

Appendix H

Stakeholder and Public Meeting Minutes

MINUTES
Stakeholder Meeting #1
KY 1286/KY 998 – McCracken County – Item # 1-153.00
KYTC District 1 Office
Paducah, Kentucky
April 22, 2013
10:30 AM CDT

A Stakeholder Meeting for the KY 1286/KY 998 Planning Study in McCracken County was held at 10:30 a.m. CDT on Monday, April 22nd, in Paducah, Kentucky. The purpose of the meeting was to discuss the purpose and need of the project, environmental overview, roadway condition, and improvement options. The following project team members were in attendance:

Mike McGregor	KYTC, District 1 Transportation Branch Manager
Jessica Herring	KYTC, District 1 Planning
Kara Wilson	KYTC, District 1 Design
Susan Oatman	KYTC, District 1 Design
David Davis	KYTC, District 1 Utilities
Steve Ross	KYTC, Central Office Planning
Mikael Pelfrey	KYTC, Central Office Planning
Tonya Higdon	KYTC, Central Office Planning
Shane McKenzie	KYTC, Central Office Planning
Dorian Brawner	KYTC, Central Office Planning
Stacey Courtney	Purchase Area Development District
Brad Johnson	CDM Smith
Len Harper	CDM Smith

The following local officials were in attendance:

Richard Roof	Regional Transportation Committee
Steve Ervin	Paducah Department of Planning
Dr. Nancy Waldrop	Superintendent McCracken County Schools
Fran Johnson	Paducah Area Chamber of Commerce
Ken Canter	Paducah Riverport
Van E. Newberry	McCracken County Judge/Executive
Rick Murphy	City of Paducah
Donald Hodgson	Paducah Police
Dan Key	Washburn Key & Lowry PLLC

A summary of the key discussion items and decisions from this meeting are provided below, following the agenda outline. A copy of the meeting materials, including the agenda, is attached.

1. Welcome and Introductions

Mike McGregor, KYTC Project Manager, began the meeting, welcoming attendees and asking for formal introductions from all.

2. Project Approach/Schedule

Brad Johnson, CDM Smith Project Manager, outlined the project schedule and approach. He noted the original project limits were extended to include KY 1286 between New Holt Road and KY 998 and include KY 998 between KY 1286 and US 60. This project will look at long-term solutions as well as short-term spot improvements along KY 1286 and KY 998. Preliminary Alternatives will be presented at the Stakeholder Meeting #2 and Public Meeting in June. Based on input from those meetings and the evaluation process, a preferred alternative will be selected in August. The Final Report is due in October.

3. Purpose and Need

Brad Johnson outlined the Draft Purpose and Need of the proposed KY 1286/KY 998 project. The purpose is to improve safety and traffic operations along the route between US 45 and US 60. Improving safety was identified as the top priority/need for the project.

3. Roadway Condition

Brad Johnson gave an overview of the existing roadway condition. There are between 3,700 and 8,900 vehicles along KY 1286. Traffic analysis shows that a 2 lane facility provides adequate capacity for existing traffic. Traffic could become an issue in the future if major developments are built along the corridor. The Traffic Forecast is ongoing, which will look at future traffic needs. The new consolidated McCracken County High School was noted as a potential traffic generator. Once the traffic forecast is established, a capacity analysis will be conducted to determine the number of lanes needed along the route. A level of service (LOS) analysis will also be conducted at the major intersections. Additional turn lanes may be needed at the US 45, Hew Holt Road, and KY 998 intersections.

The existing roadway geometrics were evaluated based on current design standards. This analysis found five deficient horizontal curves and one vertical curve with deficient headlight sight distance. Most all of KY 1286 and KY 998 have driving lanes and shoulders that are too narrow.

Crash records were collected from KYTC for the project area over a four year period (October 2008 – October 2012). KY 1286 between US 45 and US 62 has a Critical Rate Factor (CRF) greater than 1.0. There are also seven spot locations with a CRF greater than 1.0. The CRF is one measure of the safety of a roadway, expressed as a ratio of the crash rate at the study location to the average crash rate for roadways of the same functional classification throughout the state. If the CRF is 1.00 or greater, it is assumed that crashes are happening due to circumstances that cannot be attributed to random occurrence. This highest CRF is at the deficient curve at Seneca Lane. There were 44 crashes at this location between 2008 and 2012, 15 of those resulted in injuries. The second highest CRF is at the US 62 intersection. Brad noted there was an intersection improvement project at this location in 2012 which likely fixed the safety issues.

4. Improvement Options

Brad explained that long-term solutions as well as short-term spot improvements will be looked at as part of this project. As of now the long-term improvement options include; (1) improve the two-lane cross section and (2) widen to three lanes. Three typical section options were presented for each scenario. Although not anticipated, if the traffic forecast indicates more than three lanes are needed, those options will be added to the alternative analysis.

Brad discussed the need for different typical sections along the route. A urban typical section is likely needed between US 45 and US 62. A rural typical section is likely appropriate everywhere else.

Short-term spot improvements were also discussed. Locations were presented which were based on the crash analysis, geometric analysis, traffic analysis, and previous studies. Input from stakeholders, public, and project team members will be needed to prioritize these improvements.

5. Discussion & Next Steps

Referencing the project schedule, Brad explained that the next step was to complete the traffic analysis and further develop the initial alternatives for Stakeholder Meeting #2 and the Public Meeting in June. Brad then reiterated potential project issues and asked for feedback from the group. The following is a list of comments received:

- The Traffic Study for the new consolidated McCracken County High School did not look at KY 1286. The Superintendent of McCracken County Schools thinks the new consolidated High School will add a considerable amount of through traffic to this route. Also, the new high school starts at 7:55 am which adds to the AM peak hour. CDM Smith will work with the Superintendent and make sure the additional traffic is included in the traffic forecast. The bus traffic should not change as a result of the consolidation. Busses will keep their same routes and drop-off students at their old high schools. Students will then be bused from their old high school to the new high school.
- The queues at the US 62 intersection were fixed as part of the intersection improvement in 2012. Currently this is labeled as a high crash spot. The intersection improvement likely fixed the safety issues.
- It is desirable to have bicycle and pedestrian facilities along KY 1286 between US 45 and US 62.
- The number of lanes needed on KY 1286 and KY 998 will be determined based on a volume to capacity analysis. KYTC shows the existing AADT as 10,000 vehicles per day. A 2 lane facility is adequate for this many vehicles. The major intersections will be analyzed using a level of service (LOS) analysis.
- This study will provide KYTC with the information needed to justify funding for the next phases of the project. Stakeholder input is very important when applying for funding. Currently there are design funds for this project in the Six-Year Highway Plan. No construction money has been designated.
- Segment 1 is by far the most important segment. This segment should be the top priority.
- There is strong support for this project from both the McCracken County Judge/Executive and the City of Paducah.
- Consider adding guardrail at the curve at Seneca. This could lower the number of injury crashes at this location.
- The City of Paducah demographics/growth seems to be shifting west.
- What is the EPA site at the KY 1286 and US 45 intersection? CDM Smith will look into this.
- The project team should look at realignment options for KY 1286 through the unutilized portion of Mount Kenton Cemetery. The City of Paducah has design plans for this section. CDM Smith will look at this option in more detail.

With no further questions, the meeting was adjourned around 12:00 a.m. CDT.

**KY 1286/KY 998 Planning Study
from US 45 to US 60**

**Stakeholder Meeting
Monday, April 22, 2013
KYTC District 1
Paducah, KY
12:30 AM CDT**



Agenda

*KY 1286/KY 998 Planning Study
From US 45 to US 60
McCracken County
Item # 1-153.00*

1. Welcome and Introductions
2. Project Approach/Schedule
3. Purpose of the Project
4. Roadway Condition
 - a. Traffic
 - b. Roadway Geometry
 - c. Crash Analysis
5. Improvement Options
 - a. Improve Two Lane
 - b. Widen to Three Lanes
 - c. Minor Spot Improvements
6. Discussion & Next Steps

2. Project Approach/Schedule

*KY 1286/KY 998 Planning Study
From US 45 to US 60
McCracken County
Item # 1-153.00*

- | | |
|--|----------------|
| a. Existing Conditions | March |
| b. Environmental Overview | March |
| c. Purpose and Need | April |
| d. Public Involvement | |
| • Project Team Meeting #1 | February 19th |
| • Project Team Meeting #2 & Stakeholder Meeting #1 | April 22nd |
| • Stakeholder Meeting #2 & Public Meeting | Late June |
| • Project Team Meeting #3 | Mid July |
| e. Project Evaluation/Identification | May |
| f. Documentation | |
| • Draft Planning Study Report | Late August |
| • Receive Comments from KYTC | Late September |
| • Submit Draft Executive Summary | Mid October |
| • Submit Final Report | Late October |

3. Draft Purpose & Need

The Purpose of the proposed KY 1286/KY 998 project is to improve safety and traffic operations along this route between US 45 and US 60.

Identified Needs:

- Vehicle crashes appear more frequently than on similar type facilities
 - The 1.36-mile segment of KY 1286 between US 45 and US 62 has a critical rate factor (CRF) of 1.80, indicating crashes are occurring too often to be attributed to random circumstances.
 - Seven 1/10-mile long spots along the 3.87-mile long corridor exhibit a CRF greater than 1.0. The highest crash spot, at the Seneca Lane intersection, has a CRF of 4.86.
- Traffic Operations
 - KY 1286 & KY 998 are used as a cut through route between US 45, US 62 and US 60 and provides access to Kentucky Oaks Mall and a number of other commercial establishments adjacent to US 60, near New Holt Road.
 - The future Consolidated McCracken County High School will also be located along the US 60 corridor west of KY 998.
- The existing geometry along KY 1286 compromises the safety and operational characteristics along the roadway.
 - Substandard cross section: 10-11 foot lanes with no shoulders
 - Sharp curves: 5 horizontal curves do not meet radius requirements
 - Sight distance: 1 deficient sag vertical curve limits headlight sight distance

4. Roadway Conditions

1. Existing Traffic Volumes

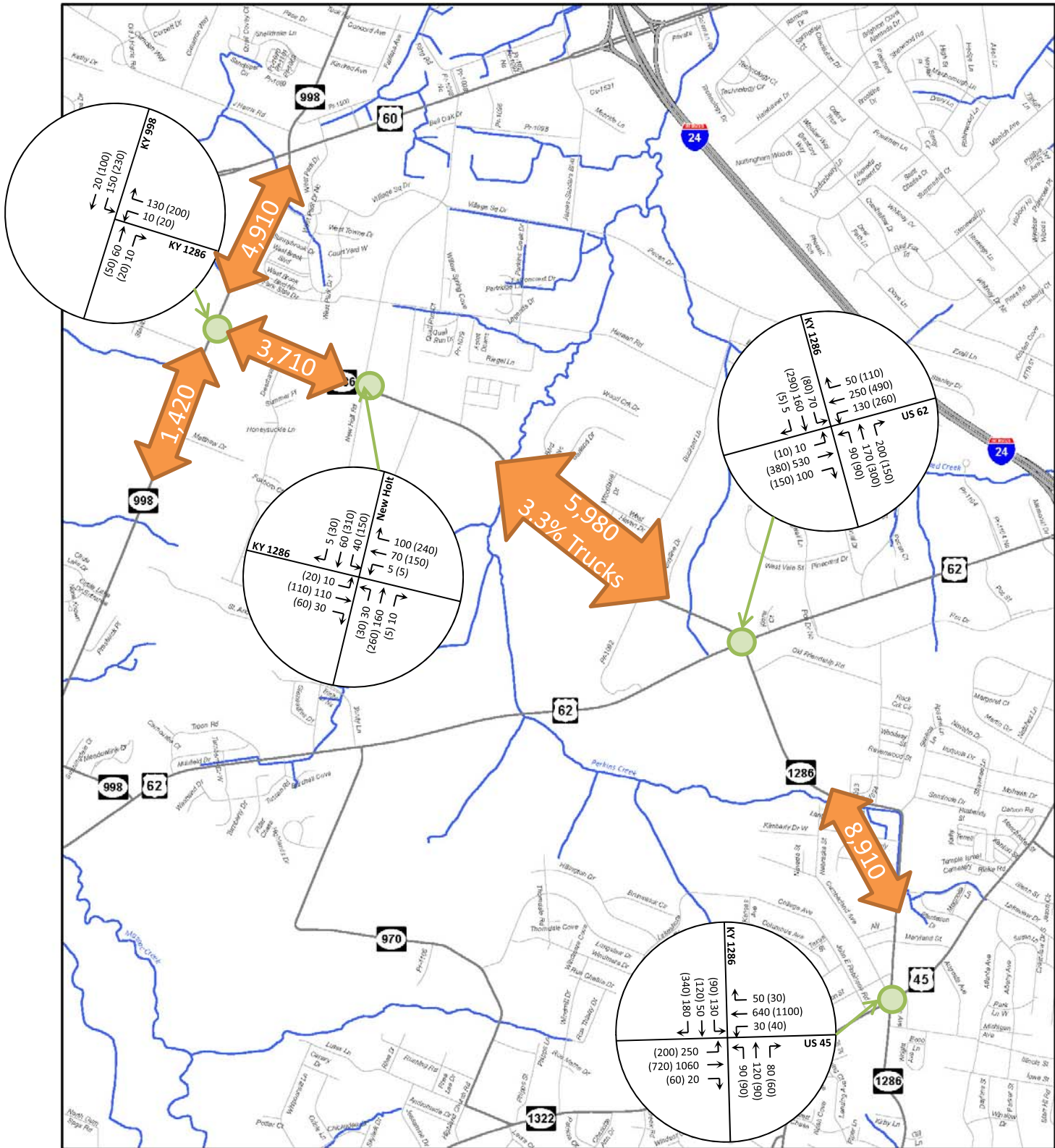
- Daily traffic ranges between 3,700 and 8,900 vehicles along KY 1286
- Maximum peak hour traffic volume was 1,240 vehicles (700 vehicles for the peak direction)

2. Geometric Deficiencies

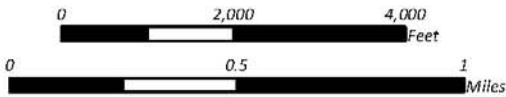
- Five deficient horizontal curves
- One deficient headlight sight distance location

3. Crash Analysis

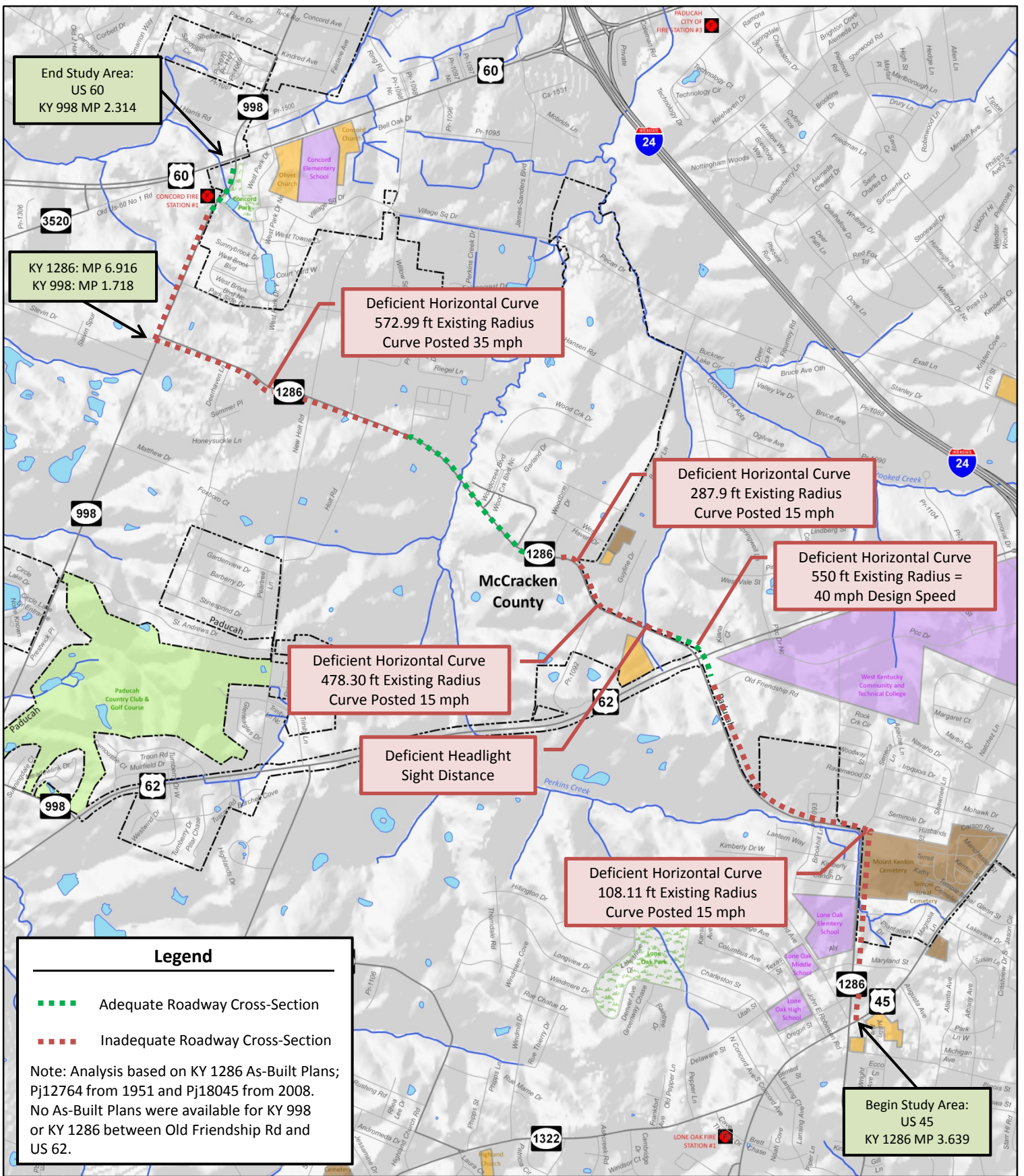
- Four segments analyzed and one with a CRF greater than 1.0
- Seven spot locations with a CRF greater than 1.0



##
Average Daily Traffic
AM (PM) Peak Hour



2013 Traffic Volumes
KY 1286/KY 998 Planning Study
McCracken County, KY
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End Study Area:
US 60
KY 998 MP 2.314

KY 1286: MP 6.916
KY 998: MP 1.718

Deficient Horizontal Curve
572.99 ft Existing Radius
Curve Posted 35 mph

Deficient Horizontal Curve
287.9 ft Existing Radius
Curve Posted 15 mph

Deficient Horizontal Curve
550 ft Existing Radius =
40 mph Design Speed

Deficient Horizontal Curve
478.30 ft Existing Radius
Curve Posted 15 mph

Deficient Headlight
Sight Distance

Deficient Horizontal Curve
108.11 ft Existing Radius
Curve Posted 15 mph

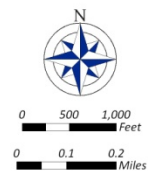
Begin Study Area:
US 45
KY 1286 MP 3.639

Legend

- Adequate Roadway Cross-Section
- - - - - Inadequate Roadway Cross-Section

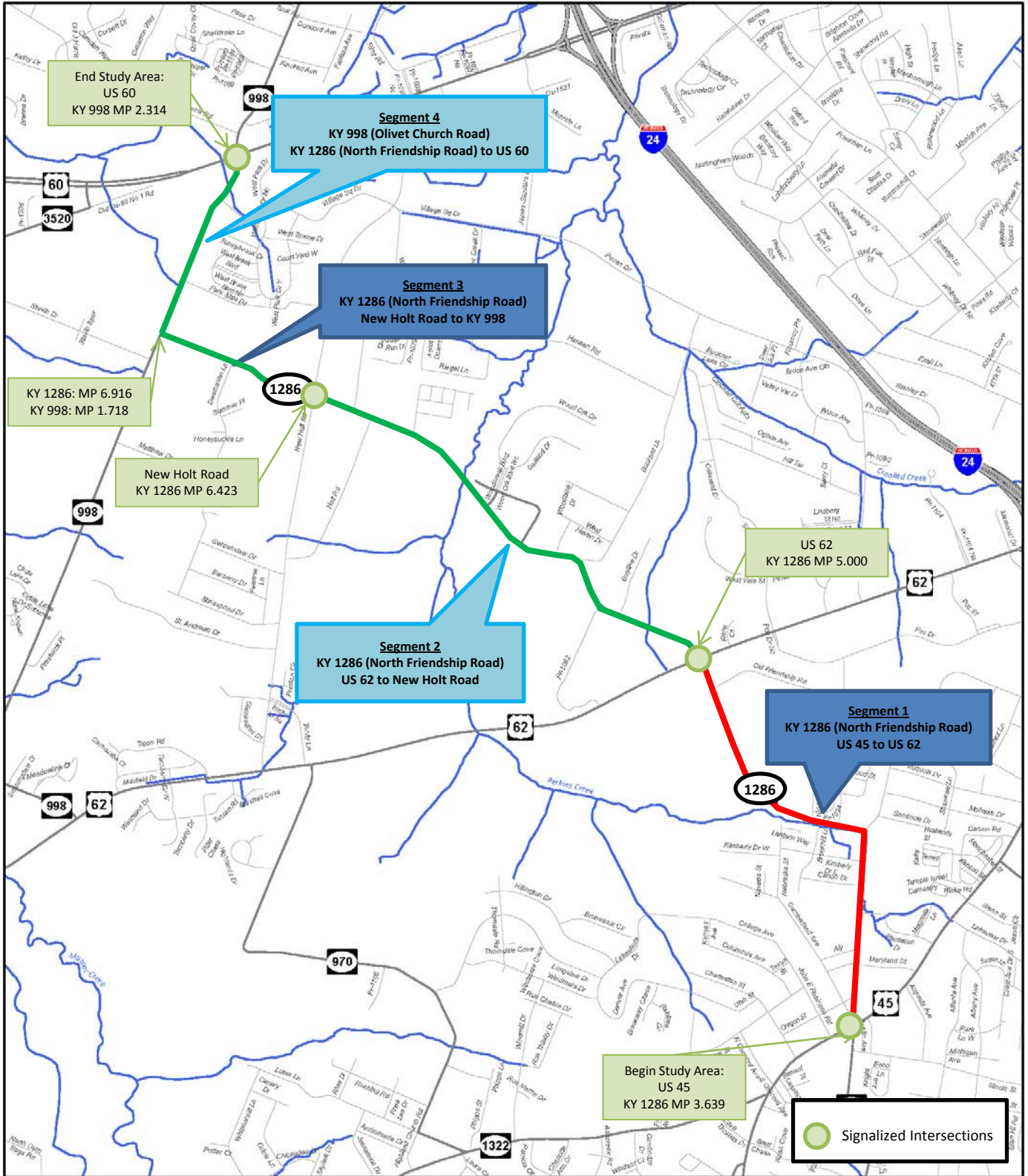
Note: Analysis based on KY 1286 As-Built Plans; Pj12764 from 1951 and Pj18045 from 2008. No As-Built Plans were available for KY 998 or KY 1286 between Old Friendship Rd and US 62.

Deficient Roadway Geometrics
KY 1286/KY 998 Planning Study
McCracken County, KY
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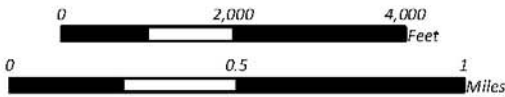
Crash Statistics by Segment

Based on reported crashes November 2008 – October 2012



Critical Rate Factor

- 0.0 - 0.9
- 0.9 - 1.0
- Above 1.0



Crash Analysis

KY 1286/KY 998 Planning Study
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Crash Statistics by Segment

Based on reported crashes November 2008 – October 2012

Crash records were collected from KYTC for KY 1286 over a four-year period (November 2008-October 2012). Crashes were geospatially referenced and compared to statewide data to identify locations exhibiting above average crash rates.

KYTC's crash analysis methodology, as outlined in the Kentucky Transportation Center (KTC) report *Analysis of Crash Data in Kentucky*, identifies two types of analysis areas: "spots" and "segments." Spots are 1/10 mile in length and are identified based on the location of crash concentrations. Segments vary in length, divided based on traffic volumes and geometric characteristics.

Each spot or segment in Kentucky is assigned a Critical Rate Factor (CRF) based on formulas published by the KTC. The CRF is one measure of the safety of a roadway, expressed as a ratio of the crash rate at the study location to the average crash rate for roadways of the same functional classification throughout the state. CRF also takes into account traffic volume, area type (rural or urban), and the number of lanes. If the CRF is 1.00 or greater, it is assumed that crashes are happening due to circumstances that cannot be attributed to random occurrence.

Segment 1: KY 1286

121 crashes (32 injury)

Length 1.36 miles

ADT = 8,910 vpd

CRF = **1.80**

By Type:

Angle = 23

Backing = 0

Head On = 2

Rear End = 52

Sideswipe = 7

Single Vehicle = 37

Segment 2: KY 1286

41 crashes (7 injury)

Length 1.42 miles

ADT = 5,980 vpd

CRF = 0.82

By Type:

Angle = 3

Backing = 0

Head On = 0

Rear End = 16

Sideswipe = 3

Single Vehicle = 19

Segment 3: KY 1286

8 crashes (4 injury)

Length 0.49 mile

ADT = 3,710 vpd

CRF = 0.54

By Type:

Angle = 2

Backing = 0

Head On = 1

Rear End = 2

Sideswipe = 0

Single Vehicle = 3

Segment 4: KY 998

15 crashes (4 injury)

Length 0.60 mile

ADT = 4,910 vpd

CRF = 0.70

By Type:

Angle = 5

Backing = 1

Head On = 0

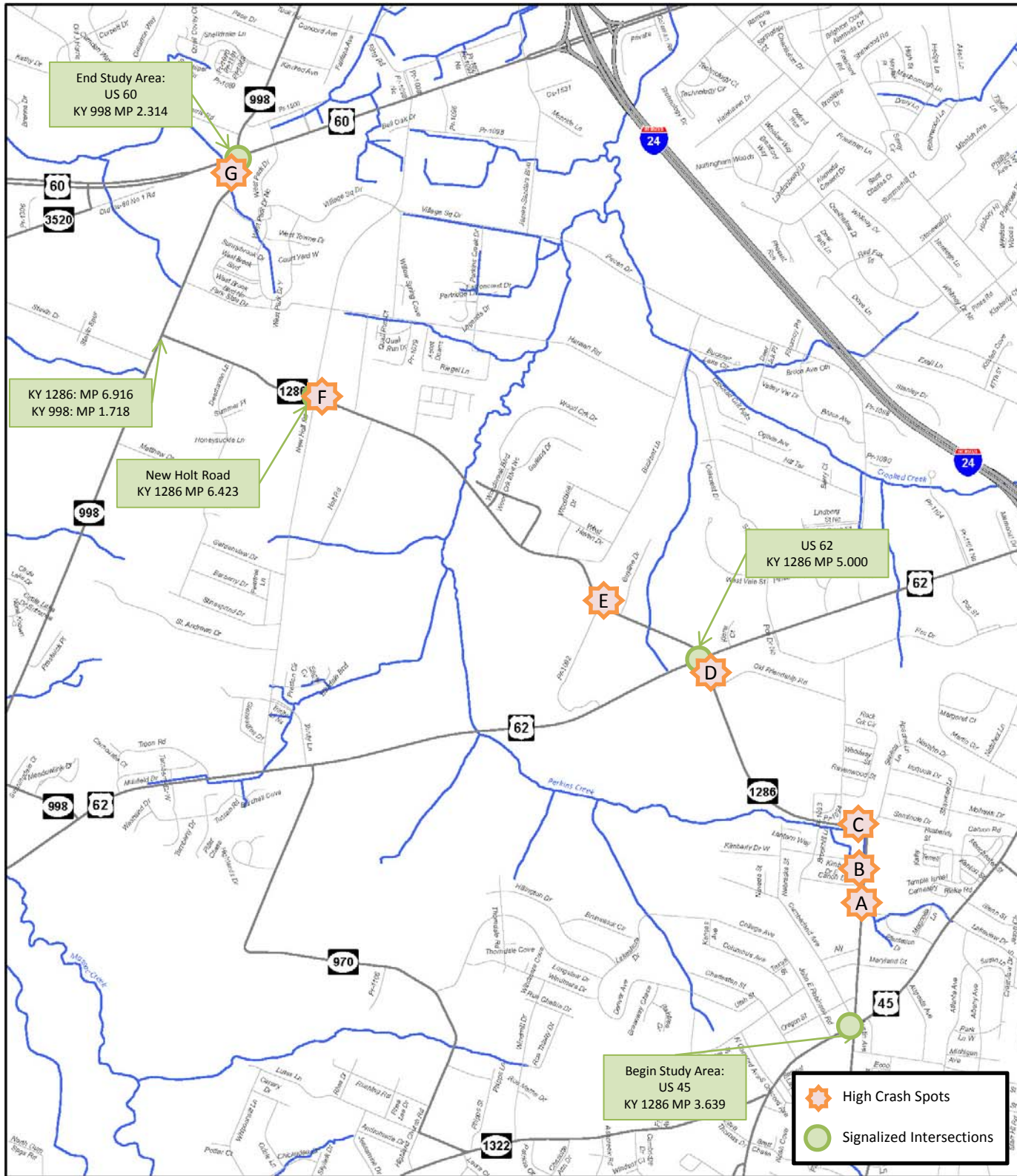
Rear End = 3

Sideswipe = 2

Single Vehicle = 4

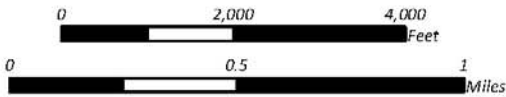
Crash Statistics by Segment

Based on reported crashes November 2008 – October 2012



Critical Rate Factor

- █ 0.0 - 0.9
- █ 0.9 - 1.0
- █ Above 1.0



Crash Analysis

KY 1286/KY 998 Planning Study
 McCracken County, KY
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Crash Statistics by Spot

Based on reported crashes November 2008 – October 2012

Spot A: CRF = **1.77**
16 crashes (4 injury)

By Type:

Angle = 4
Backing = 0
Head On = 0
Rear End = 9
Sideswipe = 1
Single Vehicle = 2

Spot B: CRF = **1.32**
12 crashes (3 injury)

By Type:

Angle = 0
Backing = 0
Head On = 1
Rear End = 9
Sideswipe = 1
Single Vehicle = 1

Spot C: CRF = **4.86**
44 crashes (15 injury)

By Type:

Angle = 6
Backing = 0
Head On = 1
Rear End = 3
Sideswipe = 3
Single Vehicle = 31

Spot D: CRF = **2.21**
20 crashes (5 injury)

By Type:

Angle = 2
Backing = 0
Head On = 0
Rear End = 17
Sideswipe = 1
Single Vehicle = 0

Spot E: CRF = **1.15**
8 crashes (1 injury)

By Type:

Angle = 0
Backing = 0
Head On = 0
Rear End = 2
Sideswipe = 0
Single Vehicle = 6

Spot F: CRF = **1.35**
7 crashes (3 injury)

By Type:

Angle = 2
Backing = 0
Head On = 1
Rear End = 2
Sideswipe = 0
Single Vehicle = 2

Spot G: CRF = **1.46**
9 crashes (2 injury)

By Type:

Angle = 3
Backing = 1
Head On = 0
Rear End = 2
Sideswipe = 2
Single Vehicle = 1

5. Improvement Options

Alternatives for Consideration

- 1. Improve Two Lane Cross Section**
 - Details/figures

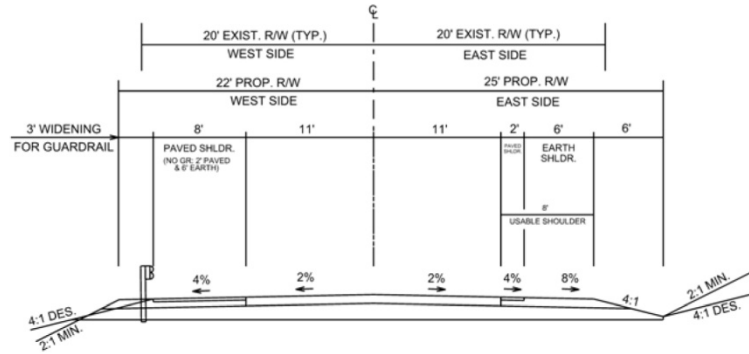
- 2. Widen to Three Lanes**
 - Details/figures

- 3. Minor Spot Improvements**
 - Details/figures

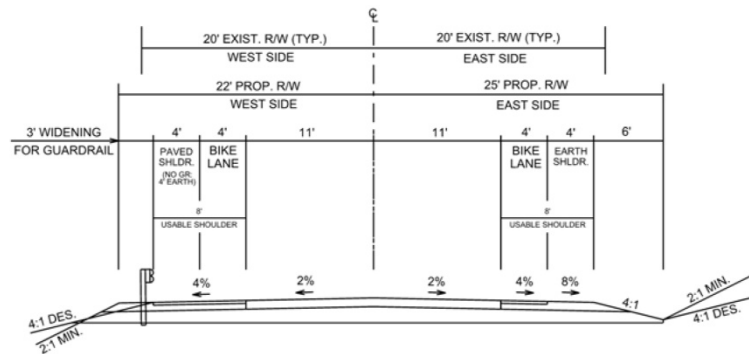
5. Improvement Options

KY 1286/KY 998 Planning Study
 From US 45 to US 60
 McCracken County
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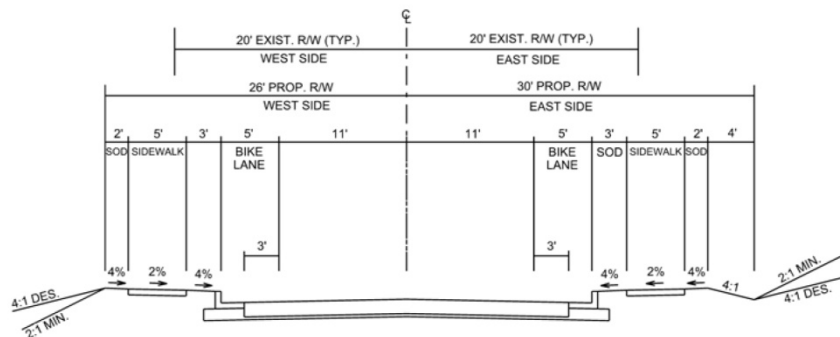
Two-Lane Typical Section Options



KY 1286 FROM US 45 TO KY 998
 KY 998 FROM KY 1286 TO US 60
 TWO LANE OPTION A (47' PROP. R/W)



KY 1286 FROM US 45 TO KY 998
 KY 998 FROM KY 1286 TO US 60
 TWO LANE OPTION B (47' PROP. R/W)

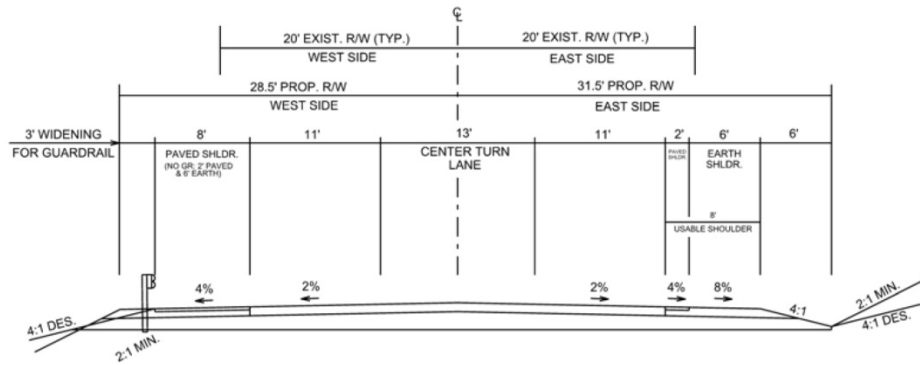


KY 1286 FROM US 45 TO KY 998
 KY 998 FROM KY 1286 TO US 60
 TWO LANE OPTION C (56' PROP. R/W)

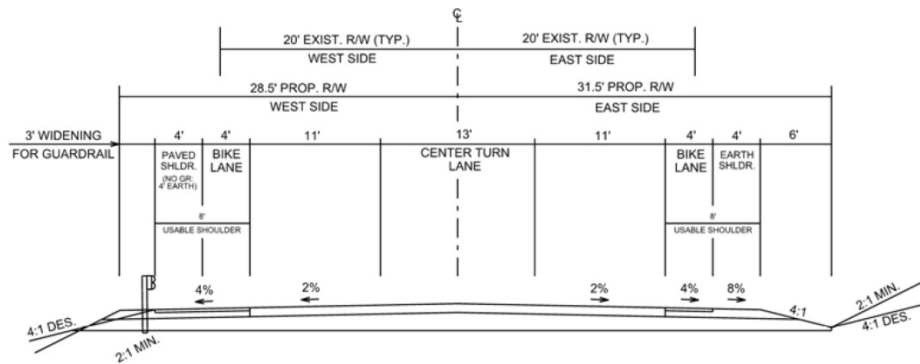
5. Improvement Options

KY 1286/KY 998 Planning Study
 From US 45 to US 60
 McCracken County
 Item # 1-153.00

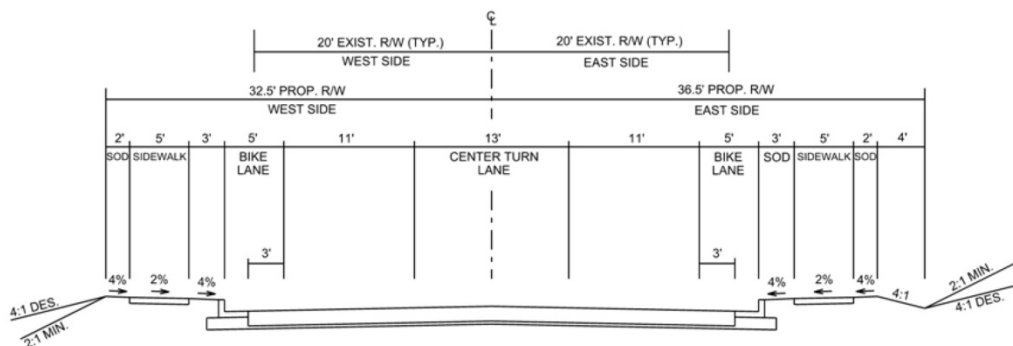
Three-Lane Typical Section Options



KY 1286 FROM US 45 TO KY 998
 KY 998 FROM KY 1286 TO US 60
 TWO LANE OPTION A (60' PROP. R/W)



KY 1286 FROM US 45 TO KY 998
 KY 998 FROM KY 1286 TO US 60
 TWO LANE OPTION B (60' PROP. R/W)



KY 1286 FROM US 45 TO KY 998
 KY 998 FROM KY 1286 TO US 60
 THREE LANE OPTION C (69' PROP. R/W)

6. Next Steps

Next Steps

- Finalize traffic forecasts & analysis
- Compile data on existing historic resources
- Finalize initial alternatives
- Develop cost estimates
- Summarize impacts of corridor improvements
- Prepare for public meeting

Additional comments?

If you have additional comments after this meeting, please send them to:

Mike McGregor, P.E.

Mike.McGregor@ky.gov

Transportation Branch Manager for Project Development

KYTC District One Office

5501 Kentucky Dam Road

Paducah, KY 42003

270-898-2431

MINUTES
Stakeholder Meeting #2
KY 1286/KY 998 Planning Study
McCracken County
Item # 1-153.00

KYTC District 1 Office
Paducah, Kentucky
August 26, 2013
1:30 PM Central

A Stakeholder and Local Officials Meeting for the KY 1286/KY 998 Planning Study in McCracken County was held from 1:30 to 2:30 p.m. CDT on Monday, August 26th, in Paducah, Kentucky. The purpose of the meeting was to discuss all the agency/stakeholder/public input received to date and improvement recommendations. The following project team members were in attendance:

Mike McGregor	KYTC, District 1 Transportation Branch Manager
Jessica Herring	KYTC, District 1 Planning
Susan Oatman	KYTC, District 1 Design
Steve Ross	KYTC, Central Office Planning
Mikael Pelfrey	KYTC, Central Office Planning
Tonya Higdon	KYTC, Central Office Planning
Shane McKenzie	KYTC, Central Office Planning
Brad Johnson	CDM Smith
Len Harper	CDM Smith

The following stakeholder and local officials were in attendance:

Steve Ervin	City of Paducah, Department of Planning
Dr. Nancy Waldrop	Superintendent McCracken County Schools
Bill Gain	Assistant with McCracken County Judge/Executive
Dan Key	Washburn Key & Lowry Pllc
Robert Worden	Mt. Kenton Cemetery
Stacey Courtney	Purchase ADD

A summary of the key discussion items and decisions from this meeting are provided below, following the agenda outline.

1. Welcome and Introductions

Mike McGregor, KYTC Project Manager, began the meeting, welcoming attendees and asking for formal introductions. Mike noted that we are nearing the end of this Planning Study and that this study will be used to get additional funding for future phases of the preferred alternates.

2. Purpose of the Meeting

Brad Johnson, CDM Smith Project Manager, gave a brief overview of the purpose of the meeting. The purpose is to discuss the project findings and get input from the stakeholders on the recommendations.

3. Agency/Stakeholder/Public Input Summary

Brad presented an overview of all the KY 1286/KY 998 coordination efforts to date; (1) one meeting with stakeholders and local officials, (2) one public meeting and (3) an agency coordination mailing. The second and final Stakeholder Meeting is today.

There were 21 surveys returned from the Public Meeting. This is a low amount and the survey results should be weighed accordingly. The following are some key results from the surveys:

- 100% of respondents indicated the route should be improved.
- 67% of respondents preferred the 3-Lane Widening Alternative.
- Improvements to Segment 1 were the top priority.
- 70% of the respondents do not think bicycle/pedestrian facilities should be included along the corridor.
- Spot Improvements D and E were most often selected as the top priority spot improvements.

3. Spot Improvement Recommendations

Brad presented a map of the Spot Improvements. Mike noted that Spot Improvements are good options if funding is tight. The following comments/recommendations were made:

- Dan Kelly recommended that right turn lanes be looked at on US 62 at KY 1286. Mike McGregor was not aware of this being looked at in other studies, but noted that this was outside this Project's Scope of Work.
- Dr. Nancy Waldrop does not want Spot Improvements done in Segment 1. There is a lot of traffic in this segment and the entire segment should be fixed not piece milled.
- Brad noted the project team recommendations for the Spot Improvements. The Stakeholders did not have any comments on the Project Team recommendations. The Project Team recommendations are as follows:
 - Combine Spot Improvements B and C.
 - Construct Spot Improvement F
 - Remove Spot Improvements D, E, and G. These should be improved with the Long-Term Improvement Option.
 - Existing traffic does not justify the turn lanes at Spot Improvement A. This should be recommended as a future improvement as traffic grows.

4. Long-Term Improvement Recommendations

Brad presented the three-lane widening segment map as well as the 8 1/2 x 11 layout sheets that will be included in the final report. Although the 3-lane widening option is being shown, this is only the worst case scenario. All segments likely don't need to be 3 lanes wide. The following comments/recommendations were made:

- Steve Ervin thought this was a good opportunity to add bike lanes throughout and look at adding sidewalks. This would provide a link between the Lone Oak area and the Kentucky Oaks Mall.
- Overall the stakeholders would like the entire route to be 3-lanes. Brad Johnson noted that a three lane road only helps if there are a large number of closely spaced driveways, entrances, and side streets as in Segment 1. Although there is the potential for density to increase as land gets developed, Segments 2 through 4 do not currently warrant a three lane section.
- Segment 1 (KY 1286 from US 45 to US 62):
 - The stakeholders agreed this was the priority segment.

- The Stakeholders agreed that this segment should be an Urban Three-Lane Typical Section.
- Dr. Nancy Waldrop wants to see Bicycle and Pedestrian Facilities in this segment because of all the schools.
- Alternate 1E:
 - The Project Team dismissed the alternative because it does not improve the curve at Seneca. The Stakeholder's agreed with this recommendation.
- Alternate 1F:
 - The Project Team recommends this alternate move forward to the next phase of the project. The Stakeholder's agreed with this recommendation.
- Alternate 1G:
 - The Project Team recommends this alternate move forward to the next phase of the project. The Stakeholder's agreed with this recommendation.
 - Robert Worden asked if the Mt. Kenton Cemetery would be compensated for going through their property. Mike McGregor said an appraisal would be done to determine the fair market value for the property.
 - Robert Worden asked if a 35 – 45 mph design speed was appropriate through the cemetery. Brad Johnson explained that this portion would likely have a 35 mph design speed which seems appropriate.
 - Robert Worden will take this information and present it at the Mt. Kenton Cemetery Board Meeting on August 27, 2013. He will send Mike McGregor comments from that meeting if needed.
 - Brad Johnson noted that a drawback to this alternate is that no improvements would be made to existing Friendship Road.
 - Steve Ervin asked about the traffic impacts and potential diversion for this alternate. Brad Johnson explained that a more detailed traffic analysis would be needed in the next phase to understand those impacts.
- Alternate 1H:
 - The Project Team dismissed the alternative because of the cost and impacts. The Stakeholder's agreed with this recommendation.
- Overall the Project Team recommends that both Alternate 1F and 1G be looked at in the next phase of the project. A more detailed traffic analysis and design is needed to compare the two alternatives. The Stakeholder's agreed with this recommendation.
- Segment 2 (KY 1286 from US 62 to New Holt Road):
 - The Stakeholders agreed this was the second priority segment.
 - Removing the reverse curves near Buckner Lane (Spot Improvement D) should be considered in the design phase of the project. This option will be added in the Final Report.
- Segment 3 (KY 1286 from New Holt Road to KY 998):
 - The Stakeholders agreed this was the third priority segment.
- Segment 4 (KY 998 from KY 1286 to US 60):
 - The Stakeholders agreed this was the fourth priority segment.
- Overall the Project Team recommended the following Top 4 Priorities. The Stakeholders had no comments on these recommendations.
 1. Segment 1: Both Alternate 1F and Alternate 1G should be considered. An Urban Three-Lane Typical Section is recommended. Bicycle and Pedestrian Facilities are preferred and should be studied further in the next phase of the project.

2. Combined Spot Improvement B and Spot Improvement C
3. Spot Improvement F
4. Segment 2: Alternate 2B with improved curves at Buckner Lane including a potential new alignment which removes the reverse curves.

5. Next Steps

Brad explained that the next step was to complete the draft report. The Final Report is expected in November. The Final Report will be made public on KYTC's website.

With no further questions, the meeting was adjourned around 2:30 PM CDT.

MINUTES
Public Meeting
KY 1286/KY 998 – McCracken County – Item 1-153.00
Lone Oak Elementary School
Paducah, Kentucky
June 17, 2013
5:00 PM

An open house public meeting was held for the KY 1286/KY 998 Planning Study from 5:00 p.m. to 7:00 p.m. CDT on Monday, June 17, in Paducah, Kentucky. The purpose of the meeting was to present project findings to-date, solicit public input, and give the public an opportunity to ask questions of the project team. The following KY 1286/KY 998 project team members were in attendance to engage the public and answer questions:

Jim LeFevre	KYTC, District 1 Chief Engineer
Mike McGregor	KYTC, District 1 Branch Manager
Jessica Herring	KYTC, District 1 Planning
Keith Todd	KYTC, District 1 Public Information Officer
Susan Oatman	KYTC, District 1 Design
Tonya Higdon	KYTC, Central Office Planning
Shane McKenzie	KYTC, Central Office Planning
Steve Ross	KYTC, Central Office Planning
Mikael Pelfrey	KYTC, Central Office Planning
Stacey Courtney	Purchase Area Development District
Brad Johnson	CDM Smith
Len Harper	CDM Smith
Steve De Witte	CDM Smith

Welcome

Attendees were greeted by KYTC and consultant team staff and provided a project information sheet and project survey (attached).

Presentation Boards

There was no formal presentation made by the project team in this open house style meeting. The following project information was plotted on large display boards for members of the public to view and ask questions about:

- KY 1286/KY 998 Study Overview/"How We Build Roads"
- Key Roadway Characteristics
- Existing Traffic Conditions
- Four Year Crash History
- Environmental Features
- Proposed Spot Improvements
- Two and Three-Lane Widening Options

Copies of the presentation boards are attached.

Verbal Comments

Attendees made several comments to the project team:

- The sharp corner at Seneca Lane is dangerous and needs to be improved.

- The owner of an overhead door business at the Seneca Lane corner was in favor of the project for two reasons: either a new alignment is constructed – improving his business – or he is compensated by the state for moving to a new location. The lack of movement forward on the project is the only thing causing apprehension, as he does not know if he should make long-term improvements to his building.

Meeting Results

A total of 35 people attended the meeting, at which 21 surveys were returned. At the time these minutes were drafted, zero surveys had been returned by mail. The survey showed the following results:

- 100% of respondents indicated sharp curves are an existing problem, with 95% of respondents also listing narrow lanes and shoulders. Other issues identified by the majority of surveys include congestion, truck safety, poor visibility, and driver safety.
- 100% of respondents indicated the corridor should be improved in some way.
- 67% of respondents preferred the 3 lane widening long-term option.
- 100% of respondents listed Segment 1 (KY 1286 from US 45 to US 62) as the top priority for improvement.
- 30% of respondents felt that portions of the corridor should be designed to accommodate bicyclists and pedestrians.
- The Seneca Lane spot improvement was identified as the greatest need, with 94% ranking it first or second priority out of 7 potential spot improvements.
- No member of the public preferred improving the existing 15 mph curve at Seneca Lane on the existing alignment, but there was no consensus on which alternative (curve improvement, new alignment to US 45) was preferred.
- 88% of respondents prefer improving the curve at Buckner Lane to a 45 mph curve.
- 94% percent of respondents indicated the curve at New Holt Lane should be improved, but there was a lack of consensus on which alternative (curve improvement, curve removal) was preferred.

The meeting adjourned shortly after 7:00 p.m.

KY 1286/KY 998 PLANNING STUDY

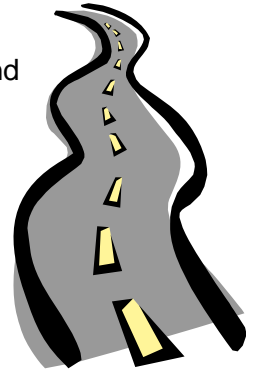
From US 45 to US 60

(KYTC Item No. 1-153)

The Kentucky Transportation Cabinet (KYTC) is undertaking a planning study to develop and evaluate alternatives for the improvement of KY 1286 (Friendship Road) and KY 998 (Olivet Church Road) between US 45 and US 60 in Central McCracken County.

The study will (1) analyze existing conditions (including transportation, environmental, and socioeconomic issues); (2) estimate future travel conditions; and (3) identify and evaluate alternatives for the proposed project.

Throughout the planning process, comments, concerns, suggestions, and insight from the public and local officials will be considered and documented.



PROJECT CONSIDERATIONS

Typical Section (including signalized Intersections) + Multimodal Connectivity + Schools + Churches + Environmental Features + Environmental Justice + Sightlines + Stopping Distances + Driveway Access + Utility and Drainage Relocations + Access Control



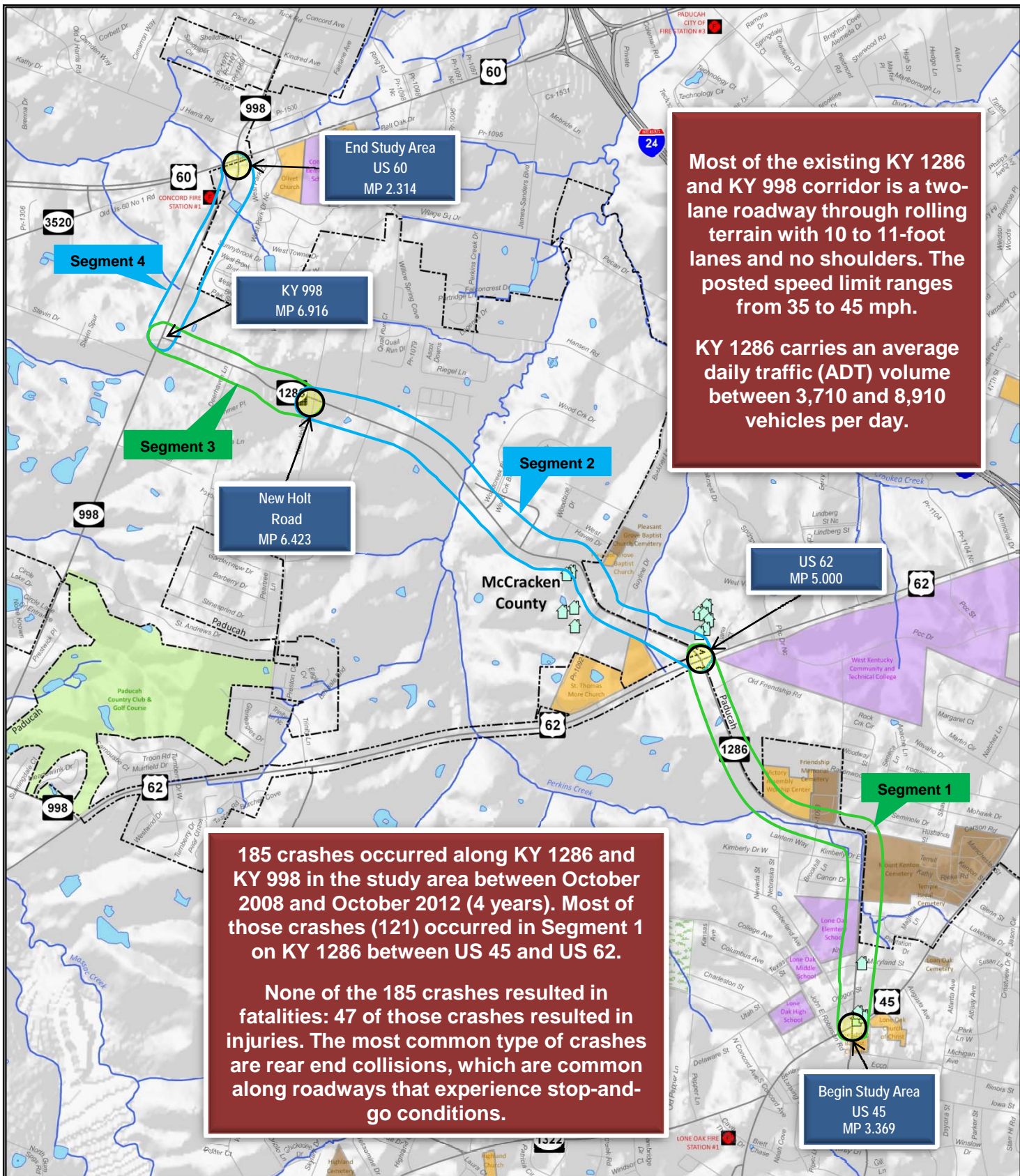
This public meeting is being held to provide information and gain input on the proposed project regarding major issues, potential impacts, and possible alternates. Efforts are also included to coordinate with and get input from local officials, public agency representatives, and others with special interest in the project.

Using the input from all sources, a series of KY 1286/KY 998 alternatives have been identified and will be evaluated based on: traffic impacts, environmental issues, public and agency input, cost, constructability, and/or others. Long term solutions as well as short-term spot improvements will be looked at as part of this project. As of now the long-term improvement options include: (1) improve the two-lane cross section and (2) widen to three lanes. The no-build option will receive equal consideration. The planning process will result in recommendations for KY 1286 and KY 998.

Your Input Is Important!

Address comments to: **Mike McGregor**, Project Manager at KYTC District One, 5501 Kentucky Dam Road, Paducah, KY 42003 or (270) 898-2431 or Mike.McGregor@ky.gov





Most of the existing KY 1286 and KY 998 corridor is a two-lane roadway through rolling terrain with 10 to 11-foot lanes and no shoulders. The posted speed limit ranges from 35 to 45 mph.

KY 1286 carries an average daily traffic (ADT) volume between 3,710 and 8,910 vehicles per day.

185 crashes occurred along KY 1286 and KY 998 in the study area between October 2008 and October 2012 (4 years). Most of those crashes (121) occurred in Segment 1 on KY 1286 between US 45 and US 62.

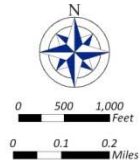
None of the 185 crashes resulted in fatalities: 47 of those crashes resulted in injuries. The most common type of crashes are rear end collisions, which are common along roadways that experience stop-and-go conditions.

- Fire Department
- Potentially Historic Properties
- Signalized Intersections

- Church
- Cemetery
- Schools
- Local Parks
- Country Clubs/Golf Courses

Study Area

KY 1286/KY 998 Planning Study
 McCracken County, KY
 (KYTC Item No. 1-153)



7. For the curve at Seneca Lane , which improvement option do you feel works best? This could be applied to either long term alternative or as a spot improvement. See map below.

- Option 1 - follow existing 15 mph curve
- Option 2 - Improve Curve, 35 mph Design Speed
- Option 3 - New link to US 45, 35 mph Design Speed

8. For the curves at Buckner Lane, which improvement option do you feel works best? This could be applied to either long term alternative or as a spot improvement. See map below.

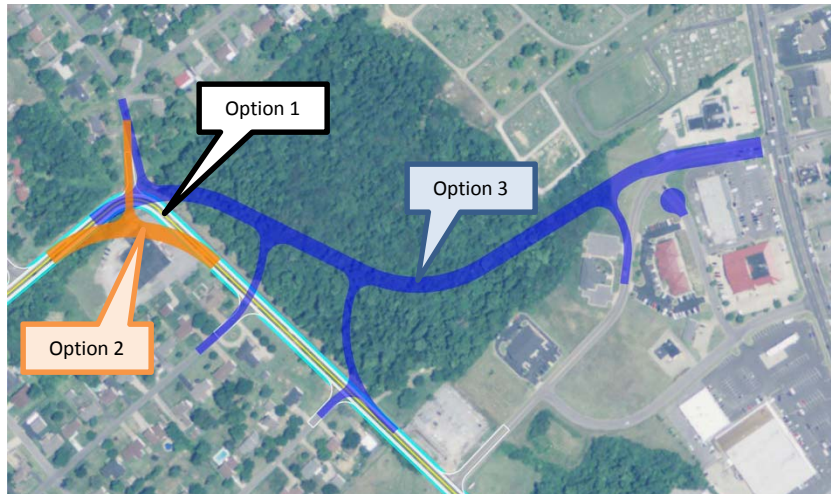
- Option 1 - follow existing 15 mph curves
- Option 2 - Improve Curves, 45 mph Design Speed

9. For the curve west of New Holt Road, which improvement option do you feel works best? This could be applied to either long term alternative or as a spot improvement. See map below.

- Option 1 - follow existing 35 mph curve
- Option 2 - Improve Curve, 45 mph Design Speed
- Option 3 - Remove Curve, 45 mph Design Speed

Maps referenced for questions 7-9:

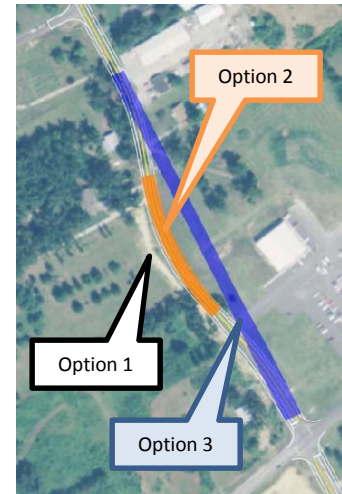
7-at Seneca



8-at Buckner



9-at New Holt



Additional comments or questions:



KY 1286/KY 998 Planning Study
- Public Survey -

What is your opinion about improving KY 1286 (Friendship Road) and KY 998 (Olivet Church Road) in McCracken County? You can help us better understand the transportation problems, issues, and potential impacts of proposed improvements to the KY 1286/KY 998 corridor between US 45 (Lone Oak Road) and US 60 (Hinkleville Road). The Kentucky Transportation Cabinet will use your input to help evaluate alternatives. Please return this form during the meeting or return it by mail within 2 weeks of the meeting date. Completed surveys should be sent to Mike McGregor at KYTC District 1, 5501 Kentucky Dam Road in Paducah, KY 42003 or via email to Mike.McGregor@ky.gov.

Your name: _____
 Your organization (if any): _____
 Address: _____
 Email (optional): _____

1. In your opinion, what transportation problems exist now on KY 1286 and KY 998? Check all that apply.

- | | |
|---|--|
| <input type="checkbox"/> Narrow lanes/shoulders | <input type="checkbox"/> Congestion (too much traffic) |
| <input type="checkbox"/> Sharp curves | <input type="checkbox"/> Poor visibility |
| <input type="checkbox"/> Travel speed too high | <input type="checkbox"/> Travel speed too low |
| <input type="checkbox"/> Limited passing opportunities | <input type="checkbox"/> Safety issues for drivers |
| <input type="checkbox"/> Safety issues for trucks/buses | <input type="checkbox"/> Safety issues for pedestrians or cyclists |
| <input type="checkbox"/> Other (please explain): _____ | |

2. Should KY 1286/KY 998 be improved? Yes No

Why or why not? _____

3. Which long term improvement option do you prefer? Check one.

- No Improvements
- Short term spot improvements (see question 6) but no long term improvements
- Widen Lanes and Shoulders, but keep corridor at 2 lanes
- Widen the corridor to 3 lanes (includes center turn lane)

4. Which Segments most need improvement? Rank the options below 1 through 4 where 1 is the top priority need. The map to the right shows the different segments discussed below. If you do not think a segment needs to be improved, leave it blank.

- _____ Segment 1: KY 1286 from US 45 to US 62
- _____ Segment 2: KY 1286 from US 62 to New Holt Road
- _____ Segment 3: KY 1286 from New Holt Road to KY 998
- _____ Segment 4: KY 998 from KY 1286 to US 60

5. Should the corridor be designed to accommodate bicyclists and pedestrians?
 Yes No

If you marked "yes" above, which segments should include bicycle and pedestrian facilities?

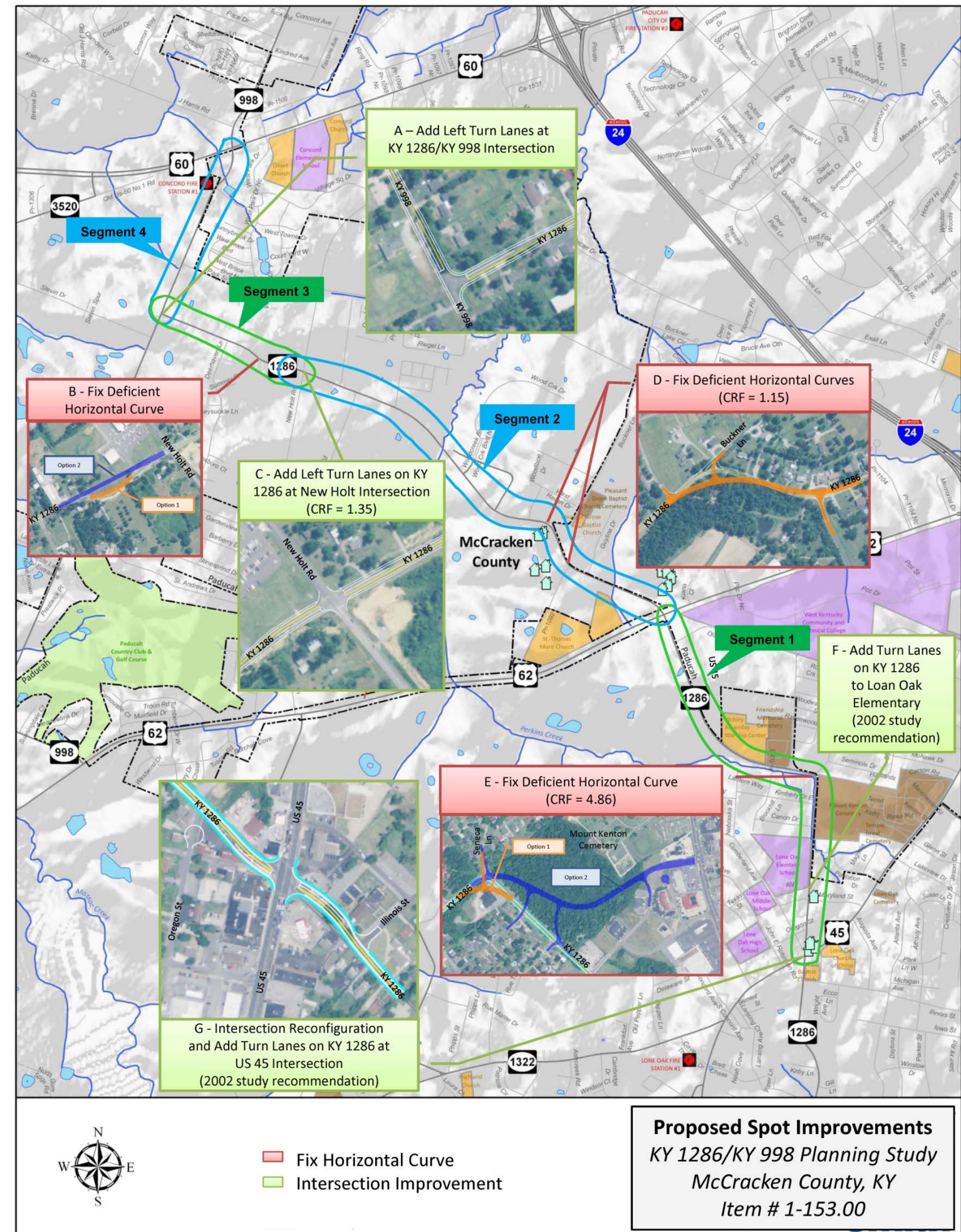
Bike Pedestrians

- | | | |
|--------------------------|--------------------------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | Segment 1: KY 1286 from US 45 to US 62 |
| <input type="checkbox"/> | <input type="checkbox"/> | Segment 2: KY 1286 from US 62 to New Holt Road |
| <input type="checkbox"/> | <input type="checkbox"/> | Segment 3: KY 1286 from New Holt Road to KY 998 |
| <input type="checkbox"/> | <input type="checkbox"/> | Segment 4: KY 998 from KY 1286 to US 60 |

6. If the overall corridor is not improved, it may be possible to still fix some of the existing problem spots. The map to the right shows potential spot improvements that have been suggested. Of the spot improvements shown, please rank the top 5 locations you believe are the highest priority where 1 is the top priority need. If you do not think any of these improvements are needed, leave this question blank.

- _____ Spot A: Add left turn lanes at KY 1286/KY 998 intersection
- _____ Spot B: Fix horizontal curve between Deerhaven Lane and New Holt Road
- _____ Spot C: Add left turn lanes on KY 1286 at New Holt Road intersection
- _____ Spot D: Fix horizontal curves near Buckner Lane
- _____ Spot E: Fix horizontal curve near Seneca Lane
- _____ Spot F: Add turn lanes for Lone Oak Elementary School
- _____ Spot G: Reconfigure KY 1286/US 45 intersection and add turn lanes

If there are other spot improvements that should be considered, please mark them on the map and describe them below:



Proposed Spot Improvements
 KY 1286/KY 998 Planning Study
 McCracken County, KY
 Item # 1-153.00

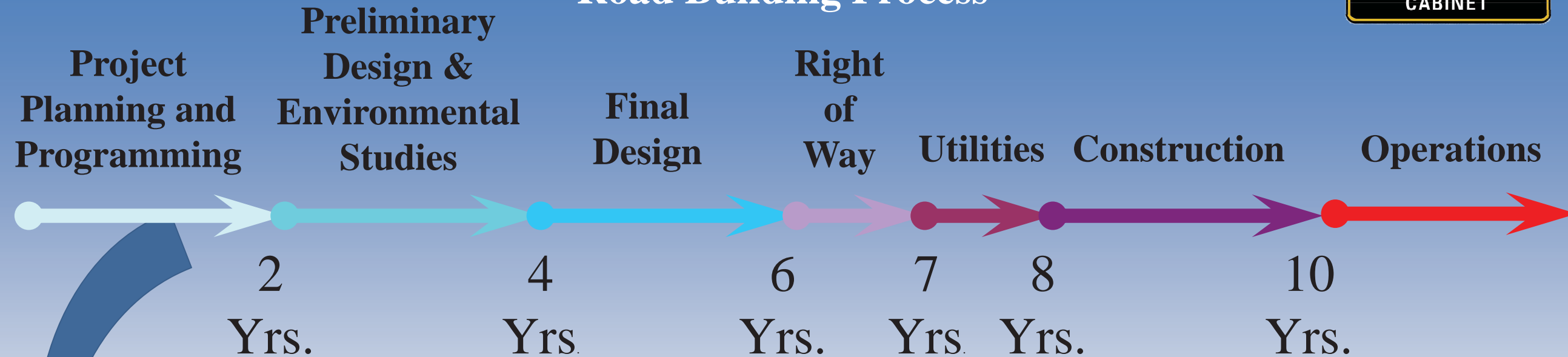
KY 1286/KY 998 PLANNING STUDY

From US 45 to US 60

(KYTC Item No. 1-153.00)



Road Building Process



We Are Here

Planning Study Tasks & Target Dates

Completed

- Existing Conditions (Traffic, Crashes, Geometrics)
- Environmental Overview (March)
- Developed Purpose and Need Statement (April)
- Stakeholder Meeting #1 (April 22nd)
- Alternative Development (May)

On-going Project Team Meetings (KYTC, ADD, Consultant)

Hold Public Meeting (June 17th)

Conduct Stakeholder Meeting #2 (July)

Complete Project Evaluation/Identification (July & August)

Submit Final Report (October)

PROJECT PURPOSE & NEED

What is it? A project's Purpose and Need provides the supporting facts that form the foundation of the project. It describes the problems that the project should address. It clearly defines what the project should accomplish. The Purpose and Need Statement guides the alternative development and evaluation processes.

The Purpose of the proposed KY 1286/KY 998 project is to improve safety and traffic operations along this route between US 45 and US 60.

The Need for the proposed KY 1286/KY 998 project is demonstrated by a variety of facts:

SAFETY- RELATED:

Vehicle crashes appear more frequently than on similar type facilities.

- The 1.36-mile segment of KY 1286 between US 45 and US 62 has a critical rate factor (CRF) of 1.80, indicating crashes are occurring too often to be attributed to random circumstances.
- Seven 1/10-mile long spots along the 3.87-mile long corridor exhibit a CRF greater than 1.0.
- The highest crash spot, at the Seneca Lane intersection, has a CRF of 4.86.
- The most common type of crashes are rear end collisions, which are common along high volume roadways that experience stop-and-go conditions. The high number of access points also contribute to this trend.

The existing geometry along KY 1286 compromises the safety and operational characteristics along the roadway.

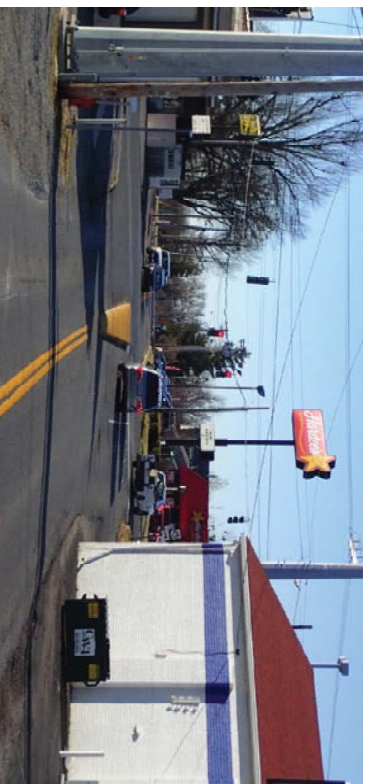
- Substandard cross section: 10-11 foot lanes with no shoulder do not meet current guidelines.
- Sharp curves: 5 horizontal curves do not meet radius requirement.
- Sight distance: 1 deficient sag vertical curve limits headlight sight distance (how far ahead drivers can see at night).

TRAFFIC-RELATED:

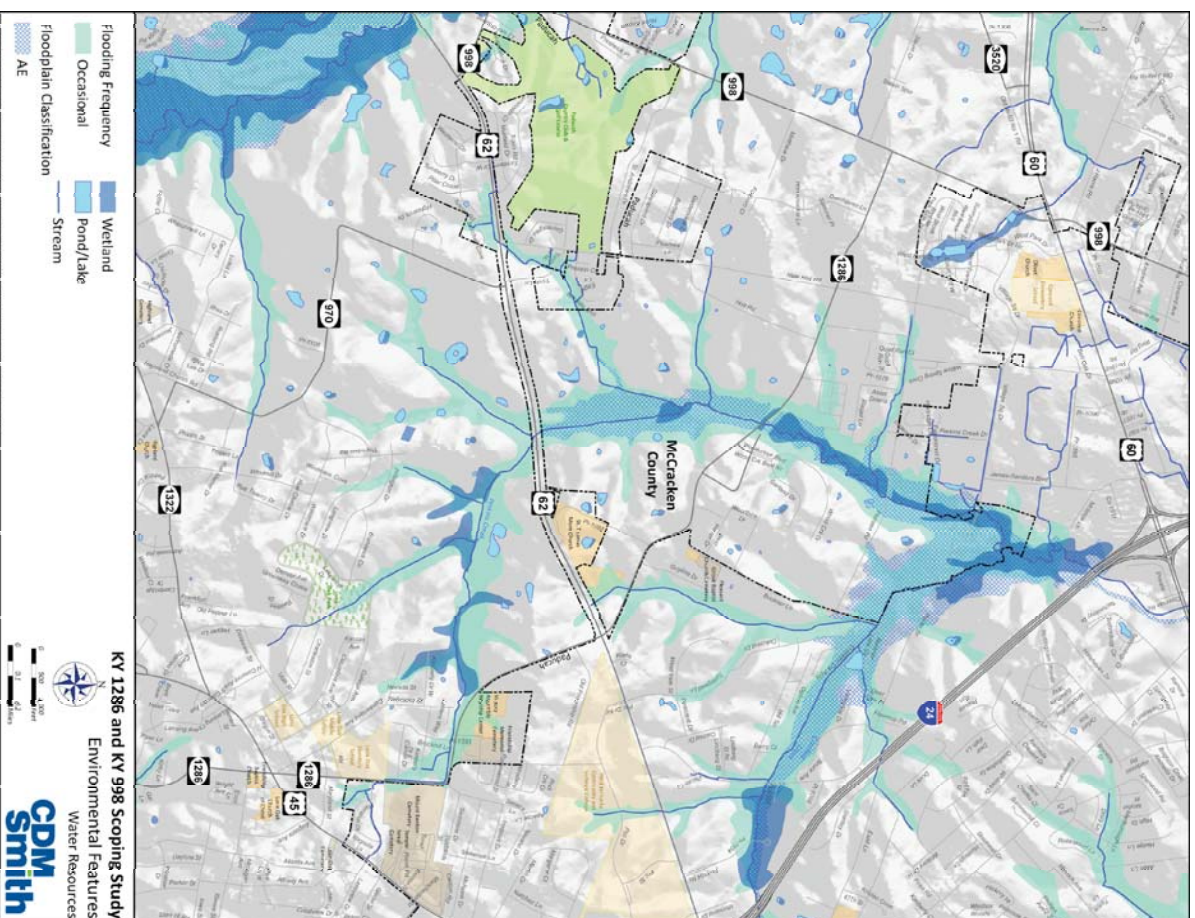
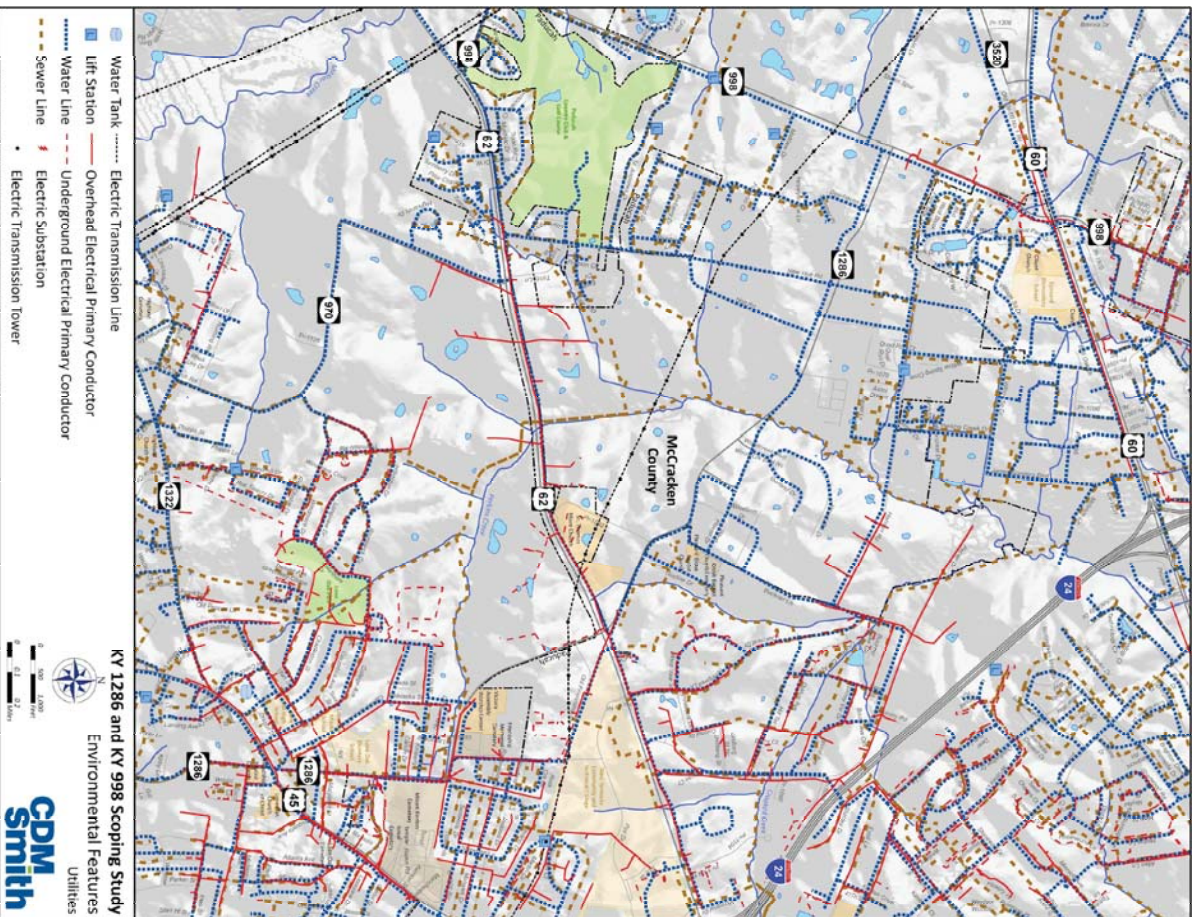
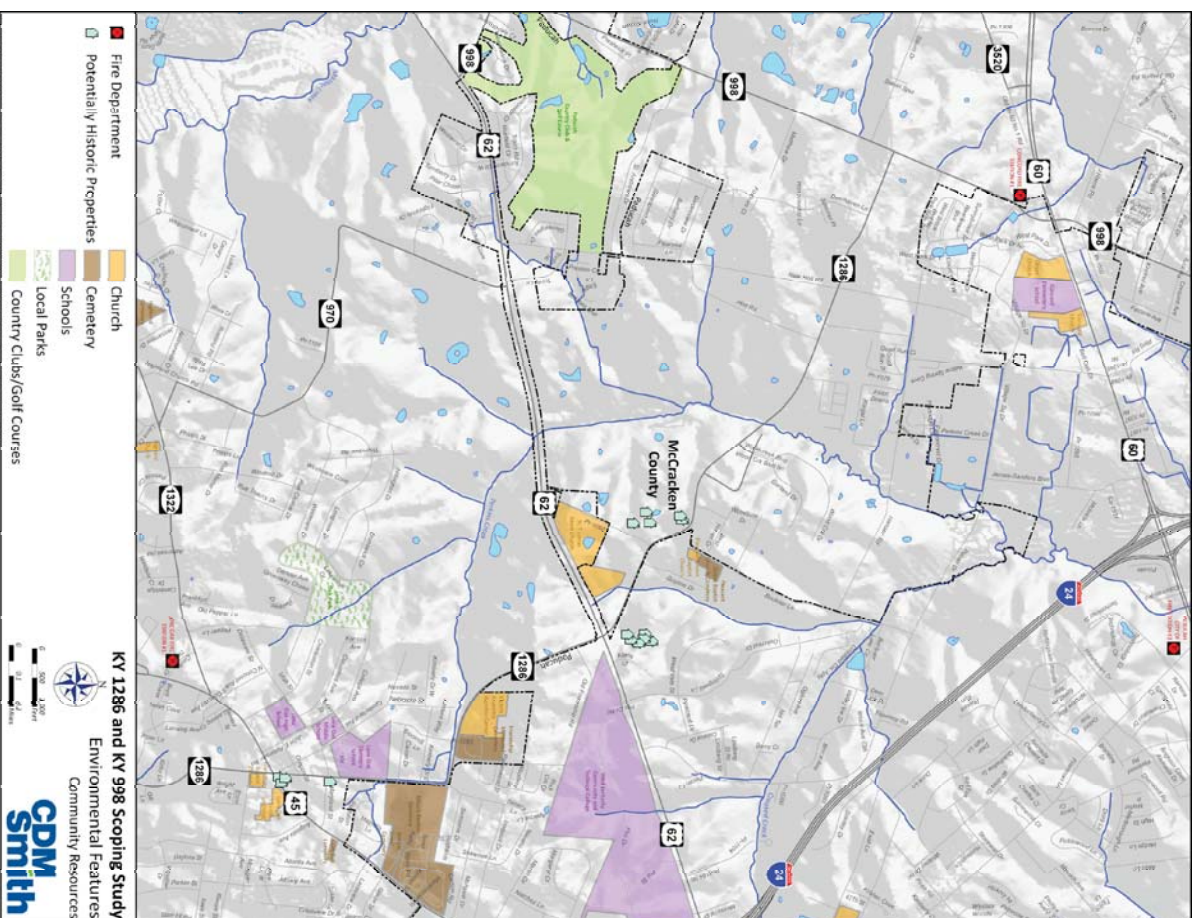
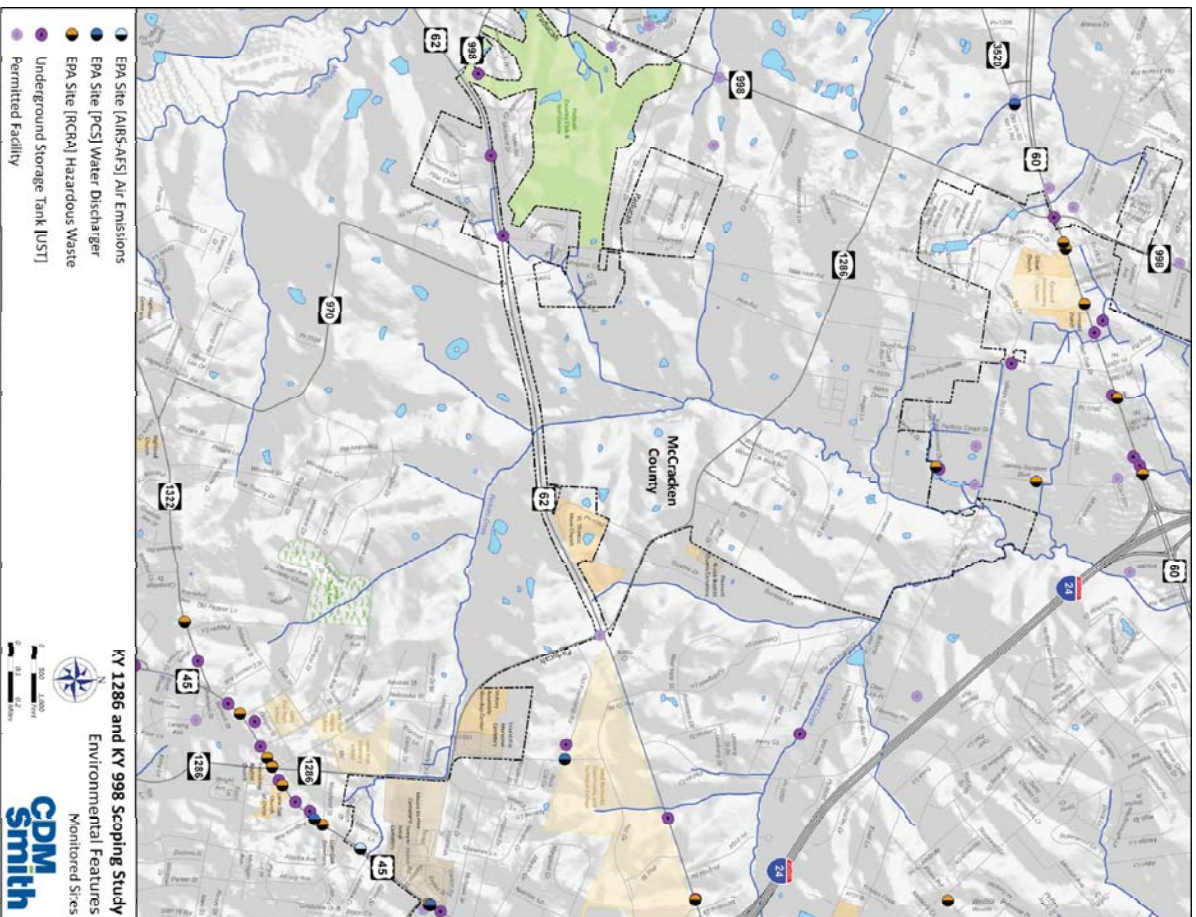
- Existing (2013) traffic volumes along the corridor range from 4,910-8,910 vehicles per day.
- KY 1286 & KY 998 are used as a cut through route between US 45, US 62 and US 60 and provides access to Kentucky Oaks Mall and a number of other commercial establishments adjacent to US 60, near New Holt Road.
- The future Consolidated McCracken County High School will also be located along the US 60 corridor west of KY 998. Some school traffic will use the study corridor.

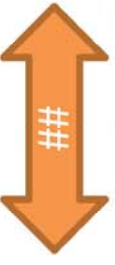
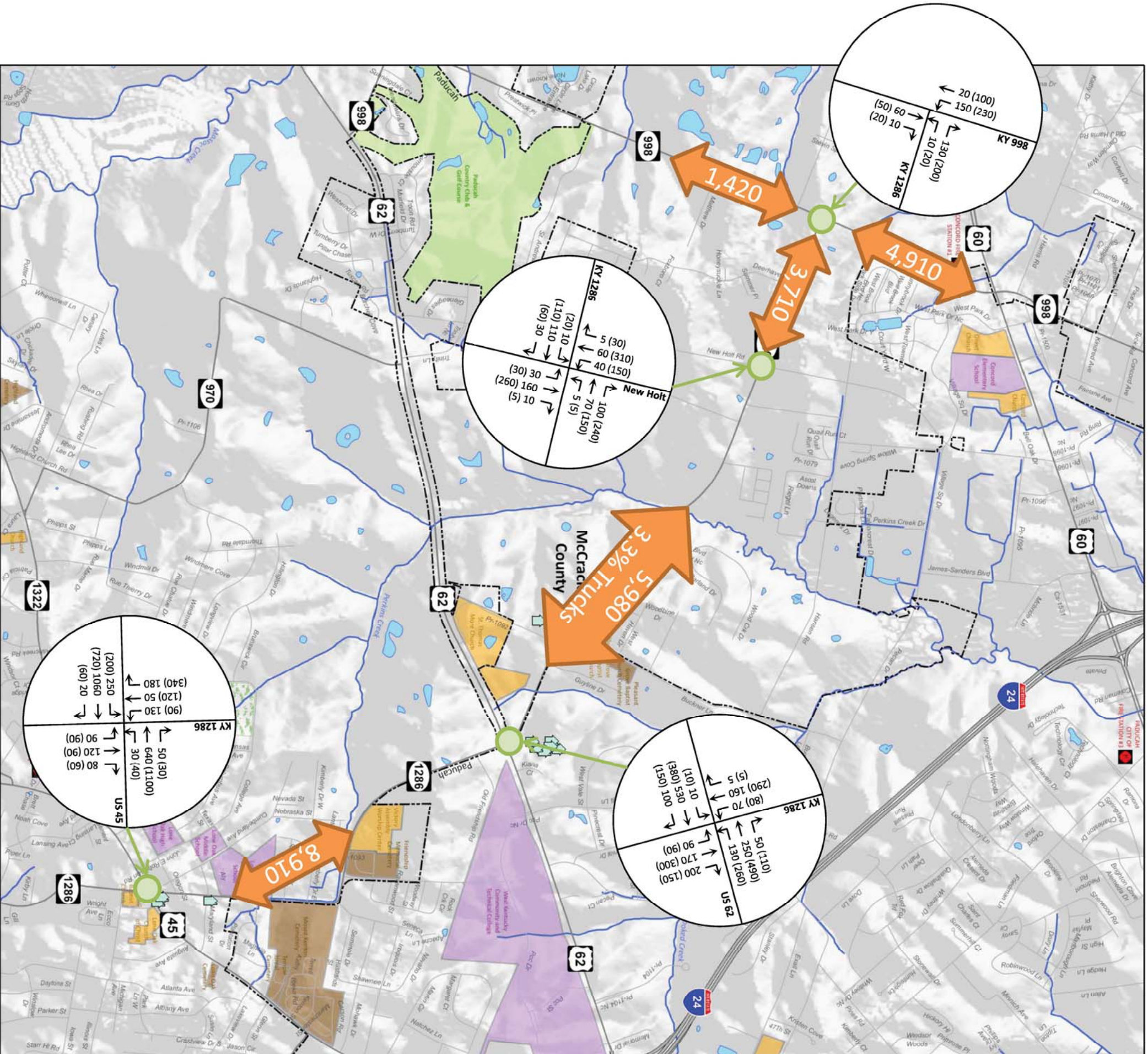
Other Goals for the Project:

The project should also minimize impacts to the human and natural environment, accommodate bicyclists and pedestrians where appropriate, ensure any improvement can handle traffic from other planned improvements (like the Consolidated High School and Paducah Outer Loop), and have a consistent design speed.



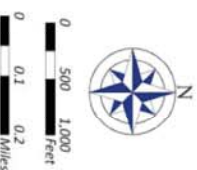
ENVIRONMENTAL FEATURES & RESOURCES





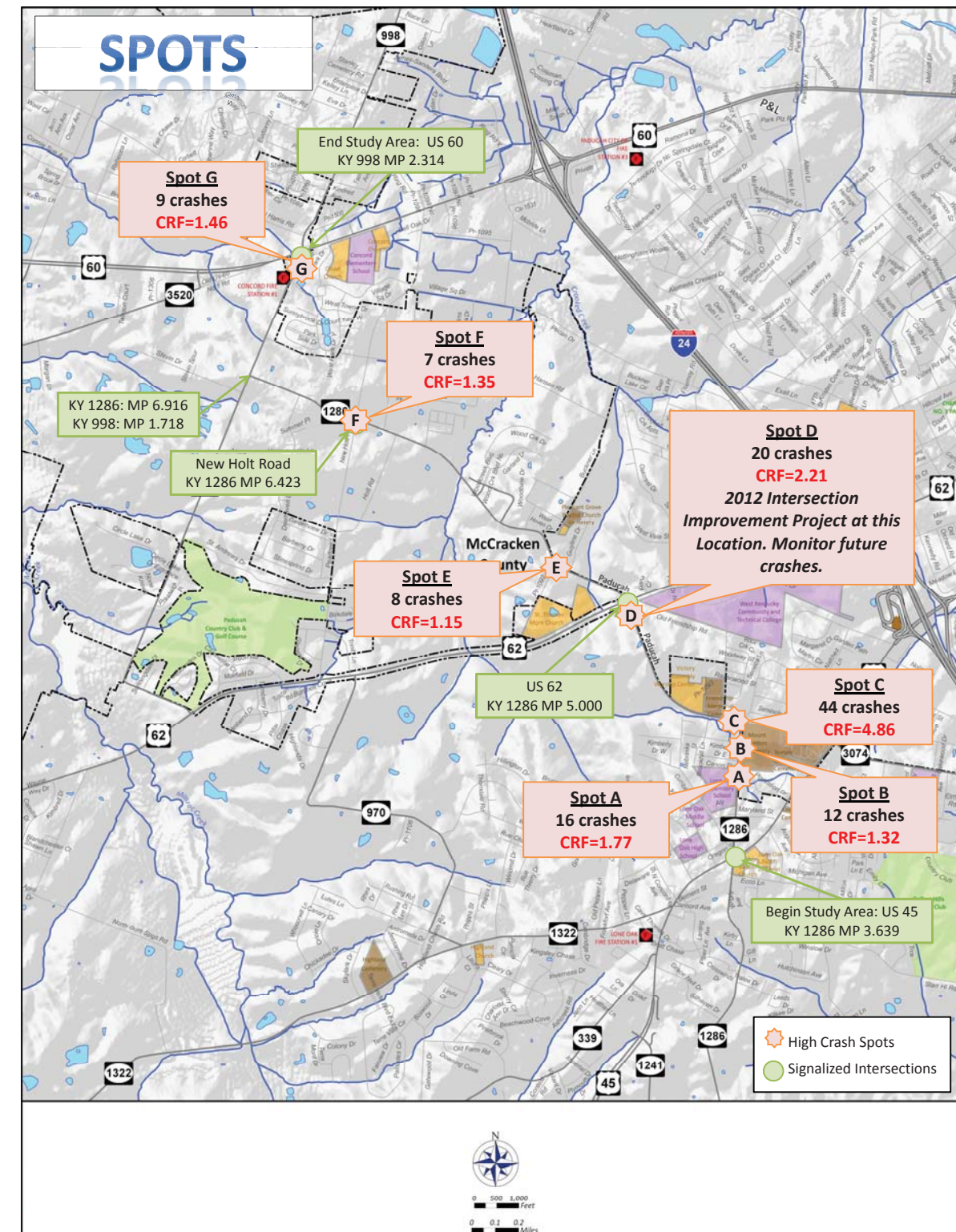
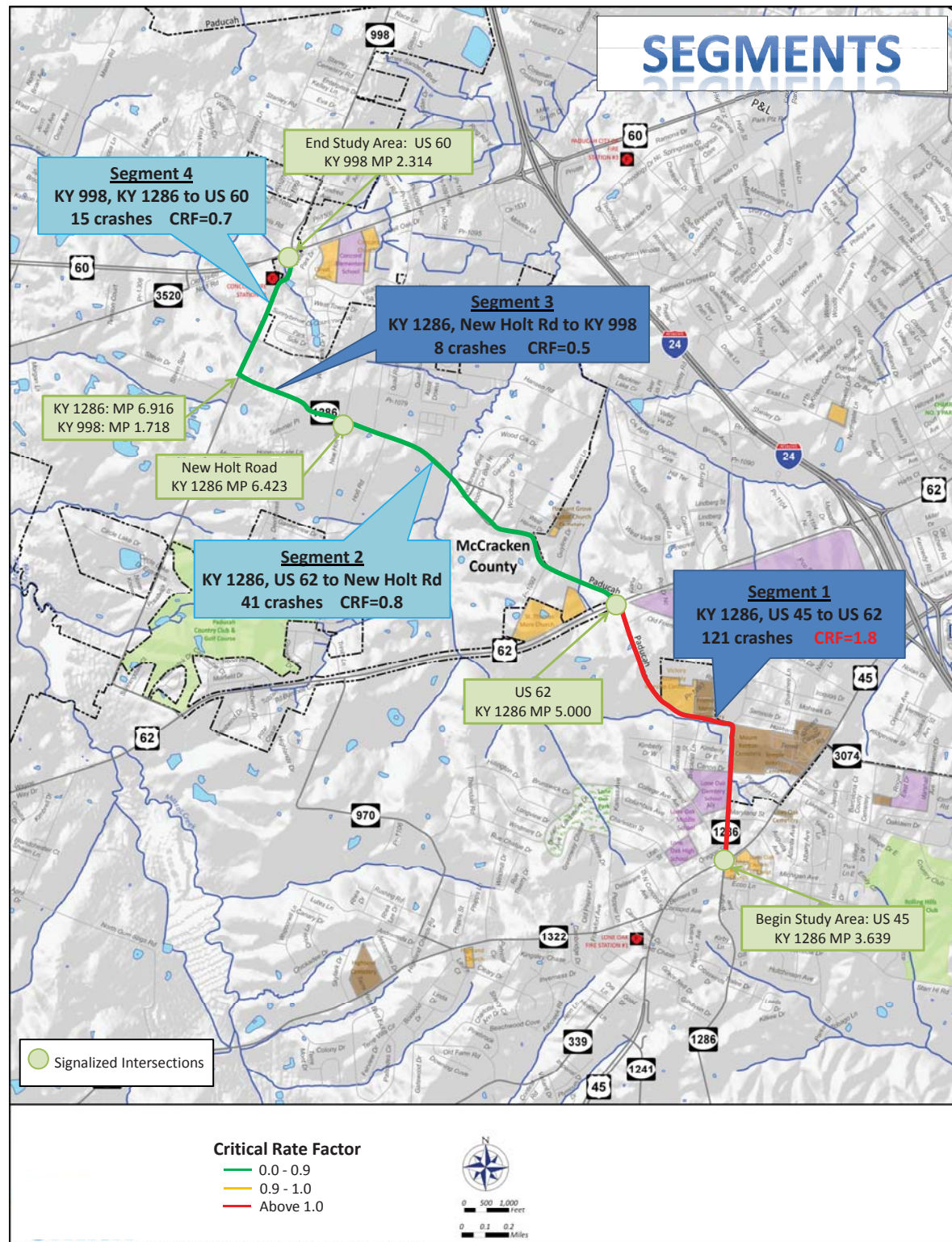
Average Daily Traffic
AM (PM) Peak Hour

2013 Traffic Volumes
KY 1286/KY 998 Planning Study
McCracken County, KY
Item # 1-153.00



REPORTED HIGHWAY CRASH STATISTICS

November 2008- October 2012



Spot A: CRF = 1.77
16 crashes (4 injury)

By Type:
Angle = 4
Backing = 0
Head On = 0
Rear End = 9
Sideswipe = 1
Single Vehicle = 2

Spot B: CRF = 1.32
12 crashes (3 injury)

By Type:
Angle = 0
Backing = 0
Head On = 1
Rear End = 9
Sideswipe = 1
Single Vehicle = 1

Spot C: CRF = 4.86
44 crashes (15 injury)

By Type:
Angle = 6
Backing = 0
Head On = 1
Rear End = 3
Sideswipe = 3
Single Vehicle = 31

Spot D: CRF = 2.21
20 crashes (5 injury)

By Type:
Angle = 2
Backing = 0
Head On = 0
Rear End = 17
Sideswipe = 1
Single Vehicle = 0

Spot E: CRF = 1.15
8 crashes (1 injury)

By Type:
Angle = 0
Backing = 0
Head On = 0
Rear End = 2
Sideswipe = 0
Single Vehicle = 6

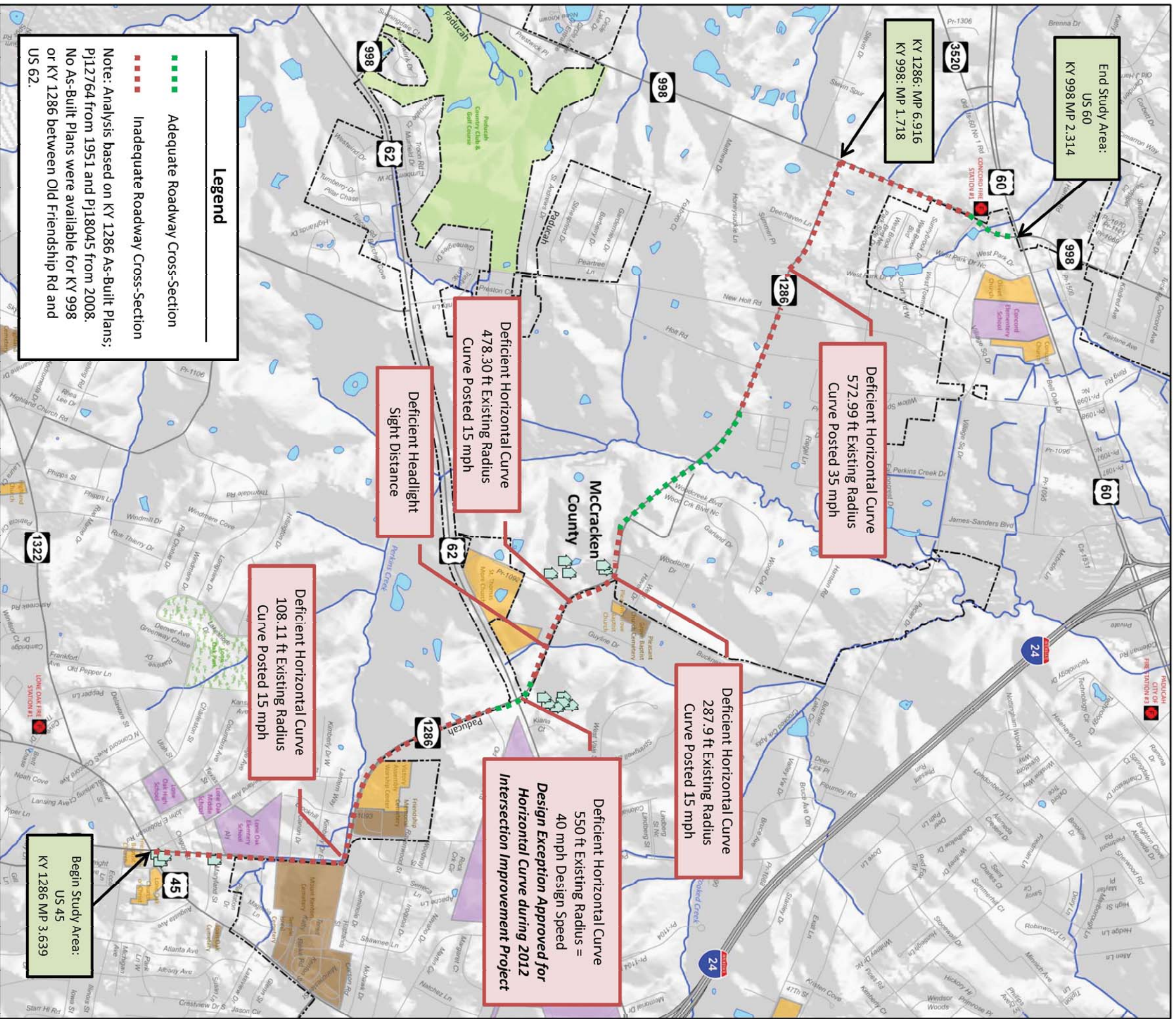
Spot F: CRF = 1.35
7 crashes (3 injury)

By Type:
Angle = 2
Backing = 0
Head On = 1
Rear End = 2
Sideswipe = 0
Single Vehicle = 2

Spot G: CRF = 1.46
9 crashes (2 injury)

By Type:
Angle = 3
Backing = 1
Head On = 0
Rear End = 2
Sideswipe = 2
Single Vehicle = 1

The analysis looks at 1/10-mile "Spots" and varying length "Segments" where crashes occur. Each spot or segment is assigned a Critical Rate Factor (CRF). A CRF greater than 1.0 indicates a possible safety concern.



Legend

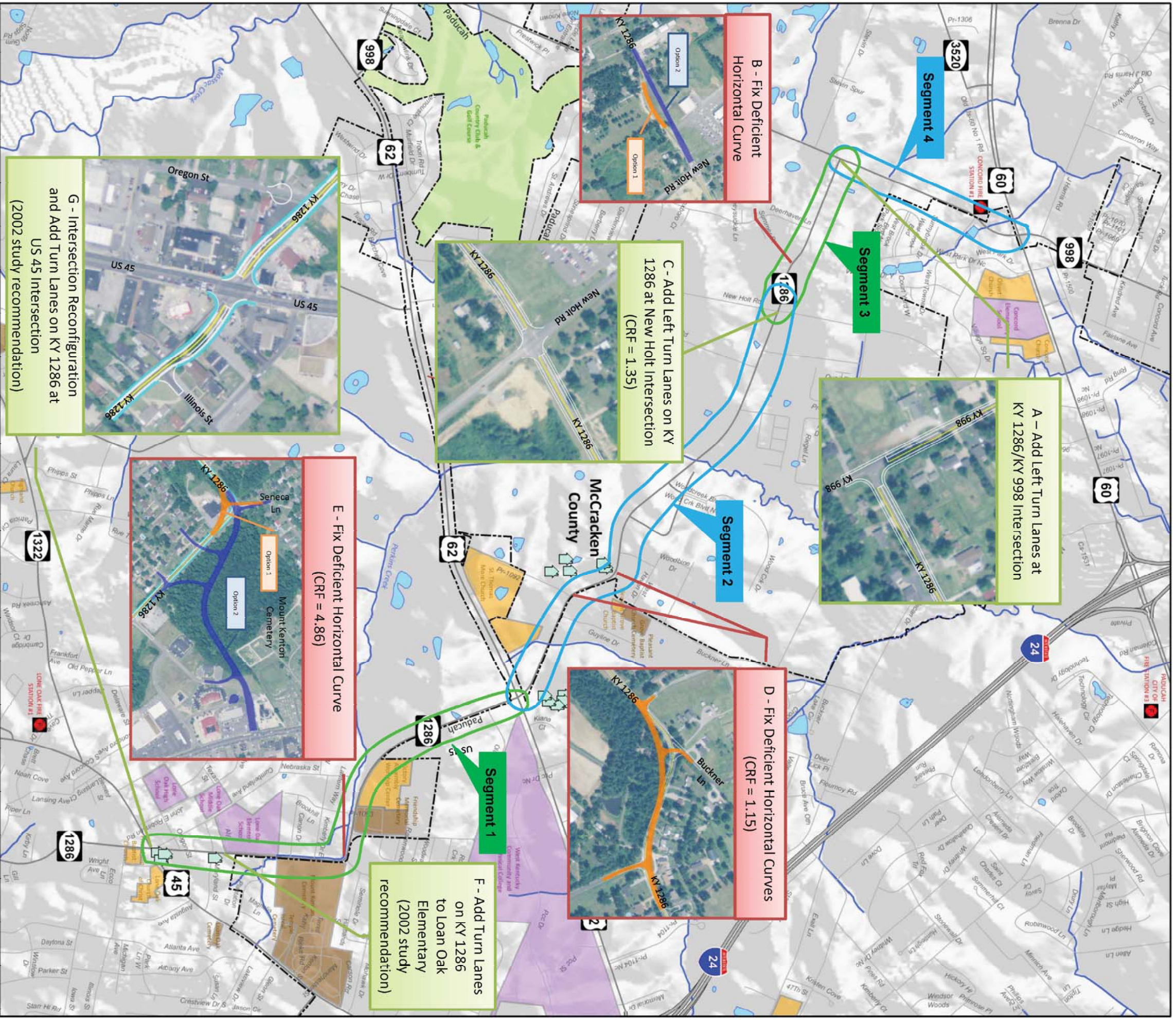
- Adequate Roadway Cross-Section
- Inadequate Roadway Cross-Section

Note: Analysis based on KY 1286 As-Built Plans; PJ12764 from 1951 and PJ18045 from 2008. No As-Built Plans were available for KY 998 or KY 1286 between Old Friendship Rd and US 62.

- Fire Department
- Church
- Cemetery
- Schools
- Local Parks
- Country Clubs/Golf Courses
- Potentially Historic Properties

Deficient Roadway Geometrics

KY 1286/KY 998 Planning Study
 McCracken County, KY
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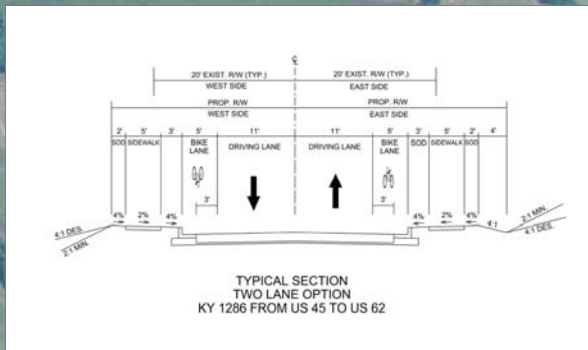
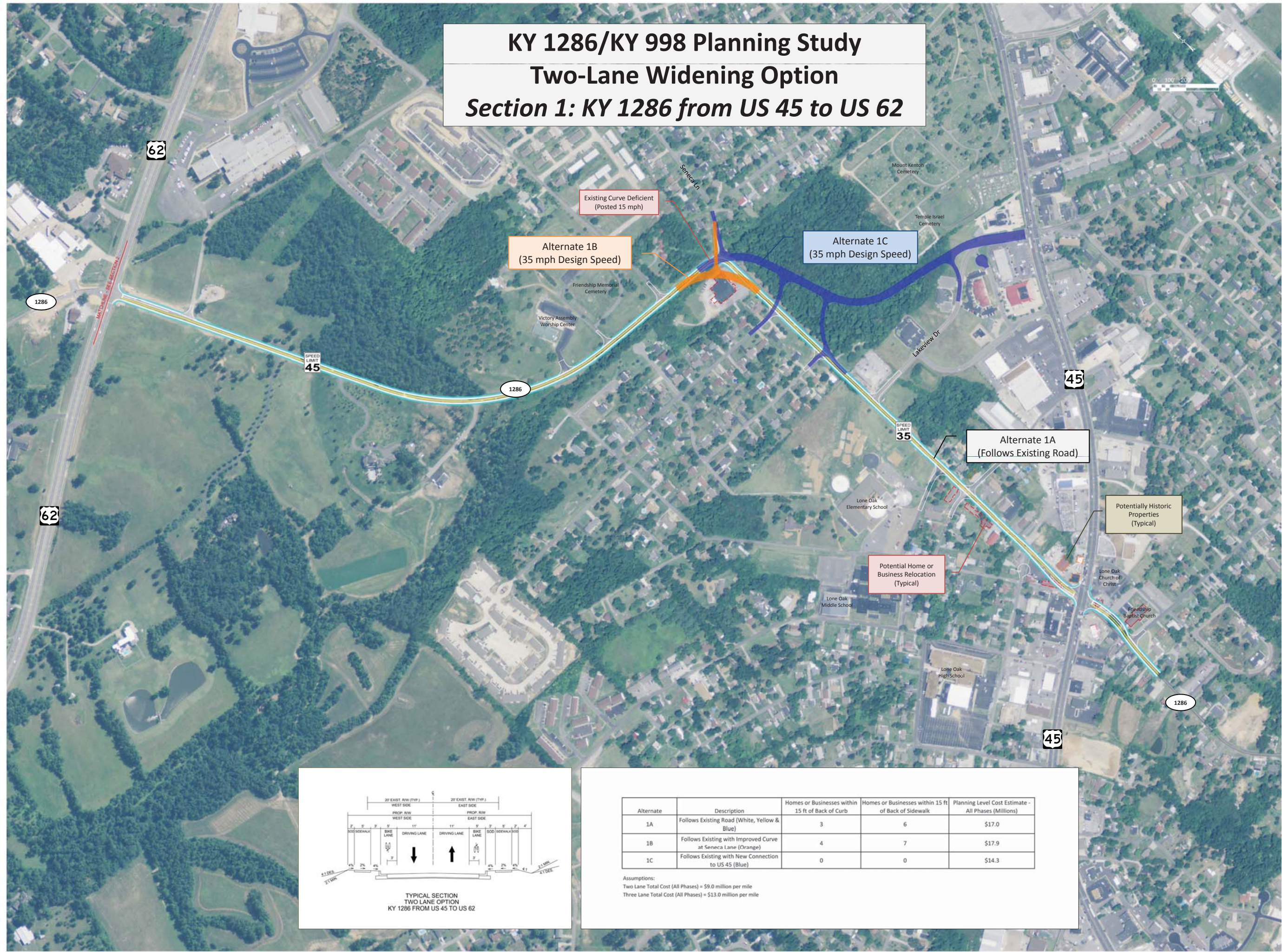
- Fix Horizontal Curve
- Intersection Improvement

Proposed Spot Improvements
KY 1286/KY 998 Planning Study
McCracken County, KY
Item # 1-153.00

KY 1286/KY 998 Planning Study

Two-Lane Widening Option

Section 1: KY 1286 from US 45 to US 62



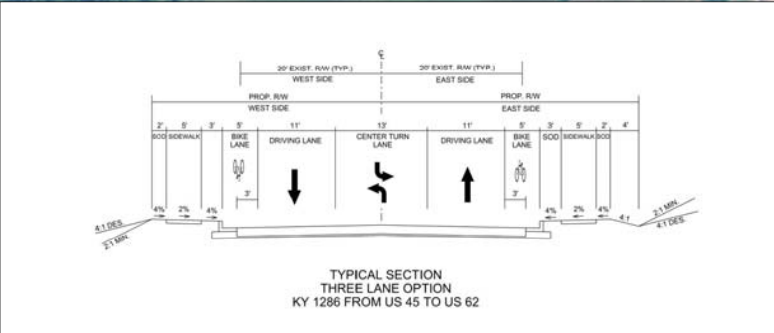
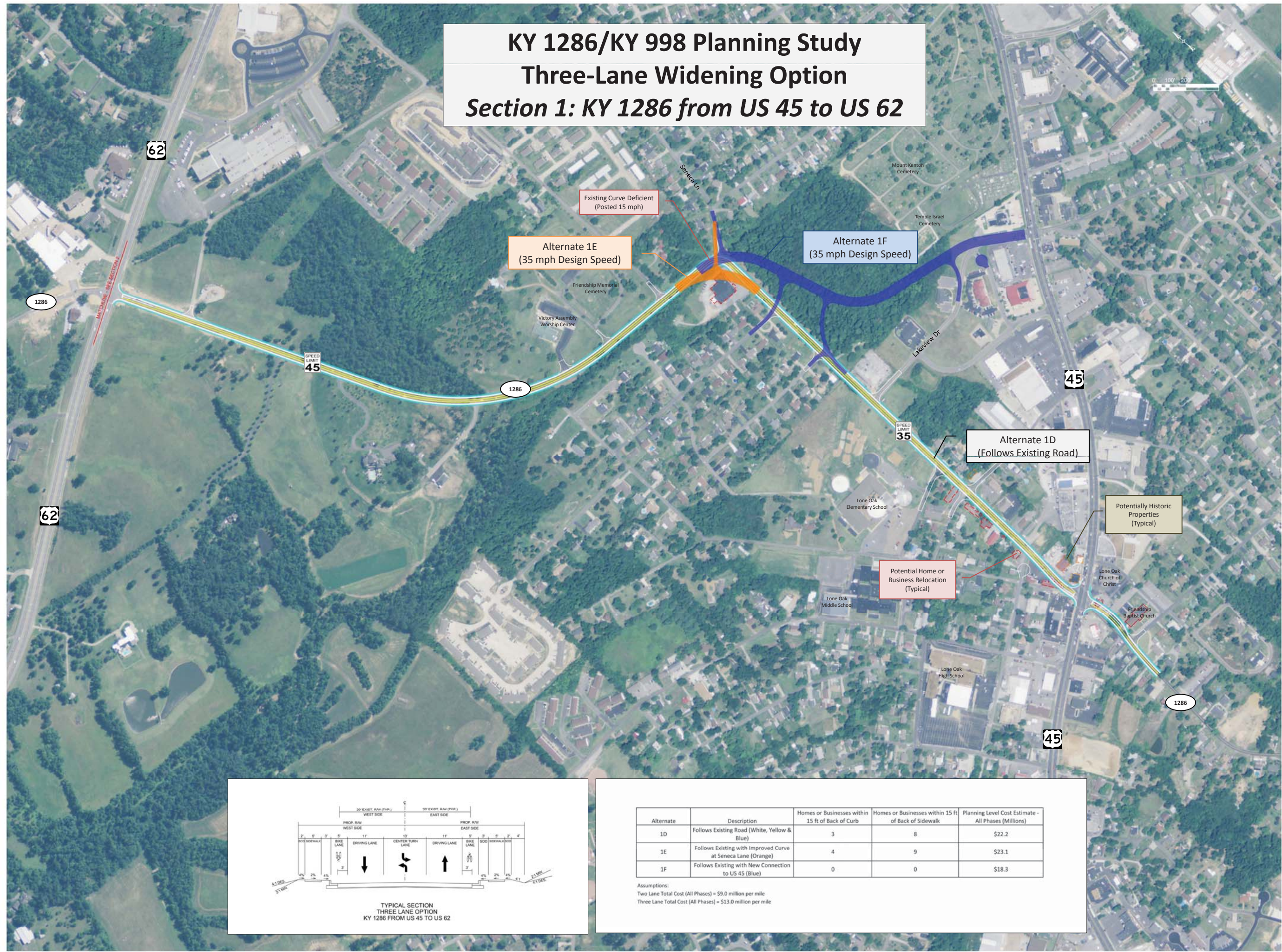
Alternate	Description	Homes or Businesses within 15 ft of Back of Curb	Homes or Businesses within 15 ft of Back of Sidewalk	Planning Level Cost Estimate - All Phases (Millions)
1A	Follows Existing Road (White, Yellow & Blue)	3	6	\$17.0
1B	Follows Existing with Improved Curve at Seneca Lane (Orange)	4	7	\$17.9
1C	Follows Existing with New Connection to US 45 (Blue)	0	0	\$14.3

Assumptions:
 Two Lane Total Cost (All Phases) = \$9.0 million per mile
 Three Lane Total Cost (All Phases) = \$13.0 million per mile

KY 1286/KY 998 Planning Study

Three-Lane Widening Option

Section 1: KY 1286 from US 45 to US 62



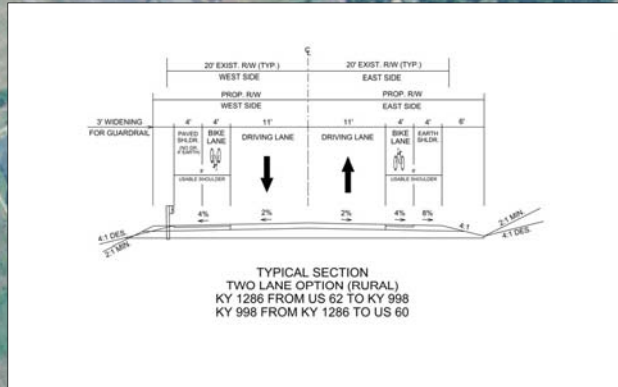
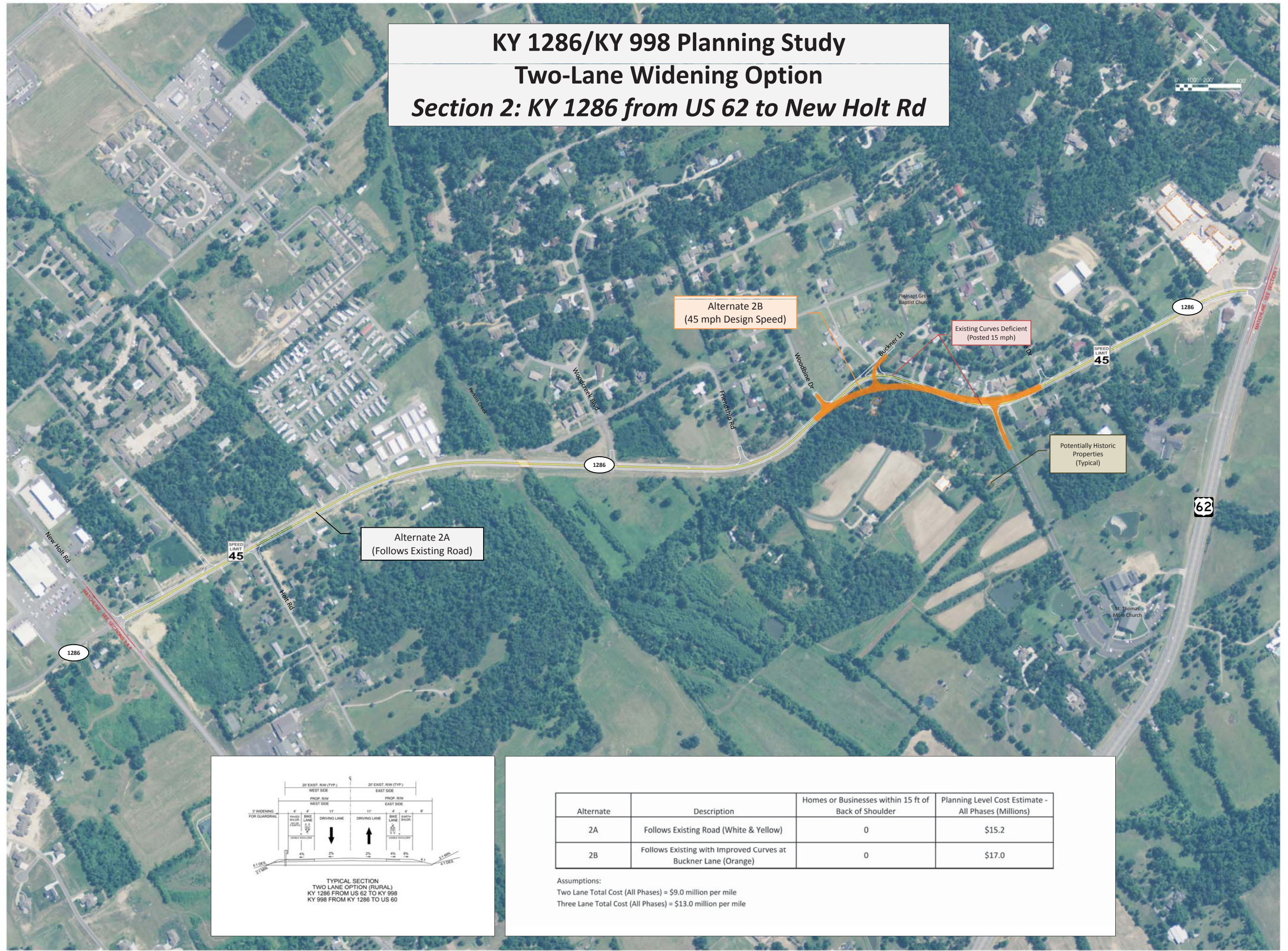
Alternate	Description	Homes or Businesses within 15 ft of Back of Curb	Homes or Businesses within 15 ft of Back of Sidewalk	Planning Level Cost Estimate - All Phases (Millions)
1D	Follows Existing Road (White, Yellow & Blue)	3	8	\$22.2
1E	Follows Existing with Improved Curve at Seneca Lane (Orange)	4	9	\$23.1
1F	Follows Existing with New Connection to US 45 (Blue)	0	0	\$18.3

Assumptions:
 Two Lane Total Cost (All Phases) = \$9.0 million per mile
 Three Lane Total Cost (All Phases) = \$13.0 million per mile

KY 1286/KY 998 Planning Study

Two-Lane Widening Option

Section 2: KY 1286 from US 62 to New Holt Rd



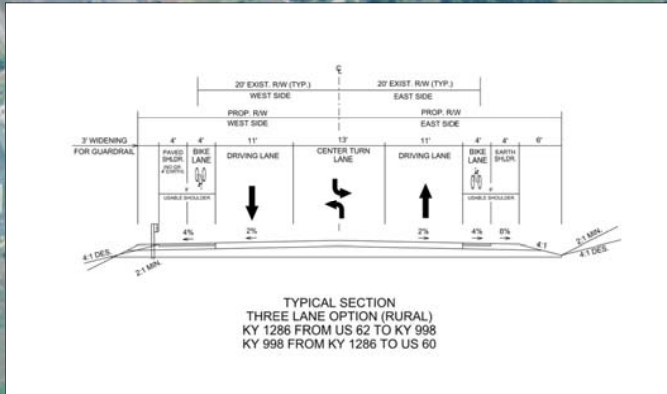
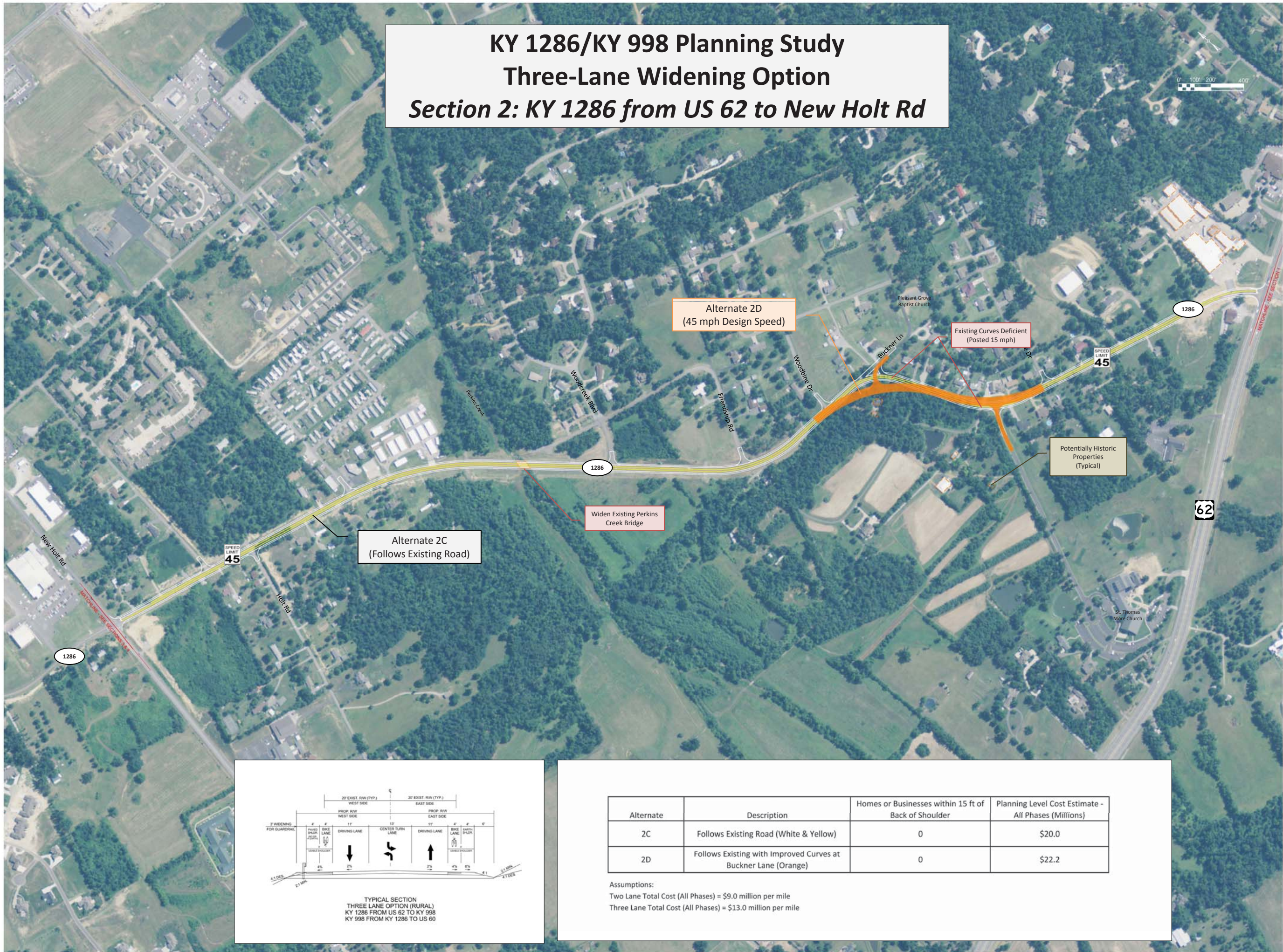
Alternate	Description	Homes or Businesses within 15 ft of Back of Shoulder	Planning Level Cost Estimate - All Phases (Millions)
2A	Follows Existing Road (White & Yellow)	0	\$15.2
2B	Follows Existing with Improved Curves at Buckner Lane (Orange)	0	\$17.0

Assumptions:
 Two Lane Total Cost (All Phases) = \$9.0 million per mile
 Three Lane Total Cost (All Phases) = \$13.0 million per mile

KY 1286/KY 998 Planning Study

Three-Lane Widening Option

Section 2: KY 1286 from US 62 to New Holt Rd



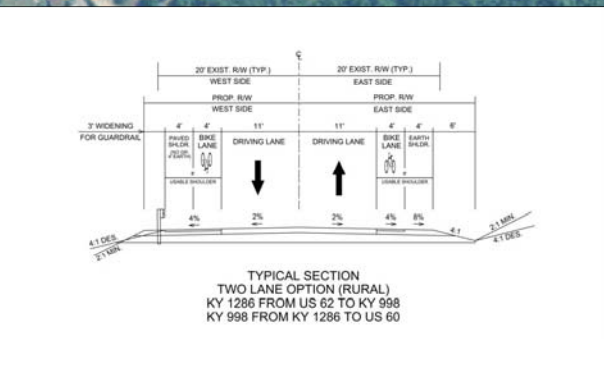
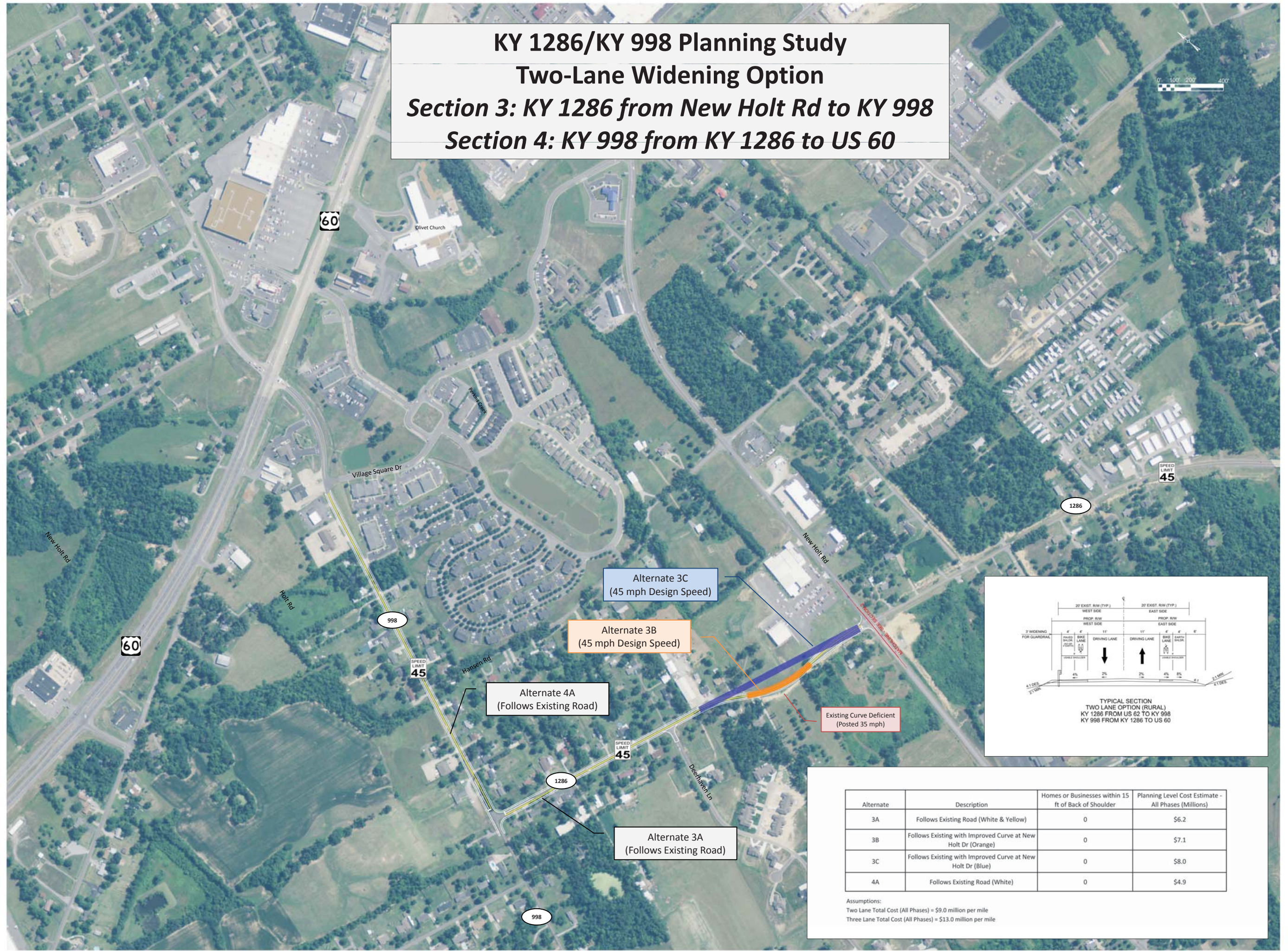
Alternate	Description	Homes or Businesses within 15 ft of Back of Shoulder	Planning Level Cost Estimate - All Phases (Millions)
2C	Follows Existing Road (White & Yellow)	0	\$20.0
2D	Follows Existing with Improved Curves at Buckner Lane (Orange)	0	\$22.2

Assumptions:
 Two Lane Total Cost (All Phases) = \$9.0 million per mile
 Three Lane Total Cost (All Phases) = \$13.0 million per mile

KY 1286/KY 998 Planning Study

Two-Lane Widening Option

Section 3: KY 1286 from New Holt Rd to KY 998
Section 4: KY 998 from KY 1286 to US 60



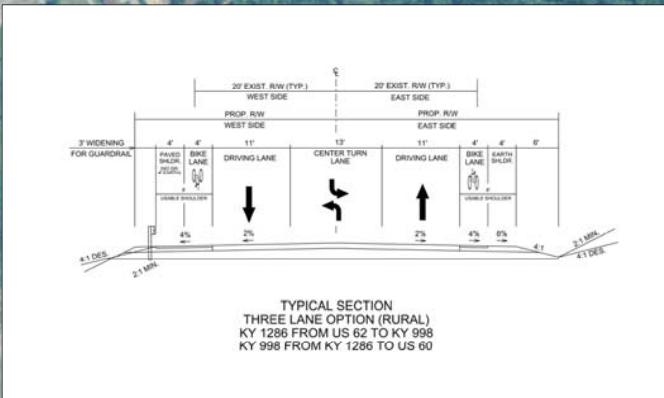
Alternate	Description	Homes or Businesses within 15 ft of Back of Shoulder	Planning Level Cost Estimate - All Phases (Millions)
3A	Follows Existing Road (White & Yellow)	0	\$6.2
3B	Follows Existing with Improved Curve at New Holt Dr (Orange)	0	\$7.1
3C	Follows Existing with Improved Curve at New Holt Dr (Blue)	0	\$8.0
4A	Follows Existing Road (White)	0	\$4.9

Assumptions:
 Two Lane Total Cost (All Phases) = \$9.0 million per mile
 Three Lane Total Cost (All Phases) = \$13.0 million per mile

KY 1286/KY 998 Planning Study

Three-Lane Widening Option

Section 3: KY 1286 from New Holt Rd to KY 998
Section 4: KY 998 from KY 1286 to US 60



Alternate	Description	Homes or Businesses within 15 ft of Back of Shoulder	Planning Level Cost Estimate - All Phases (Millions)
3D	Follows Existing Road (White & Yellow)	0	\$7.4
3E	Follows Existing with Improved Curve at New Holt Dr (Orange)	0	\$8.7
3F	Follows Existing with Improved Curve at New Holt Dr (Blue)	0	\$10.0
4B	Follows Existing Road (White)	0	\$7.8

Assumptions:
 Two Lane Total Cost (All Phases) = \$9.0 million per mile
 Three Lane Total Cost (All Phases) = \$13.0 million per mile