| **Ryan Fisher** | KYTC | KOHS | Participated in field visit, alignment with High Five Program |
| **Ed Harding** | KYTC | KOHS | Participated in field visit, alignment with High Five Program |
| **Jeff Liles** | KYTC | KOHS | Participated in field visit, local law enforcement liaison for District 1 |
| **Drew Chiles** | Preusser Group | KOHS | Alignment with High Five Program |
| **Capt. David Archer** | KSP | Law Enforcement | Participated in field visit |
| **Brent White** | Lyon County Sheriff | Law Enforcement | Participated in field visit |

## Corridor Selection

The High Five program focuses on rural roads, and all county-maintained roads and low-priority state roads were included in the initial crash analysis[3]. KY 93 was also included in the analysis for Lyon County due to detour traffic when I-24 is closed (**Figure 3**). Routes inside the municipal boundaries of Eddyville and Kuttawa were removed from consideration, as the focus is on rural roads.

*Figure 3: I-24 Detour via KY 93*

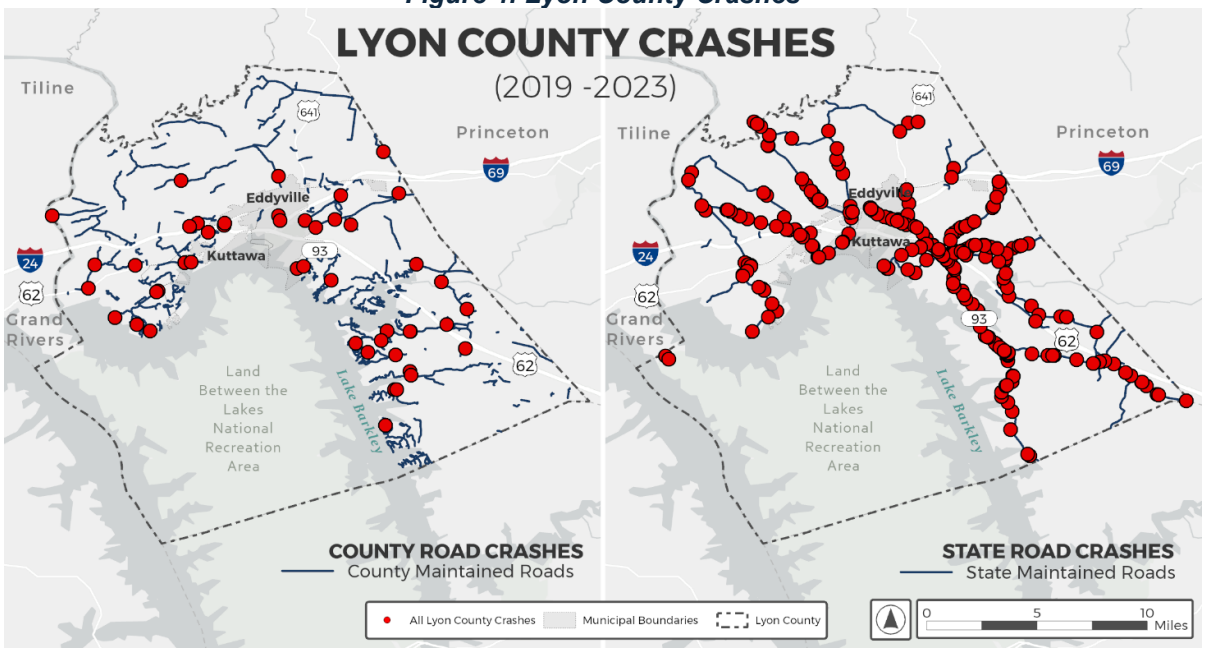



## Crash Review

The initial step in selecting the RSA corridors involved a review of the county's crash data. Crash data was obtained from the Kentucky State Police's Kentucky Crash Database, covering a five-year period from January 1, 2019, to December 31, 2023. During this timeframe, there were a total of 212 crashes on local and select state routes in Lyon County. **Figure 4** provides a spatial representation of crash locations: The map on the left illustrates crashes on county-maintained roads, and the map on the right displays crashes on state-maintained roads in the study area.

- 48 crashes have been reported on county-maintained roads.
  - 0 fatal crashes
  - 2 serious injury crashes
- 164 crashes on low-priority state roads (and KY 93)
  - 3 fatal crashes
  - 7 serious injury crashes

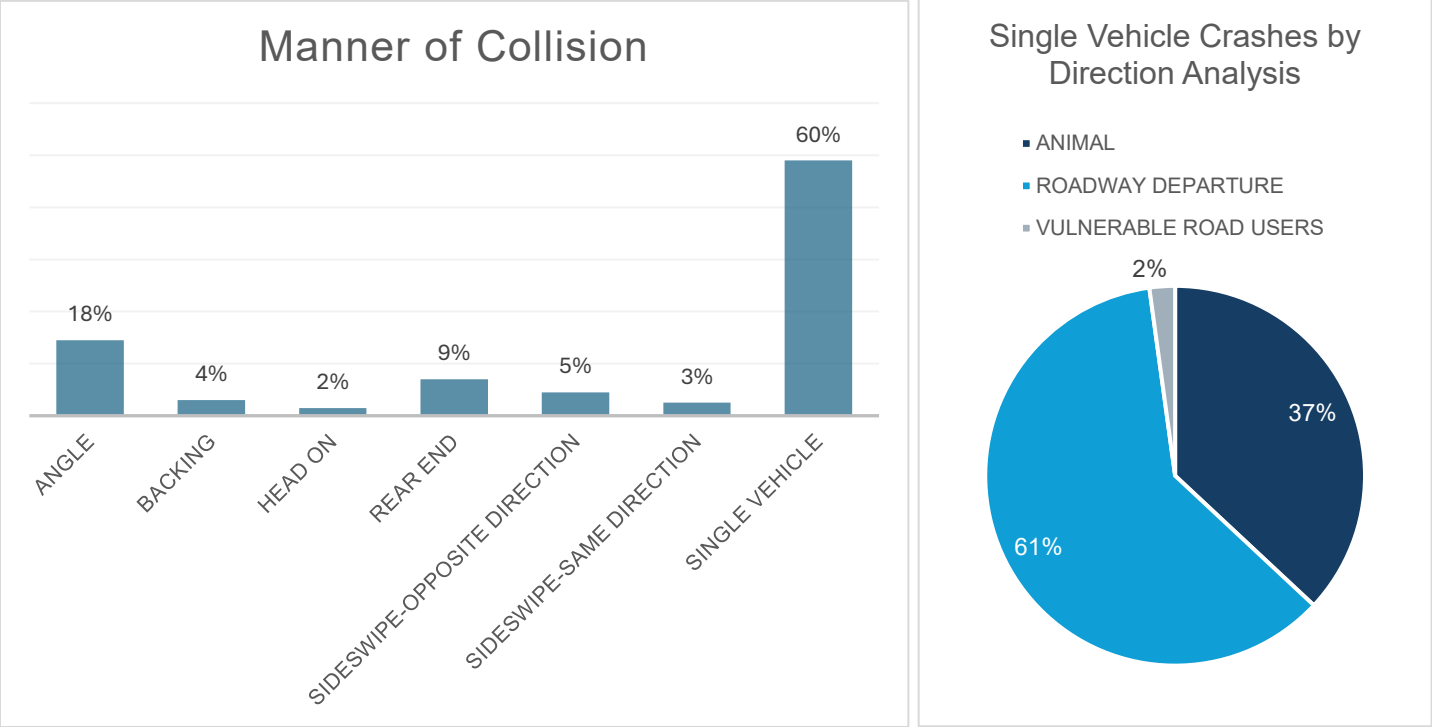
*Figure 4: Lyon County Crashes*




[3] State routes with three- and four-digit numbers. County and state roads were determined using the "ROUTE_TYPE" field in KYTC's All Roads GIS layer.

Crashes by manner of collision on study area roads in Lyon County are shown in **Figure 5.** Most (60%) of the study area crashes involved a single vehicle, and, of these, 37% were collisions with animals (non-intersection), 61% were roadway departures, and 2% involved Vulnerable Road Users. Roadway departure is an emphasis area in the Kentucky 2025-2029 Strategic Highway Safety Plan, meaning there is a stated goal to identify and implement strategies that prevent all future roadway departure-related fatalities and serious injuries. Opportunities to implement roadway departure countermeasures will be considered, among others, given the prevalence of roadway departure crashes on the study area roads.

***Figure 5: Crashes by Manner of Collision***




*Source: Kentucky State Police, Crash Data 2019-2023*

An Equivalent Property Damage Only (EPDO) analysis was conducted to identify roads with frequent severe crashes and present them for consideration for an RSA. An EPDO analysis uses a weighted rating technique based on crash severity. The EPDO formula used in this analysis (**Table 1**) assigned a weight of ten (10) to crashes resulting in a fatality (K), seven (7) for crashes resulting in a serious injury (A), five (5) for crashes resulting in an apparent (B) injury, three (3) for crashes resulting in a suspected (C), and one (1) for crashes resulting in property damage only (PDO).

***Table 1: EPDO Crash Analysis Weighting***

| Crash Type | Weight |
|---|---|
| **K** (Fatal) | 10 |
| **A** (Serious Injury) | 7 |
| **B** (Apparent Injury) | 5 |
| **C** (Suspected Injury) | 3 |
| **PDO** (Property Damage Only) | 1 |

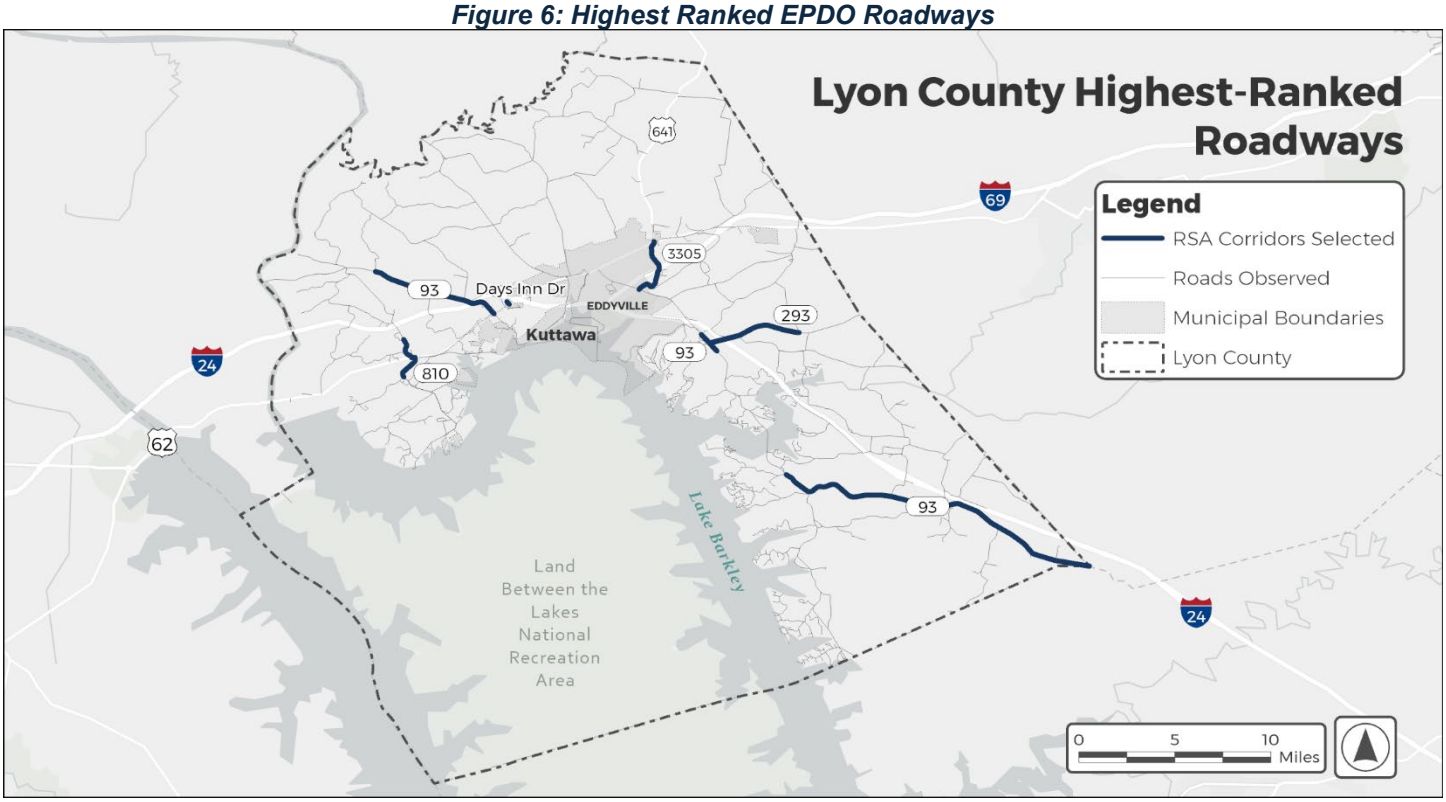
Spatial analysis was used to tie crash data to roadway segments, and EPDO values were calculated. Road segments (based on KYTC's All Roads GIS file) were then ranked high to low based on their EPDO values. This methodology was decided by the RSA team and is consistent with the previous round of High Five Program RSAs conducted in 2023.

## *Pre-Field Visit Meeting*

The top 27 ranked routes were presented to the project team and county stakeholders, which included the Lyon County Sheriff's Office and Kentucky State Police, at a Pre-Field Visit Meeting held virtually on January 16, 2025. The Lyon County Sheriff's Office cross referenced feedback received from a social media campaign for the High Five rural highway safety campaign with the top ranked EPDO routes. From there, the project team decided to conduct RSAs on the selected roads because of the high EPDO values ***and*** local priority. Most of the selected roadways are state maintained because local law enforcement considers these roads to be rural. As noted previously, KY 93 was specifically included due to it being a common detour route when I-24 is closed for crash incidents or maintenance **(Figure 3)**.

**Table 2** lists the top 27 ranked routes, based on EPDO scores, and notes the segments that were selected for RSAs in red highlight. The segments listed below were expanded to logical termini, and several segments of KY 93 were combined into three sections. **Figure 6** shows the selected roadways for RSAs.

***Figure 6: Highest Ranked EPDO Roadways***



### *Table 2: Highest Ranked EPDO Scores*

| Road Name | Begin Mile Point | End Mile Point | Fatal (K) | Serious Injury (A) | Apparent Injury (B) | Suspected Injury (C) | PDO (O) | EPDO Score | EPDO Rank |
|---|---|---|---|---|---|---|---|---|---|
| KY 293 | 0.707 | 2.261 | 2 | 0 | 4 | 0 | 12 | 52 | 1 |
| CS 2057/Days Inn Dr | 0.012 | 0.106 | 0 | 0 | 2 | 0 | 28 | 38 | 2 |
| KY 3305 | 1.248 | 1.811 | 0 | 2 | 0 | 4 | 6 | 32 | 3 |
| KY 93 N | 18.239 | 19.698 | 1 | 0 | 2 | 0 | 3 | 23 | 4 |
| KY 93 S | 14.524 | 15.265 | 1 | 0 | 1 | 0 | 7 | 22 | 5 |
| CS 1006/ Fairview Ave | 0.077 | 0.192 | 0 | 0 | 0 | 0 | 20 | 20 | 6 |
| KY 93 S | 12.65 | 12.938 | 0 | 0 | 2 | 1 | 4 | 17 | 7 |
| KY 93 S | 16.452 | 16.509 | 0 | 1 | 0 | 0 | 9 | 16 | 8 |
| KY 295/Lake Barkley Dr | 0.57 | 1.556 | 0 | 0 | 2 | 1 | 2 | 15 | 9 |
| KY 93 N | 16.864 | 17.274 | 0 | 0 | 2 | 1 | 2 | 15 | 9 |
| KY 295 N | 3.694 | 3.706 | 0 | 1 | 0 | 1 | 3 | 13 | 11 |
| KY 93 S | 7.576 | 8.304 | 0 | 0 | 0 | 2 | 6 | 12 | 12 |
| KY 295 N | 5.427 | 6.158 | 0 | 1 | 0 | 1 | 2 | 12 | 12 |
| KY 3305 | 0.35 | 0.771 | 1 | 0 | 0 | 0 | 2 | 12 | 12 |
| KY 93 S | 1.409 | 2.527 | 1 | 0 | 0 | 0 | 2 | 12 | 12 |
| KY 93 S | 12.938 | 13.28 | 0 | 0 | 1 | 0 | 7 | 12 | 12 |
| KY 295 N | 4.633 | 5.427 | 0 | 0 | 1 | 0 | 5 | 10 | 17 |
| KY 373 | 1.698 | 2.402 | 0 | 1 | 0 | 1 | 0 | 10 | 17 |
| KY 453/The Trace | 0.044 | 0.399 | 0 | 1 | 0 | 1 | 0 | 10 | 17 |
| KY 730 E | 4.928 | 5.022 | 1 | 0 | 0 | 0 | 0 | 10 | 17 |
| KY 810 S | 3.756 | 4.45 | 0 | 0 | 1 | 0 | 5 | 10 | 17 |
| KY 818 N | 5.749 | 6.292 | 0 | 0 | 1 | 0 | 5 | 10 | 17 |
| KY 93 S | 3.733 | 3.941 | 0 | 0 | 0 | 2 | 3 | 9 | 23 |
| CS 1006/ Fairview Ave | 0 | 0.012 | 0 | 0 | 0 | 1 | 5 | 8 | 23 |
| KY 373 | 0 | 0.012 | 0 | 0 | 1 | 1 | 0 | 8 | 23 |
| KY 93 S | 5.374 | 6.77 | 0 | 0 | 0 | 1 | 5 | 8 | 23 |
| CS 2057/Days Inn Dr | 0 | 0.012 | 0 | 0 | 0 | 1 | 5 | 8 | 23 |

### *Field Visit*

The RSAs were conducted on a one-day field visit on Tuesday, January 21, 2025, between 9:00 a.m. and 3:00 p.m. Weather conditions were clear and dry with minimal vegetation, typical in the winter. The RSA Team visited each site, conducting either drive-through observations or parking to inspect the locations on foot, depending on roadside conditions.

# Road Safety Assessments

This section describes each corridor assessed during the field visit, detailing the observed roadside conditions and features and suggested improvements. Additional countermeasure information is detailed in **Appendix C**.

## KY 93 South

**(Mile Points 0.0 to 8.304)**

### *Background*

KY 93 S is a state highway and major collector that runs parallel to I-24 in Lyon County (**Figure 7)**. It serves as a connector between Eddyville and KY 139 near Cadiz and is often used as a detour route if incidents cause congestion on I-24. The predominant land uses along this route include rural farmland and residential areas. Notable landmarks include a Dollar General store at mile point 0.0 and the Eddyville Marina Resort at mile point 8.3. Seasonal recreational activities associated with Lake Barkley bring additional traffic to the corridor during the summer. This segment of KY 93 S passes through the unincorporated communities of Confederate and Lamasco.

**HIS DATA**

**Speed Limit:** 55 mph

**AADT:** 440-1500

**Truck %:** 4.9

**Lane Widths:** 9'-10'

**Shoulder Widths:** 1'

**Total Width:** 20'-22'

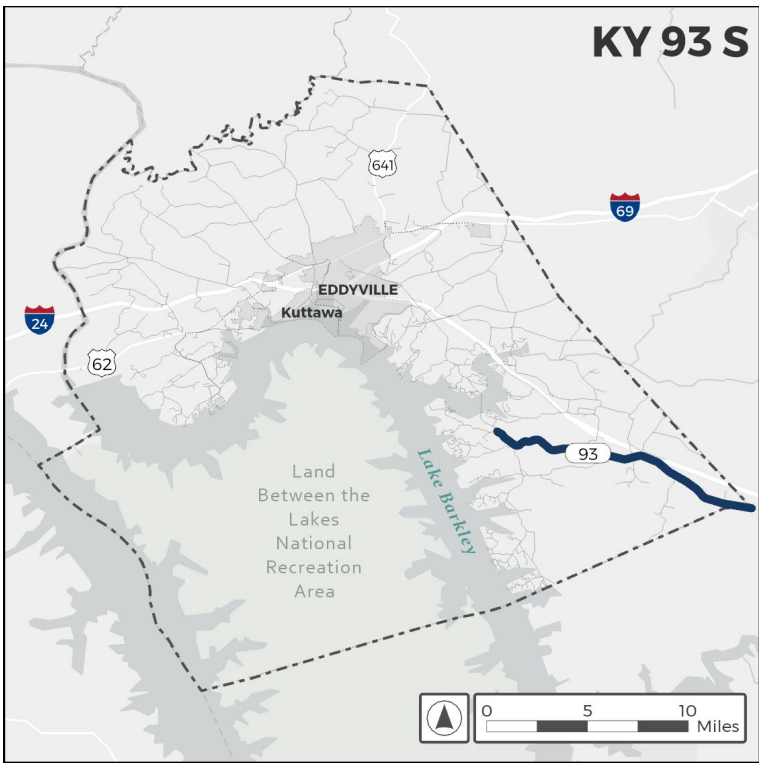
**Rumble Strips:** None

**Curves (Class C or Sharper):** 0.13 mi

**Grade Length (C or Higher):** 0.67 mi

The section of KY 93 S evaluated in the RSA spans slightly over eight miles, with average annual daily traffic (AADT) ranging from 480 at the southern end to 1,500 at the northern end of the corridor. This was the longest segment visited during the RSA field visit. The segment intersects with KY 274 at mile point 7.580 where there is a large frequency of crashes.

*Figure 7: KY 93 S*

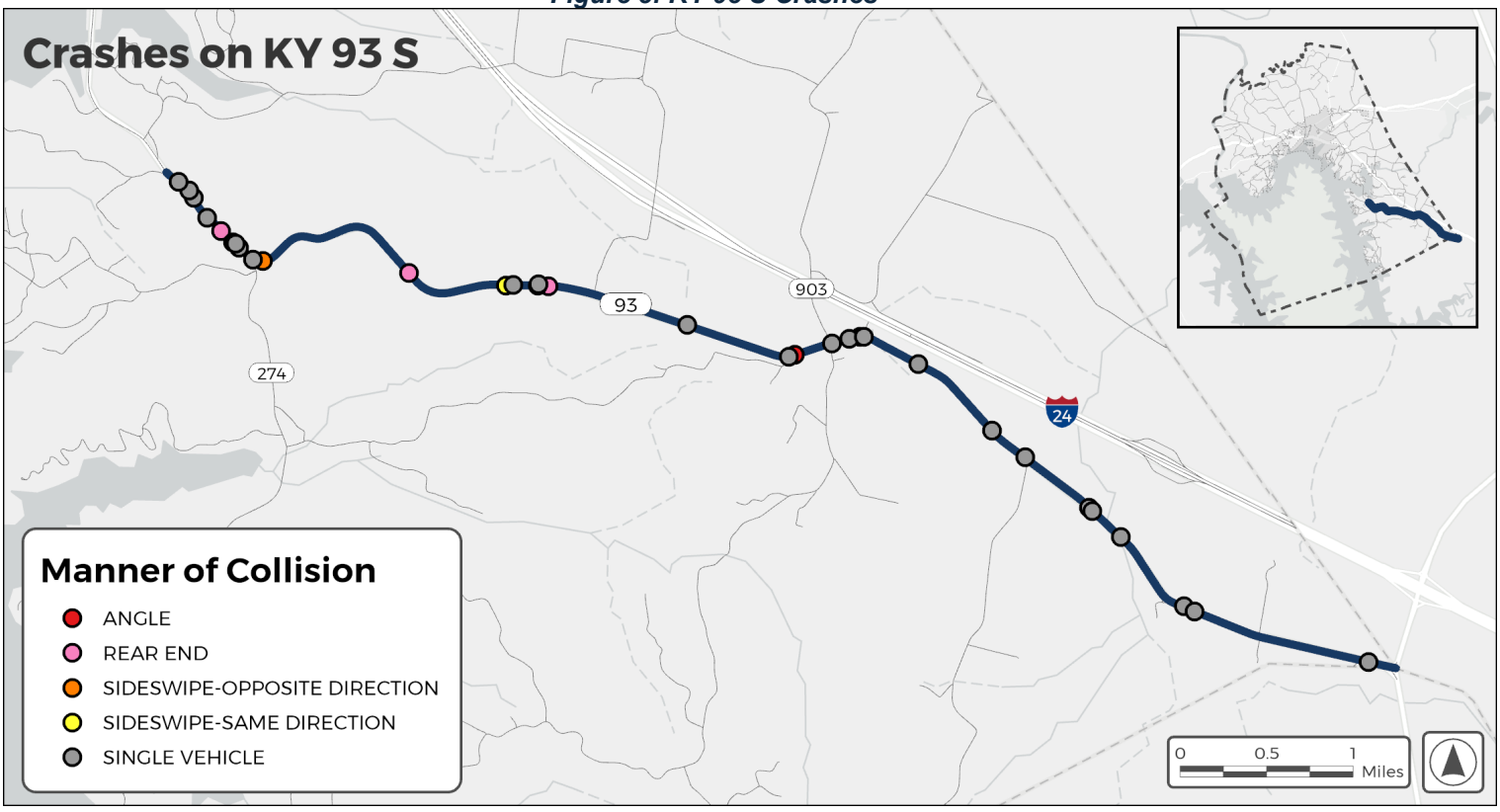



Individual crash reports were obtained after the RSA field visit to inform whether severe injury crashes can be prevented or reduced through engineering design. Crash reports describe three crashes involving drivers who said they were unfamiliar with the road as they were taking an alternate route from I-24 due to construction or traffic. One also mentioned that KY 93 S was the route directed to take by GPS. Several crash reports noted collisions due to vehicles crossing the centerline. Total crashes by type are shown in **Table 3** and crash locations are shown in **Figure 8**. Post-field visit review of crashes along the segment indicated most are roadway departure or collisions with animals.

*Table 3: KY 93 S Manner of Collisions*

| Manner of Collision | Fatal (K) | Suspected Serious Injury (A) | Suspected Minor Injury (B) | Possible Injury (C) | Property Damages Only (O) |
|---|---|---|---|---|---|
| Angle | - | - | - | - | 1 |
| Backing | - | - | - | - | - |
| Head On | - | - | - | - | - |
| Opposing Left Turn | - | - | - | - | - |
| Rear End | - | - | - | 2 | 1 |
| Rear to Rear | - | - | - | - | - |
| Sideswipe (Opposite Direction) | - | - | - | - | 1 |
| Sideswipe (Same Direction) | - | - | - | - | 1 |
| Single Vehicle | 1 | - | - | 3 | 22 |
| ***TOTAL*** | **1** | **-** | **-** | **5** | **26** |

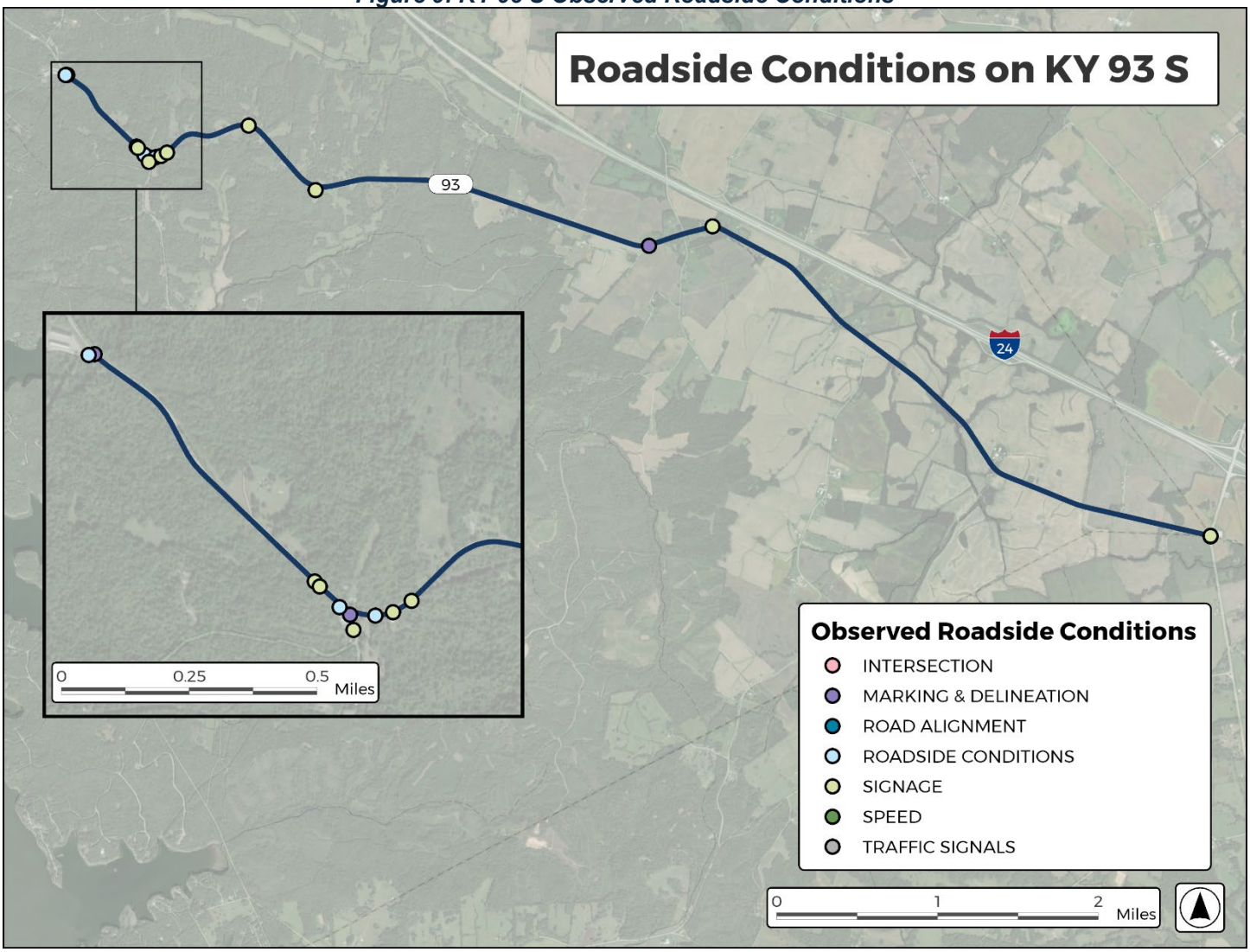
*Figure 8: KY 93 S Crashes*



## *Field Visit Observations*

Roadside conditions observed in the field are shown in **Figure 9** and discussed in this section.

*Figure 9: KY 93 S Observed Roadside Conditions*



## *Intersections*

Local participants noted difficult visibility near the intersection of KY 93 and KY 274. Vehicles driving southbound on KY 93 S are not visible to vehicles turning from KY 274 due to a sag in the road **(Figure 10)**. Junction signs are present in both directions to note the upcoming junction. Intersection warning signs are not present. There are also no curve advisory speed signs or curve chevrons. A recently striped stop bar is present on KY 274 **(Figure 11)**. It is angled to the left – the primary direction of travel – and does not span the entire lane width.

***Figure 11: View from KY 274, facing north***

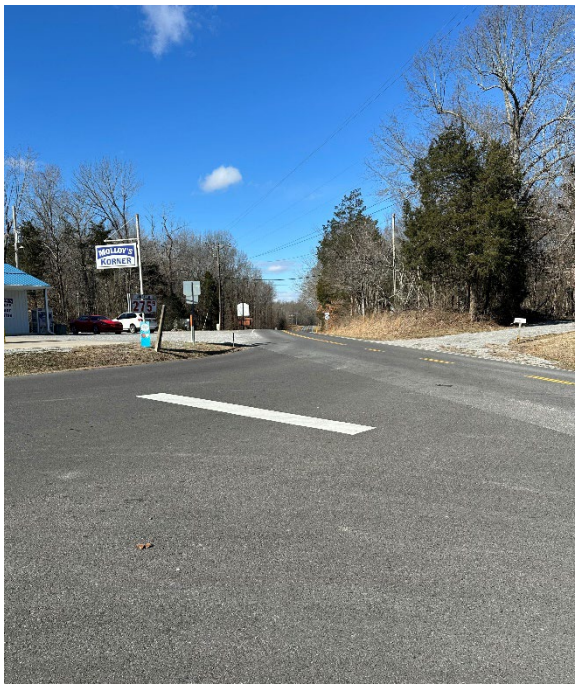



***Figure 10: View of K93 S from the KY 274 approach, facing south***


### Recommendations

- Restripe the stop bar on KY 274 to be perpendicular to KY 93 and extend the bar across the entire land width for right-turning traffic.
- Install Combination Horizontal Alignment/Intersection warning signs (*W1-10*) on KY 93 S
- Install Chevron Alignment signs (*W1-8*).

See **Appendix D** for conceptual layout.

***W1-10***

***W1-8***

### *Roadside Conditions*

Overgrowth was observed at mile points 7.525 and 8.305. Since the RSA was done in January, there may be more locations that need vegetation cut back, but it was not possible to properly discern with less foliage.

Additionally, at the intersection of KY 93 and KY 274, there are two entrances to Molloys Korner Store where drivers can enter the lot. This creates several potential maneuvers for drivers in the curve, noted in **Intersections.**

#### Recommendations

- Provide access management to Molloys Korner Store on KY 93. This will eliminate the adjacent entrance to KY 274 on KY 93 in the curve and simplify potential maneuvers.
- Vegetation control near mile points 7.525 and 8.305.

## KY 93 South and KY 293 Intersection

**(Mile points 12.649 to 13.278)**

### *Background*

**HIS DATA (KY 93)**

**Speed Limit:** 55 mph

**AADT:** 3,800

**Truck %:** 12.45

**Lane Widths:** 10’

**Shoulder Widths:** 1’

**Total Width:** 22’

**Rumble Strips:** Present

**Curves (Class C or Sharper):** None

**Grade Length (C or Higher):** 1.26 mi

**HIS DATA (KY 293)**

**Speed Limit:** 55 mph

**AADT:** 2,700

**Truck %:** 14.47

**Lane Widths:** 9’-10’

**Shoulder Widths:** 2’-10’ (1’ Surfaced)

**Total Width:** 20’-22’

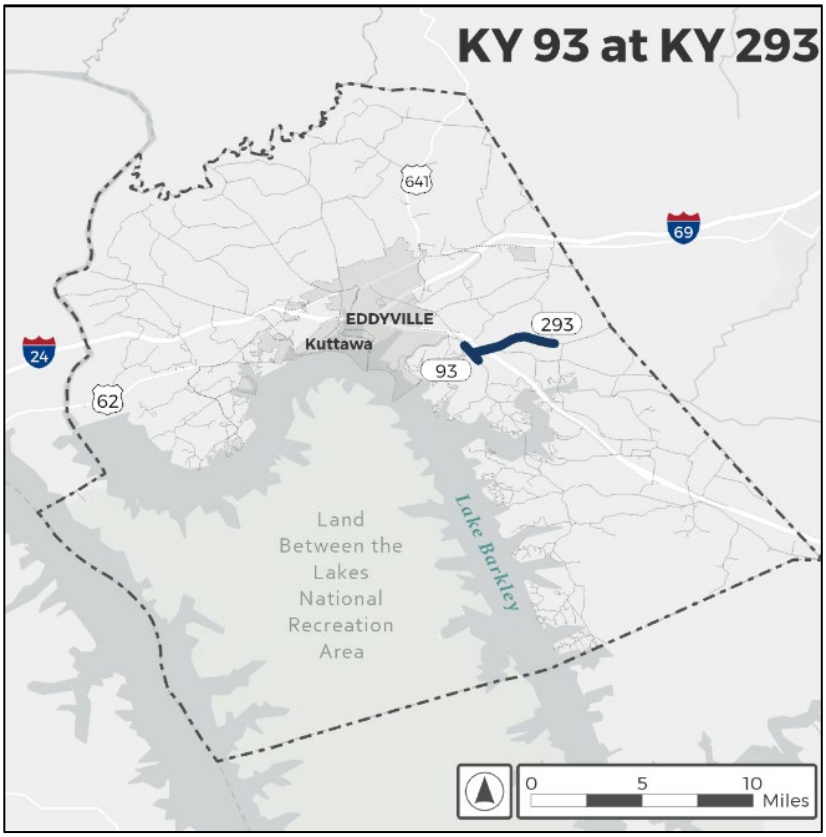
**Rumble Strips:** Present

**Curves (Class C or Sharper):** None

**Grade Length (C or Higher):** 0.31 mi

KY 93 South and KY 293 are major collectors near Interstate 24 **(Figure 12).** The road segment identified for the RSA was originally KY 293, mile points 0.707 to 2.261. However, local participants asked that the focus be on the intersection of KY 93 and KY 293. Background data is provided for KY 293, but the recommendations focus on the intersection only. The KY 93 S segment spans about 0.6 miles, which includes the intersection with KY 293 and KY 1055. As discussed in the previous section (***KY 93 South***), KY 93 is used as a detour route when there is traffic, crashes, or construction on I-24. The exit 45 interchange is on KY 293. The land around the intersection is primarily rural farmland, though there is some commercial development supporting interstate traffic, including a Dollar General and a gas station. To address the high volume of intersection crashes, an Advanced Warning System has been installed at the KY 293 intersection since at least 2015.[4] However, crash reports since 2020 indicate intersection crashes, particularly angle and roadway departure crashes, are still a common occurrence. A review of crash data report narratives suggests that all crashes along this route are potentially correctable through engineering design. Total crashes by type are shown in **Table 4** and crash locations are shown in **Figure 13**.

*Figure 12: KY 93 S at KY 293 Intersection*

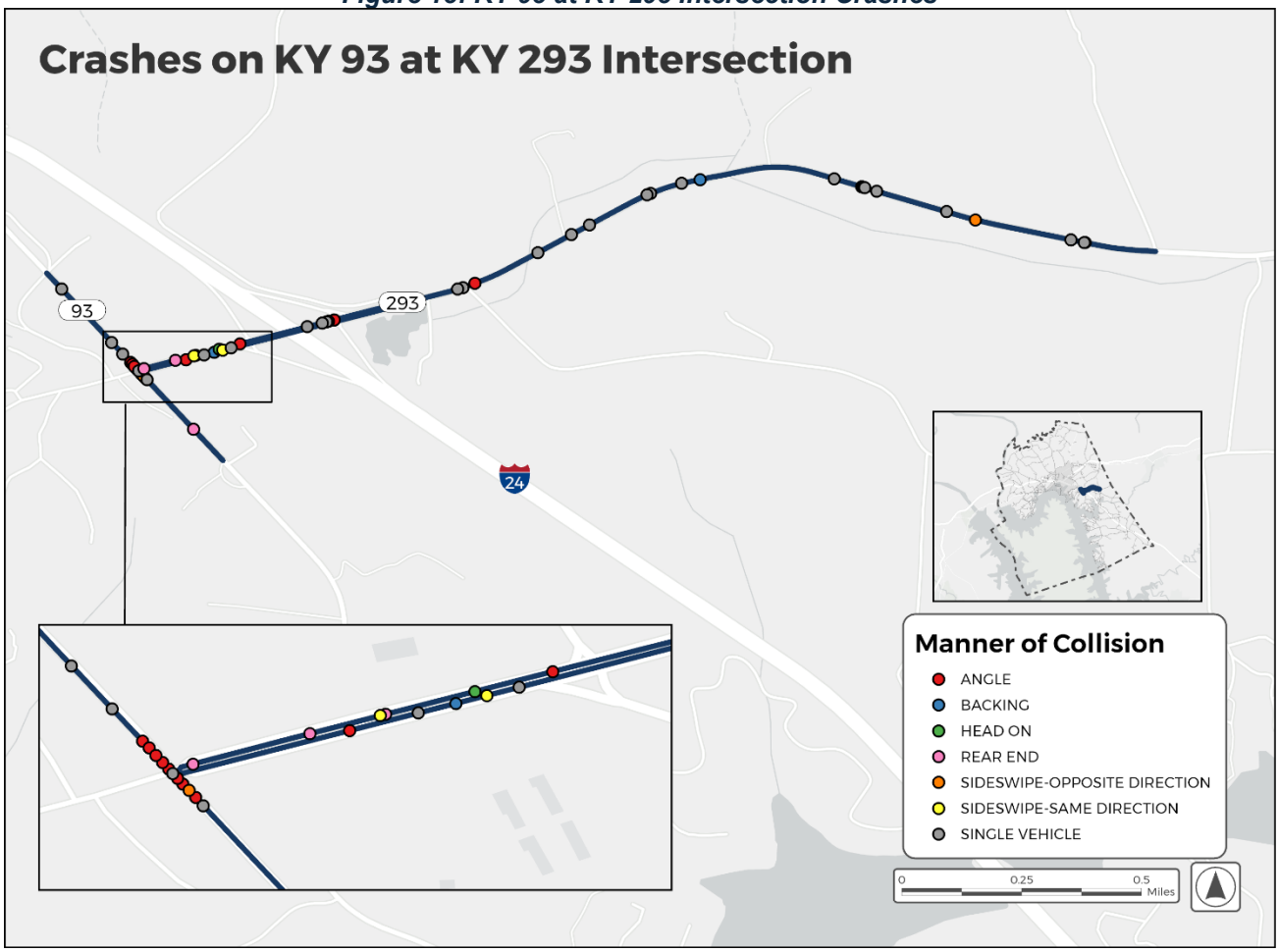



[4] Local participants in the RSA were unsure of the date. Street-view imagery was later reviewed to determine an approximate install date.

*Table 4: KY 93 at KY 293 Intersection Manner of Collisions*

| Manner of Collision | Fatal (K) | Suspected Serious Injury (A) | Suspected Minor Injury (B) | Possible Injury (C) | Property Damages Only (O) |
|---|---|---|---|---|---|
| Angle | - | - | 2 | 1 | 11 |
| Backing | - | - | - | - | 2 |
| Head On | - | - | - | - | 1 |
| Opposing Left Turn | - | - | - | - | - |
| Rear End | - | - | - | - | 3 |
| Rear to Rear | - | - | - | - | - |
| Sideswipe (Opposite Direction) | - | - | 2 | - | 2 |
| Sideswipe (Same Direction) | - | - | 1 | - | 1 |
| Single Vehicle | 2 | - | 5 | - | 20 |
| TOTAL | 2 | - | 10 | 1 | 40 |

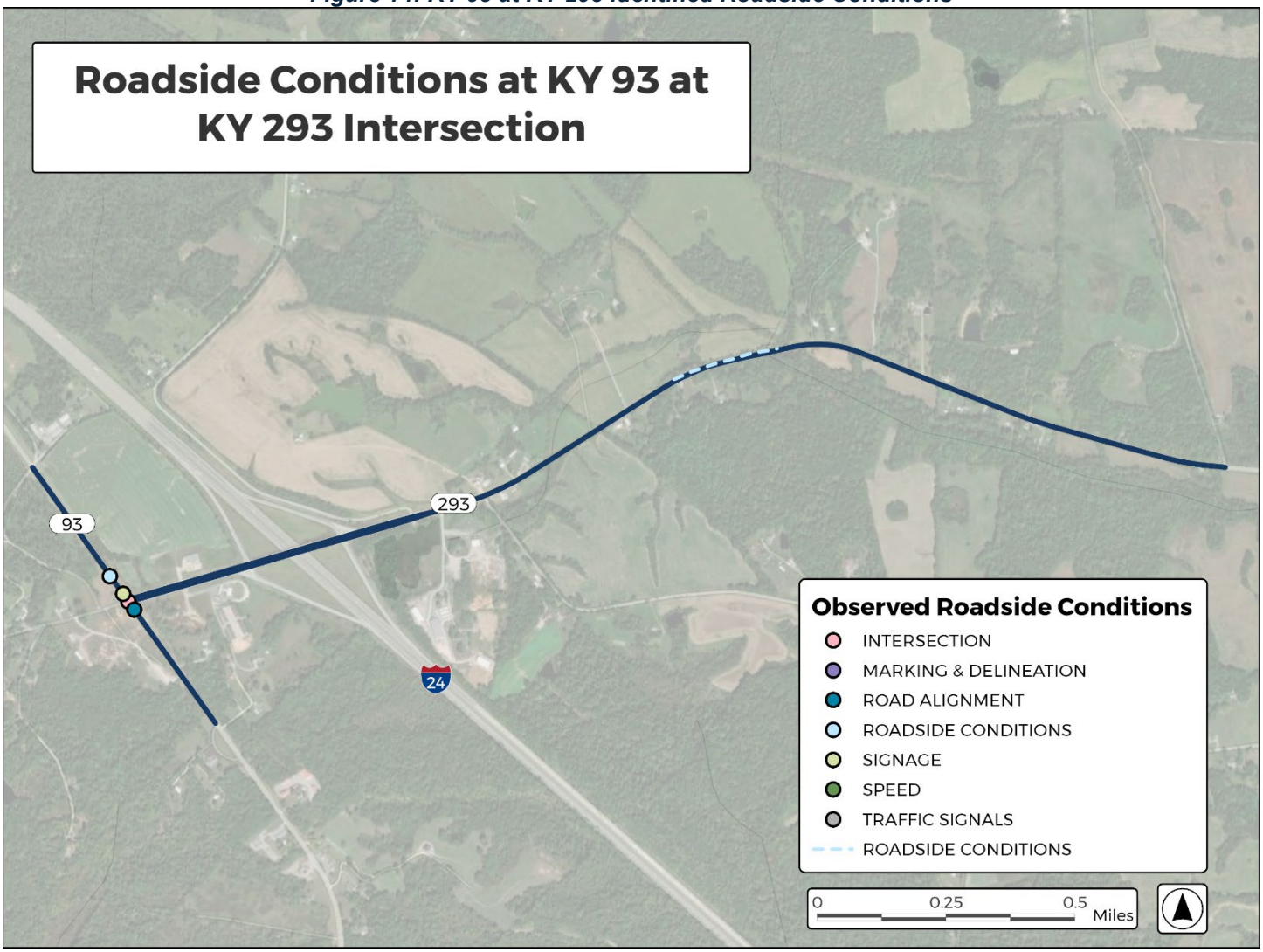
*Figure 13: KY 93 at KY 293 Intersection Crashes*



## *Field Visit Notes*

During the field review, several conditions along the roadway were identified. These are shown in **Figure 14** and each of the conditions is discussed in this section.

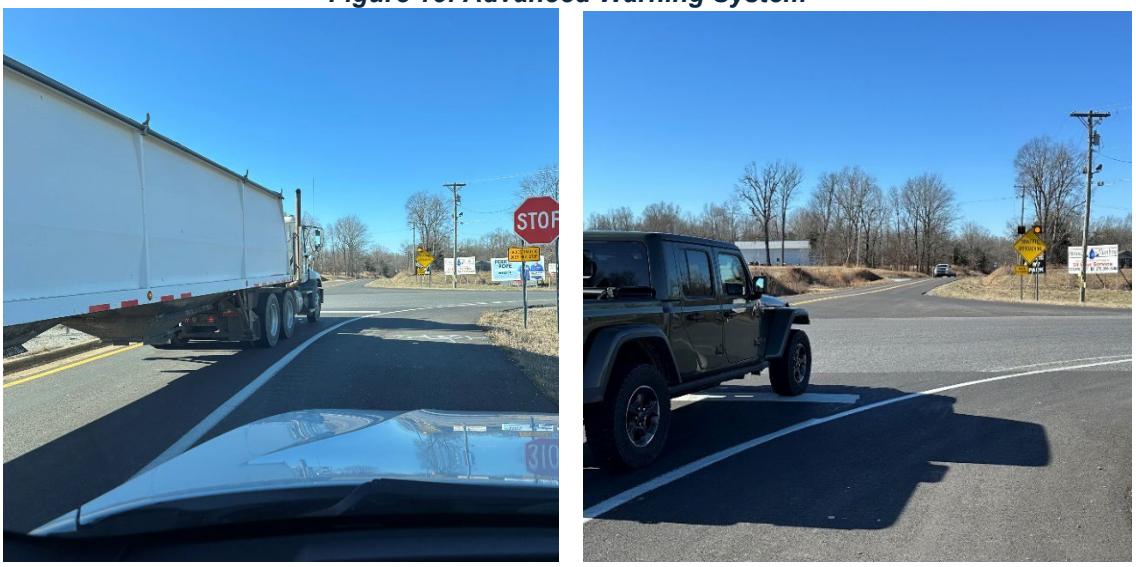
***Figure 14: KY 93 at KY 293 Identified Roadside Conditions***



## *Intersections*

An Advanced Warning System was installed around 2015. The system alerts drivers on the side roads—KY 293 and KY 1055—with a flashing light when vehicles are approaching in either direction on KY 93 (**Figure 15**). This aims to assist motorists with limited sight distance due to the road's sag in both directions. There are transverse rumble strips on KY 293 approaching the intersection and stop sign ahead signs (W3-1), all of which are in good condition.

***Figure 15: Advanced Warning System***




The RSA team observed the flashing light warning system and the amount of time vehicles turning onto KY 93 had to react appeared adequate. Local participants noted that longer timing is potentially needed with the number of large trucks and vehicles pulling trailers traveling through the intersection. The team did not witness any near misses or queuing on KY 293, but street-view imagery reviewed later shows a queue of eight vehicles, including two pulling trailers (e.g. camper and a boat).

### Recommendation

- Utilize Intersection Control Evaluation Phase 1 to identify intersection control improvements (e.g. roundabout, RCUT).

## *Road Alignment & Cross Section*

As noted in the Intersection section, the road sags in both directions, limiting sight distance for motorists **(Figure 16)**.

### Recommendations

- Utilize Intersection Control Evaluation Phase 1 to identify intersection control improvements (e.g. roundabout, RCUT).

*Figure 16: View from left and right on KY 293*

## *Signage*

There is a cluster of signs on the right-hand side of the approach on KY 1055 that blocks the driver's view of northbound KY 93 traffic **(Figure 17)**.

### Recommendations

- Move the I-24 and KY 293 route sign assemblies to where the KY 1055 route sign is, in advance of the intersection, per the MUTCD **(Figure 18)**. This will consolidate the sign assemblies and reduce confusion for drivers.

*Figure 18: Existing KY 1055 route sign in advance of the intersection*


*Figure 17: Signage at KY 93 and KY 1055 Intersection*

## KY 93 North

**(Mile Points 16.864 - 19.698)**

### *Background*

KY 93 N is a minor collector running from US 62 northwest to KY 819 and ultimately ending at the Cumberland River **(Figure 19).** The surrounding area is predominantly rural farmland and residential. I-24 crosses over KY 93 N, and a Paducah and Louisville railroad overpass is also near the Travis Road intersection.

**HIS DATA**

**Speed Limit:** 55 mph

**AADT:** 365-755

**Truck %:** 0.00

**Lane Widths:** 9’

**Shoulder Widths:** 0’

**Total Width:** 18’

**Rumble Strips:** Some

**Curves (Class C or Sharper):** 0.33

The segment identified for the RSA extends about 2.8 miles from mile point 16.864 to mile point 19.698. According to HIS data, AADT ranges from 755 near US 62 to 365 further north. The speed limit is not posted on signage but is statutorily 55 mph. There is a centerline rumble strip from US 62 to Poplar Creek Road.

Between 2019 and 2023, thirteen crashes occurred on this segment, including one fatal crash involving a bicyclist. All crashes are potentially correctable, with several instances involving vehicles pulling out of side roads or driveways and being hit by vehicles traveling along KY 93. Total crashes by type are shown in **Table 5** and crash locations are shown in **Figure 20**.

*Figure 19: KY 93 N*

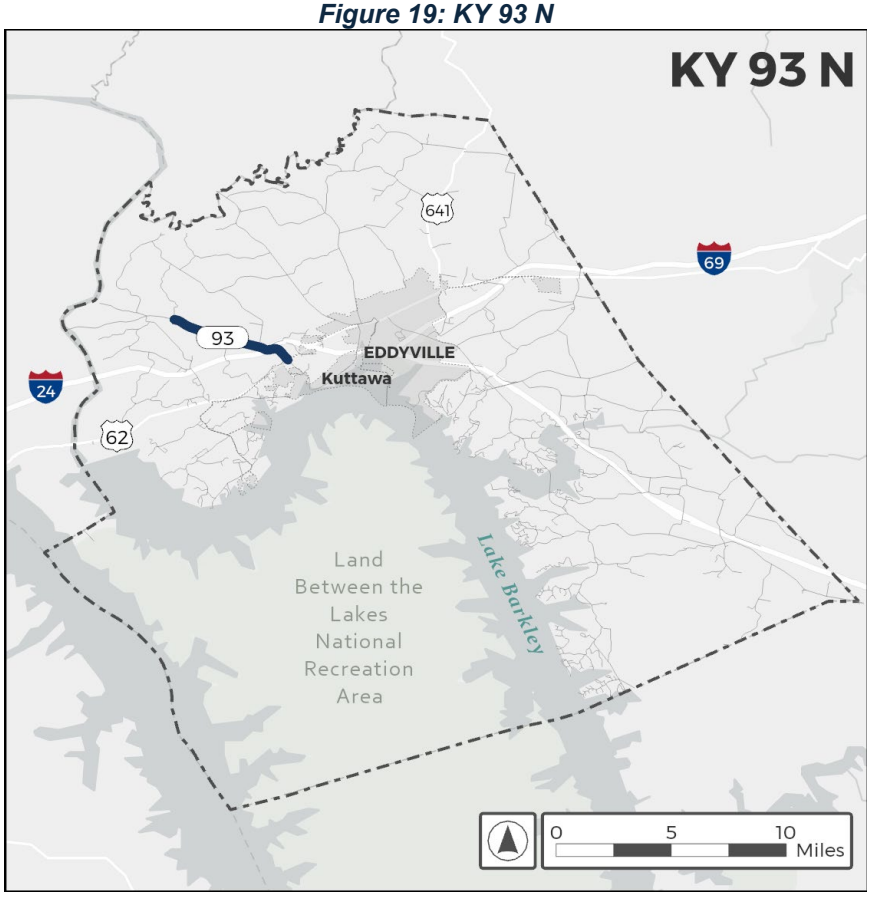
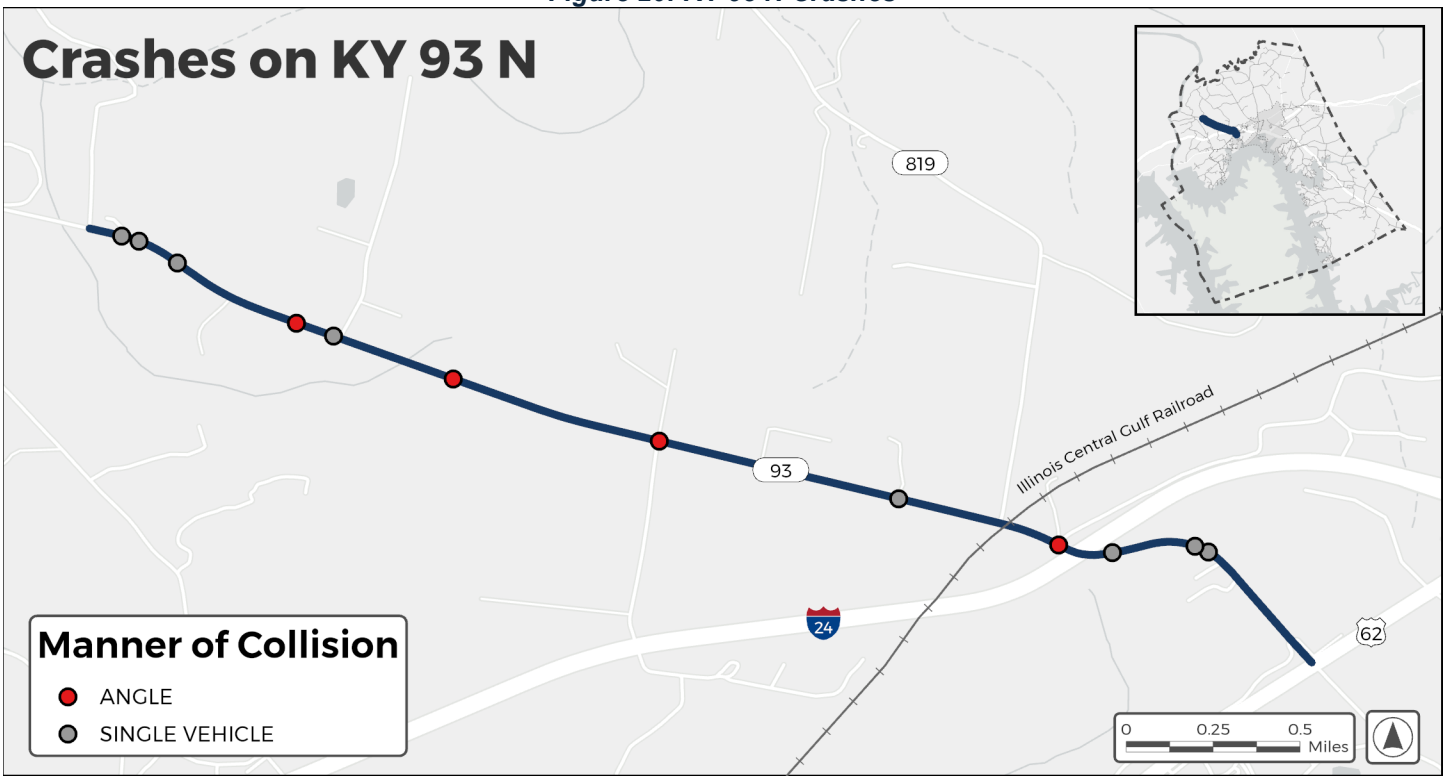


*Table 5: KY 93 N Manner of Collisions*

| Manner of Collision | Fatal (K) | Suspected Serious Injury (A) | Suspected Minor Injury (B) | Possible Injury (C) | Property Damages Only (O) |
|---|---|---|---|---|---|
| Angle | - | - | 1 | 1 | 3 |
| Backing | - | - | - | - | - |
| Head On | - | - | - | - | - |
| Opposing Left Turn | - | - | - | - | - |
| Rear End | - | - | - | - | - |
| Rear to Rear | - | - | - | - | - |
| Sideswipe (Opposite Direction) | - | - | - | - | - |
| Sideswipe (Same Direction) | - | - | - | - | - |
| Single Vehicle | 1 | - | 3 | - | 4 |
| *TOTAL* | 1 | - | 4 | 1 | 7 |

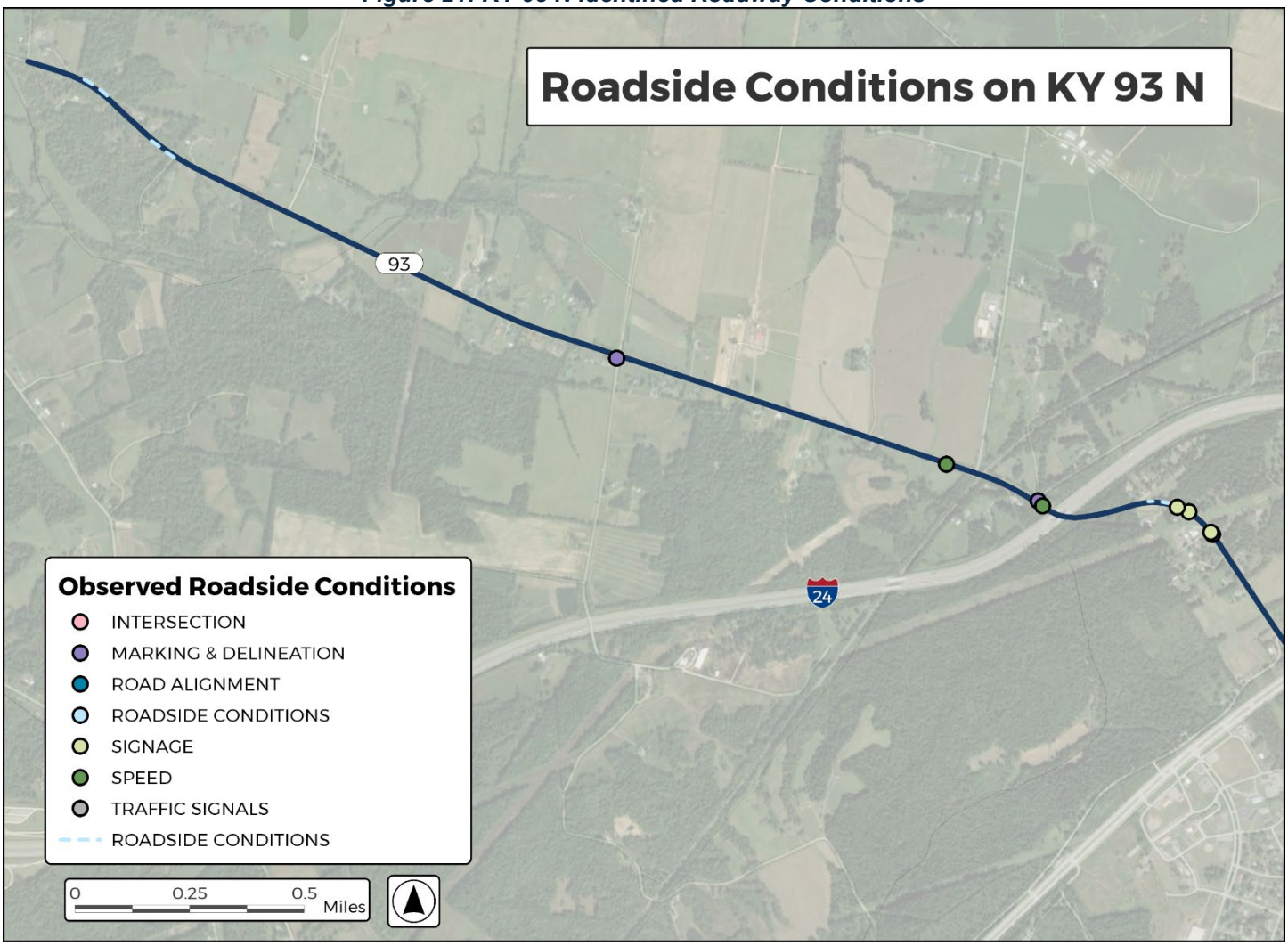
*Figure 20: KY 93 N Crashes*



## *Field Visit Notes*

During the field review, several conditions along the roadway were identified. These are shown in **Figure 21** and each of the conditions is discussed in this section.

***Figure 21: KY 93 N Identified Roadway Conditions***



## Speed

Heading northwest from US 62, KY 93 N transitions into a straight segment after KY 819 (**Figure 22**). The team observed vehicles that appeared to be exceeding the speed limit. As this section of KY 93 N concludes at the Cumberland River, it is primarily utilized by residents who are acquainted with the road.

### Recommendation

- Conduct a speed study to potentially reduce the speed limit to 45 mph and change signage accordingly.

***Figure 22: Straight segment on KY 93 N***

## Road Alignment & Cross Section

The section between Woodall Road and KY 819 contains curves and two overpasses, one for I-24 and one for the Paducah and Louisville Railroad.

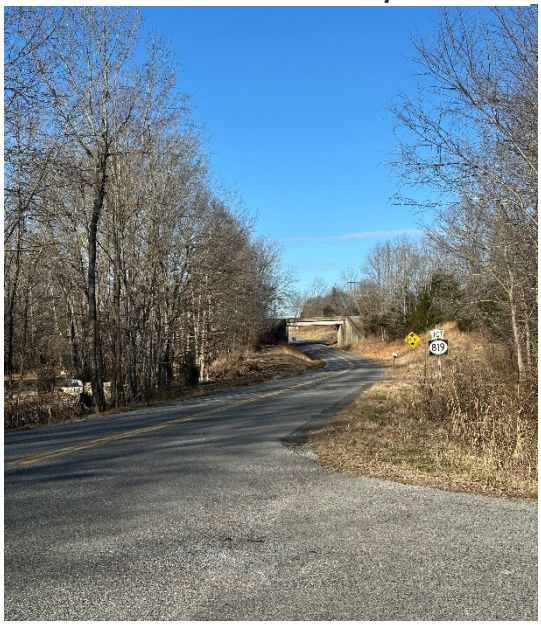
*Travis Road Intersection (MP 17.273)*

Drivers turning left out of Travis Road to get to US 62 may have a difficult time seeing vehicles coming down the hill from the overpass (**Figure 23**). Traveling southbound, there is a curve advisory speed sign (35 mph) prior to the overpass and a sign for KY 819 just before the overpass.

### Recommendations

- Add Blind Entrance Ahead sign for Travis Road intersection.
- Stripe a stop bar on Travis Road.

***Figure 23: View from Travis Road looking toward the railroad overpass***



## *Marking & Delineation*

Currently, the route contains an 18-foot typical section, two nine-foot lanes, and a double yellow centerline. Due to the limited roadway width, the roadway cannot have both a double yellow centerline and white edge lines. As noted in the **Background** section, there is a centerline rumble strip from the beginning of the observed segment to mile point 18.249. There is not a history of head on collisions, though there are roadway departure crashes.

### Recommendations

- When there is a planned resurfacing project, plan to fill in the centerline rumble strip and stripe the roadway to install white edge lines and shoulder rumble strips with a one-foot shoulder on each side. This change will narrow the travel lanes and encourage drivers to slow down when passing one another in opposite directions.

## *Road Users*

KY 93 N is not designated as a detour route for I-24, unlike KY 93 S. However, routing applications (such as Waze) direct all traffic to KY 93 N. Trucks encounter difficulties when trying to turn around, leading to situations where they become stuck. Furthermore, truck drivers are experiencing challenges due to language barriers in understanding signage.

### Recommendations

- KYTC or the County could reach out to Waze or the other mapping apps and make a request to edit their maps to not designate this as a truck route.
- Address the language barriers through education by reaching out to trucking companies so they can talk about it with their drivers. Spin it as a positive, beneficial experience: “Hi. We noticed your trucks are regularly turning down this road and getting stuck, which causes delays to traffic as well as your shipments. Maybe you could let your drivers know to use another route which would help keep your deliveries on time!”

## KY 810

**(Mile Points 3.753 to 5.064)**

### *Background*

KY 810 is a minor collector, connecting drivers from US 62 to primarily residential areas around the Cumberland River (**Figure 24**). KY 810 intersects with US 62 at an offset intersection. The northern leg of KY 810 is west of this segment. From ground level and aerial observation, it appears KY 810 was once aligned before the railroad bridge was constructed. The observed area of KY 810 is primarily a rural residential area.

**HIS DATA**

**Speed Limit:** 55 mph

**AADT:** 1,600

**Truck %:** 0.0

**Lane Widths:** 9'-10'

**Shoulder Widths:** 0'-1'

**Total Width:** 18'-20'

**Rumble Strips:** Present

**Curves (Class C or Sharper):** 0.25 mi

**Grade Length (C or Higher):** None

The segment of road observed for the RSA extends for approximately 1.3 miles and carries an average of 1,600 drivers daily, though this varies by season. From May to September, the route is used more frequently by tourists, including drivers with trailers and boats.

In reviewing the crash data, many crashes occurred at the intersection of KY 810 S and US 62. These crashes are primarily sideswipe same-direction and rear end crashes from entering traffic. Total crashes by type are shown in **Table 6** and crash locations are shown in **Figure 25**.

*Figure 24: KY 810*

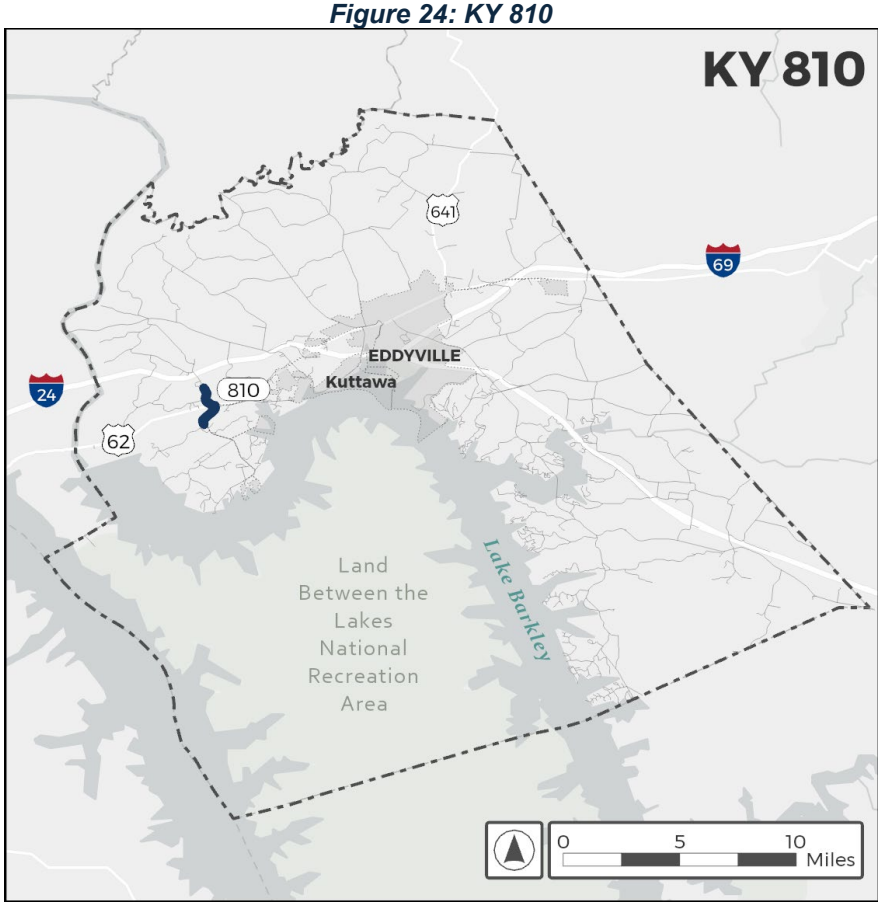
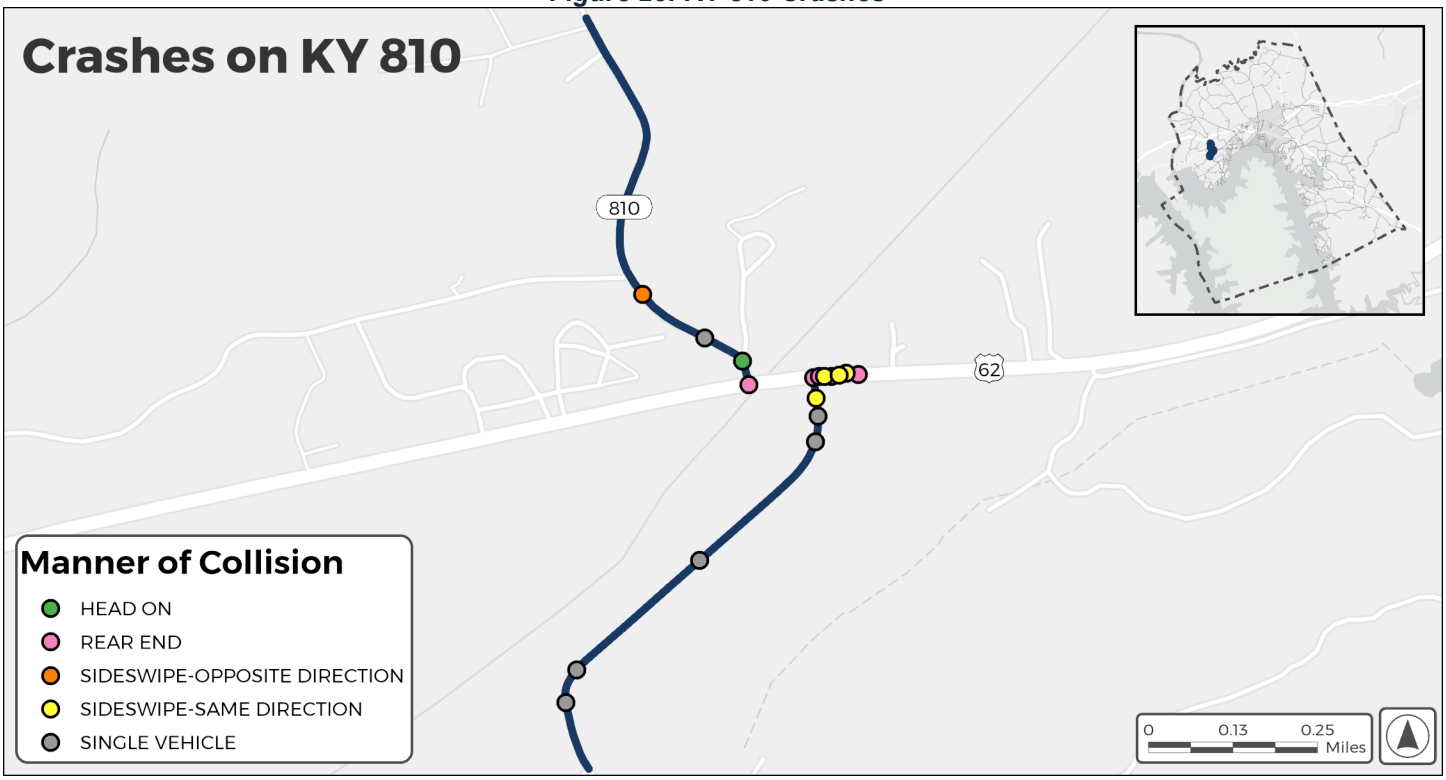


*Table 6: KY 810 Manner of Collisions*

| Manner of Collision | Fatal (K) | Suspected Serious Injury (A) | Suspected Minor Injury (B) | Possible Injury (C) | Property Damages Only (O) |
|---|---|---|---|---|---|
| Angle | - | - | - | - | - |
| Backing | - | - | - | - | - |
| Head On | - | - | - | - | 1 |
| Opposing Left Turn | - | - | - | - | - |
| Rear End | - | - | - | 2 | 3 |
| Rear to Rear | - | - | - | - | - |
| Sideswipe (Opposite Direction) | - | - | - | - | 1 |
| Sideswipe (Same Direction) | - | - | - | - | 3 |
| Single Vehicle | - | - | 1 | - | 5 |
| *TOTAL* | - | - | 1 | 2 | 13 |

*Figure 25: KY 810 Crashes**

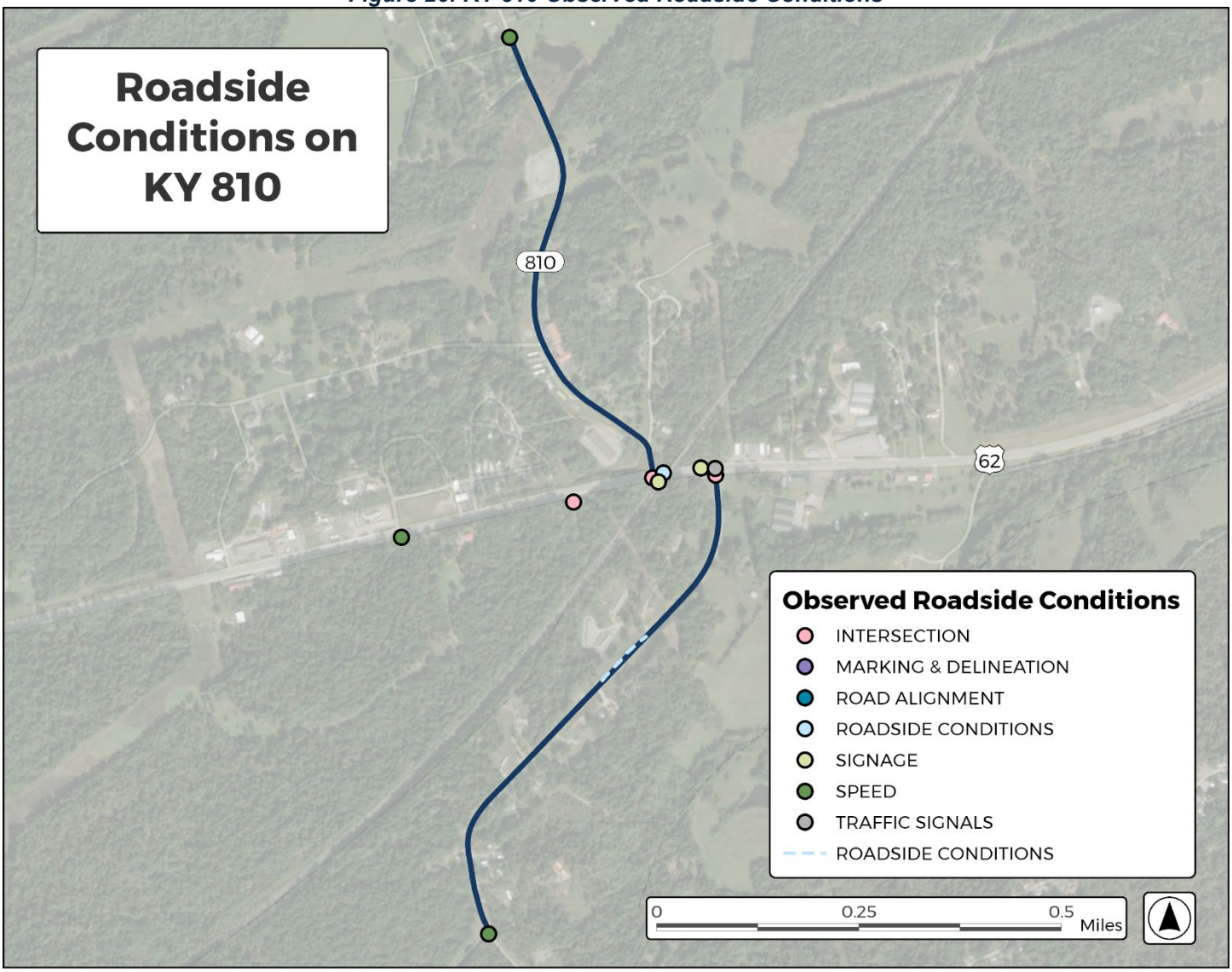



*Crashes on US 62 were included due to local knowledge of crashes known to be in the intersection.

## *Field Visit Notes*

During the field review, several conditions along the roadway were identified. These are shown in **Figure 26** and each of the conditions is discussed in this section.

*Figure 26: KY 810 Observed Roadside Conditions*



## Speed

KY 810 lacks speed limit signage. There are two sections with advisory speeds of 35 mph, and these are signed (**Figure 27**). Speeds over 55 mph were not observed. In the summer, local law enforcement noted that there are more vehicles with trailers traveling on the road, and they have a difficult time getting up to speed and navigating the curves.

High speeds were observed for vehicles traveling eastbound on US 62 at the KY 810 intersection. Vehicles travel downhill in this direction. There is an Offset Intersection Ahead sign and 35 mph Advisory Speed sign prior to the KY 810 N intersection.

*Figure 27: Curve Advisory Speed Sign on KY 810*

### Recommendations

- Conduct a speed study to potentially reduce speed limit to 45 mph on both KY 810 and US 62 and change signage accordingly.

## Roadside Conditions

A steep embankment is on the west side of the road between mile points 4.134 and 4.209 (**Figure 28**).

Vegetation overgrowth on US 62 at the railroad bridge (MP 3.682) limits sight distance for vehicles on KY 274 turning onto US 62.

*Figure 28: Steep embankment on west side of road*

### Recommendations

- Investigate installing guardrails. Add the areas with significant elevation changes between mile points 4.134 and 4.209 to the competitive guardrail program.
- Vegetation control on US 62 at the railroad bridge near mile point 3.682.

## *Signage*

There is a double-sided sign assembly for KY 810 S at the intersection. The sign for KY 810 S for westbound US 62 traffic is on the wrong side of the road and limits sight distance for motorists on KY 810 turning onto US 62 (**Figure 29**).

***Figure 29: Signage limits sight distance for turning vehicles***

### Recommendations

- Move sign to the opposite side of US 62 or raise the bottom height of the sign to seven feet.

## *Intersections*

As mentioned in the **Speed** section, high speeds were observed for vehicles traveling downhill, eastbound on US 62 approaching the KY 810 intersection. Local participants in the RSA team noted a history of crashes, which was later confirmed with crash data. Traffic calming is a possible way to slow vehicles on US 62.

### Recommendations

- Utilize Intersection Control Evaluation Phase 1 to identify intersection control improvements (e.g. roundabout, RCUT).

## Days Inn Drive

**(Mile Point 0.0 - 0.106)**

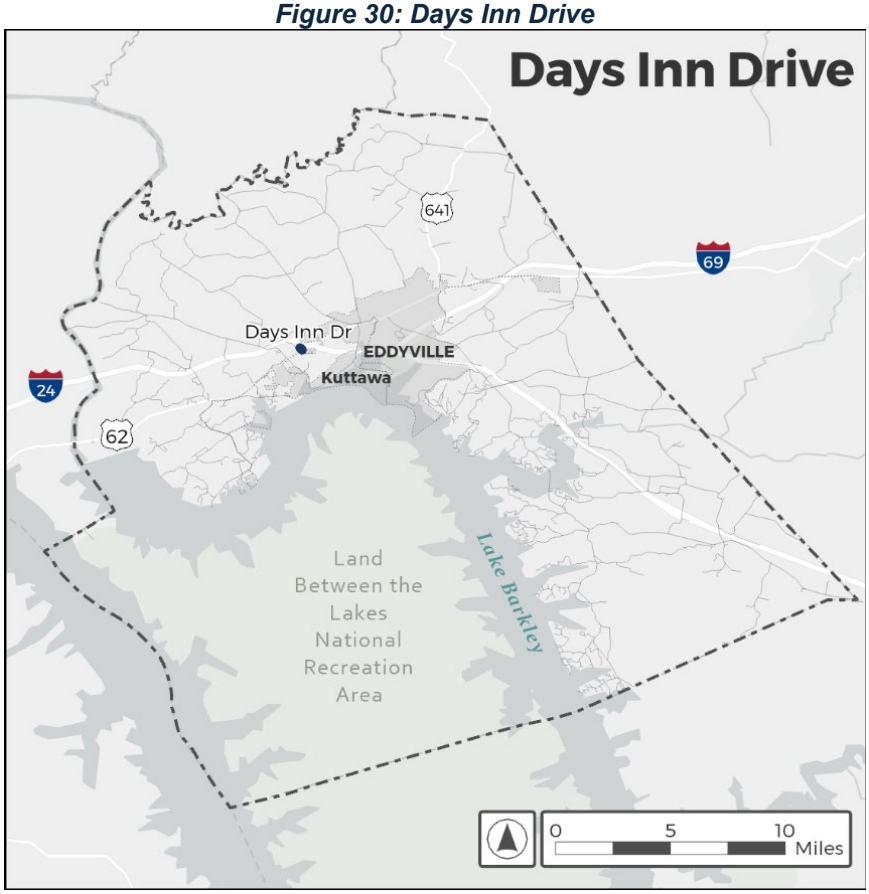
### *Background*

Days Inn Drive is a local road providing access to hotels, restaurants, and the Lake Barkley Tourist Commission from US 62 **(Figure 30)**. Notably, Huck's Travel Center, a large truck stop and gas station, is situated across from Days Inn Drive, on US 62, and draws significant traffic from large vehicles. Because of its proximity to the Land Between the Lakes National Recreation Area, this route is most traveled in the summer both by cars and by pedestrians. It should be noted that traffic in recreation areas also includes more pull-behind vehicles, such as boats and fifth wheel campers.

Days Inn Drive is 0.1 mile and intersects US 62 at mile point 6.558 **(Figure 31)**. The I-24 Exit 40 interchange is adjacent to the intersection.

Between 2019 and 2023, thirty-one crashes occurred in this segment[5] and in the adjacent intersection. Many of these crashes took place near the intersection of Days Inn Drive and US 62 and near the parking lots of the surrounding commercial areas. Most of these crashes did not result in injury and are correctible with engineering solutions. Total crashes by type are shown in **Table 7** and crash locations are shown in **Figure 31**.

*Figure 30: Days Inn Drive*

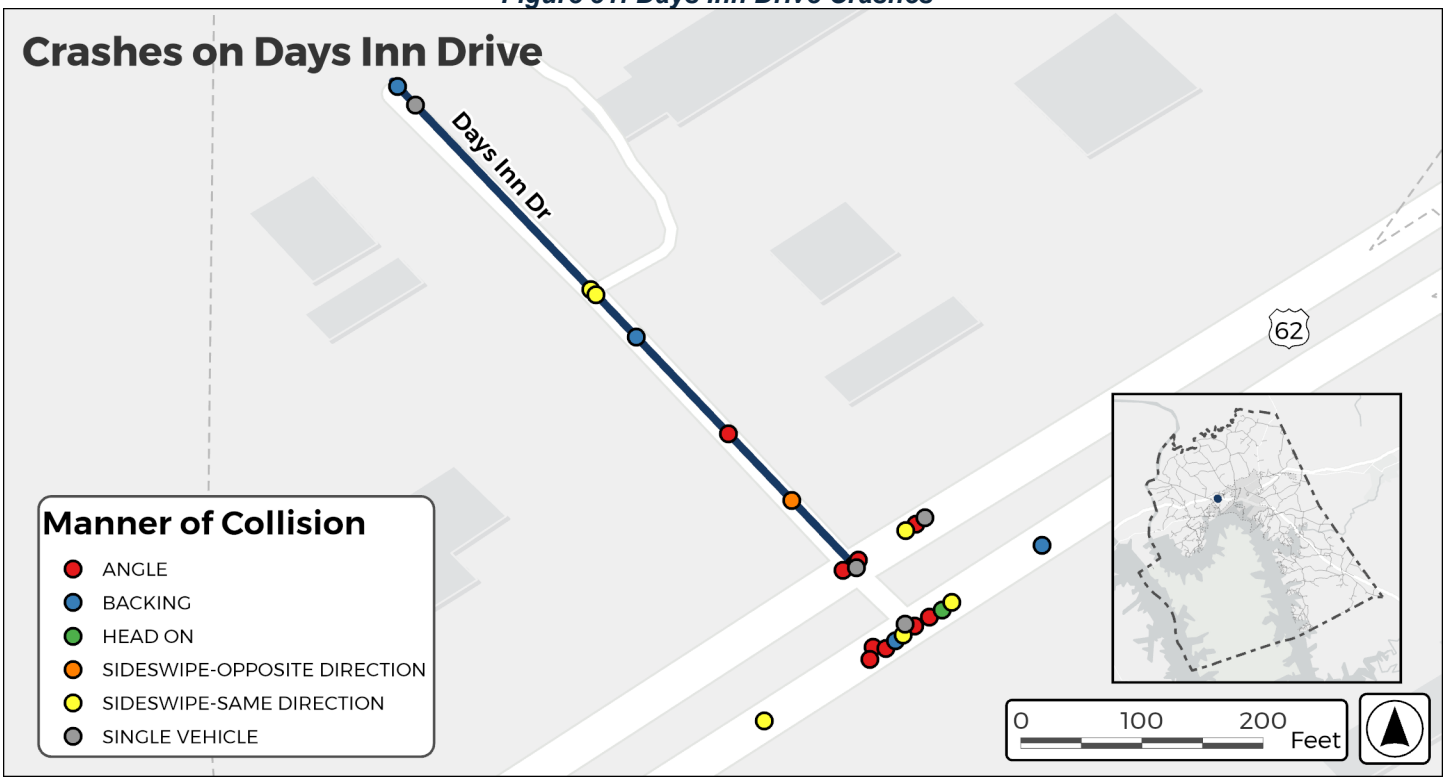



[5] These crashes are listed as non-parking lot crashes, although Days Inn Drive is not well defined as a separate road segment from the surrounding parking areas. The intersection of Days Inn Drive and US 62 was requested to be kept in the RSA.

*Table 7: Days Inn Drive Manner of Collisions*

| Manner of Collision | Fatal (K) | Suspected Serious Injury (A) | Suspected Minor Injury (B) | Possible Injury (C) | Property Damages Only (O) |
|---|---|---|---|---|---|
| Angle | - | 1 | - | 2 | 10 |
| Backing | - | - | - | - | 4 |
| Head On | - | - | - | - | 1 |
| Opposing Left Turn | - | - | - | - | 1 |
| Rear End | - | - | - | - | 1 |
| Rear to Rear | - | - | - | - | - |
| Sideswipe (Opposite Direction) | - | - | - | - | 1 |
| Sideswipe (Same Direction) | - | - | - | - | 6 |
| Single Vehicle | - | - | - | - | 4 |
| *TOTAL* | - | 1 | - | 2 | 28 |

*Figure 31: Days Inn Drive Crashes**

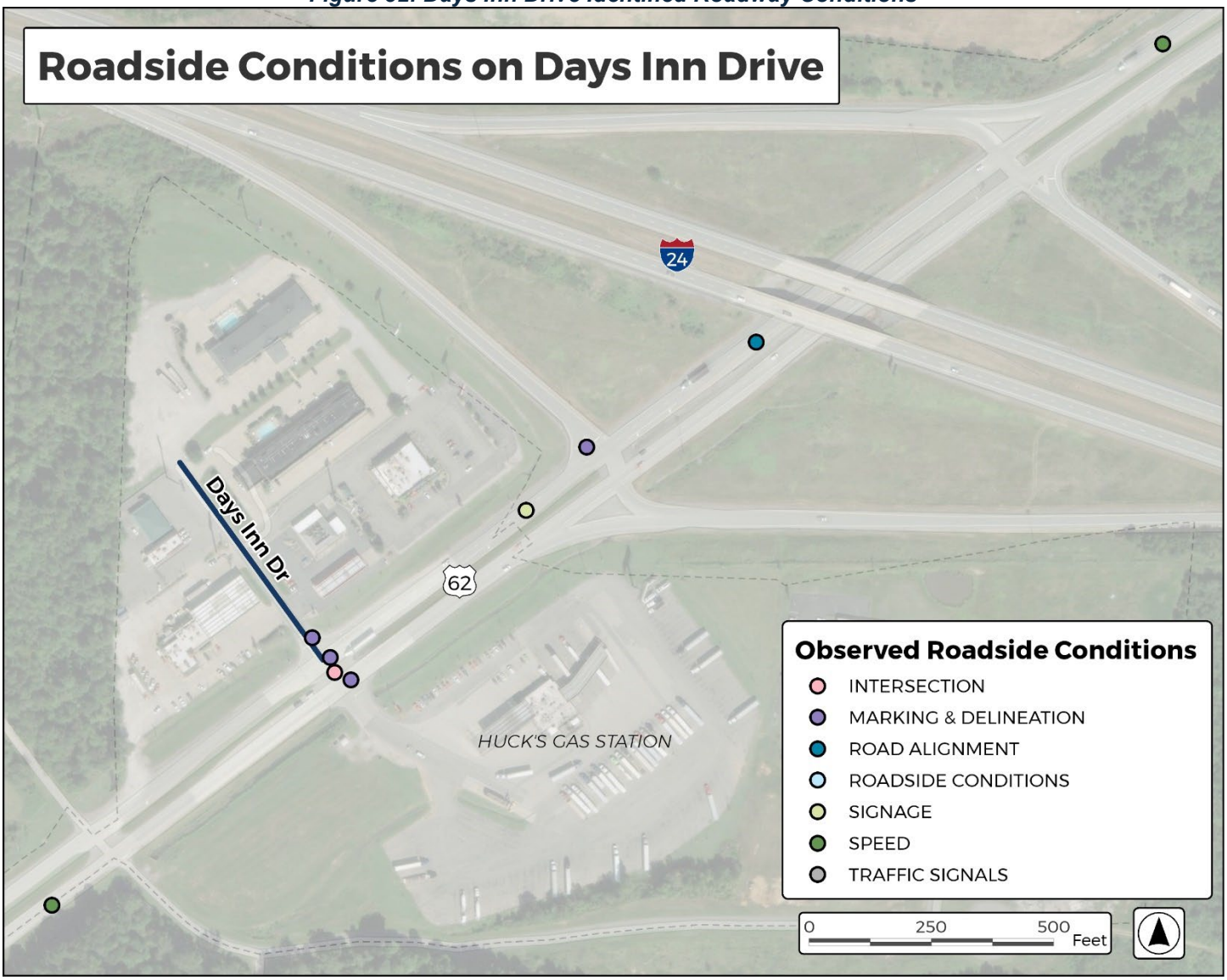



*Crashes on US 62 were included due to local knowledge for crashes known to be in the intersection.

## *Field Visit Notes*

During the field review, several conditions along the roadway were identified. These are shown in **Figure 32** and each of the conditions is discussed in this section.

***Figure 32: Days Inn Drive Identified Roadway Conditions***



## Speed

The intersection is located 450 feet from the I-24 off ramp, and the team witnessed large trucks and vehicles exiting ramps not slowing down and entering the Days Inn Drive intersection at a high rate of speed. Additionally, traffic traveling west on US 62 was also going fast down a large hill into the interchange area.

### Recommendations

- Conduct a speed study to potentially reduce the speed limit to 45 mph east of Mt. Pleasant Church Road and New Circle Road beginning at the top of the hill and change signage accordingly.

## Road Alignment & Cross Section

While observing the intersection, local participants on the RSA team noted that the I-24 overpass to the northeast blocked the view of the traffic signal at Days Inn Drive for oncoming vehicles (**Figure 33**). When reviewing the sight distance after the field visit, it meets standards. However, as noted in the **Speed** section, higher travel speeds of vehicles exiting the I-24 off ramp and traveling west on US 62 were observed.

***Figure 33: View of US 62 northwest from the intersection***

### Recommendations

- Consider advanced signal/flashing warning lights on US 62 southwest bound.
- Utilize Intersection Control Evaluation Phase 1 to identify intersection control improvements (e.g. roundabouts through the interchange).
- Stripe a centerline the entire length of Days Inn Drive.

## *Intersections*

The stop bar markings at all four legs of the intersection are faded. The pavement is concrete in the intersection.

Local law enforcement noted that several wrong way driving incidents have occurred due to vehicles turning left out of Days Inn Drive into oncoming US 62 traffic. The grassy median on US 62 may be difficult to see, especially at night, and there are no divided highway signs.

The RSA team observed heavy truck traffic in the intersection, particularly turning in and out of the Huck's entrance **(Figure 34).**

### Recommendations

- Restripe stop bars at all four legs of the intersection.
- Restripe the centerline on Days Inn Drive and the Huck's entrance to prevent sideswipes, because both roads look more like driveways.
- Stripe cross-hatched lines through the intersection for left-turning vehicles.
- Reconstruct left turn lanes on US 62 as positive offset turn lanes.
- Install divided highway and one-way signage on Days Inn Drive and Huck's entrance approaches.
- Utilize Intersection Control Evaluation Phase 1 to identify intersection control improvements (e.g. roundabouts through the interchange) (see **Road Alignment & Cross Section**).

See **Appendix D** for conceptual layout.

***Figure 34: Truck turning right onto US 62 from Huck's gas station, across from Days Inn Drive***

## *Traffic Signals*

The traffic signal at the intersection of Days Inn Drive and US 62 has dedicated left turn lanes and phases. However, the flashing yellow arrow was removed from the westbound US 62 left turn into Huck's Gas Station, because of trucks blocking the visibility of the arrow in the left turn lanes, according to local participants.

There is a pedestrian signal for the US 62 crossing between hotels on Days Inn Drive and Huck's Travel Center; however, the crosswalk extends 115 feet, potentially requiring additional crossing time.

### Recommendations

- If not already configured, incorporate a leading pedestrian signal into the timing plan for the summer months.
- Prohibit right-turn-on red from Days Inn Drive and Huck's entrance onto US 62.

## *Markings & Delineation*

The markings at the intersection, both on Days Inn Drive and US 62, are faded. Local law enforcement also noted that several wrong way driving incidents have occurred due to vehicles turning left out of Days Inn Drive into oncoming US 62 traffic. The grassy median on US 62 may be difficult to see, especially at night. Additionally, there are no lane or stop bar markings at the Huck's entrance, which is heavily used by trucks. There is also a 115-foot continental striped pedestrian crosswalk.

### Recommendations

- Restripe stop bars at all four legs of the intersection.
- Restripe the centerline on Days Inn Drive and the Huck's entrance to prevent sideswipes, because both roads look more like driveways.
- Stripe cross-hatched lines through the intersection for left-turning vehicles.

See **Appendix D** for conceptual layout.

## *Signage*

There is a pedestrian warning sign (W11-2) at the far side of the intersection at the crosswalk. The street sign for Days Inn Drive is difficult to see, as it is low to the ground.

### Recommendations

- Remove pedestrian warning sign that is not compliant with the MUTCD.
- Install divided highway and one-way signage on Days Inn Drive and Huck's entrance approaches.
- Consider advanced signal/flashing warning lights on US 62 southwest bound.

## *Roadway Users*

Pedestrians are prevalent in this area in the summer, according to local participants. Existing safety features for pedestrians include a continental-style crosswalk (approximately 115 feet long) with pedestrian signal heads on the far side of the intersection, across US 62 (**Figure 35**). There are no sidewalks at the intersection.

***Figure 35: Pedestrian Infrastructure near Days Inn Drive***

## Recommendations

- Add sidewalks within three feet of the pedestrian push button and curb ramps at the intersection of Days Inn Drive and US 62 to comply with ADA standards.
- Construct a pedestrian refuge island in the existing grass median on US 62 to reduce crossing length.

## KY 3305

**(Mile Points 0.0 – 1.811)**

### *Background*

KY 3305 is a state highway and minor collector that connects KY 93 and US 62 (**Figure 36**). Though the surrounding area is primarily rural residential, the Lyon County Convenient Center, the county's primary waste management service, is located near the start of the observed segment. The nearby intersection between KY 3305 and KY 93 has a large hillside that obstructs sight distance.

**HIS DATA**

**Speed Limit:** 55 mph

**AADT:** 700

**Truck %:** 0.0

**Lane Widths:** 9'

**Shoulder Widths:** 0'

**Total Width:** 18'

**Rumble Strips:** None

**Curves (Class C or Sharper):** 0.3 mi

**Grade Length (C or Higher):** None

The segment of KY 3305 observed is approximately 1.8 miles long and has a speed limit of 55 mph. The road has approximately 700 drivers per day.

Many of the crashes on the observed segment of KY 3305 were single vehicle crashes. In addition, two fatal crashes occurred on this segment, an angle crash at the intersection with KY 93 and a head-on crash on the curve near the southernmost portion of the segment. Both the US 62 and the KY 93 intersections were noted by the surrounding community as areas for potential improvement. These assertions are supported by crash data, specifically the concentration of crashes at the US 62 intersection. Total crashes by type are shown in **Table 8** and crash locations are shown in **Figure 37**.

*Figure 36: KY 3305*

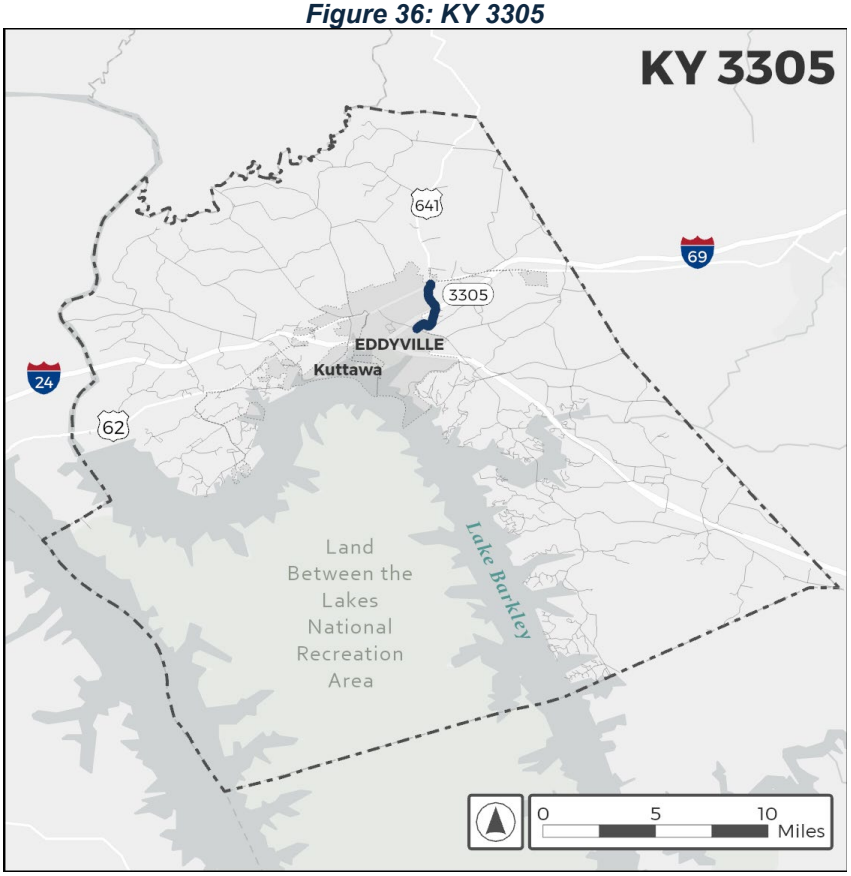
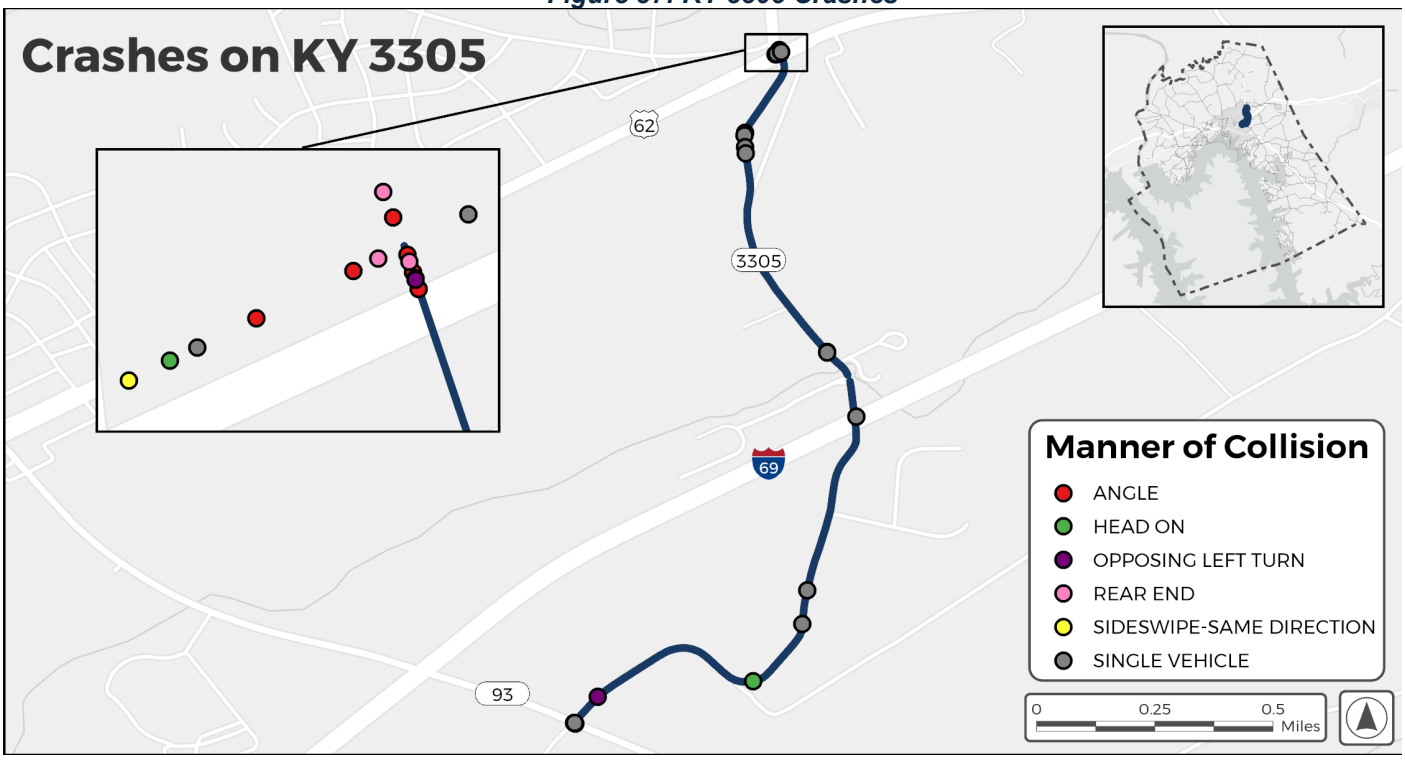


*Table 8: KY 3305 Manner of Collisions*

| Manner of Collision | Fatal (K) | Suspected Serious Injury (A) | Suspected Minor Injury (B) | Possible Injury (C) | Property Damages Only (O) |
|---|---|---|---|---|---|
| **Angle** | **1** | **1** | **2** | **2** | 4 |
| **Backing** | - | - | - | - | - |
| **Head On** | **1** | 1 | - | - | - |
| **Opposing Left Turn** | - | - | - | 1 | **1** |
| **Rear End** | - | - | 1 | 1 | **3** |
| **Rear to Rear** | - | - | - | - | - |
| **Sideswipe (Opposite Direction)** | - | - | - | - | - |
| **Sideswipe (Same Direction)** | - | - | - | - | **1** |
| **Single Vehicle** | - | **1** | 1 | **1** | **10** |
| ***TOTAL*** | **2** | **3** | **4** | **5** | **19** |

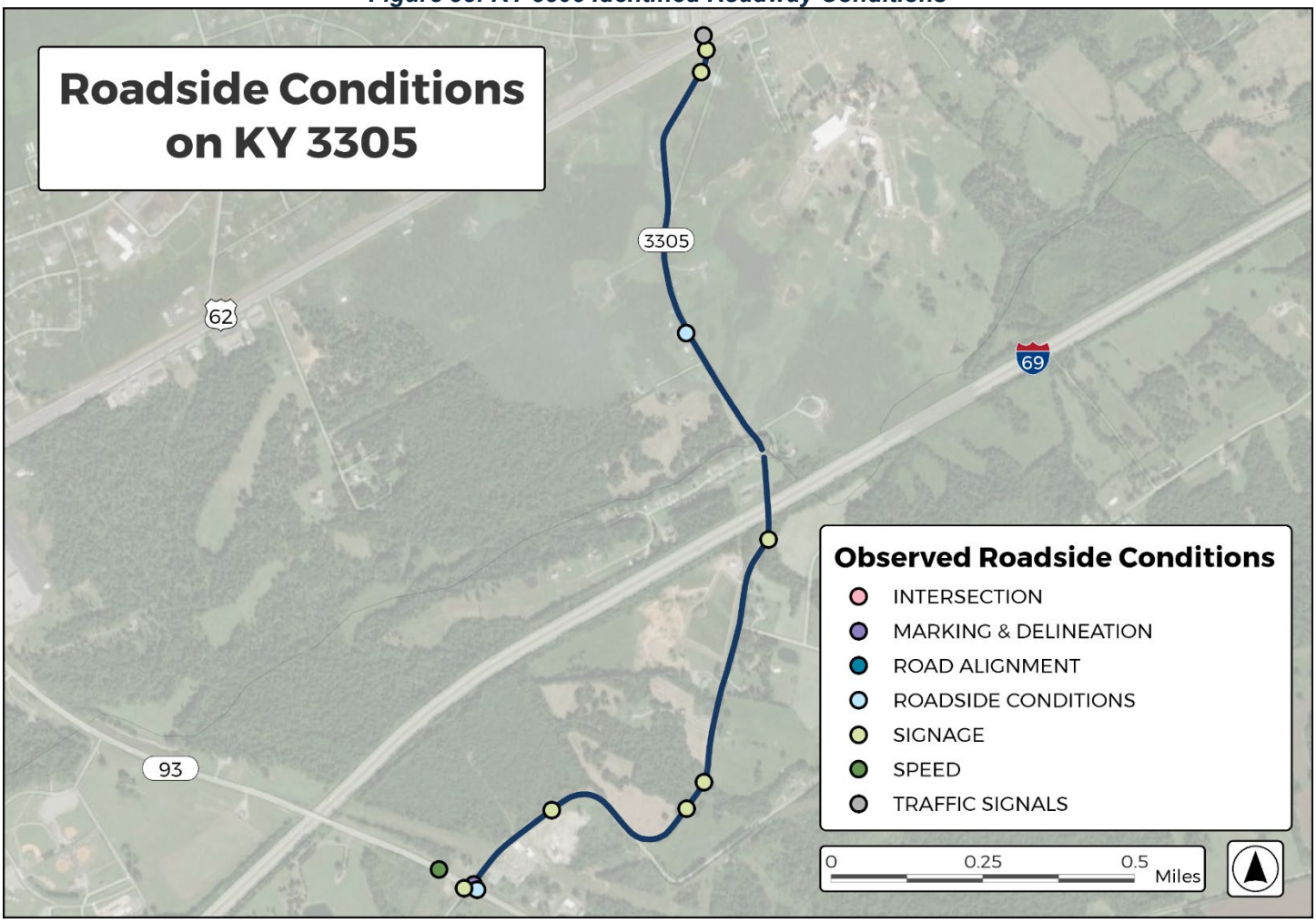
*Figure 37: KY 3305 Crashes*



## *Field Visit Notes*

During the field review, several conditions along the roadway were identified. These are shown in **Figure 38** and each of the conditions is discussed in this section.

*Figure 38: KY 3305 Identified Roadway Conditions*



## Speed

High travel speeds were recorded on KY 93 S at the intersection with KY 3305, consistent with other traffic observations made by the team for KY 93 S (see **KY 93 South**). The RSA team observed a memorial cross from a fatal crash at the corner of KY 3305 and KY 93.

While driving the corridor, the RSA team noted it was difficult to drive at or more than 55 mph.

### Recommendations

- Conduct a speed study to consider reducing the speed limit to 45 mph on KY 93 and KY 3305.

## Signage

At the intersection of KY 3305/Gregory Road and KY 93 S, signs on the northwest corner of the Gregory Road approach interfere with motorists' view of oncoming traffic **(Figure 39)**.

Several curves on KY 3305 have minimal or no curve signage and may benefit from adding appropriate signage.

Low clearance signage is present at the intersections of KY 93 S and US 62 **(Figure 40)**, referring to the I-69 tunnel further discussed in the **Roadside Conditions** section.

### Recommendations

- Consolidate and move KY 3305 route sign and Mineral Mound State Park sign further in advance of the intersection.
- Add curve ahead signs and chevrons or W1-6 for tight radii. See **Appendix D** for conceptual layout.

***Figure 39: Signage obstructing view of KY 93 S from Gregory Road***


***Figure 40: Low clearance and restricted truck signage***

## Roadside Conditions

A tunnel under I-69 is located at mile point 0.94 **(Figure 42)**. The tunnel height is low – only 13 feet 6 inches, and the route is signed with truck restrictions. The tunnel has flat concrete abutments adjacent to the narrow road with no shoulder, and the speed limit is 55 mph. There are object marker signs. There is evidence that multiple vehicles have scraped the walls (**Figure 41**).

***Figure 41: Vehicle scrapes on tunnel wall***

***Figure 42: Tunnel under I-69***


At the intersection with KY 93 S, there are hillsides close to the approach that limit the view for motorists turning from KY 3305 or Gregory Road **(Figure 43)**.

***Figure 43: Hillsides on the KY 3305 and Gregory Road approaches***

### Recommendations

- Install crash cushions at each corner with barrier wall transitions at the tunnel under I-69
- Cut back the hillsides to improve line of sight.

## *Intersections*

Intersection conditions related to **Traffic Signals** and **Roadside Conditions** at the US 62 and KY 93 S intersection are described in the linked sections.

## *Traffic Signals*

The traffic signals on US 62 at the KY 3305 intersection are difficult to see in sunny conditions due to glare (**Figure 44**).

### Recommendations

- Install backplates with retroreflective borders to traffic signal heads to make them more visible and conspicuous during both the day and night.

***Figure 44: Traffic signal at KY 3305 and US 62***

## Future Priorities

Several suggestions made in this report are more costly and/or require further study, engineering, and garnering funding. Below is a summary of these suggestions for future consideration for Lyon County and KYTC District 1.

- Innovative intersection (e.g. roundabout, RCUT) at KY 93 S and KY 293
- Innovative intersection (e.g. roundabout, RCUT) at KY 810 S and US 62
- Innovative intersection (e.g. roundabout, RCUT) at KY 810 N and US 62
- Innovative intersection (e.g. roundabout, RCUT) at Days Inn Drive and US 62

## Conclusion and Next Steps

The purpose of this project is to enhance roadside safety in Lyon County by identifying and implementing practical countermeasures. Recommendations were made based on detailed Road Safety Audits (RSAs) that evaluated road segments with high EPDO values. The multidisciplinary RSA team was essential to providing both engineering skills and local perspectives.

A summary of recommendations by corridor is provided in **Appendix E** and includes cost estimates. This report is provided to the local stakeholders, and their responses to the recommendations are provided in **Appendix F**.

The next steps involve sharing this report with local agencies to raise awareness of safety-related roadside features and improvements. Local stakeholders could coordinate with KYTC District and Central Office staff to garner additional funding for improvements as available.

The High Five Program also encourages collaboration with local law enforcement agencies to develop behavior-based strategies, such as promoting seat belt use and addressing distracted driving, impaired driving, and speeding. Additionally, targeted education strategies, including speed feedback signs and awareness programs, could be implemented in areas with high EPDO ratings to maximize the impact of these safety measures.