

HARRODSBURG NORTHWEST BYPASS

MERCER COUNTY

Item Number: 07-8344.00

FINAL REPORT

JULY 2009

ALTERNATIVES PLANNING STUDY



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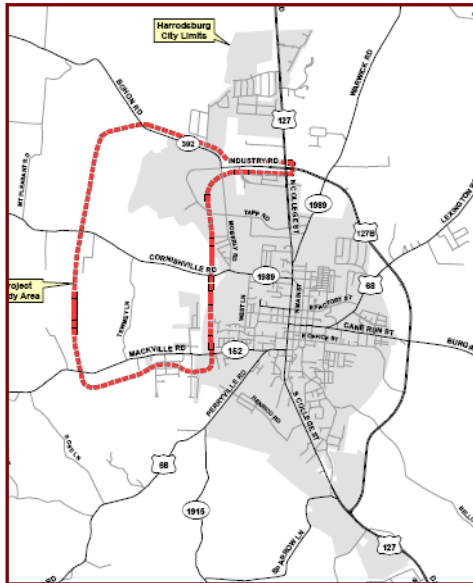
Harrodsburg

Northwest Bypass Alternatives Study

Final Report

Item No. 7-8344.00

Mercer County, Kentucky



Prepared for:

Kentucky Transportation Cabinet
Division of Planning
and
District-7, Lexington, Kentucky



Prepared by:



July 2009

TABLE OF CONTENTS

EXECUTIVE SUMMARY	ES-1
1.0 INTRODUCTION	1
1.1 Background	1
1.2 Project Location and Study Area	2
1.3 Study Process	2
2.0 STUDY ISSUES AND GOALS	4
2.1 Project Issues	4
2.2 Project Goals	5
3.0 EXISTING AND FUTURE NO-BUILD CONDITIONS	6
3.1 Highway and Traffic Characteristics	6
3.2 Existing and Projected No-Build Traffic Data	7
3.3 Crash Analysis	9
4.0 HUMAN ENVIRONMENT OVERVIEW	13
4.1 Environmental Justice	13
4.2 Hazardous Waste	13
4.3 Previously Documented Cultural Historic and Archeological Sites	14
4.4 Land Use and Zoning	15
5.0 NATURAL ENVIRONMENT OVERVIEW	17
5.1 Aquatic Ecology	17
5.2 Terrestrial Ecology, and Threatened and Endangered Species	18
5.3 Karst Areas	19
5.4 Special Designation Lands	20
6.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION	21
6.1 Public Involvement Program Summary	21
6.2 Agency Coordination	21
7.0 ALTERNATIVES DEVELOPMENT AND EVALUATION	24
7.1 Alternative Development	24
7.2 Identification of Recommendations	30
7.3 Projected Traffic Volumes and Levels of Service with Recommended Projects	31
8.0 RECOMMENDATIONS	33

APPENDICES

Appendix A	Exhibits
	Exhibit 1: Existing and Projected No-Build Traffic, Functional Class, and Crashes
	Exhibit 2: 2006 Aerial Photography Environmental Footprint
	Exhibit 3: USGS Topographic Environmental Footprint
	Exhibit 4: Other Northwest Quadrant Options
	Exhibit 5: 2030 Build Alternative, Level of Service and Average Daily Traffic
	Exhibit 6: Recommended Projects
Appendix B	Photo Log
Appendix C	Environmental Justice Report
Appendix D	HAZMAT Report
Appendix E	Cultural Historic and Archaeological Overview Reports
Appendix F	Ecological Overview and USFWS 2008 ETC Species List
Appendix G	Meeting Minutes and Summaries
Appendix H	Resource Agency Coordination Correspondence
Appendix I	Initial Northwest Bypass Alternatives

TABLES

Table ES-1	High Crash Segments and Spots	ES-5
Table 1	Northwest Harrodsburg Roadway Characteristics	7
Table 2	Existing and Projected No-Build Traffic Volume Comparison	8
Table 3	Corridor/Segment Crash Analysis	10
Table 4	Crash Patterns for Problem Spots and Segments in Study Area	12
Table 5	Demographic Characteristics of Study Area	13
Table 6	Cost Estimates—Alternative Bypass Concepts	27
Table 7	Cost Estimates—Other Improvement Concepts	29
Table 8	Existing and Projected (Year 2030) Traffic Volume and Level of Service Comparison	32
Table 9	Cost Estimates—Recommended Improvements	34
Table 10	Goal Satisfaction of Improvements Considered	35
Table 11	Other Metrics of Improvements Considered	36

FIGURES

Figure ES-1	Study Area Scenes	ES-1
Figure ES-2	Project Location—City of Harrodsburg, Mercer County, Kentucky	ES-3
Figure ES-3	Looking East Toward US 127 at the Junction of US 68 (Perryville Street) and KY 152 (Mooreland Avenue)	ES-4
Figure ES-4	New Mercer County High School Seen From Moberly Road	ES-6
Figure ES-5	(Top) Conceptual Alignments Drawn by Stakeholders, Public. (Bottom) Alternatives Developed from Conceptual Drawings	ES-7
Figure ES-6	Recommended Projects	ES-9
Figure 1	(Top) Salt River Bridge. (Bottom) Norfolk-Southern Railroad Track	1
Figure 2	Project Location—City of Harrodsburg, Mercer County, Kentucky	3
Figure 3	Looking East Toward US 127 at the Junction of US 68 and KY 152	4
Figure 4	Future Land Use Plan, City of Harrodsburg, Kentucky	16
Figure 5	Salt River Near Confluence With Town Creek	17
Figure 6	Town Creek West of Water Treatment Facility	17
Figure 7	Bypass Corridors Suggested by the Public	24
Figure 8	Bypass Alternatives Recommended for Consideration, With Projected (Year 2030) Average Daily Traffic North and South of KY 1989 (Cornishville Road)	25
Figure 9	Possible Location, Moberly Road Extension	27
Figure 10	Existing Moberly Road Between KY 390 and KY 1989	28
Figure 11	Broadway Looking West from Hill Street	28
Figure 12	Moberly Road / KY 1989 Intersection	28
Figure 13	Moberly Road/Industry Road Intersection, Looking East	28



Figure ES-1: Study Area Scenes:

- Harrodsburg Water Tower and Mercer County High School.
- Cornishville Road at Norfolk-Southern RR Crossing.
- KY 1989 Westbound.
- US 68/KY 152 Intersection.

EXECUTIVE SUMMARY

Study Background and Purpose

The initial purpose of the *Harrodsburg Northwest Bypass Alternatives Study* was to examine possible corridors for a new northwest Harrodsburg bypass in Mercer County, Kentucky. The potential northwest bypass was to extend from US 127 at its northern junction with the existing eastern Harrodsburg bypass (US 127B) to KY 152 west of the city. During the development of this study, alternatives to the bypass were identified that, unlike the bypass concept, had substantial public support. The options were refined through a comprehensive stakeholder/public involvement effort, and now form the basis for the course of action recommended herein. The evolution of the initial bypass study and the recommendations resulting from the advancement of alternative concepts are the subject of this document.

In 1991, the Kentucky Transportation Cabinet (KYTC) completed a *Harrodsburg Bypass Advanced Planning Study* that recommended constructing a bypass on the east side of the city. In 2001 a bypass was constructed on the east side of Harrodsburg (from US 127 south of Harrodsburg to US 127 north of Harrodsburg). Presently, KYTC is considering the west side, and focusing on the northwest quadrant because of the perceived lack of roadway connectivity in this area of Harrodsburg.

There is a mix of land uses in the area, and several industries and school facilities in the northwest generate and attract large volumes of traffic, including heavy trucks and school busses. The Salt River and a Norfolk-Southern (NS) rail line bisect the area and would be crossed by any proposed alignment. The Mercer County-Harrodsburg 2004 *Comprehensive Plan* designated this portion of the county as a growth area, and the proximity to the railroad could encourage future industrial growth in this designated area.

Figure ES-1 shows examples of land uses in the project area. Figure ES-2 shows the project location and study area boundaries.

A new road in this area could offer several travel benefits, including the following:

- Facilitating travel from the western portion of Mercer County to US 127 north (toward Lawrenceburg and the Martha Layne Collins Bluegrass Parkway) by providing an alternative to the congested US 127 through Harrodsburg.
- Avoiding the at-grade Norfolk-Southern railroad crossing on US 127, where 26 trains per day contribute to congestion and delay.
- Improving access to/from industrial areas and schools in the northern part.

Study Location and Limits

The Northwest Bypass study area, shown in Figure ES-2, includes the northwestern quadrant of Harrodsburg, beginning at KY 152 in the south and extending north and then east to US 127, a distance of about 3.0 miles. The study area ends at the existing northern US 127/US 127 Bypass intersection. The study area is approximately 1.4 miles wide and about 3.6 square miles in size.

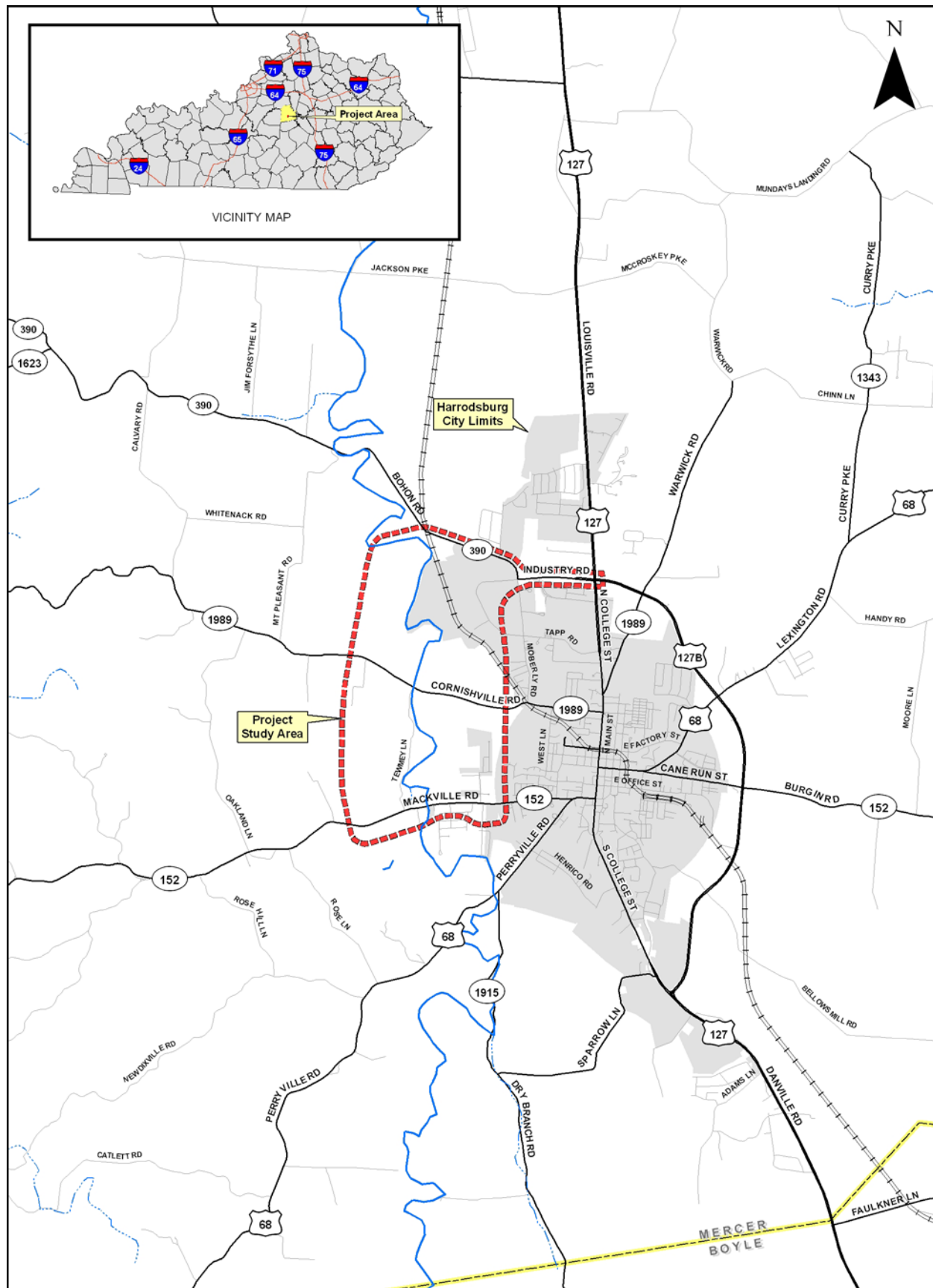


Figure ES-2: Project Location—City of Harrodsburg, Mercer County, Kentucky.

Conditions Analysis¹

Year 2008 traffic data for the study area reveals that College Street is the most heavily travelled of these facilities with a traffic volume of approximately 20,800 vehicles per day (vpd) between Mooreland Avenue and Lexington Street—more than double the average daily traffic volume (ADT) on the existing Eastern Bypass, US 127B (9,700 vpd). On US 127 between KY 1989 and KY 390, the traffic volume was approximately 13,500 vpd, while the section of US 127 between US 68 (Lexington Street) and KY 1989 carried approximately 14,700 vpd. KY 152 carried 5,200 vpd east of Tewmeyer Lane and approximately 2,470 vpd west of that point. KY 390 served nearly 4,660 vpd between Moberly Road and US 127; while west of Moberly Road it carried 1,430 vpd. KY 1989 carried 1,680 vpd from Moberly Road westward and 3,500 vpd from Moberly Road eastward to US 127. KY 152 westward from approximately 0.3 mile west of its intersection with US 68 (see Figure ES-3), KY 1989, and KY 390 west of Moberly Road do not have adequate roadway widths to handle the existing traffic volumes. Exhibit 1 shows the existing traffic counts on these and other sections of roads within the study area.



Figure ES-3: Looking East Toward US 127 at the Junction of US 68 (Perryville Street) and KY 152 (Mooreland Avenue).

KYTC provided crash data for a five-year period from January 1, 2004, through December 31, 2008. US 127 (N. College Street) from US 68 (W. Lexington Street) north to the KY 390 (Industry Road)/US 127B intersection) has a critically high crash rate. The Critical Crash Rate Factors (CCRF) range from 1.10 to 4.72, with the worst section extending from the US 127/US 68 (W. Lexington Street) intersection northward approximately 0.3 mile.

As summarized in Table ES-1, below, two segments and a total of twelve spot locations within the segments analyzed are high crash locations.

¹ Through Harrodsburg, all U.S. and state highways have local names and, among these, several have more than one name/route designation. The following road names are referenced in this study: **US 127** is *South College Street* south of US 68 (Mooreland Avenue) and *North College Street* north of Lexington Street; between Mooreland Avenue and Lexington Street, College Street is officially US 68 for data purposes, not US 127, in accordance with KYTC route numbering conventions; **KY 390** is *Bohon Road* from the intersection of Industry Road and Moberly Road west, and is *Industry Road* from that intersection eastward; **KY 152** is *Mackville Road* from Shewmaker Lane southwestward and *Mooreland Avenue* eastward to US 68. At its juncture with US 68 (see below), Mooreland Avenue becomes US 68. **KY 1989** is *Cornishville Road* west of Moberly Road and *Cornishville Street* east of that road to US 127 (N. College Street); and **US 68** has several names, as follows:

- From the southwest heading northeast: *Perryville Street* from Henrico Road to Mooreland Avenue (KY 152); and *Mooreland Avenue* to US 127 (S. College Street).
- Turning northward: *South College Street* to West Lexington Street.
- Turning eastward: *West Lexington Street* from College Street to North Main Street; *East Lexington Street* beyond.

For ease of reference, U.S. and state highways are identified by their route numbers only, herein, except where use of both route number and local name would provide more precise locational information (e.g., because of its several name and directional changes, US 68 is usually identified by both its route number and a local name).

Table ES-1: High Crash Segments and Spots

Segment & Spot	Route	Begin MP	End MP	Length (Miles)	Number Lanes	Rural / Urban	ACCIDENTS				Critical Crash Rate Factor
							Fatal	Injury	PDO	Total	
Segment	US 127	4.402	6.071	1.669	3-4	U	0	29	125	154	1.76
Spot	US 127	4.400	4.700	0.300	3	U	0	17	68	85	4.21
Spot	US 127	4.500	4.800	0.300	3	U	0	1	22	23	1.10
Spot	US 127	4.600	4.900	0.300	3	U	0	3	19	22	1.05
Spot	US 127	4.700	5.000	0.300	3-4	U	0	5	23	28	1.30
Spot	US 127	4.800	5.100	0.300	3-4	U	0	6	25	31	1.43
Spot	US 68	6.500	6.800	0.300	3	U	0	2	18	20	1.23
Segment	KY 1989	6.837	9.848	3.011	2	R	0	7	11	18	1.14
Spot	KY 1989	6.800	7.100	0.300	2	R	0	5	4	9	3.23
Spot	KY 1989	6.900	7.200	0.300	2	R	0	3	1	4	1.43
Spot	KY 1989	7.000	7.300	0.300	2	R	0	1	2	3	1.08
Spot	KY 1989	7.600	7.900	0.300	2	R	0	0	3	3	1.04
Spot	KY 1989	8.900	9.200	0.300	2	R	0	2	1	3	1.09
Spot	KY 1989	9.000	9.300	0.300	2	R	0	2	1	3	1.09

	High Crash Locations: Segment
	High Crash Locations: Spot

Source: KYTC crash data, 2005-2007

Project Issues and Goals

The following issues and concerns within the study area were identified for consideration in examining the potential purpose of and need for a bypass facility in northwestern Harrodsburg.

- Several schools and industries are located in the northwest quadrant of Harrodsburg. A new Mercer County High School (shown on Figure ES-4) is now open southwest of the KY 390/Moberly Road junction, approximately one-half mile from the former high school campus that is being renovated as a middle school. This concentration of trip origins and destinations at similar times of the day contributes to traffic congestion in the vicinity.



Figure ES-4: New Mercer County High School Seen From Moberly Road.

- Emergency response travel times to the James B. Haggin Memorial Hospital and to other locations are lengthened by congestion along and west of US 127 (S. College Street) in the vicinity of the hospital). The hospital is located on Linden Avenue, which intersects US 68 (KY 152) just west of US 127.
- The Norfolk Southern railroad runs through Harrodsburg from northwest to southeast. At-grade railroad crossings carry up to 26 trains daily. The unique “diagonal” routing of this rail line results in multi-directional street blockages during passage of these trains.
- Location of any northwest bypass in Harrodsburg should be compatible with possible future extension south of KY 152 and connecting with US 127.

Several project goals were identified, including:

- Improve transportation system connectivity
 - Separate school and industry traffic
 - Reduce emergency response travel time
- Provide grade-separated railroad crossings
- Reduce congestion on area roadways
- Facilitate compatibility with future bypass extension to the south

Alternatives Development and Evaluation

A project team approach was used, consisting of representatives from the KYTC Central Office and District 7, the Bluegrass Area Development District (BGADD), and Qk4. Public involvement activities included Project Team meetings, resource agency coordination, meetings with a Project Advisory Committee consisting of local officials and stakeholders, and public information meetings.

At the first public meeting, held on November 19, 2007, attendees were given large maps and invited to draw conceptual corridors for a northwest bypass. This activity produced seventeen alternatives, many of which overlapped or, for various reasons, were not feasible. (Figure ES-5 shows the conceptual corridors and alternatives developed from them.)

Subsequently, the Project Team consolidated these into four northwest bypass corridor options. However, the public expressed little enthusiasm for a northwest bypass option. Therefore, the Project Team produced several “other” options for possible advancement in lieu of a bypass option. At the second public meeting, on May 12, 2008, the final four bypass options as well as the “other” options were presented to the public. Again, all northwest bypass options were exceedingly unpopular with the public, while much enthusiasm was expressed for some of the other, less expansive options.

Recommendations

In consideration of the existing and projected future transportation system conditions in the northwest quadrant of Harrodsburg; the project goals; the preferences of the KYTC Project Team, the Project Advisory Committee, other local project stakeholders, and the general public; and the desire for a set of fiscally responsible recommendations that would result in the greatest chance of implementation, the following projects are recommended in each of three time-periods.

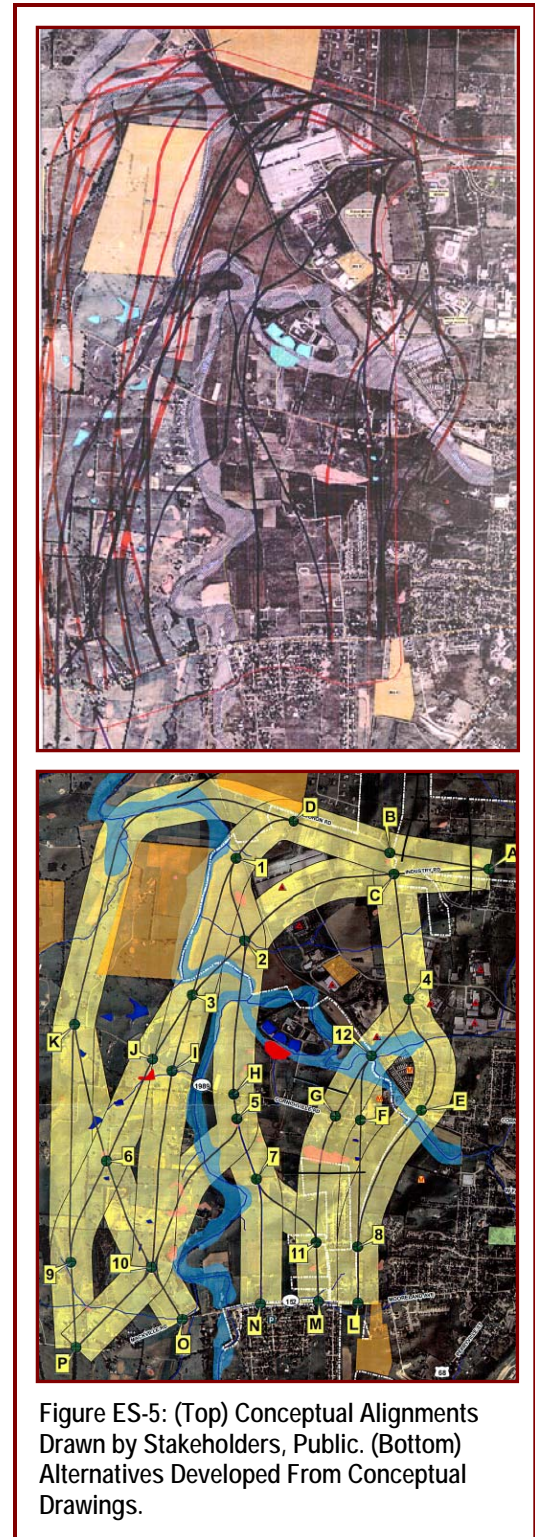


Figure ES-5: (Top) Conceptual Alignments Drawn by Stakeholders, Public. (Bottom) Alternatives Developed From Conceptual Drawings.

SHORT-TERM RECOMMENDATIONS—

Priority 1—Conduct a Small Urban Area (SUA) Study for Harrodsburg.

A SUA study is applicable for municipalities that range in population from 5,000 to 50,000 with the goal of maximizing the current transportation assets on the existing state-controlled route system in and around the municipality.

Priority 2—Intersection Spot Improvements

- Improve Intersections on Moberly Road at KY 390 (Mile Point [MP] 12.844), Tapp Road, and KY 1989 (MP 9.185) to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization. (See Figure ES-6, Project ID #1)

Cost estimate: \$ 245,000

- Reconstruct the intersection of US 68 (MP 6.550)/KY 152 (MP 10.099), to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization. (See Figure ES-6, Project ID #2)

Cost estimate: \$ 1,500,000

(Design \$50,000; ROW \$850,000; Utilities \$100,000; Construction \$500,000)

LONG-TERM (NEXT 5-TO-10 YEAR) RECOMMENDATIONS —

Priority 3—Reconstruct and Extend the Moberly Road Corridor:

- Reconstruct the intersection of Moberly Road/ KY 1989 (MP 9.168–9.185) with an overpass of the Norfolk-Southern RR track. (See Figure ES-6, Project ID #3A)

Cost estimate: \$10,600,000

(Design \$700,000; ROW \$2,200,000; Utilities \$400,000; Construction \$7,300,000)

- Widen Moberly Road between KY 1989 (MP 9.168) and KY 390 (MP 12.844). (See Figure ES-6, Project ID #3B)

Cost estimate: \$ 1,500,000

(Design \$200,000; ROW \$0; Utilities \$100,000; Construction \$1,200,000)

- Construct the Moberly Road extension (on new alignment) to the south from KY 1989 (MP 9.110* to KY 152 (MP 9.553*), and include an east-west connector to West Broadway Street. (See Figure ES-6, Project ID #3C)

Cost estimate: \$ 4,800,000

(Design \$300,000; ROW \$1,650,000; Utilities \$150,000; Construction \$2,700,000)

Total Priority 3 project cost estimate: \$ 16,900,000 (*Note: Exact locations await final design.)

OTHER FUTURE RECOMMENDATIONS —

- Upon implementation of the short- and long-term projects, consider conducting a planning study to re-examine the purpose and need for a western Harrodsburg bypass to complete the loop around the city and provide connectivity with the existing eastern bypass.
- Conduct a railroad relocation study that would focus on relocation sites and financing options.

The total estimated cost of recommended construction—Priorities 2 and 3— is approximately \$18.70 million. Figure ES-6 shows the locations of the improvement options.

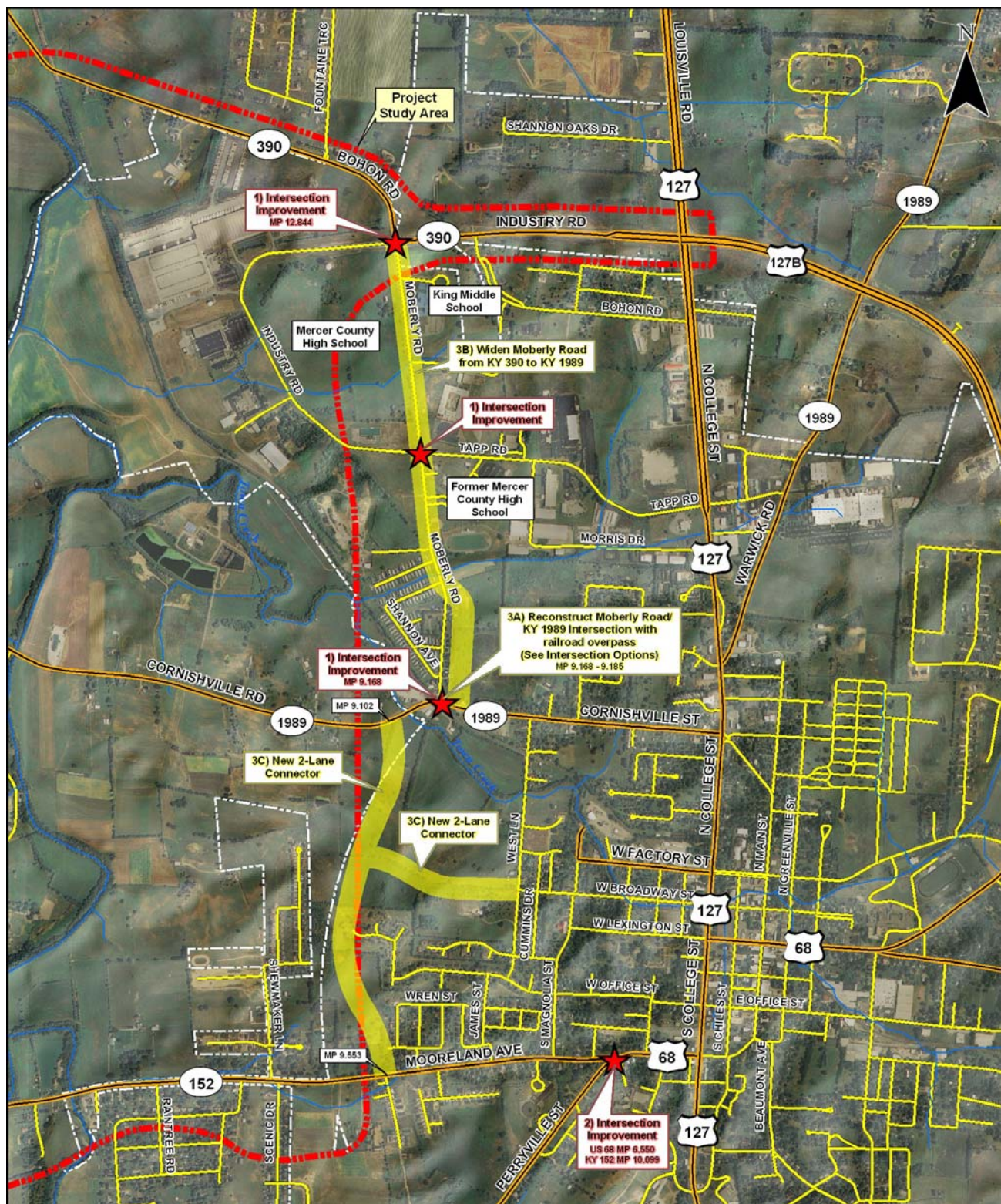


Figure ES-6: Recommended Projects

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1.0 INTRODUCTION

The initial purpose of the *Harrodsburg Northwest Bypass Alternatives Study* was to examine possible corridors for a new northwest Harrodsburg bypass in Mercer County, Kentucky. The potential northwest bypass was to extend from US 127 at its northern junction with the existing Eastern Harrodsburg Bypass (US 127B) to KY 152 west of the city. During the development of this study, alternatives to the bypass were identified that, unlike the bypass concept, had substantial public support. The alternatives were refined through a comprehensive stakeholder/public involvement effort, and now form the basis for the course of action recommended herein. The evolution of the initial bypass study and the recommendations resulting from the advancement of alternative concepts are the subject of this document.

1.1 Background

In 1991, the Kentucky Transportation Cabinet (KYTC) completed a *Harrodsburg Bypass Advanced Planning Study* that recommended constructing a bypass on the east of the city. In 2001 a bypass was constructed on the east side of Harrodsburg (from US 127 south of Harrodsburg to US 127 north of Harrodsburg). Presently, KYTC is considering the west side, and focusing on the northwest quadrant because of the perceived lack of roadway connectivity in this area of Harrodsburg.

There is a mix of land uses in the area, and several industries and school facilities in the northwest generate and attract large volumes of traffic, including heavy trucks and school busses. The Salt River and a Norfolk-Southern (NS) railroad (see Figure 1) bisect the area and would be crossed by any proposed alignment.

The Mercer County-Harrodsburg 2003 *Comprehensive Plan* designated this portion of the county as a growth area, and the proximity to the railroad could encourage future industrial growth in this designated area. A new road in this area could offer several travel benefits, including:

- Facilitating travel from the western portion of Mercer County to US 127 north (toward Lawrenceburg and the Martha Layne Collins Bluegrass Parkway) by providing an alternative to the congested US 127 through Harrodsburg.
- Avoiding the at-grade Norfolk-Southern railroad crossing on US 127, where 26 trains per day contribute to congestion and delay.
- Improving access to/from industrial areas and schools in the northern portion of the study area.



Figure 1: (Top) Salt River Bridge.
(Bottom) Norfolk-Southern Railroad Track.

1.2 Project Location and Study Area

The study area, shown in Figure 2, includes the northwestern quadrant of Harrodsburg, beginning at KY 152 in the south and extending north and then east to US 127, a distance of about 3.0 miles. The study area ends at the existing northern US 127/US 127 Bypass intersection. The study area is approximately 1.4 miles wide and about 3.6 square miles in size.

1.3 Study Process

The *Harrodsburg Northwest Bypass Alternatives Study* has consisted of four major steps:

- Define the project goals using input from a KYTC Project Team, an advisory committee consisting of local citizens and stakeholders, and the general public.
- For identified transportation deficiencies, develop alternative solutions that reflect the project goals.
- Evaluate the alternative solutions through discussions with the KYTC Project Team, the Project Advisory Committee, and the general public.
- Recommend alternative solutions.

The following exhibits depict the results of the various analyses described in the study and the recommend alternative solutions identified herein. The exhibits are located in Appendix A.

- Existing and No-Build traffic data and crash data (Exhibit 1)
- Existing conditions: area transportation system, land uses, and environmental and cultural (historic) features on both aerial photography and USGS mapping (Exhibits 2 and 3, respectively)
- Northwest quadrant options (Exhibit 4)
- Projected (year 2030) traffic data for the recommended projects (Exhibit 5)
- Recommended Projects (Exhibit 6)

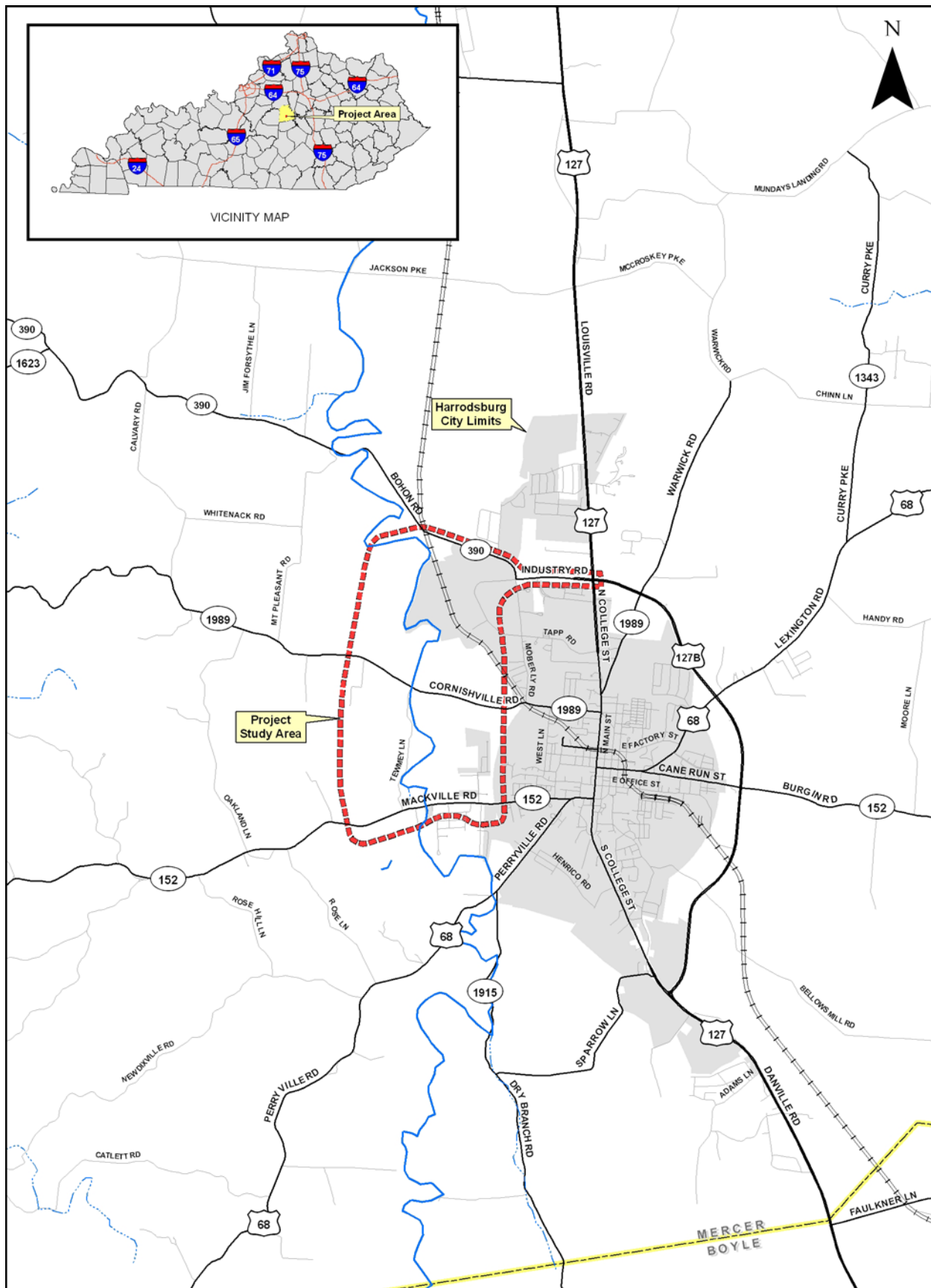


Figure 2: Project Location—City of Harrodsburg, Mercer County, Kentucky.

2.0 STUDY ISSUES AND GOALS

2.1 Project Issues

Discussions were held with the KYTC Project Team, the local Project Advisory Committee, and other interested project stakeholders in the Harrodsburg area during which a number of important issues were identified for consideration in examining the potential purpose of and need for a bypass facility in northwestern Harrodsburg. A summary of the identified issues follows:

- Several schools and industries are located in the northwest quadrant of Harrodsburg. A new Mercer County High School is now open near the corner of KY 390 (Industry Road) and Moberly Road, approximately one-half mile from the former high school campus that is being renovated as a middle school. This concentration of trip origins and destinations at similar times of the day contributes to traffic congestion in the vicinity.
- Emergency response travel times to the James B. Haggin Memorial Hospital and to other locations are lengthened by congestion along and west of S. College Street in the vicinity of the hospital. The hospital is located on Linden Avenue, which intersects US 68 (KY 152/Mooreland Avenue) just west of US 127 (S. College Street). Figure 3 shows the US 68 (Perryville Street)/KY 152 (Mooreland Avenue) junction, approximately one block west of Linden Avenue.
- At-grade railroad crossings of the Norfolk Southern railroad track, which runs through Harrodsburg from northwest to southeast, carry up to 26 trains daily. The unique “diagonal” routing of this rail line results in multi-directional street blockages during passage of these trains.
- Location of any northwest bypass in Harrodsburg should be compatible with possible future extension south of KY 152 and connecting with US 127.



Figure 3: Looking East Toward US 127 at the Junction of US 68 (Perryville Street) and KY 152 (Mooreland Avenue).

2.2 Project Goals

Several project goals were identified, including:

- Improve transportation system connectivity
 - Separate school and industry traffic
 - Reduce emergency response travel time
- Provide grade-separated railroad crossings
- Reduce congestion on area roadways
- Facilitate compatibility with future bypass extension to the south

3.0 EXISTING AND FUTURE NO-BUILD CONDITIONS

3.1 Highway and Traffic Characteristics

To evaluate the purpose of and need for additional highway facilities in northwest Harrodsburg, existing conditions on facilities in the area were compiled from the KYTC Highway Information System (HIS) database and from KYTC crash records. US 68/US 127 (N. and S. College Street), the existing US 127B eastern bypass of Harrodsburg, KY 152 (Mackville Road/Mooreland Avenue), KY 390 (Bohon Road/Industry Road), and KY 1989 (Cornishville Road/Street) were reviewed to identify physical and traffic characteristics.

The following should be noted regarding U.S. and state designated roadways in the Harrodsburg area: Through Harrodsburg, all U.S. and state highways have local names, and among these several have more than one name. The following road names and route numbers are referenced herein:

- **US 127** is *South College Street* south of Lexington Street and *North College Street* north of Lexington Street; between Mooreland Avenue and Lexington Street, College Street is officially US 68 for data purposes, not US 127, in accordance with KYTC route numbering conventions.
- **KY 390** is *Bohon Road* from the intersection of Industry Road and Moberly Road west, and is *Industry Road* from that intersection eastward.
- **KY 152** is *Mackville Road* from Shewmaker Lane southwestward and *Mooreland Avenue* from Shewmaker Lane eastward to US 68. At its juncture with US 68 (see below), Mooreland Avenue becomes US 68.
- **KY 1989** is *Cornishville Road* west of Moberly Road and *Cornishville Street* from east of that road to US 127 (N. College Street).
- **US 68** has several names, as follows:
 - From the southwest heading northeast: *Perryville Street* from Henrico Road to KY 152 (Mooreland Avenue); and *Moreland Avenue* to US 127 (S. College Street).
 - Turning northward: *South College Street* to West Lexington Street.
 - Turning eastward: *West Lexington Street* from College Street to North Main Street; *East Lexington Street* beyond.

For ease of reference, U.S. and state highways are identified by their route numbers herein except where use of both route number and local name would provide more precise locational information (e.g., because of its several name and directional changes, US 68. is usually identified by its route number and local name). Exhibit 1 includes the names and locations of roads in the study area.

Table 1 summarizes significant roadway characteristics for existing streets and highways in northwestern Harrodsburg.

Table 1: Northwest Harrodsburg Roadway Characteristics

Roadway Characteristics	US 127 (N./S. College St.)	US 127B (E. Harrodsburg Bypass)	US 68 (Mooreland Ave. & S. College St. from Mooreland Ave. to Lexington St.)	KY 152 (Mackville Rd. & Mooreland Ave., W. of US 68)	KY 390 (Bohon Rd. & Industry Rd.)	KY 1989 (Cornishville Rd. & St.)
Driving Lanes	2/3/4	4	2/3/4	2	2 / 3 / 4	2
Lane Width	12'	12'	11'	10'/11'/12'/13'	10'/11'/12'/13'	7'/8'/9'/10'
Shoulder Type	Curbed/Paved	Paved	Curbed	Paved	Combination	Earth
Shoulder Width	2'/8'/12'	10'	-	1'	3'/8'/10'	3'
2008 ADT	13,500-14,700	9,700	5,810-20,800	4,900 – 5,200	1,430 – 4,660	1,680-3,850
Posted Speed Limit	35/45 mph	55 mph	35 mph	35/45/55 mph	35/45/55 mph	35/55 mph
Type Road	Median Divided/Undivided	Median Divided	Undivided Highway	Undivided Highway	Undivided Highway	Undivided Highway
Median	Flush/Raised	Depressed	None	None	None	None
Functional Class	Urban Principal Arterial Street	Rural Principal Arterial	College St. is Urban Principal Arterial; Mooreland Ave. is Urban Minor Arterial	Urban Collector Street (E. of Salt River Bridge)	Urban Minor Arterial (E. of NS railroad crossing)	Urban Collector Street (E. of Moberly Rd.)
State Primary Rd System	State Primary	State Primary	College St. is State Primary; Mooreland Ave. is State Secondary	State Secondary	Rural Secondary	Rural Secondary
National Hwy System	YES (N & S of bypass)	YES	NO	NO	NO	NO
National Truck Network	YES (N & S of bypass)	YES	NO	NO	NO	NO
Truck Weight Class	AAA	AAA	AAA	AA	AA	A
Terrain	Rolling	Rolling	Rolling	Rolling	Rolling	Rolling
Pavement Type	High Flexible	High Flexible	High Flexible	High Flexible	High Flexible	Mixed Bituminous
Designated Bike Rt.	NO	NO	YES	NO	NO	NO

Section 3.2 discusses the existing (year 2008) and projected (year 2030) No-Build scenario traffic volumes on the local roadway network. Section 3.3 provides crash data for a five-year period from January 1, 2004, through December 31, 2008. Exhibit 1 in Appendix A shows existing traffic and crash data; and Appendix B provides photographs of many of the existing transportation facilities in and surrounding the study area, including several of the high crash locations.

3.2 Existing and Projected No-Build Traffic Data

Existing (Year 2008) Traffic Data—Year 2008 traffic data for the study area reveals that College Street is the most heavily travelled of these facilities with a traffic volume of approximately 20,800 vehicles per day (vpd) between Mooreland Avenue and Lexington Street—more than double the average daily traffic volume (ADT) on the existing Eastern Bypass, US 127B (9,700 vpd). On US 127 between KY 1989 and KY 390, the traffic volume was approximately 13,500 vpd, while the section of US 127 between US 68 (Lexington Street) and KY 1989 carried approximately 14,700 vpd. KY 152 carried 5,200 vpd east of Tewmeyer Lane and approximately 2,470 vpd west of that point. KY 390 served 4,660 vpd between Moberly Road and US 127; while west of Moberly Road it carried 1,430 vpd. KY 1989 carried 1,680 vpd from Moberly Road westward and 3,850 vpd from that road eastward to US 127. KY 152 westward from approximately 0.3 mile west of its intersection

with US 68, KY 1989, and KY 390 west of Moberly Road do not have adequate roadway widths to handle the existing traffic volumes. Exhibit 1 shows the existing traffic counts on these and other sections of roads within the study area.

Projected (Year 2030) Traffic Data—No Build Scenario—Traffic volumes were projected for the year 2030 to determine how the road network would function if no improvements (beyond normal maintenance) were made during that time period. This scenario is referred to as the No-Build scenario. The traffic volumes were projected to 2030 using a 2% annual growth rate. With the construction of the Eastern Bypass affecting traffic volumes and relatively little to no growth in traffic numbers on study area roadways in recent years, it was decided to use a conservative growth rate which also happens to correspond to the average growth rate of all Mercer County roadways (2%).

The 2030 No-Build traffic volumes project that College Street would remain the most heavily travelled roadway in the study area, with traffic volumes from approximately 32,000 vpd between Mooreland Avenue and Lexington Street; 23,700 vpd between Lexington Street and KY 1989; and 27,100 vpd between KY 1989 and KY 390. KY 152 is projected to carry from 7,600 vpd east of its junction with Tewmeyer Lane and approximately 4,900 vpd west of that point. KY 390 is projected to carry 6,300 vpd between Moberly Road and US 127 and 2,300 vpd west of the intersection with Moberly Road. KY 1989 is projected to carry 2,400 vpd west of its junction with Moberly Road and 7,600 vpd east of that point.

Exhibit 1 in Appendix A and Table 2, below, show traffic volumes on selected roadways for existing conditions (year 2008) and for the projected (year 2030) No-Build scenario.

Table 2: Existing and Projected No-Build Traffic Volume Comparison

Roadway	Segment	2008 ADT	Projected 2030 ADT – No Build
US 127 (N. College St.)	US 68 (W. Lexington St.) to KY 1989 (Cornishville St.)	14,700	23,700
US 127 (N. College St.)	KY 1989 (Cornishville St.) to KY 390 (Industry Rd.)	13,500	27,100
KY 390 (Bohon/Industry Rds.)	East of Moberly Rd.	4,660	6,300
Moberly Rd.	North of Tapp Rd.	2,100	3,300
Moberly Rd.	Between Tapp Rd. and KY 1989 (Cornishville St.)	2,540	4,100
KY 1989 (Cornishville St.)	East of Moberly Rd.	4,810	7,600
KY 1989 (Cornishville Rd.)	West of Moberly Rd.	1,680	2,400
US 68 (KY 152/ Mooreland Ave.)	West of US 127 (S. College St.) Intersection	5,810	16,600
US 68/US 127 (S. College St.)	Mooreland Ave. to W. Lexington St.	20,800	32,000
KY 152 (Mooreland Ave.)	West of US 68 / KY 152 Intersection	5,200	7,600

3.3 Crash Analysis

KYTC provided crash data for a five-year period from January 1, 2004, through December 31, 2008. Crash analysis procedures involve assigning reported crashes to roadway locations by mile point (MP). The crashes are classified into one of three categories: fatal, injury, or property damage only (PDO). Then, the average crash rate for roadway sections of various lengths is determined. This includes analyzing the entire roadway length under study, followed by analyzing successively smaller roadway sections, especially those containing higher concentrations of crashes.

Roadway sections are classified as either spots or segments depending on their length— sections 0.30 mile or less in length are classified as a spot location, and sections over 0.30 mile are classified as a segment. Roadway section crash rates were normalized for comparison by either hundred-million-vehicle-miles traveled (HMVM) for segments, or millions-of-vehicles (MV) for spots. Using the average crash rate, the critical crash rate was obtained from Kentucky Transportation Center's *Analysis of Traffic Crash Data in Kentucky (2004-2008)*. The critical crash rate is the maximum crash rate expected to randomly occur on a roadway section, given the statewide average crash rate for that road's functional class, the average daily traffic (ADT) volume, and the roadway section length. The ratio of these two rates (*i.e.*, the actual crash rate to the critical crash rate) produces a critical crash rate factor (CCRF). If the roadway section's actual crash rate exceeds the critical rate (*i.e.*, the CCRF is greater than 1.0), then that section is classified as a high crash location. In other words, if the CCRF exceeds 1.0, then that highway section has more crashes occurring than is statistically probable. If the CCRF is 0.9 or greater, that section is considered as a potential high crash location.

Crash problems, as measured by the CCRF in the KYTC crash program, appear to exist on US 127 (N. College Street) between MP 4.40 (US 68/W. Lexington Street) and MP 5.10 (near Veteran's Park Drive); on KY 1989 (Cornishville Road/Street) between MP 6.84 and MP 9.85 (including the vicinity of Norfolk-Southern railroad crossing and intersection with Moberly Drive); and along US 68 (Mooreland Avenue) between MP 6.5 and 6.8 (at the intersection with S. College Street). Results of the crash analysis are provided on Table 3 and the locations are depicted on Exhibit 1. As summarized below and shown on the table, two segments and a total twelve spot locations within the segments analyzed are high crash locations.

US 127	1.7-mile segment (MP 4.40-6.07)	CCRF 1.76 (154 crashes, 29 resulting in injuries)
	5 spots	CCRF ranges 1.05 – 4.21*
US 68	1 spot (MP 6.5-6.8)	CCRF 1.23
KY 1989	3.0-mile segment (MP 6.84-9.85)	CCRF 1.14 (18 crashes, 7 resulting in injuries)
	6 spots	CCRF ranges 1.04 – 3.23

* Sections of some spot locations overlap; therefore, crash totals provided in the table apply to each spot location, only, and are not cumulative.

Table 3: Corridor / Segment Crash Analysis

	Segment or Spot	Begin MP	End MP	Length (Miles)	Number Lanes	Rural / Urban	ACCIDENTS				Critical Rate Factor
							Fatal	Injury	PDO	Total	
US 127	Segment	4.402	6.071	1.669	4	U	0	29	125	154	1.76
	Spot	4.400	4.700	0.300	4	U	0	17	68	85	4.21
	Spot	4.500	4.800	0.300	4	U	0	1	22	23	1.10
	Spot	4.600	4.900	0.300	4	U	0	3	19	22	1.05
	Spot	4.700	5.000	0.300	4	U	0	5	23	28	1.30
	Spot	4.800	5.100	0.300	4	U	0	6	25	31	1.43
	Spot	4.900	5.200	0.300	4	U	0	4	18	22	0.58
	Spot	5.000	5.300	0.300	4	U	0	4	12	16	0.42
	Spot	5.100	5.400	0.300	4	U	0	2	10	12	0.31
	Spot	5.200	5.500	0.300	4	U	0	3	9	12	0.31
	Spot	5.300	5.600	0.300	4	U	0	3	11	14	0.36
	Spot	5.400	5.700	0.300	4	U	0	2	10	12	0.31
	Spot	5.500	5.800	0.300	4	U	0	1	6	7	0.18
	Spot	5.600	5.900	0.300	4	U	0	2	10	12	0.31
	Spot	5.700	6.000	0.300	4	U	0	2	10	12	0.31
	Spot	5.800	6.100	0.300	4	U	1	8	16	24	0.65
US 127 B	Segment	4.000	4.483	0.483	4	U	0	2	1	3	0.02
	Spot	4.000	4.300	0.300	4	U	0	2	1	3	0.02
	Spot	4.100	4.400	0.300	4	U	0	0	0	0	0.00
	Spot	4.200	4.500	0.300	4	U	0	0	0	0	0.00
US 68	Segment	6.550	7.031	0.481	4	U	0	3	17	20	0.77
	Spot	6.500	6.800	0.300	4	U	0	2	18	20	1.23
	Spot	6.600	6.900	0.300	4	U	0	0	12	12	0.67
	Spot	6.700	7.000	0.300	4	U	0	0	10	10	0.51
	Spot	6.800	7.100	0.300	4	U	0	1	3	4	0.18
KY 152	Segment	7.947	10.099	2.152	2	U	1	11	11	23	0.75
	Spot	8.000	8.300	0.300	2	R	0	2	0	2	0.47
	Spot	8.100	8.400	0.300	2	R	0	1	0	1	0.24
	Spot	8.200	8.500	0.300	2	R	0	1	0	1	0.24
	Spot	8.300	8.600	0.300	2	R	0	3	0	3	0.71
	Spot	8.400	8.700	0.300	2	R	0	2	0	2	0.47
	Spot	8.500	8.800	0.300	2	R	0	2	0	2	0.47
	Spot	8.600	8.900	0.300	2	U	0	1	0	1	0.24
	Spot	8.700	9.000	0.300	2	U	0	0	0	0	0.00
	Spot	8.800	9.100	0.300	2	U	0	0	0	0	0.00
	Spot	8.900	9.200	0.300	2	U	0	0	1	1	0.11
	Spot	9.000	9.300	0.300	2	U	0	1	2	3	0.33
	Spot	9.100	9.400	0.300	2	U	0	3	2	5	0.55
	Spot	9.200	9.500	0.300	2	U	0	3	1	4	0.44
	Spot	9.300	9.600	0.300	2	U	0	2	0	2	0.22
	Spot	9.400	9.700	0.300	2	U	0	1	1	2	0.21
	Spot	9.500	9.800	0.300	2	U	0	0	1	1	0.10
	Spot	9.600	9.900	0.300	2	U	0	0	2	2	0.21
	Spot	9.700	10.000	0.300	2	U	1	0	3	4	0.42
	Spot	9.800	10.100	0.300	2	U	1	2	4	7	0.75

Table 3: Corridor / Segment Crash Analysis (Continued)

	Segment or Spot	Begin MP	End MP	Length (Miles)	Number Lanes	Rural / Urban	ACCIDENTS				Critical Rate Factor
							Fatal	Fatal	Fatal	Fatal	
KY 390	Segment	11.890	13.512	1.622	2	U	0	2	3	5	0.24
	Spot	11.900	12.200	0.300	2	R	0	0	1	1	0.26
	Spot	12.000	12.300	0.300	2	R	0	0	1	1	0.26
	Spot	12.100	12.400	0.300	2	R	0	0	0	0	0.00
	Spot	12.200	12.500	0.300	2	R	0	0	1	1	0.26
	Spot	12.300	12.600	0.300	2	R	0	0	1	1	0.26
	Spot	12.400	12.700	0.300	2	R	0	0	0	0	0.00
	Spot	12.500	12.800	0.300	2	R	0	0	0	0	0.00
	Spot	12.600	12.900	0.300	2	R	0	0	1	1	0.16
	Spot	12.700	13.000	0.300	2	R	0	1	0	1	0.16
	Spot	12.800	13.100	0.300	2	U	0	2	0	2	0.28
	Spot	12.900	13.200	0.300	2	U	0	1	1	2	0.15
	Spot	13.000	13.300	0.300	2	U	0	1	1	2	0.15
	Spot	13.100	13.400	0.300	2	U	0	0	0	0	0.00
	Spot	13.200	13.500	0.300	2	U	0	0	0	0	0.00
KY1989	Segment	6.837	9.848	3.011	2	R	0	7	11	18	1.14
	Spot	6.800	7.100	0.300	2	R	0	5	4	9	3.23
	Spot	6.900	7.200	0.300	2	R	0	3	1	4	1.43
	Spot	7.000	7.300	0.300	2	R	0	1	2	3	1.08
	Spot	7.100	7.400	0.300	2	R	0	0	1	1	0.37
	Spot	7.200	7.500	0.300	2	R	0	0	1	1	0.37
	Spot	7.300	7.600	0.300	2	R	0	0	0	0	0.00
	Spot	7.400	7.700	0.300	2	R	0	0	2	2	0.70
	Spot	7.500	7.800	0.300	2	R	0	0	2	2	0.70
	Spot	7.600	7.900	0.300	2	R	0	0	3	3	1.04
	Spot	7.700	8.000	0.300	2	R	0	0	1	1	0.34
	Spot	7.800	8.100	0.300	2	R	0	0	1	1	0.34
	Spot	7.900	8.200	0.300	2	R	0	0	1	1	0.36
	Spot	8.000	8.300	0.300	2	R	0	0	1	1	0.36
	Spot	8.100	8.400	0.300	2	R	0	0	1	1	0.36
	Spot	8.200	8.500	0.300	2	R	0	0	0	0	0.00
	Spot	8.300	8.600	0.300	2	R	0	0	0	0	0.00
	Spot	8.400	8.700	0.300	2	R	0	0	0	0	0.00
	Spot	8.500	8.800	0.300	2	R	0	1	0	1	0.36
	Spot	8.600	8.900	0.300	2	R	0	1	0	1	0.36
	Spot	8.700	9.000	0.300	2	R	0	2	0	2	0.72
	Spot	8.800	9.100	0.300	2	R	0	2	0	2	0.73
	Spot	8.900	9.200	0.300	2	R	0	2	1	3	1.09
	Spot	9.000	9.300	0.300	2	R	0	2	1	3	1.09
	Spot	9.100	9.400	0.300	2	R	0	0	1	1	0.36
	Spot	9.200	9.500	0.300	2	R	0	0	1	1	0.11
	Spot	9.300	9.600	0.300	2	R	0	0	0	0	0.00
	Spot	9.400	9.700	0.300	2	R	0	0	0	0	0.00
	Spot	9.500	9.800	0.300	2	R	0	0	0	0	0.00

	High Crash Locations: Segment		High Crash Locations: Spot
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Source: KYTC crash data, 2005-2007

Table 4 compares the crash patterns on these spots and segments with the patterns for all crashes recorded in Mercer County during the same time period. Some of the differences in these patterns can be attributed to the urban nature of the segments and spots highlighted in Table 4. The high percentage of angle crashes on US 68 between KY 152 and US 127 is likely caused both by the unusual arrangement of the US 68/KY 152 intersection and the tight turning radii at the US 68/US 127 intersection. The extraordinarily high percentage of both “head-on” and “opposing left-turn” crashes on US 68 reflect crashes at the US 68/KY 152 intersection. The high percentage of rear-end crashes along College Street likely was one of the reasons for the recent two-way-left-turn-lane conversion; however, it is too early to measure the effect of this change. The high percentage of single-vehicle crashes on KY 1989 likely reflects the geometric restrictions of that route, e.g., ten-foot-wide lanes, three-foot-wide shoulders, etc.

Table 4: Crash Patterns for Problem Spots and Segments in Study Area

Spot or Segment	US 68	US 127	KY 1989	Mercer County
From Mile Point	6.500	4.402	6.837	--
To Mile Point	6.800	6.071	9.848	--
Length (miles)	0.3	1.669	3.011	184
Daylight Crashes	96%	83%	69%	72%
Crashes on Dry Roadway	88%	83%	80%	72%
Angle Crashes	48%	36%	11%	20%
Backing Up Crashes	0%	4%	3%	6%
Head On Crashes	8%	2%	0%	3%
Opposing Left-Turn Crashes	8%	7%	3%	3%
Rear End Crashes	36%	37%	17%	17%
Sideswipe, Opposite Direction	0%	1%	9%	6%
Sideswipe, Same Direction	0%	9%	0%	7%
Rear-to-Rear Crashes	0%	0%	0%	7%
Single Vehicle Crashes	0%	4%	60%	38%

4.0 HUMAN ENVIRONMENT OVERVIEW

4.1 Environmental Justice

An *Environmental Justice and Community Impact Report (EJ Report)* was prepared for the *Harrodsburg Northwest Bypass Study* by the BGADD. The full report is included in Appendix C and is summarized in this chapter.

An *EJ Report* is an assessment of community demographics within the project study area and a comparison of these demographics with those of the surrounding area, particularly regarding low income, minority, and elderly populations. The goal of such an effort is to ascertain if any of these populations might be disproportionately impacted by potential transportation system improvements in the northwest Harrodsburg area.

Census data for four Block Groups (Block Groups 1, 3, and 4 in Census Tract 9602 and Block Group 2 in Census Tract 9603) represented the study area. The demographic characteristics of the Block Groups representing the study area compared to Mercer County, state, and national averages are summarized in Table 5.

BGADD concluded that Census Tract 9602, Block 3 should be monitored and reviewed in more detail during future development phases, if any, for projects in the study area.

Table 5: Demographic Characteristics of Study Area

Percent of..	Tract 9602 Block 1	Tract 9602 Block 3	Tract 9602 Block 4	Tract 9603 Block 2	Mercer County	Kentucky	United States
Black Population	3.49%	11.57%	0.86%	1.31%	3.69%	7.32%	12.38%
Hispanic Population	1.27%	1.78%	0.31%	0.58%	1.27%	1.48%	14.78%
Asian Population	1.18%	0.46%	0.49%	0.09%	0.47%	0.74%	4.38%
Native American Population	0.14%	0.23%	0.00%	0.15%	0.21%	0.21%	0.79%
Population Below Poverty Level	11.87%	29.48%	7.86%	10.41%	12.97%	15.37%	12.05%
Population Age 65 & Older	12.33%	10.71%	9.81%	14.10%	14.59%	12.49%	12.43%

4.2 Hazardous Waste

A report identifying hazardous materials sites within/near the project study area was prepared for this study. Although 16 reported sites were identified in the report, it is anticipated that no sites would be affected by the project. Appendix D contains the report, which includes maps locating all sites identified therein. The report's mapped sites correspond with those identified on Exhibits 2 and 3, in Appendix A.

The Kentucky Division of Waste Management (KDWM) reports a hazardous waste facility site, known as the "Kidde-Fenwal" site (formerly known as the "Hallmack-Nutone" or "Hallmack" site) is a source for groundwater contamination of trichloroethylene (TCE) at levels above the drinking water standards. The site is located in the southwest quadrant of the US 127/Tapp Road intersection, and the contaminated groundwater surfaces farther west, at Humane Spring (see Site 15 and the spring location on Exhibits 2 and 3). Humane Spring, although a large spring, is currently

not used for any purpose. Based on the flow lines of both groundwater and surface water, KDWM does not believe that any activity in the project study area would directly impact the flow of contaminated groundwater to Humane Spring. Nonetheless, KDWM recommends that steps be taken to avoid any disturbance that would, in any way, affect Humane Spring, itself.

4.3 Previously Documented Cultural Historic and Archeological Sites

Archaeological Resources—AMEC Earth & Environmental Consultants prepared a letter report detailing an archaeological resource overview for the *Harrodsburg Northwest Bypass Alternatives Study* area. A copy of that letter report is included in Appendix E.² In summary, AMEC identified several potential historic and/or prehistoric sites in or near the study area and concluded that the study area had a moderate to high potential to contain significant historic and prehistoric archaeological sites. AMEC reiterated the need for a Phase 1 archaeological survey in future development phases, if any, for projects in the study area to comply with Section 106 of the *National Historic Preservation Act of 1966* (NRHP) (as amended), 16 U.S.C. 470(f), and Presidential Executive Order 11593, *Protection and Enhancement of the Cultural Environment*. Further, AMEC recommended that a Section 4(f) evaluation³ be conducted and avoidance options be considered if the right-of-way in any future development phase overlaps an NRHP-listed or -eligible archaeological site requiring preservation in place (e.g., a burial site or areas of a Civil War battlefield).

Cultural Historic Resources—The *Cultural Historic Resource Overview* prepared for this study identified four sites—identified as Sites A, D, E, and H in the report and on Exhibits 2 and 3—as being on, or potentially eligible for, the NRHP. Appendix E includes the complete report. Properties in northwest Harrodsburg that appear to be eligible for listing on the NRHP are:

- Fountain Blue/Hite’s Station, Site A
- Francis Kirby House, Site D
- Daniel Stagg House, Site E
- Trapnell House/Martindale, Site H

One historic resource in northwest Harrodsburg is listed on the NRHP: Joseph Morgan House/Round Ridge, Site B. This property was listed on the National Register in 1990. (Note: The location of this resource is shown in the *Overview* in Appendix E, but it not depicted on Exhibits 2 and 3 because it is outside the coverage area of these exhibits.)

² KYTC policy limits the publication of archaeological site locations to preserve and protect each site’s integrity. Therefore, maps depicting site locations have been removed from the report

³ Section 4(f) of the Department of Transportation Act of 1966, 49 USC 303(c), requires that, prior to the use of a publicly owned park, recreation area, or wildlife/waterfowl refuge; a historic property that is on or eligible for inclusion in the NRHP; or archaeological sites where preservation in place provides important value, it must be determined that there are no prudent and feasible alternatives that avoid such use, and that the project includes all possible planning to minimize harm to such resources.

4.4 Land Use and Zoning

The Greater Harrodsburg/Mercer County Planning and Zoning Commission was created in 1972 to assist in the planned growth of the city and county. The Commission's 2004 *Comprehensive Plan* guides the development of the city and county.

Mercer County is in central Kentucky in the Outer Bluegrass physiographic region. The city of Harrodsburg is the county seat and is the most intensively developed area within the county. Whereas the majority of land in Mercer County is agricultural, most of the agricultural land in the city limits of Harrodsburg has been converted to commercial, industrial, residential, and institutional uses commensurate with the availability of suitable infrastructure. Appendix B contains photographs showing roadways and land uses within the study corridor.

Originally, because a bypass option was being evaluated, the project study area extended from within the city limits westward into an unincorporated, primarily agricultural/rural residential area of the county. However, the study area has been expanded eastward, to US 127, into an urban corridor containing uses that are primarily institutional, residential subdivision, and industrial/commercial, with some agricultural land also present. The *Comprehensive Plan* projects that the agricultural land will continue to transition into urban uses. Much of the development has occurred along US 127, and the lack of frontage roads and access management techniques contributes to heavy congestion along that roadway. Exhibit 2, in Appendix A, shows an aerial view of the project area and identifies the Harrodsburg city limits; the study area; the transportation network including the U.S., state, and local roads and the Norfolk-Southern railroad corridor; natural features such as wetlands and major streams; and selected community facilities such as schools and parks.

Future land use plans within/adjacent to the project corridor in Harrodsburg include industrial and commercial development east and west of Moberly Road south of KY 390 and the US 127B (Eastern Bypass); a large industrial area in the northwest part of the city, extending southward from KY 390 along either side of the railroad to KY 1989; and industrial use continuing south of KY 1989 following the railroad to West Factory Street. Also included within these areas are primarily low density residential development in currently agricultural/undeveloped areas, and further development in existing high/low density residential areas and institutional/recreational areas.

Figure 4 (Exhibit 2 in the *Comprehensive Plan*) shows the proposed future land uses in Harrodsburg. As Figure 4 shows, the greatest overall concentration of proposed development would take place in the north and northwestern sections of Harrodsburg—areas where several commercial, industrial, institutional, and residential uses already exist. It should be noted that the new Mercer County High School occupies land that was identified in the *Comprehensive Plan* for future industrial use.

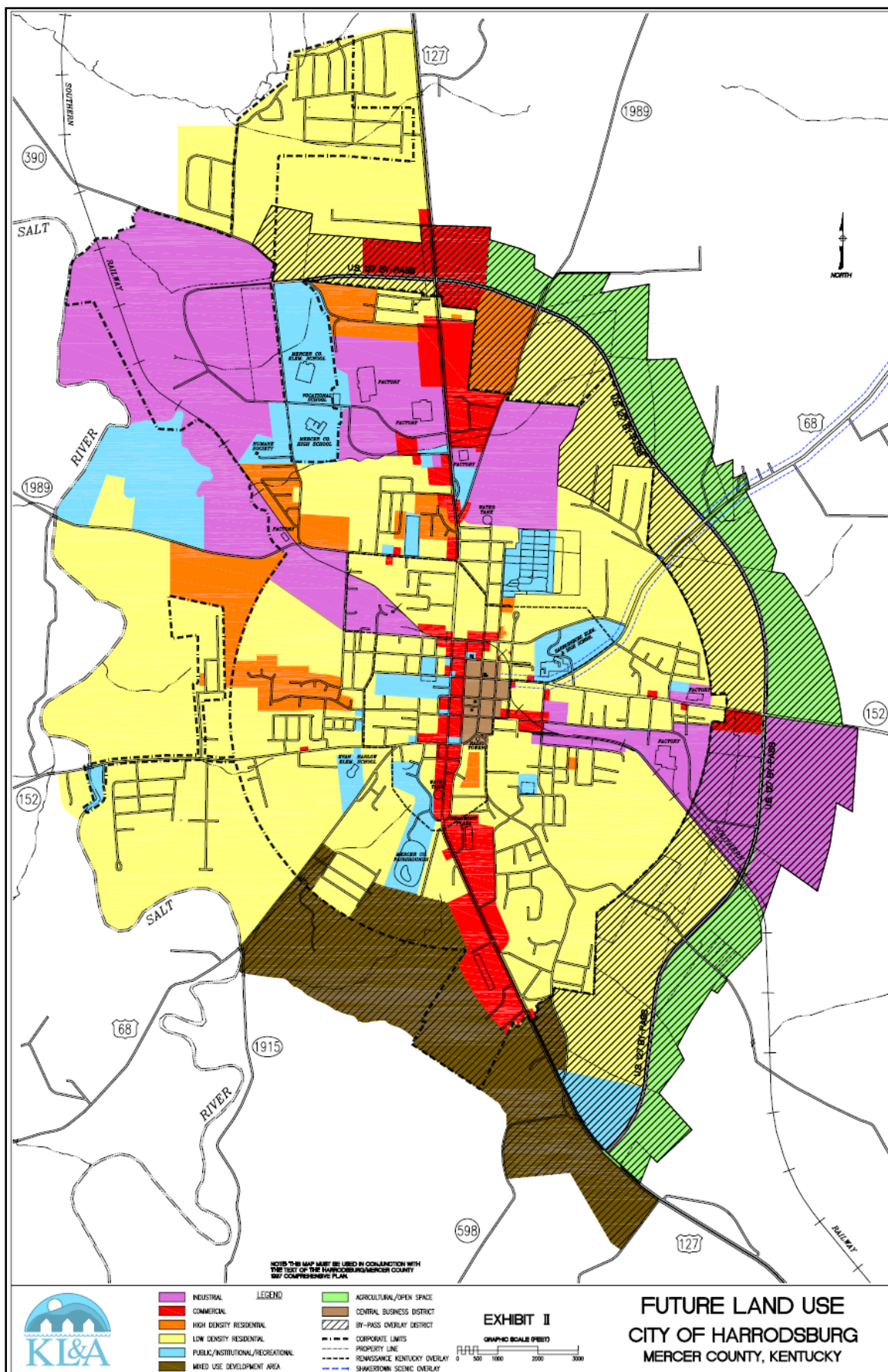


Figure 4: Future Land Use Plan, City of Harrodsburg, Kentucky.

5.0 NATURAL ENVIRONMENT OVERVIEW

An *Ecological Overview* conducted for this study in August 2007 provided a broad review of existing environmental conditions in the study area, potential impacts to the aquatic and terrestrial ecology including threatened and endangered species, and measures to minimize the impacts. A copy of the *Ecological Overview* and related agency coordination correspondence are included in Appendix F. Highlights of that report follow. Environmental features such as streams, wetlands, and ponds are shown on Exhibits 2 and 3. Figures 5 and 6, at right, show Salt River and Town Creek.

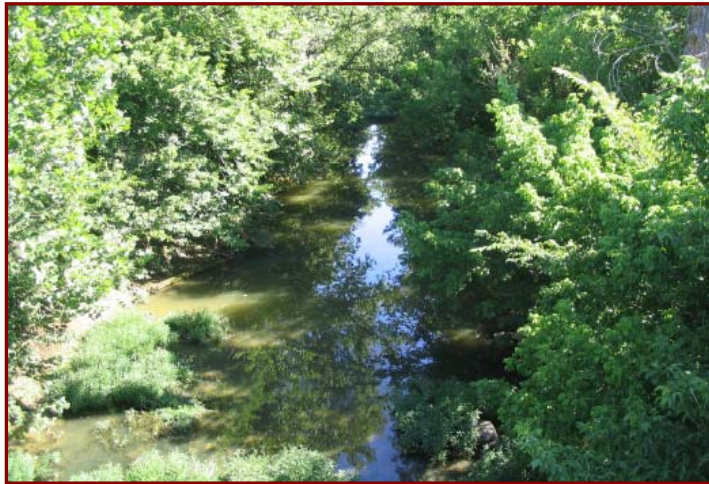


Figure 5: Salt River Near Confluence With Town Creek.

5.1 Aquatic Ecology

Streams—Jurisdictional waters, as defined by the U.S. Army Corps of Engineers (USACE), are located within the study area. This includes a section of the Salt River and its associated Federal Environmental Management Agency (FEMA) 100-year floodplain. Streams were located and field verified using the Cornishville and Harrodsburg U. S. Geologic Survey (USGS) quadrangle maps. Nine intermittent and/or perennial streams were identified within the study area on USGS mapping. These include the Salt River with seven unnamed tributaries, and Town Creek. However, field



Figure 6: Town Creek West of Water Treatment Facility.

verification only identified five intermittent and perennial streams within the study area—the Salt River and three unnamed tributaries and Town Creek. Although ephemeral streams may also be considered jurisdictional, their evaluation did not fall within the scope of the overview. All streams totally or partially located within the study area may be impacted by any proposed road construction or improvements associated with this project.

Aquatic Species—No aquatic macro invertebrate, fish, or water quality sampling was completed for the *Ecological Overview*. However, the Water Quality Branch of the Kentucky Division of Water (KDOW) provided stream and fish data for the Mercer County area and indicated there are no Outstanding State Resource Waters or Wild Rivers within the study area. Aquatic species in or near

the study area are sensitive to increased turbidity, sediment, and other adverse influences on water quality. The Kentucky State Nature Preserves Commission (KSNPC) recommended that, should any recommended improvement be implemented, an erosion control plan be developed with stringent erosion control methods. Streams that may be impacted should be surveyed by a qualified biologist prior to in-stream disturbance.

Wetlands and Ponds—A review of National Wetlands Inventory (NWI) mapping revealed one forested wetland and several palustrine unconsolidated bottom (PUB) ponds within the study area. However, field surveys determined that the mapped forested “wetland” did not possess wetland hydrology. These same field surveys identified two depressional areas near KY 1989 that may be wetlands (see *Ecological Overview*, Figure 2, in Appendix F, herein). Nine farm ponds were determined to have no connectivity to jurisdictional wetlands.

Regulatory Issues—Any stream channelization, culverting, and/or filling of jurisdictional waters may require notification and/or permitting with the USACE and certification from the KDOW. USACE, Louisville Regulatory District, Louisville, Kentucky, is the agency responsible for regulating waters, waterways, and wetlands (“Waters of the United States”).

- U.S. Army Corps of Engineers (USACE): Depending on the specific roadway construction design, this project may be permitted under Nationwide Permit 14 (NWP 14), “Linear Transportation Crossings”. However, the use of NWP 14 is limited to crossings that result in a filled area no larger than one-half acre. The permittee must notify the District Engineer in accordance with General Condition 27 if the work involves discharges of dredged or fill material into wetlands and/or results in the loss of greater than 0.1 acre of Waters of the United States. This permit does not authorize stream channelization, and the authorized activities must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality of any stream in accordance with General Conditions 9 and 21. This nationwide permit only authorizes activities with minimal adverse effects on the aquatic environment.
- Kentucky Division of Water (KDOW): Projects involving work in a stream, such as bank stabilization, road culverts, utility line crossings, and stream alteration will require a Water Quality Certification and a Floodplain Construction Permit from the KDOW. Projects that involve filling in the 100-year floodplain will also require a Floodplain Construction Permit. KDOW also requires a Groundwater Protection Plan for all construction activities. Any area disturbed due to construction should be managed for stream siltation from storm water runoff. Construction sites greater than 5 acres will require the filing of a Notice of Intent to be covered under the Kentucky Pollution Discharge Elimination System’s General Storm Water Permit. This permit requires the creation of an Erosion Control Plan.

5.2 Terrestrial Ecology, and Threatened and Endangered Species

U.S. Fish and Wildlife Service (USFWS)—USFWS’s July 30, 2008 list of endangered, threatened, and candidate species for Mercer County identifies two federally endangered mammal species, four endangered mussel species, one endangered plant species and one candidate plant species that are

known to occur or have the potential to occur within the county. The list is provided in Appendix F (p.57)⁴. USFWS was notified of the proposed project but did not submit comments. USFWS typically expresses concern over erosion and sedimentation control, stream bank stabilization, and maintaining water quality for this and other highway projects during and post-construction. The agency typically recommends reducing impacts to aquatic resources and endangered species and habitat; and if the recommendations cannot be followed, the agency suggests that surveys be conducted for the federally listed species in the project vicinity.

Kentucky Division of Forestry (KDOF)—KDOF indicated there are no current state forests or champion trees located within the study area. KDOF recommended protection of trees that will remain after completion of any proposed construction. Heavy equipment should not come into contact with the base of trees to prevent harm to the trunk and surface roots. Construction traffic should also stay away from the drip lines of trees to reduce the amount of soil compaction around trees that are to remain. Soil compaction leads to a reduction in the amount of available water for the trees, which can lead to increased stress. Stressed trees are more susceptible to disease and insect infestation. KDOF also recommends that additional trees be planted after construction. Any proposed planting should be selected according to trees already existing within the site.

Kentucky Department of Fish and Wildlife Resources (KDFWR)—Coordination with the Kentucky Department of Fish and Wildlife Resources (KDFWR) indicated no federally endangered species within the study area. However, KDFWR did list two state threatened species and three additional species of special concern. The *Ecological Overview's* Table 2 identifies these species.

Kentucky State Nature Preserves Commission (KSNPC)—KSNPC reviewed its Natural Heritage Program Database to determine if any endangered, threatened, or special concern plants and animals or exceptional communities monitored by the KSNPC occurred within or near the project area. KSNPC applied three buffers to analyze the project area:

1. 1-mile buffer for all records
2. 5-mile buffer for aquatic records and federally listed species
3. 10-mile buffer for monitored mammals and birds

Four historic records were found within the 1-mile buffer. Within the 5-mile buffer, one federally listed species was identified. Twelve records for mammals and birds were found within the 10-mile buffer. The *Ecological Overview's* Table 3 summarizes KSNPC data with respect to the records of species within these buffers.

Details of the USFWS, KDFWR, and KSNPC findings are included in Appendix F.

5.3 Karst Areas

According to the KDOW, the study area is composed of soluble rocks of the Clays Ferry Foundation on hilltops and Lexington limestones in the valleys. These karst aquifers are

⁴ The July 2008 list updates the data in the *Ecological Overview's* Table 1 and associated text.

groundwater recharge areas comprising most of the surface terrain of the study area. No spring or wellhead protection areas occur within the study area. More karst springs in addition to Humane Spring and Votah Spring may exist in the study area, especially along the Salt River and Town Creek.

5.4 Special Designation Lands

No state nature preserves or wildlife management areas are present within the study area, nor are any state or national parks or forests.

6.0 PUBLIC INVOLVEMENT AND AGENCY COORDINATION

6.1 Public Involvement Program Summary

Project Team—A KYTC Project Team was created for the *Harrodsburg Northwest Bypass Alternatives Study*. Representatives of the Planning, Design, Environmental Analysis, Traffic, and Construction functions of KYTC and the Transportation Planning staff of the BGADD met with the project consultant on three occasions to provide guidance and decision-making. Minutes of these meetings are included in Appendix G.

Meetings with Local Officials and Other Project Stakeholders—A Project Advisory Committee, whose membership included local officials and other project stakeholders, met three times during the course of the study. The first meeting was held to introduce local officials to the study, inform them regarding the study process, and solicit their suggestions for the location of a bypass in northwestern Harrodsburg. The second meeting was held to review preliminary improvement options. The third meeting was to discuss KYTC and consultant recommendations. Minutes of these meeting are also included in Appendix G.

Public Meetings—Two public meetings were held. The first public meeting was to offer participants the opportunity to comment on project goals and issues, and to offer suggestions for the location of a bypass in northwestern Harrodsburg. The second public meeting included a summary of all suggested locations for a bypass in northwestern Harrodsburg, four alternatives recommended by the KYTC Project Team, a presentation of other preliminary improvement alternatives, and a solicitation of public feedback on those proposals. One hundred fourteen people signed in at the first public meeting, while forty-four people attended the second public meeting. Questionnaires were distributed to those in attendance. Thirty-seven completed surveys were returned either at the first public meeting or by mail in the following weeks; twenty-seven completed surveys were returned either at the second public meeting or by mail in the following weeks. A summary of the meetings and questionnaire results is included in Appendix G.

6.2 Agency Coordination

Two agency mailings were prepared during this study. The first (dated November 30, 2007) was prepared and distributed after base information had been collected and the second (dated May 29, 2008) was prepared and distributed after preliminary improvement options had been identified and presented to the public at the second public meeting. A copy of the mailings and the list of recipients are included in Appendix H for reference.

Responses were received from a variety of agencies. Many of the responses indicated that their agency did not anticipate any significant project-related issues in the study area. Others outlined standard requirements and guidance related to project planning, design, and construction. A third set of agencies expressed specific concerns or identified issues to be considered in the study. A summary of the substantive responses received is provided below. A summary of all agency comments and copies of all agency correspondence received are included in Appendix H.

First Mailing—

- Department of Military Affairs indicated that a bypass facility in northwest Harrodsburg would facilitate access to the Kentucky National Guard Armory located at 500 Tapp Road.
- Permits Branch of KYTC Division of Maintenance preferred that a bypass facility in northwest Harrodsburg, if constructed, have partial or full control of access.
- Natural Resources Conservation Service of the U.S. Department of Agriculture provided an electronic database of prime farmlands and of farmlands of statewide importance.
- Federal Aviation Administration foresaw no problems assuming no ultimate construction activities, *e.g.*, construction cranes, exceeded 200 feet in height above ground level.
- Mercer County Emergency Management endorsed the concept of a bypass facility in northwest Harrodsburg, but expressed concern about the intersections of US 68 with KY 152 and of US 68 west with US 127 south.
- Kentucky Department of Fish and Wildlife Resources (KDFWR) knew of no federal and/or state threatened and/or endangered species in the project area, but did express a concern about potential impacts to wetland habitats and streams.
- Kentucky Cabinet for Health and Family Services urged involvement in project planning by the Mercer County Health Department (Note: A member of the Mercer County Health Board of Directors is a member of the Project Advisory Committee.)
- Kentucky Geological Survey (KGS) at the University of Kentucky expressed concern about karst topography and fault potential, the latter in the northern portion of the project study area.
- Geotechnical Branch of the KYTC Division of Structural Design expressed similar concerns to those of KGS.
- Center for Disease Control and Prevention of the U.S. Department of Health and Human Services advocated adequate provision for bicyclists and pedestrians.
- Division of Conservation, in the Kentucky Energy and Environment Cabinet (formerly Environmental and Public Protection Cabinet), identified one agricultural district and four agricultural easements located just north and west of the project study area.
- Water Quality Branch of the KDOW of the Kentucky Department for Environmental Protection urged that no water quality degradation impact Johnson Creek during construction.
- Division of Wastewater Management, in the Kentucky Department for Environmental Protection, urged that steps be taken to avoid any disturbance of Humane Spring.

Second Mailing—

- The Geotechnical Branch of the KYTC Division of Structural Design expressed a preference for Alternate E among the bypass alternatives and had no concerns with any of the other improvements.

- The Kentucky State Police stress the need for proper signage, signals, and lighting to accommodate inexperienced drivers and commercial vehicles operating in the project area.
- The Kentucky Department of Fish and Wildlife Resources (KDFWR) would not prefer Alternate H. Further, KDFWR prefers that any bridge crossing the Salt River be a clear span structure, i.e. no bridge piers within the river, and that possible stream mitigation sites be identified during future project development phases.
- The Kentucky Heritage Council urged that future project development phases include separate surveys of archaeological and historic sites to ascertain potential eligibility for listing in the NRHP.

7.0 ALTERNATIVES DEVELOPMENT AND EVALUATION

7.1 Alternative Development

The stated project goals include:

- Improving transportation system connectivity.
- Separating school and industry traffic.
- Reducing emergency response travel time.
- Providing grade-separated railroad crossings.
- Reducing congestion on area roadways.
- Compatibility with a possible future bypass extension to the south.

No-Build Alternative—The No-Build Alternative was considered and determined to be inadequate to address the project goals and long-term needs of the community. This alternative results in unacceptable traffic volumes and poor LOS on existing roadways in 2030. Consequently, it was not advanced and attention was turned toward a Build Alternative.

Northwest Bypass Alternatives—

With the aforementioned project goals in mind, the KYTC Project Team met with the Project Advisory Committee (October 22, 2007) and members of the public (November 19, 2007), to solicit their suggestions for the location of a bypass in northwestern Harrodsburg (see suggested corridors, Figure 7). After accounting for minor differences in the suggested concepts, seventeen possible locations were developed as a result of these suggestions. Conceptual location mapping and descriptions of these seventeen alternatives, as well as some of the more significant metrics associated with each alternative and a subjective scoring of each alternative against project goals, are included in Appendix I. The KYTC Project Team reviewed this information and identified **Alternatives E, F, H, and J** as the most promising concepts to be presented to the Project Advisory Committee at its second meeting on April 14, 2008. Figure 8 shows these four alternatives.

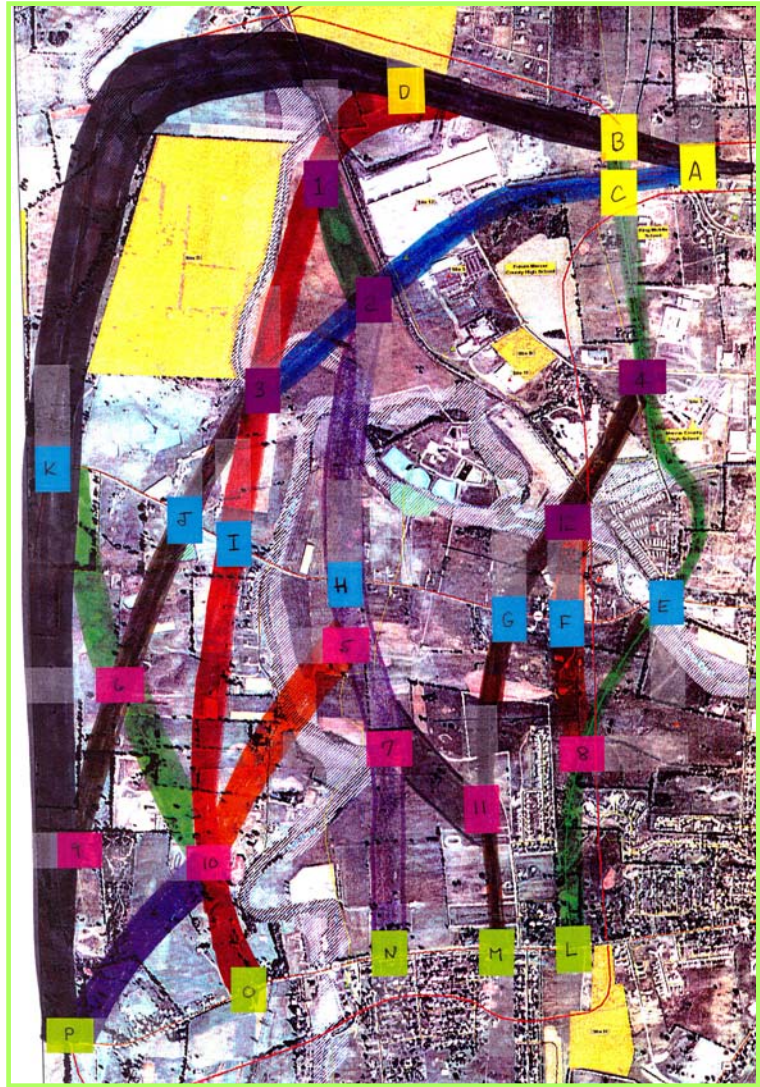


Figure 7: Bypass Corridors Suggested by the Public.

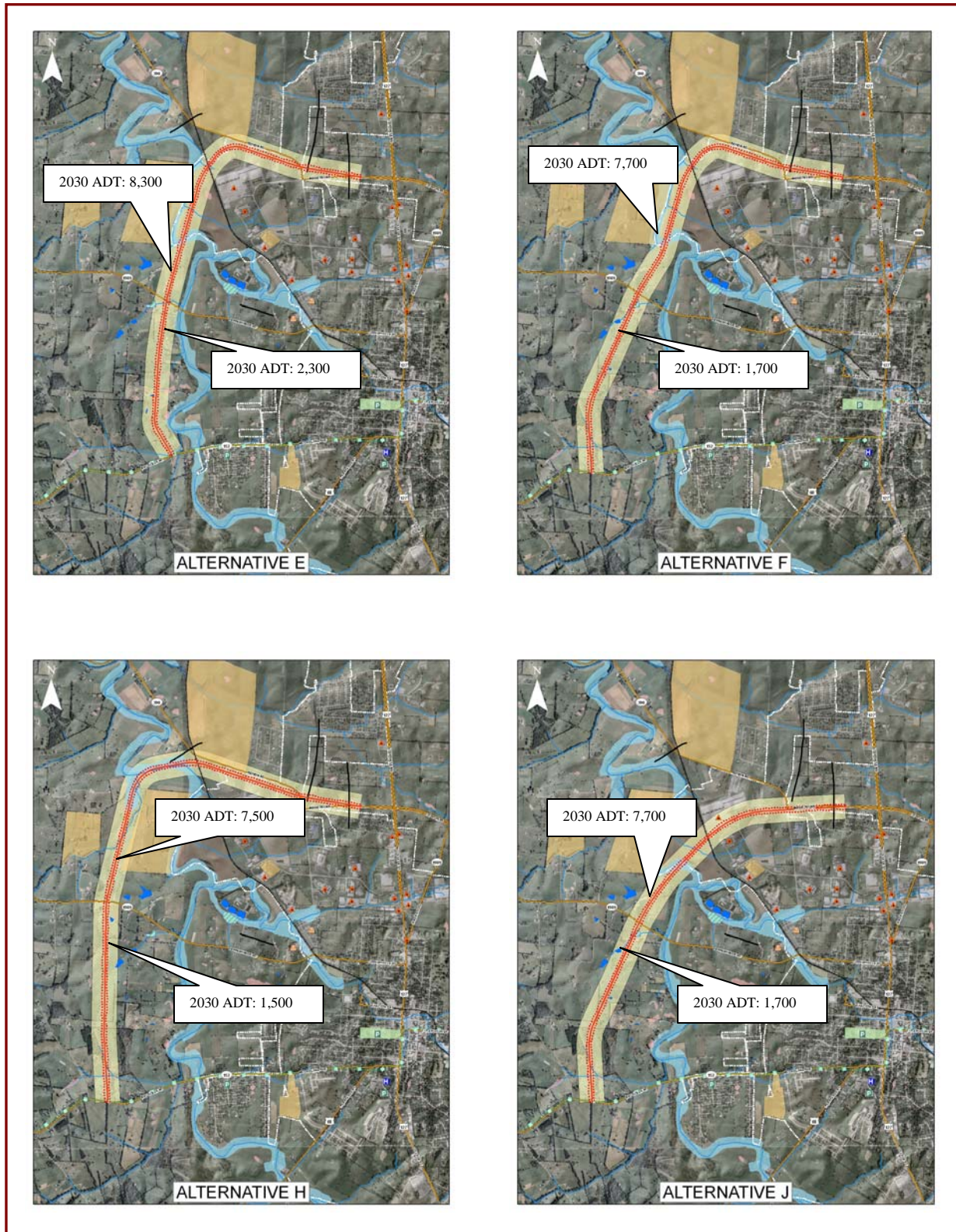


Figure 8: Bypass Alternatives Recommended for Consideration, With Projected (Year 2030) Average Daily Traffic North and South of KY 1989 (Cornishville Road).

The four bypass alternatives would attract between 7,500 vpd and 8,300 vpd on the section north of KY 1989 and between 1,500 vpd and 2,300 vpd south of KY 1989 in 2030 (see Figure 8). These scenarios would not satisfy the primary purpose of the proposed bypass, i.e., a significant reduction in traffic volumes on US 127; and the estimated cost of the bypass would range from \$29 million to \$37 million. The KYTC 2008 Highway Plan reflects a budget squeeze that does not portend well for the inclusion of additional projects requiring major investments—projects such as a Northwest Harrodsburg Bypass. Therefore, alternative transportation improvements within the study area were also conceived with emphasis on addressing project goals in a more fiscally constrained manner in what has come to be known as “practical solutions”. These alternatives were referred to as the *Other Northwest Quadrant Options (Other Options)*.

Other Northwest Quadrant Options—The following *Other Options* were presented—together with bypass Alternatives E, F, H, and J—at the April 2008 Project Advisory Committee meeting and at the second public meeting, held on May 12, 2008:

- Widen Moberly Road from KY 1989 to KY 390
- Reconstruct the Moberly Road/KY 1989 intersection—with and without railroad overpass
- Improve KY 1989 from the railroad east to College Street
- Improve KY 1989 from the railroad west to Tewmeyer Lane
- Improve access from KY 1989 near or west of Tewmeyer Lane to Wausau Paper, Trim Masters, and US 127 north
- Improve KY 152 from Tewmeyer Lane to US 127
- Construct a new 2-lane connector from KY 1989 / Moberly Road south to KY 152, and extend Broadway west to new connector
- Rebuild Tewmeyer Lane as an improved 2-lane road.
- Consider additional signalization at the following locations:
 - KY 390 and Moberly Road
 - Moberly Road and Tapp Road (city project)
 - KY 1989 and Moberly Road

Exhibit 4 shows the *Other Options* presented at the May 2008 meeting. Exhibit 5 shows projected (year 2030) traffic volumes for the non-bypass alternatives.

Forty-four persons attended the second public meeting. Twenty-seven completed comment forms were returned at the meeting or within two weeks thereafter. In addition, a petition against any northwest bypass alternative was signed by thirteen residents along Tewmeyer Lane and was submitted to KYTC. Four of these thirteen signatories also filled out public survey forms. Hence, at most, nine of the signatories represented unduplicated comments and are counted that way.

Including only the unduplicated signatories on the petition, thirty-one of the thirty-six commenters were opposed to a northwest bypass. Of the five persons who favored a northwest bypass, Alternative H was the preferred option followed in order by Alternatives J, F, and E. Of the four alternative options presented to the public, Alternative H would require the largest acreage of right-of-way, including the most acreage of both prime and state importance farmland; would cross the

largest acreage of floodplains; would impact the greatest length of streams; and would have the highest estimated cost. Because of its environmental impacts, the alternative was viewed negatively by KDFWR. In addition, although Alternative H would provide the greatest separation of school and industry traffic, it would do the least to reduce congestion on existing area roadways. These metrics are each generally associated with the fact that Alternative H is the alternative option located farthest from the heart of the Harrodsburg community. Table 6, below, provides a comparison of the estimated design, right-of-way, utility, and construction costs that are associated with each of these four alternative bypass concepts.

Table 6: Cost Estimates—Alternative Bypass Concepts

Alternative Concept – Bypass	Cost Estimates (in Millions)				
	Design	R/W	Utility	Construction	Total
Alternative E	\$ 2.1	\$ 5.4	\$ 0.7	\$ 21.0	\$ 29.2
Alternative F	\$ 2.2	\$ 5.7	\$ 0.7	\$ 22.5	\$ 31.1
Alternative H	\$ 2.7	\$ 6.6	\$ 0.7	\$ 27.0	\$ 37.0
Alternative J	\$ 2.1	\$ 5.2	\$ 1.4	\$ 20.9	\$ 29.6

The twenty-seven completed comment forms also included expressions of preference among the additional alternative transportation improvements within the project study area that were conceived with emphasis on addressing project goals in a more fiscally constrained manner. Figures 9 through 13 show the current conditions at the locations of the five options mentioned more frequently or ranked much higher than the remaining options:

1. Extend Moberly Road from (KY 1989) Cornishville Road south to KY 152 (Mooreland Avenue).



Figure 9:
Possible Location, Moberly Road Extension.

2. Reconstruct Moberly Road from KY 390 (Bohon Road) to KY 1989 (Cornishville Street).

Figure 10:
Existing Moberly Road Between
KY 390 and KY 1989.



3. Extend Broadway west to proposed Moberly Road extension (new KY 152-KY 1989 connector).

Figure 11:
Broadway Looking West from Hill Street



4. Reconstruct Moberly Road/ KY 1989 (Cornishville Street) intersection with railroad overpass.

Figure 12:
Moberly Road / KY 1989 Intersection



5. Install traffic signal at Moberly Road and Industry Road.

Figure 13:
Moberly Road / Industry Road Intersection, Looking
East



Conversely, there was relatively little interest in, or support for, the following alternative transportation improvements:

1. Improve KY 1989 from the railroad east to College Street
2. Improve KY 152 from Tewmeyer Lane to US 127
3. Install traffic signal at Moberly Road and Tapp Road
4. Rebuild Tewmeyer Lane as an improved 2-lane road
5. Improve KY 1989 from the railroad west to Tewmeyer Lane
6. Reconstruct Moberly Road/Cornishville Road intersection without railroad overpass
7. Construct a new street from Cornishville Road near or west of Tewmeyer Lane to Wausau Paper, Trim-Masters, and Bohon Road
8. Install traffic signal at Moberly Road and Cornishville Road

Table 7, below, provides a comparison of the estimated design, right-of-way, utility, and construction costs that are associated with each of these other improvement concepts.

Table 7: Cost Estimates—Other Improvement Concepts

Alternative Concept—Other	Cost Estimates (in Millions)				
	Design	R/W	Utility	Construction	Total
Extend Moberly Road from KY 1989 south to KY 152	\$ 0.2	\$ 1.1	\$ 0.1	\$ 1.8	\$ 3.2
Urbanize and reconstruct Moberly Road from KY 1989 to KY 390	\$ 0.2	\$ 0	\$ 0.1	\$ 1.2	\$ 1.5
Extend Broadway west to new KY 1989 /KY 152 connector	\$ 0.1	\$ 0.55	\$ 0.05	\$ 0.9	\$ 1.6
Reconstruct Moberly Road /KY 1989 intersection with railroad overpass	\$ 0.7	\$ 2.2	\$ 0.4	\$ 7.3	\$ 10.6
Install traffic signal at Moberly Road and Industry Road	\$ 0.005	-	-	\$ 0.075	\$ 0.08
Improve KY 1989 from the railroad east to US 127	\$0.1	\$0.0	\$0.0	\$1.0	\$1.1
Improve KY 152 from Tewmeyer Lane to US 127	\$0.2	\$0.0	\$0.0	\$1.7	\$1.9
Install traffic signal at Moberly Road and Tapp Road	\$ 0.005	-	-	\$ 0.075	\$ 0.08
Rebuild Tewmeyer Lane as an improved 2-lane road	\$0.1	\$0.0	\$0.0	\$1.3	\$1.4
Improve KY 1989 from the railroad west to Tewmeyer Lane	\$0.14	\$0.0	\$0.0	\$1.42	\$1.6
Reconstruct Moberly Road/KY 1989 intersection without railroad overpass	\$ 0.4	\$ 1.4	\$ 0.4	\$ 4.1	\$ 6.3
Construct a new street from KY 1989 near or west of Tewmeyer Lane to Wausau Paper, Trim-Masters, and KY 390 (Bohon Road)	\$ 1.0	\$ 3.5	\$ 0.6	\$ 9.4	\$ 14.5
Install traffic signal at the Moberly Road / KY 1989 intersection	\$ 0.005	-	-	\$ 0.075	\$ 0.08

7.2 Identification of Recommendations

The Project Team met on June 18, 2008, to review the public comments and identify options to present as recommendations to the Project Advisory Committee at a scheduled July 28, 2008, meeting.

At the July 28, 2008, meeting, the Project Team presented the Project Advisory Committee with a review of the May 12, 2008, public meeting results, noting that the comments received indicated strong opposition to a northwest bypass and to improvements to Tewmeyer Lane, but substantial support for other improvements. The presentation proceeded with an examination of the four bypass alternatives in terms of satisfaction of project goals, cost, traffic volumes, and public support. A list of short-term, long-term, and other future recommendations then were presented to the committee, as follows:

First recommendation: A northwest bypass is currently not recommended for the following reasons:

- High estimated costs (\$29 million to \$37 million).
- Low traffic forecasts (ADT ranging from 8,300 vpd to 1,500 vpd in 2030, as shown on Figure 8).
- Lack of public support.
- Marginally satisfies the project goals.

Second Recommendation: Advance the following short-term projects:

- 1) Consider intersection improvements at Moberly Road/KY 390, Moberly Road/Tapp Road, and Moberly Road/KY 1989. These improvements may include, but are not limited to, signal warrant analyses, signage, and striping. If signals are warranted at these intersections, then consider synchronization.
- 2) Due to need and public support, the KY 152/US 68 intersection should be considered as a spot improvement.

Third Recommendation: Advance the following long-term projects:

- 3) Reconstruct and extend the Moberly Road corridor:
 - a. Reconstruct intersection of Moberly Road/KY 1989 with a railroad overpass.
 - b. Widen Moberly Road between KY 1989 and KY 390.
 - c. Extend Moberly Road (on new alignment) south, from KY 1989 to KY 152, and construct a connector to West Broadway Street.

Other Future Recommendations:

- 4) Conduct a Small Urban Area (SUA) Study for Harrodsburg.
- 5) Upon implementation of the short and long term projects, conduct a planning study for a Western Harrodsburg Bypass to complete the loop around the city and provide connectivity with the existing eastern bypass.
- 6) Conduct a railroad relocation study.

The locations of these short- and long-term projects (recommendations 1 through 3, above) were presented to the Project Advisory Committee on a display map, a copy of which is included with the July 28 meeting minutes in Appendix G. Minutes or summaries of all meetings referenced herein are provided in Appendix G.

It was generally accepted that the non-bypass alternatives would effectively address the project goals and respond to KYTC's emphasis on practical solutions and fiscally feasible improvement alternatives. Therefore, the recommendations identified above are incorporated into this report as the *Recommended Northwest Quadrant Options*. These recommendations are shown on Exhibit 6. Section 8.0 provides additional details about the options, including cost and order of priority ranking.

7.3 Projected Traffic Volumes and Levels of Service With Recommended Projects

Traffic volumes and levels of service (LOS) were projected for the year 2030 for both the No-Build and the Build scenarios based on the recommended projects identified in Section 8.0, herein. Table 8 compares current traffic volumes, projected traffic volumes under the No-Build scenario, and projected 2030 traffic volumes assuming the completion of the recommended projects. Exhibit 5 in Appendix A also shows this data.

If the projects recommended in Section 8.0 are developed, future year growth on College Street is projected to decline by between 10% and 15%. An extension of Moberly Road south of KY 1989 to KY 152 could be expected to carry between 1,700 and 3,500 vpd. An extension of West Broadway westward to the Moberly Road extension would carry about 1,700 vpd.

Level of service (LOS) is a qualitative measure of expected traffic conflicts, delay, driver discomfort, and congestion. Levels of service are described according to a letter rating system (similar to school grades) ranging from LOS A (free flow, minimal or no delays – best conditions) to LOS F (stop and go conditions, very long delays – worst conditions). For intersections the Highway Capacity Manual defines levels of service based on the average delay due to the signal or stop control. For 2-lane roadways such as Moberly Road or the Moberly Road extension, level of service is a function of the average percent of time a vehicle spends following another vehicle. LOS C is often considered the threshold for desirable traffic conditions in cities such as Harrodsburg. LOS C corresponds to less than 35 seconds of delay per vehicle at a signalized intersection and less than 25 seconds of delay at an unsignalized intersection. For two-lane roadways, LOS C is achieved when one vehicle is following another one less than 70% percent of the time.

For purposes of comparison, Table 8 displays the current (year 2008) and projected Year 2030 LOS for various streets in the expanded study area. Exhibit 1 shows both the current and projected No-Build scenario traffic volumes and levels of service. Exhibit 5 shows projected traffic volumes and levels of service with the Build scenario.

Table 8: Current and Projected (Year 2030) Traffic Volume and Level of Service Comparison

Roadway	Segment	Existing 2008		Projected 2030 No-Build		Projected 2030 With Recommended Projects	
		ADT	LOS	ADT	LOS	ADT	LOS
US 127 (N. College St.)	US 68 (W. Lexington St.) to KY 1989 (Cornishville St.)	14,700	D	23,700	D	20,200	D
US 127 (N. College St.)	KY 1989 (Cornishville St.) to KY 390 (Industry Rd.)	13,500	D	27,100	D	24,600	D
KY 390 (Bohon/Industry Rds.)	East of Moberly Rd.	4,660	B	6,300	C	8,000	C
Moberly Rd.	North of Tapp Rd.	2,100	C	3,300	C	7,300	C
Moberly Rd.	Between Tapp Rd. and KY 1989 (Cornishville St.)	2,540	B	4,100	B	8,000	C
Moberly Rd. (Extension)	Between KY 1989 (Cornishville St.) and W. Broadway	N/A	--	N/A	--	3,500	B
Moberly Rd. (Extension)	Between W. Broadway and KY 152 (Mooreland Ave.)	N/A	--	N/A	--	1,700	A
KY 1989 (Cornishville St.)	East of Moberly Rd.	4,810	B	7,600	C	5,000	B
KY 1989 (Cornishville Rd.)	West of Moberly Rd.	1,680	B	2,400	B	2,400	B
W. Broadway (Extension)	Western Extension to New Moberly Rd. Extension	N/A	--	N/A	--	1,700	A
US 68 (KY 152/ Mooreland Ave.)	West of US 127 (S. College St.) Intersection	5,810	C	16,600	D	4,800	C
US 68 (S. College St.)	Mooreland Ave. to W. Lexington St.	20,800	D	32,000	E	28,500	D
KY 152 (Mooreland Ave.)	West of US 68/ KY 152 Intersection	5,200	B	7,600	C	5,800	B
KY152 (Mooreland Ave. & Mackville Rd.)	West of Moberly Rd. Extended	N/A	--	N/A	--	7,600	C

8.0 RECOMMENDATIONS

In consideration of the existing and projected future transportation system conditions in the northwest quadrant of Harrodsburg; the project goals; the preferences of the KYTC Project Team and the Project Advisory Committee and other local project stakeholders, and the general public; the alternative concepts; and the desire for a set of fiscally responsible recommendations that would result in the greatest chance of implementation, the projects listed below are recommended in three time-periods—short term, long term (five to ten years), and other future. The recommended projects involving construction are shown on Exhibit 6. Table 9 provides a comparison of the estimated design, right-of-way, utility, and construction costs, that are associated with each of these recommended improvement concepts. Table 10 evaluates the degree to which each alternative improvement option satisfies the goals for this project. Table 11 provides some additional metrics for each alternative improvement option.

SHORT-TERM RECOMMENDATIONS—

Priority 1—Conduct a Small Urban Area (SUA) Study for Harrodsburg.

A SUA study is applicable for municipalities that range in population from 5,000 to 50,000 with the goal of maximizing the current transportation assets on the existing state-controlled route system in and around the municipality.

Priority 2—Intersection Spot Improvements

- Improve Intersections on Moberly Road at KY 390, Tapp Road, and KY 1989 to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization. (See Exhibit 6, Project ID #1)
- Reconstruct the US 68/KY 152 intersection, to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization. (See Exhibit 6, Project ID #2)

LONG-TERM (NEXT 5-TO-10 YEAR) RECOMMENDATIONS—

Priority 3—Reconstruct and Extend the Moberly Road Corridor:

- Reconstruct the intersection of Moberly Road/ KY 1989 with an overpass of the Norfolk-Southern railroad track. (See Exhibit 6, Project ID #3A)
- Widen Moberly Road between KY 1989 and KY 390. (See Exhibit 6, Project ID #3B)
- Extend Moberly Road (on new alignment) to the south from KY 1989 to KY 152, and include an east-west connector to West Broadway Street. (See Exhibit 6, Project ID #3C)

OTHER FUTURE RECOMMENDATIONS—

- Upon implementation of the short- and long-term projects, consider conducting a planning study to re-examine the purpose and need for a western Harrodsburg bypass to complete the loop around the city and provide connectivity with the existing eastern bypass.
- Conduct a railroad relocation study that would focus on relocation sites and financing options.

Table 9: Cost Estimates—Recommended Improvements

Improvement Type	Alternative Concept	Cost Estimates (in Millions)				
		Design	R/W	Utility	Construction	Total
Short-Term Recommendations	Conduct a Small Urban Area (SUA) Study for Harrodsburg	\$ 0.05	N/A	N/A	N/A	\$ 0.05
	Improve all Intersections on Moberly Road: Improvements to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization.	\$ 0.02	N/A	N/A	\$ 0.225	\$ 0.245
	Reconstruct Intersection at KY 152 and US 68, to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization.	\$ 0.05	\$ 0.85	\$ 0.1	\$ 0.5	\$ 1.5
Next 5 to 10 Years	Reconstruct Moberly Road /KY 1989 intersection with railroad overpass.	\$ 0.7	\$ 2.2	\$ 0.4	\$ 7.3	\$ 10.6
	Widen Moberly Road between KY 1989 and KY 390.	\$ 0.2	\$ 0	\$ 0.1	\$ 1.2	\$ 1.5
	Extend Moberly Road from KY 1989 to KY 152.	\$ 0.2	\$ 1.1	\$ 0.1	\$ 1.8	\$ 3.2
	Extend Broadway West to new KY 1989-KY 152 connector (Moberly Road extension).	\$ 0.1	\$ 0.55	\$ 0.05	\$ 0.9	\$ 1.6
Other Future Recommendations	Upon implementation of the short- and long-term projects, conduct a planning study for a western Harrodsburg bypass to complete the loop around the city and provide connectivity with the existing eastern bypass.	\$ 0.3	N/A	N/A	N/A	\$ 0.3
	Conduct a rail relocation study that would focus on relocation sites and financing options.	\$ 0.5	N/A	N/A	N/A	\$ 0.5
Total Estimated Cost						\$19.5

Table 10: Goal Satisfaction of Improvements Considered

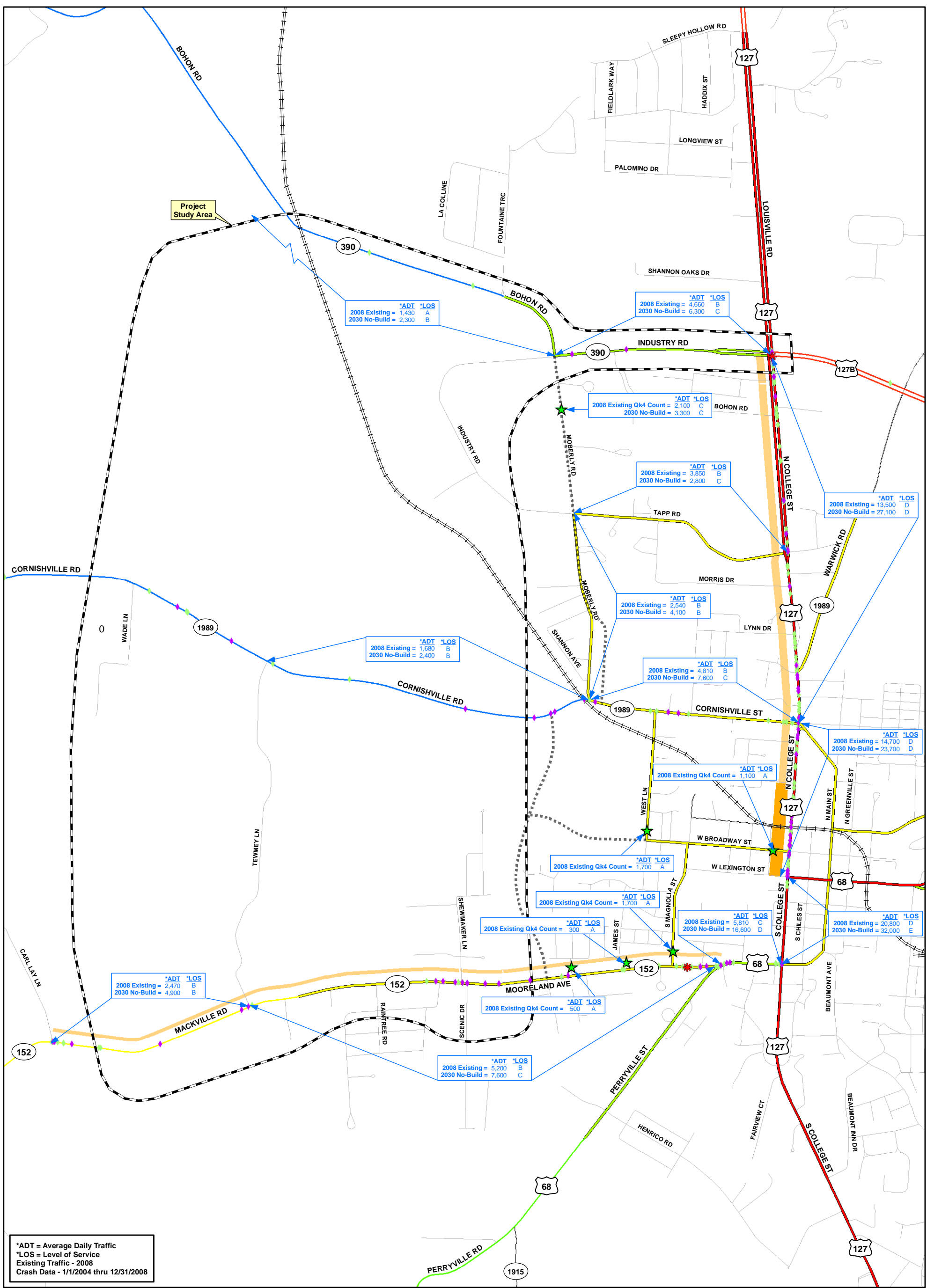
Improvement Option	Separate School and Industry Traffic	Emergency Response Time to Haggin Hospital	Grade Separated RR Crossing	Reduce Congestion on Existing Area Roadways	Compatible with Future Possible Southwest Extension
Bypass Alternative E	Good	Poor	Excellent	Fair to Poor	Excellent
Bypass Alternative F	Good	Poor	Excellent	Fair to Poor	Excellent
Bypass Alternative H	Excellent	Poor	Excellent	Poor	Excellent
Bypass Alternative J	Good	Poor	Excellent	Fair to Poor	Excellent
Extend Moberly Road from KY 1989 to KY 152	Fair	Good	N/A	Excellent	Good
Urbanize and Reconstruct Moberly Road from KY 1989 to KY 390	Poor	Fair	N/A	Good	Good
Extend Broadway west to new KY 1989-KY 152 connector (Moberly Road extension)	Fair	Fair	N/A	Good	Good
Reconstruct Moberly Road/KY 1989 intersection <u>with</u> railroad overpass	Fair	Good	Excellent	Excellent	Good
Install traffic signal at Moberly Road and KY 390	Fair	N/A	N/A	Fair	N/A
Reconstruct Moberly Road/KY 1989 intersection <u>without</u> railroad overpass	Poor	Poor	Poor	Poor	Fair
Construct a new street from KY 1989 near Tewmeyer Lane to Wausau Paper, Trim-Masters, and KY 390 (Bohon Road)	Good	Fair	Poor	Poor	Good
Install traffic signal at Moberly Road and KY 1989	Fair	Fair	Poor	Fair	Good
Conduct a Small Urban Area Study for Harrodsburg	N/A	N/A	N/A	N/A	N/A
Improve all intersections on Moberly Road, including signal warrant analyses, signage, and striping	Fair	Fair	Poor	Good	Fair
After implementation of short- and long-term projects, conduct a revised planning study for a western Harrodsburg Bypass to complete the loop around the city	N/A	N/A	N/A	N/A	N/A
Conduct a rail relocation study that would focus on relocation sites and financing options	N/A	N/A	N/A	N/A	N/A
Reconstruct Intersection at KY 152 and US 68, to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization.	N/A	Good	N/A	Good	N/A

Table 11: Other Metrics of Improvements Considered

Improvement Option	Historic Sites Potentially Impacted	School Property Potentially Disturbed	Potential HAZMAT or Landfill Impact	Number of Streams Potentially Crossed	Estimated Cost (Millions)
Bypass Alternative E	2	No	No	5	\$30.0
Bypass Alternative F	2	No	No	6	\$30.9
Bypass Alternative H	2	No	No	6	\$37.0
Bypass Alternative J	1	Yes	No	5	\$29.3
Extend Moberly Road from KY 1989 to KY 152	1	No	Yes	1	\$3.2
Urbanize and Reconstruct Moberly Road from KY 1989 to KY 390	0	Yes	Yes	0	\$1.5
Extend Broadway West to new KY 1989-KY 152 connector (Moberly Road extension)	0	No	Yes	0	\$1.6
Reconstruct Moberly Road/KY 1989 intersection <u>with</u> railroad overpass	0	No	Yes	1	\$10.6
Install traffic signal at Moberly Road and KY 390	0	No	No	0	\$0.08
Reconstruct Moberly Road/KY 1989 intersection <u>without</u> railroad overpass	0	No	No	1	\$6.3
Construct a new street from KY 1989 near Tewmeyer Lane to Wausau Paper, Trim-Masters, and KY 390 (Bohon Road)	2	Yes	Yes	1	\$14.5
Install traffic signal at Moberly Road and KY 1989	0	No	No	0	\$0.08
Conduct a Small Urban Area Study for Harrodsburg	N/A	N/A	N/A	N/A	\$0.05
Improve all intersections on Moberly Road, including signal warrant analyses, signage, and striping.	0	Yes	No	0	\$0.245
After implementation of short- and long-term projects, conduct a revised planning study for a western Harrodsburg Bypass to complete the loop around the city	N/A	N/A	N/A	N/A	\$0.3
Conduct a rail relocation study that would focus on relocation sites and financing options	N/A	N/A	N/A	N/A	\$0.5
Reconstruct Intersection at KY 152 and US 68, to include signal warrant analyses, signage, and striping. If signals are warranted, evaluate synchronization.	N/A	N/A	N/A	N/A	\$1.5

APPENDIX A

EXHIBITS



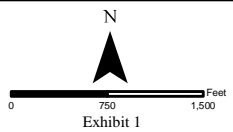
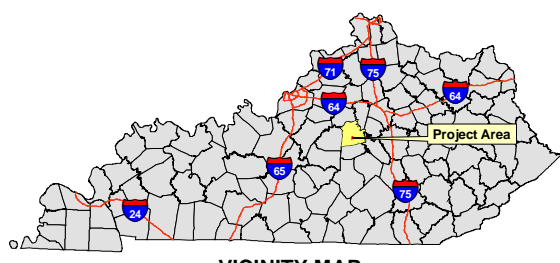
*ADT = Average Daily Traffic
*LOS = Level of Service
Existing Traffic - 2008
Crash Data - 1/1/2004 thru 12/31/2008



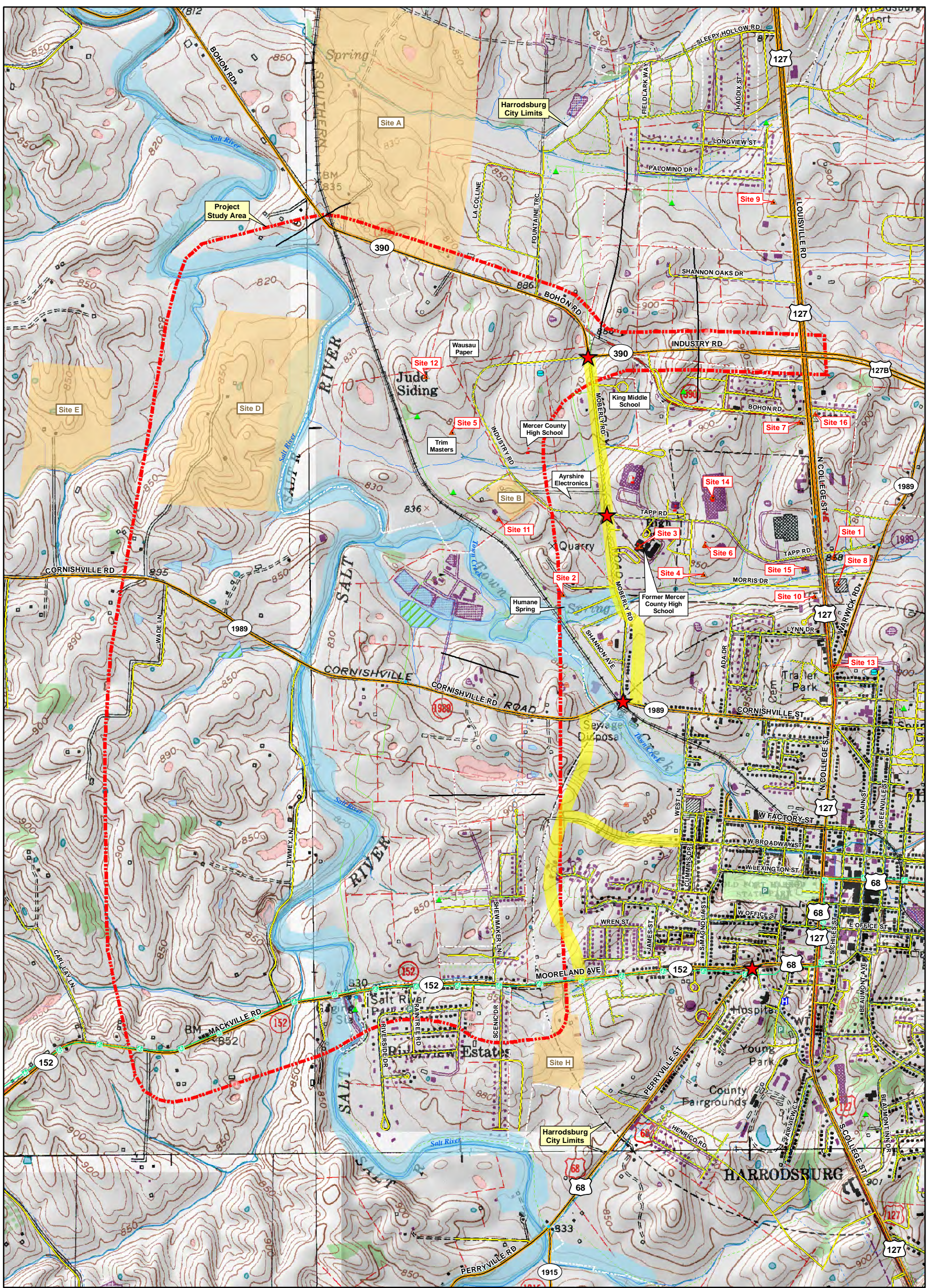
- CRF
- 1 - 1.95
 - 1.95 - 2.87
 - 2.87 - 4.72

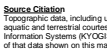


- Fatal
- Injury
- PDO
- 2008 Qk4 Count Location

- Urban Principal Arterial
- Urban Minor Arterial Street
- Urban Collector Street
- Rural Principal Arterial
- Rural Minor Arterial
- Rural Major Collector
- Rural Minor Collector
- Rural or Urban Local



























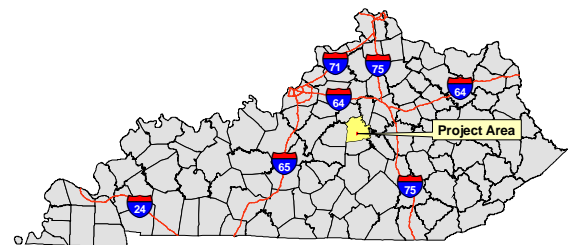
Existing and Projected No-Build Traffic, Functional Class, and Crashes
Harrodsburg Northwest US 127 Bypass Alternatives Study
Mercer County, Kentucky
KYTC Item No. 7-8344.00






Source Citation
Topographic data, including utilities and imagery and less historic, aquatic and terrestrial courtesy of the Kentucky Office of Geographic Information Systems (KYOGIS) QGIS makes no claim to the accuracy of that data shown on this map.



VICINITY MAP

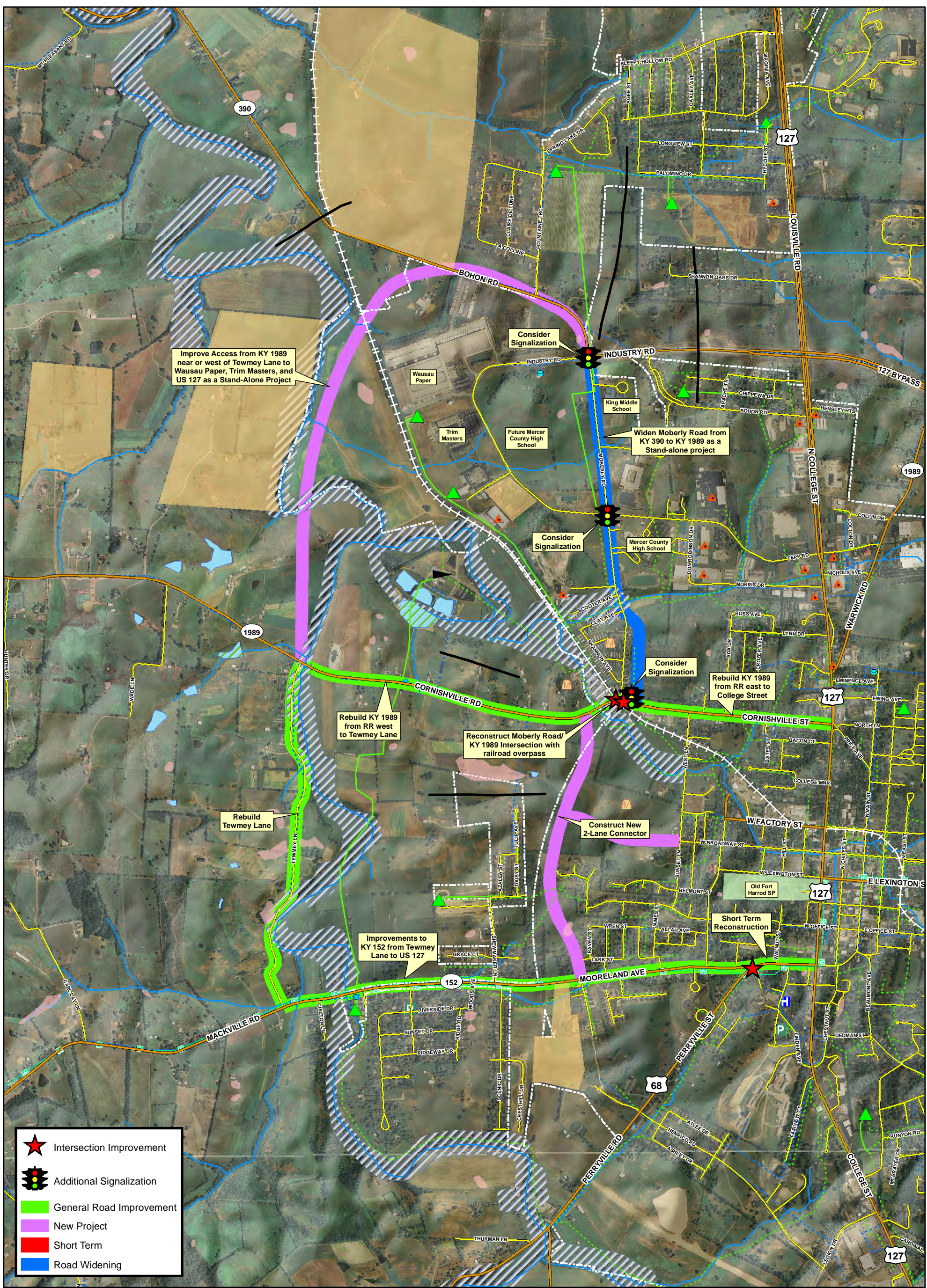


0 750 1,500 Feet

Exhibit 3

USGS Topographic Environmental Footprint

Harrodsburg Northwest US 127 Bypass Alternatives Study
Mercer County, Kentucky
KYTC Item No. 7-8344.00



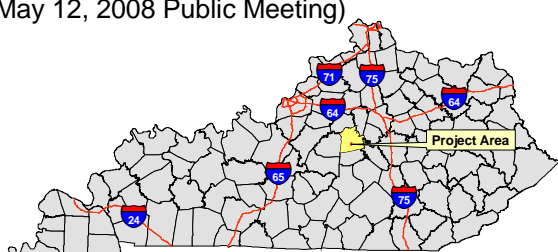
- ★ Intersection Improvement
- 🚦 Additional Signalization
- 🟢 General Road Improvement
- 🟡 New Project
- 🔴 Short Term
- 🟦 Road Widening

(As shown May 12, 2008 Public Meeting)

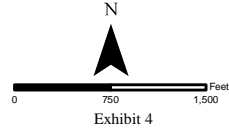


Source Citation
Topographic data, including utilities and imagery and less historic, aquatic and terrestrial courtesy of the Kentucky Office of Geographic Information Systems (KYOGIS). QGIS makes no claim to the accuracy of that data shown on this map.

- | | | |
|------------|-------------------------------|----------------------------|
| ✈ Airport | 🚶 Active Rail | 🟢 Lift Station |
| ⛔ Cemetery | 🚲 Bike Trail | 🏭 Sanitary Treatment Plant |
| 🏰 Church | 🔴 Faults (24K) | 💧 Water Tank |
| 🏡 Landfill | 🟡 Sink Hole Area | 💧 Water Pump Station |
| 🏥 Hospital | 🟠 Potential Historic Property | 💧 Water Source (Purchase) |
| 🏠 Home | 💧 Ponds | 🔵 Existing Waterline |
| 🏠 Home | 💧 Wetlands | 🟢 Force Main Sewer |
| 🏠 Home | 💧 Potential Flood Area | 🔵 Gravity Sewer |

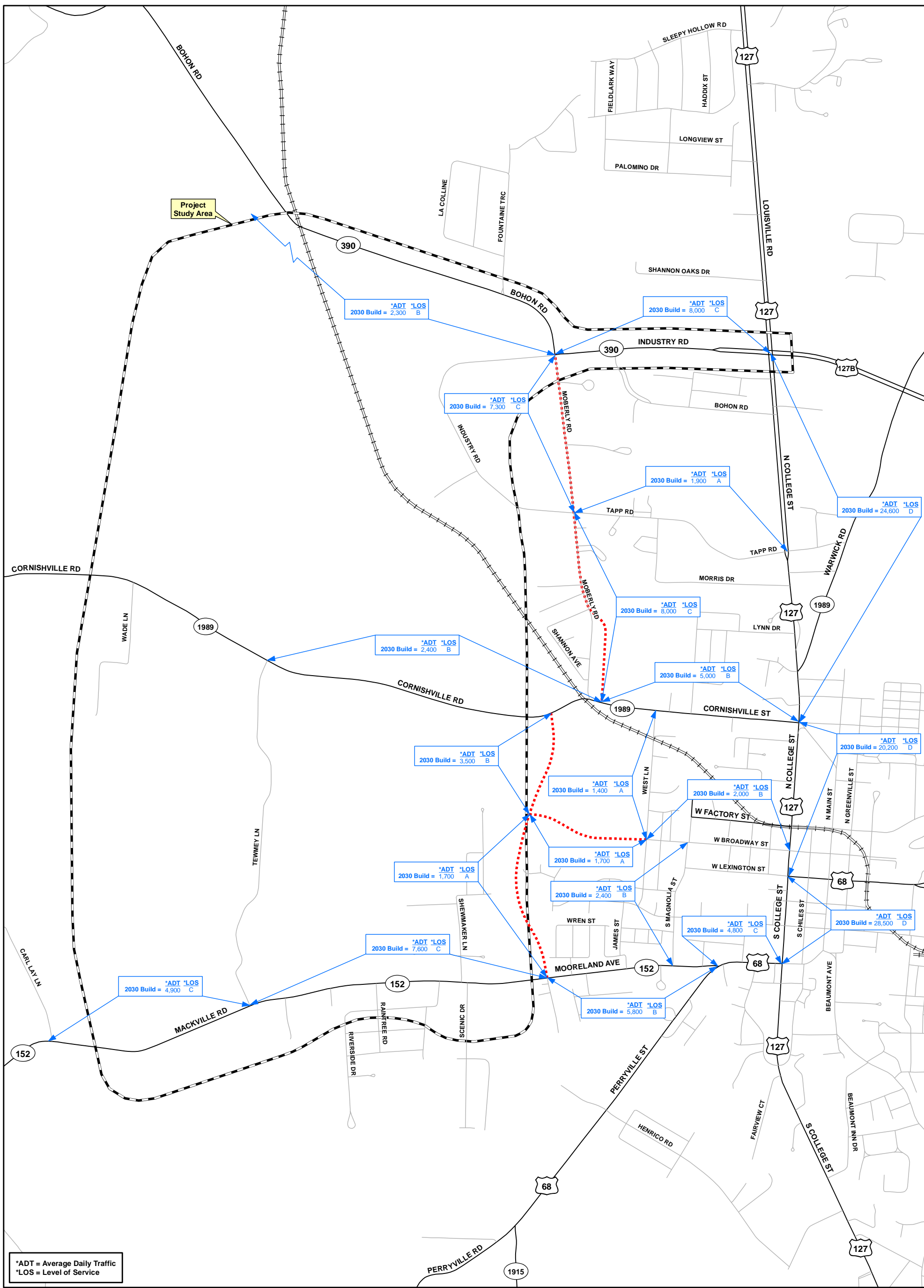


VICINITY MAP



Other Northwest Quadrant Options

Harrodsburg Northwest US 127 Bypass Alternatives Study
Mercer County, Kentucky
KYTC Item No. 7-8344.00

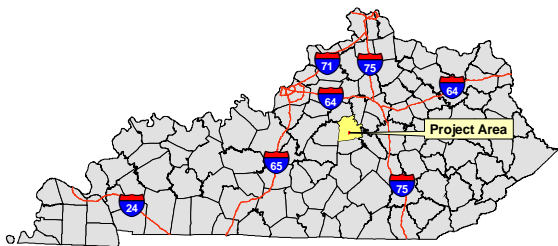


*ADT = Average Daily Traffic
*LOS = Level of Service

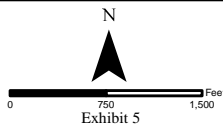


Source Citation
Topographic data, including utilities and imagery and less historic, aquatic and terrestrial courtesy of the Kentucky Office of Geographic Information Systems (KYOGIS) Q4 makes no claim to the accuracy of that data shown on this map.

Long Term Roadway Improvement Project



VICINITY MAP



2030 Build Alternative, Level of Service and Average Daily Traffic
Harrodsburg Northwest US 127
Bypass Alternatives Study
Mercer County, Kentucky
KYTC Item No. 7-8344.00

APPENDIX B

PHOTO LOG

Appendix B

Southwest Harrodsburg Bypass Photo Log



Photo 1

KY 390 looking east towards US 127

Photo 2

KY 390 looking west towards Moberly Road



Photo 3

Moberly Road and Industry Road looking east

Photo 4

Industry Road looking east
at the Harrodsburg Water
Tower



Photo 5

Industrial Drive, looking
west at Wausau Paper

Photo 6
Industrial Drive, looking
south



Photo 7

Corner of Moberly and Tapp
Road looking east from
Industry Road

Photo 8

Corner of Moberly Road and Tapp Road looking north from Moberly Road



Photo 9

Corner of Moberly Road and Tapp Road looking south from Moberly Road

Photo 10 Corner of Moberly Road and Tapp Road looking west from Tapp Road



Photo 11

Moberly Road looking northbound between Cornishville Road and Tapp Road



Photo 12

Cornishville Road Railroad
Crossing looking east on
Cornishville Road

Photo 13

Cornishville Road Railroad
Crossing looking northeast
towards Moberly Road



Photo 14

Cornishville Road Railroad
Crossing looking west on
Cornishville Road



Photo 15

Intersection of US 68 and KY 152,
looking west



Photo 16

Approaching the intersection of
US 68 and KY 152 from the east,
looking west

Photo 17

KY 1989 (Cornishville Road)
Looking West



Photo 18

Looking North from KY 1989



Photo 19

KY 152 (Mackville Road)
Looking west

Photo 20
KY 152 Looking East



Photo 21
Broadway Avenue looking
east from Hill Street

Photo 22
Broadway Avenue looking west
from Hill Street



Photo 23
Broadway looking east
from West Lane



Photo 24

Intersection of West Broadway Street and Sunset Lane, looking west



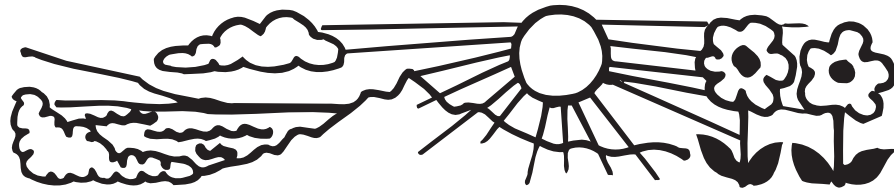
Photo 25

Intersection of Burley Street and West Lane looking south towards the West Broadway Street and Sunset Lane

APPENDIX C

ENVIRONMENTAL JUSTICE REPORT

Northwest Harrodsburg Bypass



ENVIRONMENTAL



JUSTICE
COMMUNITY
IMPACT
REPORT

Mercer County

Six Year Highway Plan FY 2006 - 2012
Item Number 7-8344.00

October, 2007

TABLE OF CONTENTS

1.0 INTRODUCTION	2
2.0 WHAT IS ENVIRONMENTAL JUSTICE?	2
2.1 DEFINITIONS	3
3.0 METHODOLOGY	3
4.0 CENSUS DATA ANALYSIS.....	4
5.0 STUDY FINDINGS	4
6.0 POPULATION BY PERSONS OF MINORITY ORIGIN	5
7.0 POPULATION BY POVERTY LEVEL	5
8.0 POPULATION BY PERSON 65 AND OVER.....	6
9.0 CONCLUSION.....	6

HARRODSBURG STUDY MAPS

MAP 1 – 2000 CENSUS BLOCK GROUP

MAP 2 – MINORITY CONCENTRATIONS 2000 CENSUS BLOCK

MAP 3 – 65 & OLDER CONCENTRATIONS 2000 CENSUS BLOCK

MAP 4 – POVERTY CONCENTRATIONS 2000 CENSUS BLOCK GROUP

APPENDIX A: METHODOLOGY FOR ASSESSING POTENTIAL
ENVIRONMENTAL JUSTICE CONCERNS FOR KYTC PLANNING STUDIES

APPENDIX B: CENSUS DATA TABLES

1.0 Introduction

The following document is an assessment of the community demographics and characteristics related to the defined project study area that includes the northern half of the western side of Harrodsburg, beginning at KY 152 in the south and extending north and then east to US 127, a distance of about 3.0 miles. The study area ends at the existing US 127/US 127 Bypass intersection. The study area is approximately 1.4 miles wide and about 3.6 square miles in size.

The project is listed as item number 7-8344.00 in the Kentucky Six-Year Highway Plan 2006-2012.

The resources used to compile the data contained herein are the U.S. Census Bureau, Kentucky State Data Center, local elected officials, community leaders, and field observations of the study area. The information and results are intended to assist the Kentucky Transportation Cabinet in making informed and prudent decisions in the study area, particularly as it pertains to the requirements of Executive Order 12898¹, to ensure equal environmental protection to all groups potentially impacted by both short and long-term improvement strategies of the Northwest Harrodsburg vicinity.

This report includes data tables comparing the populations of the census divisions directly in and around the study area at the county, state, and national levels. Statistics are provided for minority, elderly, and low-income populations for census tracts, block groups, and census blocks, except where not available. For ease of analysis, maps are included that highlight areas of interest at the block group or census block level.

2.0 What is Environmental Justice?

The U.S. EPA Office of Environmental Justice (EJ) defines EJ as:

“The fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. Fair treatment means that no group of people, including racial, ethnic, or socio-economic group should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local and tribal programs and policies.”

A disproportionately high and adverse effect on a minority or low-income population means and adverse effect that:

1 Executive Order 12898 signed on February 11, 1994 states "...each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations..."

1. is predominately borne by a minority population and/or low-income population, or
2. will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that will be suffered by the non-minority population and/or non-low-income population.

2.1 Definitions

USDOT Order 5610.2 on EJ, issued in the April 15, 1997 Federal Register defines what constitutes low-income and minority population.

- **Low-Income** is defined as a person whose median household income is at or below the U.S. Department of Health and Human Services poverty guidelines.
- **Minority** is defined as a person who is: (1) Black (a person having origins in any black racial groups of Africa); (2) Hispanic (a person of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race); (3) Asian American (a person having origins in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or (4) American Indian and Alaskan Native (a person having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).
- **Low-Income Population** is defined as any readily identifiable group of low-income persons who live in geographic proximity, and if circumstances warrant geographically dispersed/transient persons who will be similarly affected by a proposed DOT program, policy or activity.
- **Minority Population** is defined as any readily identifiable group of minority persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons who will be similarly affected by a proposed DOT program, policy or activity.

EO12898 and USDOT Order 5610.2 do not address consideration of the elderly population. However, the U.S. DOT encourages the study of these populations in EJ discussions and in accordance with EJ, Title VI of the Civil Rights Act of 1964 and the Kentucky Transportation Cabinet's advocacy of inclusive public involvement and equal treatment of all persons this study includes statistics for persons age 65 and over that are within the study and comparison areas.

3.0 Methodology

For this study, data was collected by using the method outlined by the Kentucky Transportation Cabinet document, "Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies." (See Appendix A.)

The primary sources of data used in the compilation of this report were the U.S. Census Bureau's 2000 Census, Kentucky State Data Center, local elected officials, community leaders, and field observations. Statistics were compiled to present a detailed analysis of the community conditions for the Northwest Harrodsburg Bypass Scoping Study.

4.0 Census Data Analysis

The U.S. Census Bureau defines geographical units as:

- **Census Tract (CT)** – A small, relatively, permanent statistical subdivision of a county or statistically equivalent entity delineated for data presentation purposes by a local group of census data users or the geographic staff of a regional census center in accordance with Census Bureau guidelines. CTs generally contain between 1,000 and 8,000 people. CT boundaries are delineated with the intention of being stable over many decades, so they generally follow relatively permanent visible features. They may also follow governmental unit boundaries and other invisible features in some instances; the boundary of a state or county is always a census tract boundary.
- **Block Group (BG)** – A statistical subdivision of a CT. A BG consists of all tabulation blocks whose numbers begin with the same digit in a CT. BGs generally contain between 300 and 3,000 people, with an optimum size of 1,500 people.
- **Census Block (CB)** – An area bounded on all sides by visible and/or invisible features shown on a map prepared by the Census Bureau. A CB is the smallest geographic entity for which the Census Bureau tabulates decennial census data.

The census data tables include percentages for minority, elderly, and low-income populations in the United States, Kentucky, Mercer County, Census Tracts, Block Groups, and Census Blocks located in and around the study area, except where not available. This data was separated into similar geographical census units to obtain accurate measures of demographic data.

5.0 Study Findings

This Environmental Justice and Community Impact Report is to be used as a component of a programming study currently being conducted by the Kentucky Transportation Cabinet Division of Planning for the identification of short and long-term improvement strategies for the proposed North West Harrodsburg Bypass. This study is intended to help define the location and purpose of the project and meet federal requirements regarding consideration of environmental issues as defined in the National Environmental Policy Act (NEPA).

According to the 2000 Census, there are two (2) Census Tracts and four (4) Block Groups that encompass the population of the defined study area. These are listed below. (See Map 1 for geographic location.)

Mercer County Total Population	20,817
Study Area Total Populations	7,177
Census Tract 9602	5,725
Block Group 1	2,206
Block Group 3	1,288
Block Group 4	1,620
Total population of Block Groups 1, 3 and 4	5,114
Census Tract 9603	3,261
Block Group 2	2,063
Total population of Block Group 2	2,063
Total population of study area	7,177

6.0 Population by Persons of Minority Origin

Chart 1 indicates that the black percentage of the total Mercer County population is 3.69 percent, which is lower than the Kentucky percentage of 7.32. Chart 2 shows that Tract 9602 has a Black percentage of 6.76 and Tract 9604 has a Black percentage of 4.37.

Chart 1 indicates that the Hispanic percentage of Mercer County population is 1.27 percent, which is lower than the Kentucky percentage of 1.48. Chart 2 shows that Tract 9602 has a Hispanic percentage of 1.38. Block Groups 1 and 3 have Hispanic percentages of 1.27 and 1.78 respectively. Members of the project study team and Advisory Committee indicated that there are no particular concentrations of Black and Hispanic residents in the study. A mobile home park in Block Group 1, Tract 9602 may be an area of concentration.

Chart 1 indicates that the Asian percentage of the total Mercer County population is 0.47. Chart 2 shows that Tract 9602 has an Asian percentage of 0.70. Block Groups 1 and 4 have Asian percentages of 1.18 and 0.49 respectively. No areas of particular concerns are evident.

Chart 1 indicates that the Indian percentage of the total Mercer County population is 0.21, the same as the Kentucky percentage. Chart 2 shows that Tract 9602 has an Indian percentage of 0.10. Block Group 3 is 0.23 percent. Tract 9603 has an Indian percentage of 0.25. Block Group 2 is 0.15 percent. No areas of particular concentration are evident.

The percentage of minorities is located on Map 2.

7.0 Population by Poverty Level

Chart 3 indicates that 12.97 percent of the population of Mercer County is below the poverty level, less than the Kentucky percentage of 15.37.

In the project study area, Chart 4 indicates that Tract 9602 has a total population at 14.93 percent below the poverty level. In particular, Block Group 3 is at 29.48 percent below the poverty level.

As portions of Block Group 3 are outside of the study area, it is likely that many of the below the poverty level population reside in this area as it is adjacent to Block Group 2 that is above 15 percent.

Map 3 indicates the percentage of poverty in census block groups.

8.0 Population by Person 65 and Over

As described in the census data, in Chart 5, the population percentage of persons 65 and over are very consistent at the national, state and county levels – 12.43, 12.49 and 14.59 respectively. The only variation is the Mercer County 14.59 percentage is approximately 2 percent above the average. The population by persons 65 and over in Tract 9602 and Tract 9603 is 12.28 percent and 14.14 percent respectively, below the county percentage of 14.59.

These percentages are noted on Map 4.

9.0 Conclusion

After a comprehensive analysis of the Harrodsburg study area, there appear to be several areas of interest at the Block Group and Census Block level in regard to race, age, and income level. These areas have been described in the *Study Findings* sections of this report and can be deduced from the respective maps.

In an effort to validate the accuracy of the maps created by the Bluegrass ADD GIS staff, local officials and community members were asked to review them and provide any relevant information to this report. Based on their comments, it has been concluded that the maps are representative of the locations of interest in the study area and that individuals in those areas could stand to benefit from projects that improve transportation options in Harrodsburg and Mercer County.

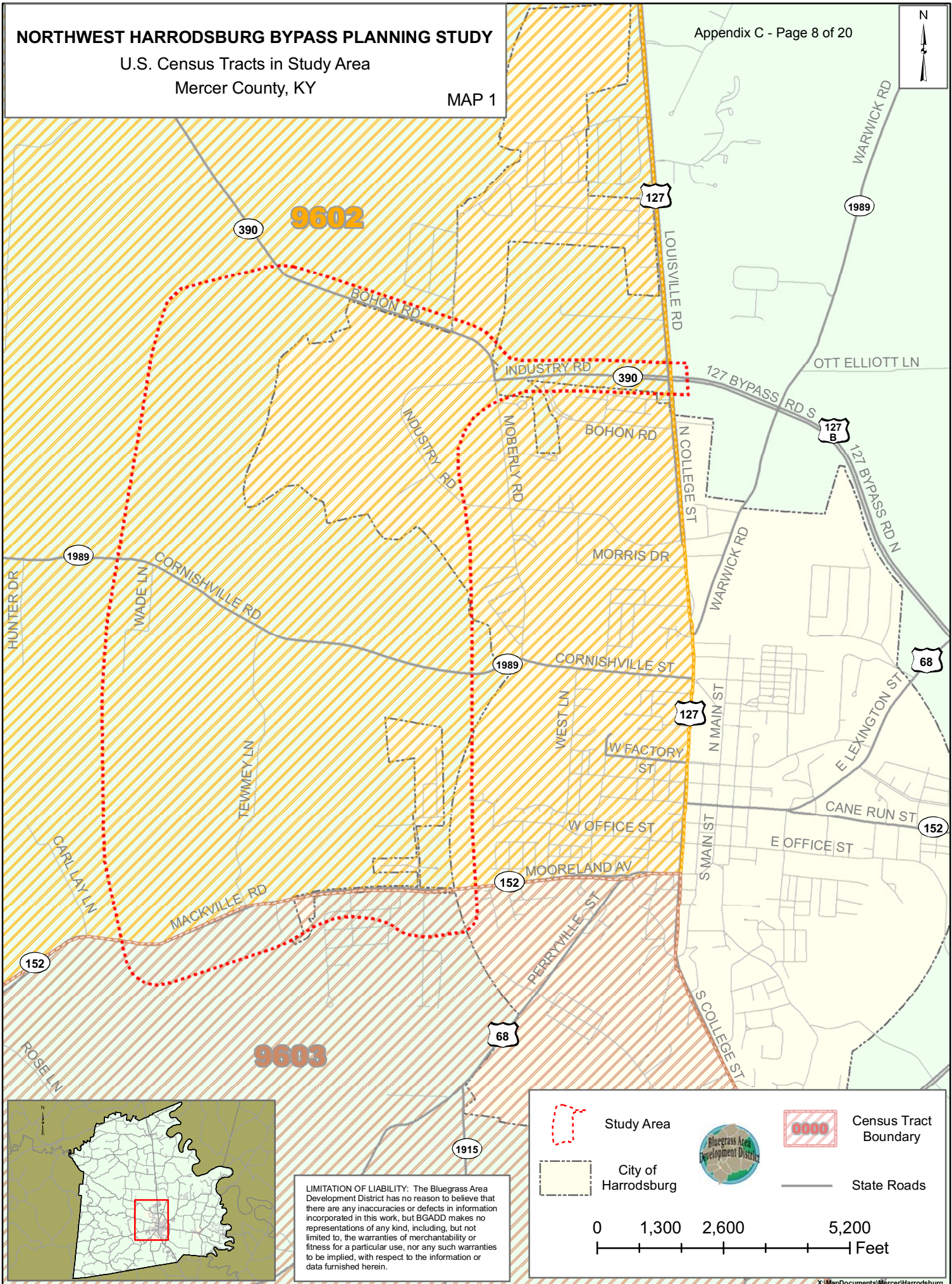
It is evident from the data that there are several locations that need to be monitored and taken into consideration when planning for a specific project. Bluegrass ADD staff will continue to monitor those locations, as well as the surrounding study area for demographic and / or socioeconomic changes that may occur throughout the development of a project or program.

NORTHWEST HARRODSBURG BYPASS PLANNING STUDY

U.S. Census Tracts in Study Area
Mercer County, KY

MAP 1

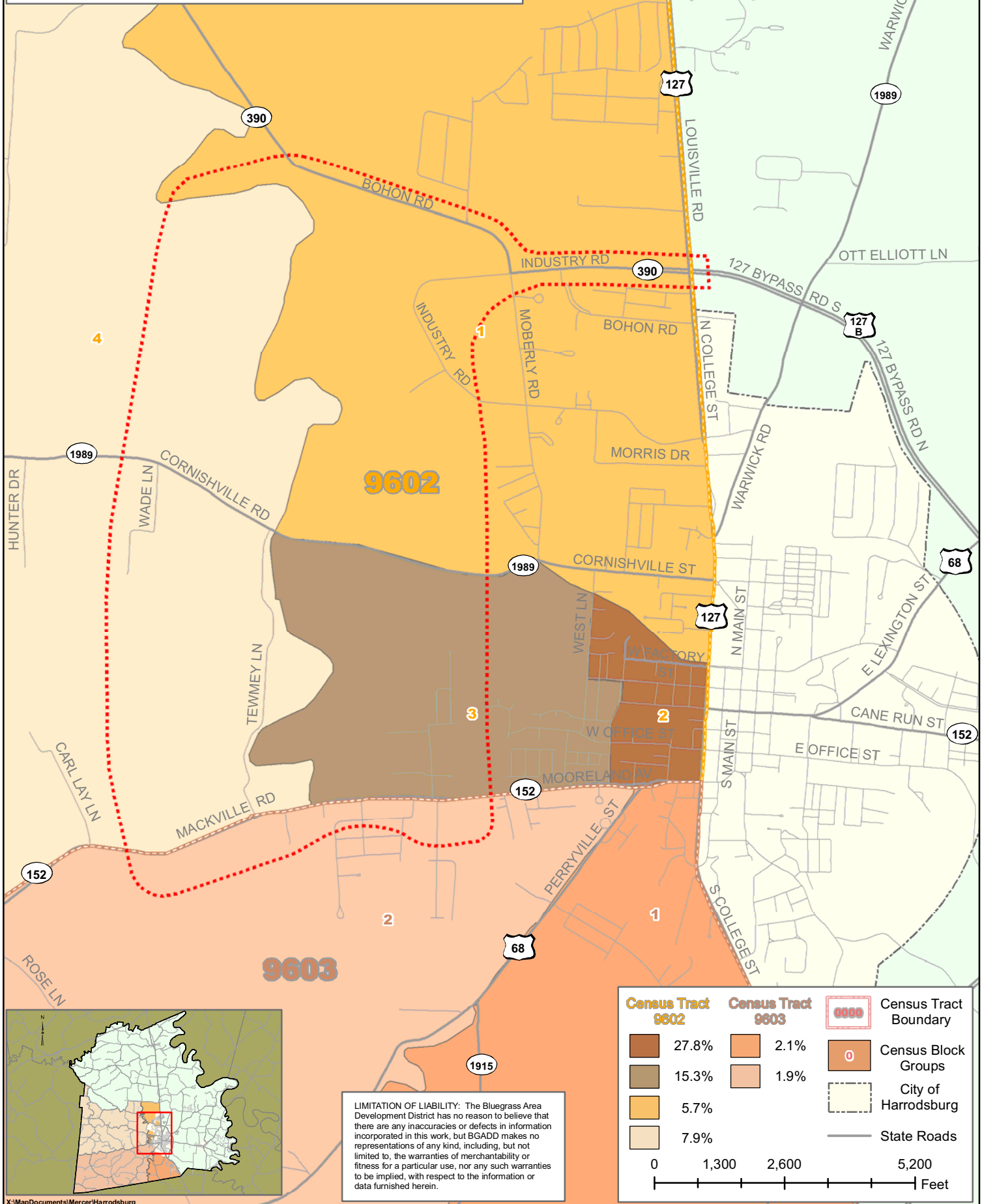
Appendix C - Page 8 of 20



NORTHWEST HARRODSBURG BYPASS PLANNING STUDY

Percentage of Minorities in Census Block Groups
Mercer County, KY

MAP 2

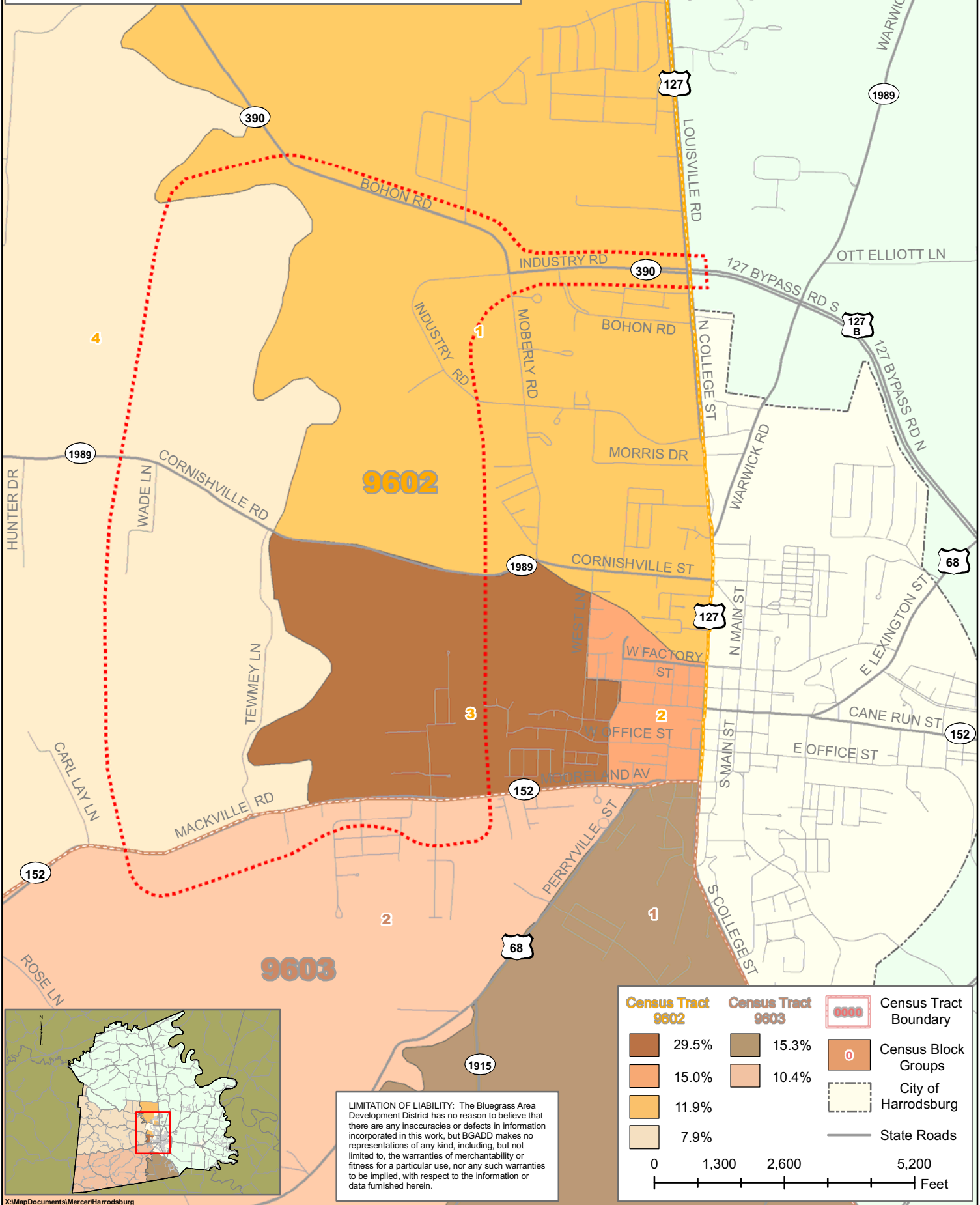


NORTHWEST HARRODSBURG BYPASS PLANNING STUDY

Percentage of Poverty in Census Block Groups
Mercer County, KY

MAP 3

Appendix C - Page 10 of 20



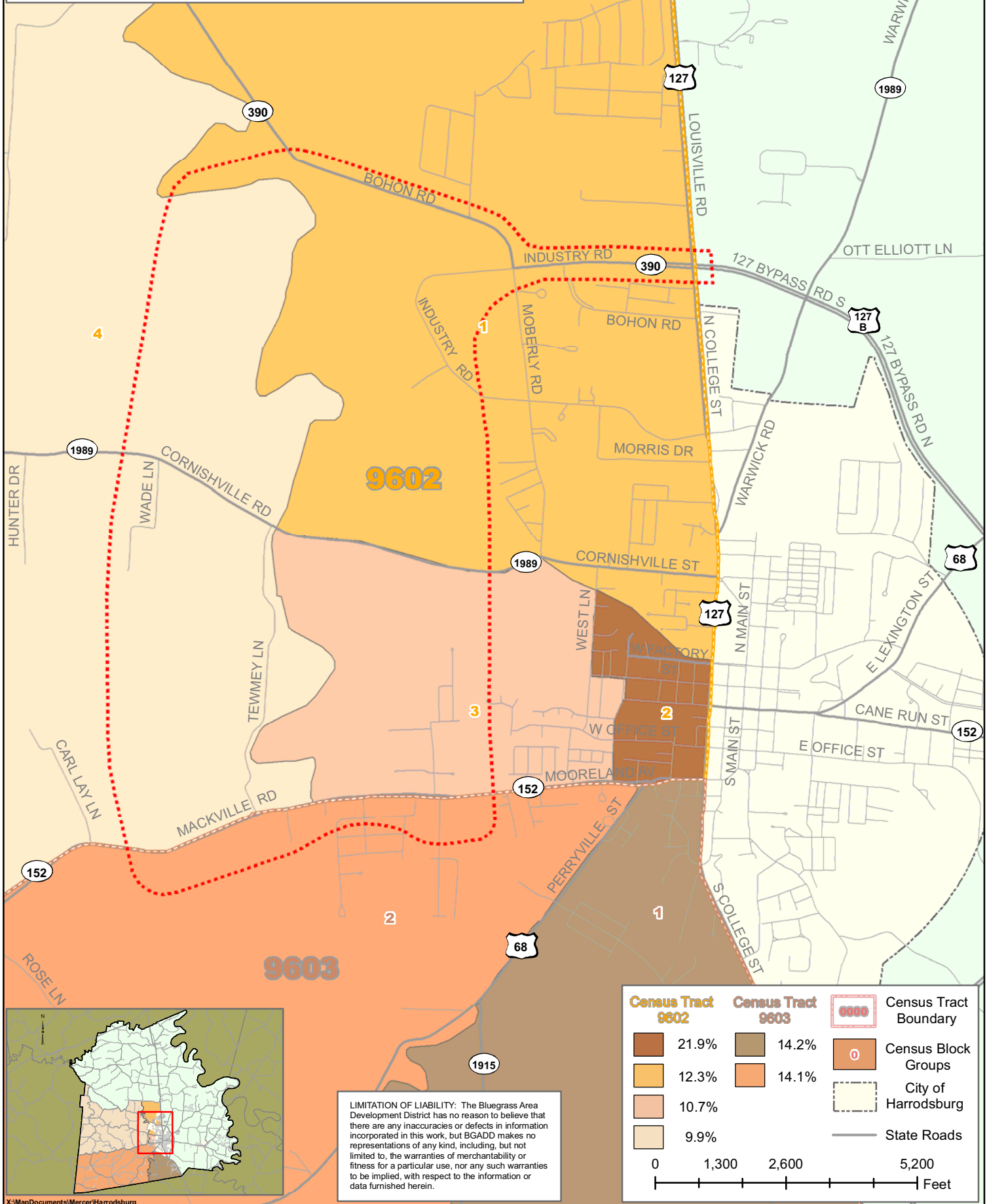
LIMITATION OF LIABILITY: The Bluegrass Area Development District has no reason to believe that there are any inaccuracies or defects in information incorporated in this work, but BGADD makes no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor any such warranties to be implied, with respect to the information or data furnished herein.

NORTHWEST HARRODSBURG BYPASS PLANNING STUDY

Percentage of Population Age Over 65
in Census Block Groups
Mercer County, KY

MAP 4

Appendix C - Page 11 of 20



Methodology for Assessing Potential Environmental Justice Concerns for KYTC Planning Studies

Updated: February 1, 2002

The demographics of the affected area should be defined using U.S. Census data (Census tracts and block groups) and the percentages for minorities, low-income, elderly, or disabled populations should be compared to those for the following:

- Other nearby Census tracts and block groups,
- The county as a whole,
- The entire state, and
- The United States.

Information from PVA offices, social service agencies, local health organizations, local public agencies, and community action agencies can be used to supplement the Census data. Specifically, we are interested in obtaining the following information:

- Identification of community leaders or other contacts who may be able to represent these population groups and through which coordination efforts can be made.
- Comparison of the Census tracts and block groups encompassing the project area to other nearby Census tracts and block groups, county, state, and United States percentages.
- Locations of specific or identified minority, low-income, elderly, or disabled population groups within or near the project area. This may require some field reviews and/or discussions with knowledgeable persons to identify locations of public housing, minority communities, ethnic communities, etc., to verify Census data or identify changes that may have occurred since the last Census. Examples would be changes due to new residential developments in the area or increases in Asian and/or Hispanic populations.
- Concentrations or communities that share a common religious, cultural, ethnic, or other background, e.g., Amish communities.
- Communities or neighborhoods that exhibit a high degree of community cohesion or interaction and the ability to mobilize community actions at the start of community involvement.
- Concentrations of common employment, religious centers, and/or educational institutions with members within walking distance of facilities.
- Potential effects, both positive and negative, of the project on the affected groups as compared to the non-target groups. This may include, but are not limited to:
 1. Access to services, employment or transportation.
 2. Displacement of persons, businesses, farms, or non-profit organizations.
 3. Disruption of community cohesion or vitality.
 4. Effects to human health and/or safety.
- Possible methods to minimize or avoid impacts on the target population groups.

Methodology for Assessing Potential Environmental Justice Concerns
for KYTC Planning Studies
Page 2

If percentages of these populations are elevated within the project area, it should be brought to the attention of the Division of Planning immediately so that coordination with affected populations may be conducted to determine the affected population's concerns and comments on the project. Also, with this effort, representatives of minority, elderly, low-income, or disabled populations should be identified so that, together, we can build a partnership for the region that may be incorporated into other projects. Also, we hope to build a Commonwealth-wide database of contacts. We are available to participate in any meetings with these affected populations or with their community leaders or representatives.

In identifying communities, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a geographically dispersed/transient set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect. The selection of the appropriate unit of analysis may be a governing body's jurisdiction, a neighborhood, census tract, or other similar unit that is to be chosen so as not to artificially dilute or inflate the affected population. A target population also exists if there is (1) more than one minority or other group present and (2) the percentages, as calculated by aggregating all minority persons, exceed that of the general population or other appropriate unit of geographic analysis.

Maps should be included that show the Census tracts and block groups included in the analysis as well as the relation of the project area to those Census tracts and block groups.

Chart 1

POPULATION BY RACE COMPARISON CHART

	White	% of Population	Black	% of Population	Hispanic ¹	% of Population	Asian	% of Population	American Indian	% of Population	Other	% of Population	Total Population
Kentucky	3,640,899	90.08	295,994	7.32	59,939	1.48	29,744	0.74	8,616	0.21	66,516	1.65	4,041,769
Mercer Co.	19,568	94.00	769	3.69	265	1.27	97	0.47	44	0.21	339	1.63	20,817
Tract 9601	3,990	97.96	22	0.54	27	0.66	12	0.29	8	0.20	41	1.0	4,073
Tract 9602	5,212	91.04	387	6.76	79	1.38	40	0.70	6	0.10	80	1.39	5,725
Tract 9603	3,095	94.91	104	3.19	30	0.92	14	0.42	8	0.25	40	1.23	3,261
Tract 9604	4,148	92.06	197	4.37	100	2.22	30	0.67	5	0.11	126	2.79	4,506
Tract 9605	3,123	96.03	59	1.8	29	0.89	1	0.03	17	0.52	52	1.59	3,252

¹Population of Hispanic Origin is included as White.

The above chart indicates Census data for the Commonwealth of Kentucky, Mercer County, and the census tracts adjacent to the proposed study corridor.

Chart 2

POPULATION BY RACE COMPARISON CHART FOR CENSUS TRACT BLOCK GROUPS IN PROJECT AREA

Census Tract	Block Group	White	% of Population	Black	% of Population	Hispanic ¹	% of Population	Hispanic	% of Population	Asian	% of Population	American Indian	% of Population	Other	% of Population	Total Population
Tract 9602	All	5,212	91.04	387	6.76	79	1.38	40	0.70	6	0.10	80	1.39			5,725
	1	2,081	94.33	77	3.49	28	1.27	26	1.18	3	0.14	19	0.89			2,206
	3	1,091	84.70	149	11.57	23	1.78	6	0.46	3	0.23	39	3.02			1,288
	4	1,591	98.20	14	0.86	5	0.31	8	0.49	0	0.0	7	0.43			1,620
Tract 9603	All	3,095	94.91	104	3.19	30	0.92	14	0.42	8	0.25	40	1.22			3,261
	2	2,019	97.87	27	1.31	12	0.58	2	0.09	3	0.15	12	0.58			2,063

¹Population of Hispanic Origin is included as White.

Chart 3

POPULATION BY POVERTY LEVEL COMPARISON CHART FOR MERCER COUNTY

	Population Below Poverty Level	Percent of Population	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population
United States	33,899,812	12.05	11,746,258	4.17	18,865,180	6.70	3,287,774	1.17
Kentucky	621,096	15.37	203,547	5.03	350,072	8.66	67,477	1.67
Mercer County	2,699	12.97	884	4.25	1433	6.88	352	1.69
Tract 9601	422	10.36	162	3.98	227	5.57	33	0.81
Tract 9602	855	14.93	244	4.26	493	8.61	118	2.06
Tract 9603	398	10.99	119	3.29	249	6.88	30	0.82
Tract 9604	761	16.89	305	6.77	374	8.30	82	1.81
Tract 9605	233	7.16	54	1.66	132	4.06	47	1.45

Source: 2000 US Census (Sample Data)

Chart 4

POPULATION BY POVERTY LEVEL IN PROJECT AREA BY CENSUS TRACT BLOCK GROUPS FOR MERCER COUNTY

Mercer County	Block Group	Population Below Poverty Level	Percent of Population	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population
Tract 9602	All	855	14.93	244	4.26	493	8.61	118	2.06
Tract 9602	1	256	11.87	51	2.36	139	6.44	66	3.06
Tract 9602	3	378	29.48	113	8.81	234	18.25	31	2.41
Tract 9602	4	130	7.86	53	3.20	77	4.65	0	0.0
Tract 9603	All	398	10.99	119	3.29	249	6.88	30	0.82
Tract 9603	2	213	10.41	55	2.69	128	6.25	30	1.46

Source: 2000 US Census (Sample Data)

Chart 5

AGE GROUP COMPARISON CHART FOR MERCER COUNTY AND PROJECT AREA BY CENSUS TRACTS

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
United States	72,293,812	25.69	174,136,341	61.88	34,991,753	12.43	281,421,906
Kentucky	994,818	24.61	2,542,158	62.90	504,793	12.49	4,041,769
Mercer County	5,080	24.40	12,700	61.00	3,037	14.59	20,817
Tract 9602	1,567	27.37	3,455	60.35	703	12.28	5,725
Tract 9603	768	23.55	2,032	62.31	461	14.14	3,261

Source: 2000 US Census

Chart 6

AGE GROUP COMPARISON CHART FOR PROJECT AREA BY CENSUS TRACT BLOCK GROUPS

	0-17	% of Total Population	18-64	% of Total Population	65-Over	% of Total Population	Total
Tract 9601	1,038	25.48	2,614	64.18	421	10.37	4,073
Tract 9604	1,002	22.23	2,528	56.10	976	21.67	4,506

Source: 2000 US Census

Chart 7

AGE GROUP COMPARISON CHART FOR CENSUS TRACT BLOCK GROUP ADJACENT TO PROJECT AREA IN MERCER COUNTY

Census Tract	Block Group	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Tract 9602	All	1,567	27.37	3,455	60.35	703	12.28	5,725
	1	581	26.33	1,353	61.33	272	12.33	2,206
	2	133	21.76	349	57.11	134	21.93	611
	3	402	31.21	748	58.07	138	10.71	1,288
	4	451	27.83	1010	62.34	159	9.81	1,620
Tract 9603	All	768	23.55	2,032	62.31	461	14.14	3,261
	1	284	23.71	744	62.10	170	14.19	1,198
	2	484	23.46	1288	62.43	291	14.10	2,063

Source: 2000 US Census

Chart 8

AGE GROUP COMPARISON CHART FOR MERCER COUNTY AND PROJECT AREA BY CENSUS TRACT BLOCK GROUPS

Census Tract	Block Group	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Mercer Co.	All	5,080	24.40	12,700	61.00	3,037	14.59	20,817
Tract 9602	All	1,567	27.37	3,455	60.35	703	12.28	5,725
	1	581	26.33	1,353	61.33	272	12.33	2,206
	2	133	21.76	349	57.11	134	21.93	611
	3	402	31.21	748	58.07	138	10.71	1,288
	4	451	27.83	1010	62.34	159	9.81	1,620
Tract 9603	All	768	23.55	2,032	62.31	461	14.14	3,261
	1	284	23.71	744	62.10	170	14.19	1,198
	2	484	23.46	1288	62.43	291	14.10	2,063

Source: 2000 US Census

Chart 9

AGE GROUP COMPARISON CHART FOR CENSUS TRACT BLOCK GROUPS ADJACENT TO PROJECT AREA

	0-17	% of Total Population	18-64	% of Total Population	65-Over	% of Total Population	Total
Tract 9601	1,038	25.48	2,614	64.18	421	10.37	4,073
Tract 9604	1,002	22.23	2,528	56.10	976	21.67	4,506

Source: 2000 US Census

Chart 10

AGE GROUP COMPARISON CHART FOR MERCER COUNTY AND PROJECT AREA BY CENSUS TRACT BLOCK GROUPS

Census Tract	Block Group	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
United States	All	72,293,812	25.69	174,136,341	61.88	34,991,753	12.43	281,421,906
Kentucky	All	994,818	24.61	2,542,158	62.90	504,793	12.49	4,041,769
Mercer Co.	All	5,080	24.40	12,700	61.00	3,037	14.59	20,817
Tract 9602	All	1,567	27.37	3,455	60.35	703	12.28	5,725
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	2	133	21.76	349	57.11	134	21.93	611
	3	402	31.21	748	58.07	138	10.71	1,288
	4	451	27.83	1010	62.34	159	9.81	1,620
Tract 9603	All	768	23.55	2,032	62.31	461	14.14	3,261
	1	284	23.71	744	62.10	170	14.19	1,198
	2	484	23.46	1288	62.43	291	14.10	2,063

Source: 2000 US Census

Chart 11

AGE GROUP COMPARISON CHART FOR CENSUS TRACT BLOCK GROUPS ADJACENT TO PROJECT AREA IN MERCER COUNTY

	Age 0-17	% of Total Population	Age 18-64	% of Total Population	Age 65-Over	% of Total Population	Total
Tract 9601	1,038	25.48	2,614	64.18	421	10.37	4,073
Tract 9604	1,002	22.23	2,528	56.10	976	21.67	4,506

Source: 2000 US Census

APPENDIX D
HAZMAT REPORT

FirstSearch Technology Corporation

Environmental FirstSearch™ Report

Target Property:

HARRODSBURG KY 40330

Job Number: 07402.00

PREPARED FOR:

QK4

815 West Market St. - Suite 300

Louisville, KY 40202

08-09-07



Tel: (407) 265-8900

Fax: (407) 265-8904

Environmental FirstSearch Search Summary Report

Target Site:

HARRODSBURG KY 40330

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	05-08-07	1.00	0	0	0	0	0	0	0
NPL Delisted	Y	03-08-07	1.00	0	0	0	0	0	0	0
CERCLIS	Y	07-18-07	1.00	0	0	0	0	0	0	0
NFRAP	Y	07-18-07	1.00	0	0	0	0	1	0	1
RCRA COR ACT	Y	06-06-06	1.00	0	0	0	0	1	0	1
RCRA TSD	Y	06-06-06	1.00	0	0	0	0	1	0	1
RCRA GEN	Y	06-06-06	1.00	0	0	1	0	1	0	2
Federal IC / EC	Y	04-16-07	1.00	0	0	0	0	0	0	0
ERNS	Y	12-31-06	1.00	0	1	0	0	3	3	7
Tribal Lands	Y	12-01-05	1.00	0	0	0	0	0	0	0
State/Tribal Sites	Y	02-22-07	1.00	0	0	0	0	2	2	4
State Spills 90	Y	NA	1.00	0	0	0	0	0	0	0
State/Tribal SWL	Y	03-29-07	1.00	0	0	0	0	1	0	1
State/Tribal LUST	Y	07-23-07	1.00	0	0	0	0	3	1	4
State/Tribal UST/AST	Y	07-10-07	1.00	0	0	0	0	10	5	15
State/Tribal EC	Y	NA	1.00	0	0	0	0	0	0	0
State/Tribal IC	Y	NA	1.00	0	0	0	0	0	0	0
State/Tribal VCP	Y	NA	1.00	0	0	0	0	0	0	0
State/Tribal Brownfields	Y	10-18-05	1.00	0	0	0	0	0	0	0
- TOTALS -				0	1	1	0	23	11	36

Notice of Disclaimer

Due to the limitations, constraints, inaccuracies and incompleteness of government information and computer mapping data currently available to FirstSearch Technology Corp., certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in FirstSearch Technology Corp.'s databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although FirstSearch Technology Corp. uses its best efforts to research the actual location of each site, FirstSearch Technology Corp. does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of FirstSearch Technology Corp.'s services proceeding are signifying an understanding of FirstSearch Technology Corp.'s searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch Site Information Report

Request Date: 08-09-07
Requestor Name: Kirk Reinke
Standard: AAI

Search Type: LINEAR
 3.00 mile(s)
Job Number: 07402.00
Filtered Report

Target Site:

HARRODSBURG KY 40330

Demographics

Sites: 36	Non-Geocoded: 11	Population: NA
Radon: 0.4 - 4.5 PCI/L		

Site Location

	<u>Degrees (Decimal)</u>	<u>Degrees (Min/Sec)</u>		<u>UTMs</u>
Longitude:	-84.873579	-84:52:25	Easting:	687288.398
Latitude:	37.771092	37:46:16	Northing:	4182341.853
			Zone:	16

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes: 0 Mile(s)

Services:

ZIP Code	City Name	ST	Dist/Dir	Sel

	Requested?	Date
Sanborns	No	
Aerial Photographs	Yes	08-09-07
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Environmental FirstSearch Sites Summary Report

Target Property:
HARRODSBURG KY 40330

JOB: 07402.00

TOTAL: 36 **GEOCODED:** 25 **NON GEOCODED:** 11 **SELECTED:** 36

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
1	RCRA	HALLMACK, DIVISION OF NUTONE, INC. KYD081017667/TSD	US HWY 127 and TAPP RD HARRODSBURG KY 40330	0.95 SE	1
1	RCRACOR	HALLMACK, DIVISION OF NUTONE, INC. KYD081017667/CA	US HWY 127 and TAPP RD HARRODSBURG KY 40330	0.95 SE	5
1	UST	HALL MACK CO 3915084	US 127 N HARRODSBURG KY 40330	0.95 SE	9
2	SWL	HARRODSBURG RECYCLING CENTER 084-00007/OPERATING	892 MOBERLY RD KY	0.71 SE	10
3	UST	MERCER CO HIGH SCHOOL 898084	937 MOBERLY RD HARRODSBURG KY 40330	0.57 SE	11
4	RCRAGN	MODINE MANUFACTURING COMPANY KYD000206417/LGN	551 TAPP ROAD HARRODSBURG KY 40330	0.87 SE	12
4	ERNS	DUPONT INC 292499/UNKNOWN	551 TAPP RD HARRODSBURG KY 40330	0.87 SE	14
4	STATE	MODINE MANUFACTURING CO 05571/ACTIVE	551 TAPP RD HARRODSBURG KY 40330	0.87 SE	14
4	NFRAP	SIGNET SYSTEMS KYD000206417/NFRAP-N	551 TAPP ROAD HARRODSBURG KY 40330	0.87 SE	15
5	RCRAGN	TRIM MASTERS KYR000036590/VGN	1120 INDUSTRY RD HARRODSBURG KY 40330	0.15 SE	16
6	UST	HARRODSBURG AREA VOC SCHOOL 2526084	661 TAPP RD HARRODSBURG KY 40330	0.69 SE	17
7	UST	HARRODSBURG EXPRESSMART 1012084	1096 N COLLEGE ST HARRODSBURG KY 40330	0.68 SE	18
8	UST	LONG RENTAL PROPERTY 1006084	986 COLLEGE ST HARRODSBURG KY 40330	0.95 SE	21
8	LUST	LONG RENTAL PROPERTY 1006084/CLW	986 COLLEGE ST HARRODSBURG KY 40330	0.95 SE	22
9	LUST	PARCEL 54 1003084/CLOSURE WORKGROUP	1122 LOUISVILLE RD HARRODSBURG KY 40330	0.63 NE	23
9	UST	PARCEL 54 1003084	1122 LOUISVILLE RD HARRODSBURG KY 40330	0.63 NE	25
10	UST	RED HED NO 40 2585084	989 N COLLEGE ST HARRODSBURG KY 40330	0.97 SE	26
11	UST	MERCER CO ROAD DEPT 1005084	894 MOBERLY RD HARRODSBURG KY 40330	0.68 SE	28
11	LUST	MERCER CO ROAD DEPT 1005084/SITE INVESTIGATION W	894 MOBERLY RD (CO RD) HARRODSBURG KY 40330	0.68 SE	29
12	ERNS	BAY WEST PAPER COMPANY 585039/FIXED FACILITY	INDUSTRY ROAD HARRODSBURG KY 40330	0.06 NW	30
13	ERNS	KENTUCKY UTILITIES CO 291960/UNKNOWN	HWY 127 and WARWICK PIKE HARRODSBURG KY 40330	1.25 SE	31

Environmental FirstSearch

Sites Summary Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

TOTAL: 36 **GEOCODED:** 25 **NON GEOCODED:** 11 **SELECTED:** 36

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
13	ERNS	KENTUCKY UTILITIES CO 291956/UNKNOWN	HWY 127 AND WARWICK PIKE HARRODSBURG KY 40330	1.25 SE	31
14	STATE	HARRODSBURG NATIONAL GUARD ARMORY KYST-1742/CLOSED	TAPP RD HARRODSBURG KY 40330	0.85 SE	32
15	UST	KIDDE FENWAL INC 48471	US 127 and TAPP RD HARRODSBURG KY 40330	0.89 SE	33
16	UST	PARCEL 7 (DEARING) 5401084	US 127 HENSLEY HEIGHTS HARRODSBURG KY 40330	0.73 SE	34

Environmental FirstSearch

Sites Summary Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

TOTAL: 36 **GEOCODED:** 25 **NON GEOCODED:** 11 **SELECTED:** 36

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	Page No.
	STATE	KENTUCKY DEPT OF MILITARY AFFAIRS B7714/CLOSED	HARRODSBURG KY 40330	NON GC	N/A
	UST	SERVICE STATION 221 D BP 291 7737084	KY 390 HARRODSBURG KY 40330	NON GC	N/A
	UST	PIONEER SHELL 9732084	HWY 127 HARRODSBURG KY 40330	NON GC	N/A
	UST	MACKVILLE R-B33K280 4032115	COUNTY RD 433 HARRODSBURG KY 40330	NON GC	N/A
	UST	LEWIS GROCERY 642084	MACKVILLE RD HARRODSBURG KY 40330	NON GC	N/A
	STATE	POWELL ASHLAND OIL A0401/CLOSED	UNKNOWN HARRODSBURG KY 40330	NON GC	N/A
	ERNS	NORFOLK SOUTHERN RAIL YARD NRC-580804/RAILROAD	MILE POST 351.6W HARRODSBURG KY 40330	NON GC	N/A
	ERNS	MILE POST 348W / SUBDIVISION: TENN NRC-646333/RAILROAD	HARRODSBURG KY 40330	NON GC	N/A
	ERNS	LEWIS TRANSPORT INC. 605873/HIGHWAY RELATED	US HWY 127 HARRODSBURG KY 40330	NON GC	N/A
	LUST	ATWELL GROCERY 20151431/SITE INVESTIGATION W	KY 152 HARRODSBURG KY 40330	NON GC	N/A
	UST	ATWELL GROCERY 20151431	KY 152 HARRODSBURG KY 40330	NON GC	N/A

Environmental FirstSearch

Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

RCRA TSD SITE

SEARCH ID: 2 **DIST/DIR:** 0.95 SE **MAP ID:** 1

NAME: HALLMACK, DIVISION OF NUTONE, INC. ADDRESS: US HWY 127 and TAPP RD HARRODSBURG KY 40330 MERCER CONTACT:	REV: 12/9/02 ID1: KYD081017667 ID2: STATUS: TSD PHONE:
--	---

SITE INFORMATION

CONTACT INFORMATION: BOB FITZGERALD
MANAGER
850 NORTH LAKE DRIVE, 500
COPPELL TX 75019

PHONE: 2144627627

CONTACT INFORMATION: MARTIN CLIFFORD
OPERATIONS MGR.
700 NICKERSON ROAD
MARLBOROUGH MA 01752

PHONE: 9724629627

UNIVERSE NAME:

ST: STORAGE AND TREATMENT
SUBJECT TO CEI
DF: LAND DISPOSAL FACILITY
TSDS SUBJECT TO CORRECTIVE ACT
SUBJECT TO CORRECTIVE ACTION
INCINERATOR

SIC INFORMATION:

3431 - MANUFACTURING - METAL SANITARY WARE

RAATS INFORMATION:

DOCKET NUMBER:	84-33-R	INITIAL DATE:	9251984
DATE RECEIVED:	12211984	AMOUNT:	
ORDER TYPE:	3008(A)	FACILITY:	PRIVATELY HELD FACILITY
COMMENTS:			

ENFORCEMENT INFORMATION:

AGENCY:	S - STATE	DATE:	03-OCT-88
TYPE:	120 - WRITTEN INFORMAL		

AGENCY:	S - STATE	DATE:	27-AUG-91
TYPE:	120 - WRITTEN INFORMAL		

AGENCY:	S - STATE	DATE:	20-JUL-89
TYPE:	120 - WRITTEN INFORMAL		

- Continued on next page -

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA TSD SITE

SEARCH ID: 2**DIST/DIR:** 0.95 SE**MAP ID:** 1

NAME: HALLMACK, DIVISION OF NUTONE, INC.
ADDRESS: US HWY 127 and TAPP RD
 HARRODSBURG KY 40330
 MERCER
CONTACT:

REV: 12/9/02
ID1: KYD081017667
ID2:
STATUS: TSD
PHONE:

AGENCY:	S - STATE	DATE:	10-APR-91
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	30-NOV-90
TYPE:	190 - COMBINATION-INFORMAL		
AGENCY:	S - STATE	DATE:	19-APR-90
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	21-DEC-89
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	28-MAY-98
TYPE:	115 - WARNING LETTER		
AGENCY:	S - STATE	DATE:	22-SEP-93
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	12-MAR-87
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	27-JUL-89
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	22-MAY-91
TYPE:	590 - COMBINATION-CIVIL ACTIONS		
AGENCY:	S - STATE	DATE:	12-DEC-88
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	14-JAN-87
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	09-SEP-86
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	E - EPA	DATE:	27-AUG-86
TYPE:	820 - EPA TO STATE ADMINISTRATIVE REFERRAL		
AGENCY:	S - STATE	DATE:	18-JUL-86
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	E - EPA	DATE:	21-DEC-84
TYPE:	310 - FINAL 3008(A) COMPLIANCE ORDER		
AGENCY:	E - EPA	DATE:	27-SEP-84
TYPE:	210 - INITIAL 3008(A) COMPLIANCE ORDER		
AGENCY:	S - STATE	DATE:	12-JUN-89
TYPE:	120 - WRITTEN INFORMAL		
AGENCY:	S - STATE	DATE:	17-JUL-89
TYPE:	310 - FINAL 3008(A) COMPLIANCE ORDER		

- Continued on next page -

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA TSD SITE

SEARCH ID: 2**DIST/DIR:** 0.95 SE**MAP ID:** 1

NAME: HALLMACK, DIVISION OF NUTONE, INC.
ADDRESS: US HWY 127 and TAPP RD
 HARRODSBURG KY 40330
 MERCER
CONTACT:

REV: 12/9/02
ID1: KYD081017667
ID2:
STATUS: TSD
PHONE:

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 **RESPONSIBLE:** S - STATE
DETERMINED: 27-MAR-90 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 01/23/1991
TYPE: DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)

VIOLATION NUMBER: 0003 **RESPONSIBLE:** X - EPA OVERSIGHT
DETERMINED: 11-JUL-84 **DETERMINED BY:** X - EPA OVERSIGHT
CITATION: **RESOLVED:** 12/14/1984
TYPE: DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)

VIOLATION NUMBER: 0003 **RESPONSIBLE:** S - STATE
DETERMINED: 27-AUG-86 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 09/13/1986
TYPE: DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)

VIOLATION NUMBER: 0004 **RESPONSIBLE:** S - STATE
DETERMINED: 12-MAR-87 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 03/13/1987
TYPE: DGW - TSD GROUNDWATER MONITORING REQUIREMENTS

VIOLATION NUMBER: 0006 **RESPONSIBLE:** S - STATE
DETERMINED: 29-SEP-88 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 03/27/1990
TYPE: DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)

VIOLATION NUMBER: 0007 **RESPONSIBLE:** S - STATE
DETERMINED: 12-JUN-89 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 03/27/1990
TYPE: DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)

VIOLATION NUMBER: 0009 **RESPONSIBLE:** S - STATE
DETERMINED: 13-JUN-89 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 07/25/1995
TYPE: DGW - TSD GROUNDWATER MONITORING REQUIREMENTS

VIOLATION NUMBER: 0011 **RESPONSIBLE:** S - STATE
DETERMINED: 29-SEP-88 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 03/27/1990
TYPE: DCL - TSD CLOSURE/POST CLOSURE REQUIREMENTS

VIOLATION NUMBER: 0012 **RESPONSIBLE:** S - STATE
DETERMINED: 29-SEP-88 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 03/27/1990
TYPE: DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)

VIOLATION NUMBER: 0013 **RESPONSIBLE:** S - STATE
DETERMINED: 12-JUN-89 **DETERMINED BY:** S - STATE
CITATION: **RESOLVED:** 07/12/1991
TYPE: DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)

- Continued on next page -

Environmental FirstSearch Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA TSD SITE

SEARCH ID: 2**DIST/DIR:** 0.95 SE**MAP ID:** 1**NAME:** HALLMACK, DIVISION OF NUTONE, INC.**REV:** 12/9/02**ADDRESS:** US HWY 127 and TAPP RD**ID1:** KYD081017667

HARRODSBURG KY 40330

ID2:

MERCER

STATUS: TSD**CONTACT:****PHONE:**

VIOLATION NUMBER:	0014	RESPONSIBLE:	S - STATE
DETERMINED:	27-AUG-86	DETERMINED BY:	X - EPA OVERSIGHT
CITATION:		RESOLVED:	09/15/1986
TYPE:	DOT - TSD OTHER REQUIREMENTS (OVERSIGHT LEVEL)		

VIOLATION NUMBER:	0014	RESPONSIBLE:	S - STATE
DETERMINED:	12-JUN-89	DETERMINED BY:	S - STATE
CITATION:	401 KAR 35:060, SEC 2(1,2,3)	RESOLVED:	04/14/1992
TYPE:	DGW - TSD GROUNDWATER MONITORING REQUIREMENTS		

VIOLATION NUMBER:	0015	RESPONSIBLE:	S - STATE
DETERMINED:	18-JUL-86	DETERMINED BY:	S - STATE
CITATION:		RESOLVED:	04/10/1992
TYPE:	DFR - TSD FINANCIAL RESPONSIBILITY REQUIREMENTS		

VIOLATION NUMBER:	0016	RESPONSIBLE:	S - STATE
DETERMINED:	15-SEP-86	DETERMINED BY:	S - STATE
CITATION:		RESOLVED:	05/06/1987
TYPE:	FEA - FORMER ENFORCEMENT AGREEMENT		

VIOLATION NUMBER:	0017	RESPONSIBLE:	S - STATE
DETERMINED:	12-JAN-87	DETERMINED BY:	S - STATE
CITATION:		RESOLVED:	05/06/1987
TYPE:	FEA - FORMER ENFORCEMENT AGREEMENT		

VIOLATION NUMBER:	0018	RESPONSIBLE:	S - STATE
DETERMINED:	03-JUL-86	DETERMINED BY:	S - STATE
CITATION:		RESOLVED:	05/06/1987
TYPE:	FEA - FORMER ENFORCEMENT AGREEMENT		

VIOLATION NUMBER:	0019	RESPONSIBLE:	S - STATE
DETERMINED:	27-AUG-86	DETERMINED BY:	S - STATE
CITATION:		RESOLVED:	05/06/1987
TYPE:	FEA - FORMER ENFORCEMENT AGREEMENT		

VIOLATION NUMBER:	0020	RESPONSIBLE:	S - STATE
DETERMINED:	20-MAR-87	DETERMINED BY:	S - STATE
CITATION:		RESOLVED:	05/06/1987
TYPE:	FEA - FORMER ENFORCEMENT AGREEMENT		

VIOLATION NUMBER:	0021	RESPONSIBLE:	S - STATE
DETERMINED:	30-NOV-90	DETERMINED BY:	S - STATE
CITATION:	401 KAR 35:020, SEC 7	RESOLVED:	02/27/1991
TYPE:	GPT - GENERATOR PRE-TRANSPORT REQUIREMENTS		

VIOLATION NUMBER:	0022	RESPONSIBLE:	S - STATE
DETERMINED:	27-AUG-91	DETERMINED BY:	S - STATE
CITATION:	401 KAR 35:100	RESOLVED:	04/10/1992
TYPE:	DFR - TSD FINANCIAL RESPONSIBILITY REQUIREMENTS		

VIOLATION NUMBER:	0023	RESPONSIBLE:	S - STATE
DETERMINED:	22-SEP-93	DETERMINED BY:	S - STATE

- More Details Exist For This Site; Max Page Limit Reached -

Environmental FirstSearch Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA COR SITE

SEARCH ID: 3**DIST/DIR:** 0.95 SE**MAP ID:** 1**NAME:** HALLMACK, DIVISION OF NUTONE, INC.**REV:** 6/6/06**ADDRESS:** US HWY 127 and TAPP RD**ID1:** KYD081017667

HARRODSBURG KY 40330

ID2:

MERCER

STATUS: CA**CONTACT:** MARTIN CLIFFORD**PHONE:** 9724629627**SITE INFORMATION****CONTACT INFORMATION:**BOB FITZGERALD
850 NORTH LAKE DRIVE, 500
COPPELL TX 75019**PHONE:**

2144627627

CONTACT INFORMATION:MARTIN CLIFFORD
700 NICKERSON ROAD
MARLBOROUGH MA 01752**PHONE:**

9724629627

UNIVERSE INFORMATION:**NAIC INFORMATION**

332998 - ENAMELED IRON AND METAL SANITARY WARE MANUFACTURING

33991 - JEWELRY AND SILVERWARE MANUFACTURING

RAATS INFORMATION:**DOCKET NUMBER:**

84-33-R

INITIAL DATE:

9251984

DATE RECEIVED:

12211984

AMOUNT:**ORDER TYPE:**

3008(A)

ENFORCEMENT INFORMATION:**AGENCY:**

S - STATE

DATE:

1/14/1987

TYPE:

120 - WRITTEN INFORMAL

AGENCY:

S - STATE

DATE:

12/12/1988

TYPE:

120 - WRITTEN INFORMAL

AGENCY:

S - STATE

DATE:

10/3/1988

TYPE:

120 - WRITTEN INFORMAL

AGENCY:

S - STATE

DATE:

3/12/1987

TYPE:

120 - WRITTEN INFORMAL

AGENCY:

S - STATE

DATE:

6/12/1989

TYPE:

120 - WRITTEN INFORMAL

AGENCY:

S - STATE

DATE:

11/30/1990

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB: 07402.00

RCRA COR SITE

SEARCH ID: 3 **DIST/DIR:** 0.95 SE **MAP ID:** 1

NAME: HALLMACK, DIVISION OF NUTONE, INC. ADDRESS: US HWY 127 and TAPP RD HARRODSBURG KY 40330 MERCER CONTACT: MARTIN CLIFFORD	REV: 6/6/06 ID1: KYD081017667 ID2: STATUS: CA PHONE: 9724629627
--	--

TYPE:	190 - COMBINATION-INFORMAL	
AGENCY:	S - STATE	DATE: 5/22/1991
TYPE:	590 - COMBINATION-CIVIL ACTIONS	
AGENCY:	S - STATE	DATE: 12/21/1989
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 4/19/1990
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 4/10/1991
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 1/14/1987
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 8/27/1991
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 7/20/1989
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 5/28/1998
TYPE:	115 - WARNING LETTER	
AGENCY:	S - STATE	DATE: 7/17/1989
TYPE:	310 - FINAL 3008(A) COMPLIANCE ORDER	
AGENCY:	S - STATE	DATE: 9/9/1986
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	E - EPA	DATE: 8/27/1986
TYPE:	820 - EPA TO STATE ADMINISTRATIVE REFERRAL	
AGENCY:	S - STATE	DATE: 7/18/1986
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	E - EPA	DATE: 12/21/1984
TYPE:	310 - FINAL 3008(A) COMPLIANCE ORDER	
AGENCY:	E - EPA	DATE: 9/27/1984
TYPE:	210 - INITIAL 3008(A) COMPLIANCE ORDER	
AGENCY:	S - STATE	DATE: 3/12/1987
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 10/3/1988
TYPE:	120 - WRITTEN INFORMAL	
AGENCY:	S - STATE	DATE: 9/22/1993
TYPE:	120 - WRITTEN INFORMAL	

- Continued on next page -

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA COR SITE

SEARCH ID: 3**DIST/DIR:** 0.95 SE**MAP ID:** 1**NAME:** HALLMACK, DIVISION OF NUTONE, INC.**REV:** 6/6/06**ADDRESS:** US HWY 127 and TAPP RD**ID1:** KYD081017667

HARRODSBURG KY 40330

ID2:

MERCER

STATUS: CA**CONTACT:** MARTIN CLIFFORD**PHONE:** 9724629627**AGENCY:** S - STATE **DATE:** 11/30/1990**TYPE:** 190 - COMBINATION-INFORMAL**AGENCY:** E - EPA **DATE:** 8/27/1986**TYPE:** 820 - EPA TO STATE ADMINISTRATIVE REFERRAL**AGENCY:** E - EPA **DATE:** 9/27/1984**TYPE:** 210 - INITIAL 3008(A) COMPLIANCE ORDER**AGENCY:** E - EPA **DATE:** 12/21/1984**TYPE:** 310 - FINAL 3008(A) COMPLIANCE ORDER**AGENCY:** S - STATE **DATE:** 8/27/1991**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 7/17/1989**TYPE:** 310 - FINAL 3008(A) COMPLIANCE ORDER**AGENCY:** S - STATE **DATE:** 9/22/1993**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 7/27/1989**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 4/10/1991**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 9/9/1986**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 4/19/1990**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 12/21/1989**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 7/27/1989**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 7/20/1989**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 5/28/1998**TYPE:** 115 - WARNING LETTER**AGENCY:** S - STATE **DATE:** 12/12/1988**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 7/18/1986**TYPE:** 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 5/22/1991**TYPE:** 590 - COMBINATION-CIVIL ACTIONS**- Continued on next page -**

Environmental FirstSearch Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA COR SITE

SEARCH ID: 3**DIST/DIR:** 0.95 SE**MAP ID:** 1

NAME: HALLMACK, DIVISION OF NUTONE, INC.
ADDRESS: US HWY 127 and TAPP RD
 HARRODSBURG KY 40330
 MERCER
CONTACT: MARTIN CLIFFORD

REV: 6/6/06
ID1: KYD081017667
ID2:
STATUS: CA
PHONE: 9724629627

AGENCY: S - STATE **DATE:** 6/12/1989
TYPE: 120 - WRITTEN INFORMAL

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 **RESPONSIBLE:** S - STATE
DETERMINED: 3/27/1990 **DETERMINED BY:** S - STATE
CITATION:
RESOLVED: 1/23/1991
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0003 **RESPONSIBLE:** S - STATE
DETERMINED: 8/27/1986 **DETERMINED BY:** S - STATE
CITATION:

VIOLATION NUMBER: 0003 **RESPONSIBLE:** X - EPA OVERSIGHT
DETERMINED: 7/11/1984 **DETERMINED BY:** X - EPA OVERSIGHT
CITATION:
RESOLVED: 9/13/1986
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

RESOLVED: 12/14/1984
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0004 **RESPONSIBLE:** S - STATE
DETERMINED: 3/12/1987 **DETERMINED BY:** S - STATE
CITATION:
RESOLVED: 3/13/1987
TYPE: TSD-GROUNDWATER MONITORING REQUIREMENTS

VIOLATION NUMBER: 0006 **RESPONSIBLE:** S - STATE
DETERMINED: 9/29/1988 **DETERMINED BY:** S - STATE
CITATION:
RESOLVED: 3/27/1990
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0007 **RESPONSIBLE:** S - STATE
DETERMINED: 6/12/1989 **DETERMINED BY:** S - STATE
CITATION:
RESOLVED: 3/27/1990
TYPE: TSD-OTHER REQUIREMENTS (OVERSIGHT)

VIOLATION NUMBER: 0009 **RESPONSIBLE:** S - STATE
DETERMINED: 6/13/1989 **DETERMINED BY:** S - STATE
CITATION:
RESOLVED: 7/25/1995
TYPE: TSD-GROUNDWATER MONITORING REQUIREMENTS

VIOLATION NUMBER: 0011 **RESPONSIBLE:** S - STATE
DETERMINED: 9/29/1988 **DETERMINED BY:** S - STATE
CITATION:
RESOLVED: 3/27/1990

- More Details Exist For This Site; Max Page Limit Reached -

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 29**DIST/DIR:** 0.95 SE**MAP ID:** 1

NAME: HALL MACK CO
ADDRESS: US 127 N
 HARRODSBURG KY 40330
 MERCER
CONTACT: HALL MACK CO

REV: 01/24/06
ID1: 3915084
ID2: 64241
STATUS:
PHONE:

TANK NUMBER:		TANK STATUS:	TANK CLOSED PRIOR TO 1988
TANK INSTALLED DATE:	1/1/1980	TANK CAPACITY:	500 GALLONS
CONTAINED DATE:		REMOVED DATE:	5/27/1987
CLOSED DATE:		TEMP CLOSED:	
INERT MATERIAL:		TANK CONTENTS:	GASOLINE
CONSTRUCTION MATERIAL:	SINGLE WALL STEEL		
CORROSION PROTECTION:	UNKNOWN		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	UNKNOWN		
OVERFILL PROTECTION:	UNKNOWN		
SECONDARY CONTAINMENT:			
SPILL PREVENTION:	UNKNOWN		
PIPE MATERIAL:	STEEL		
PIPE TYPE:	UNKNOWN		
CORROSION PROTECTION:	UNKNOWN		
PIPE RELEASE DETECTION:	UNKNOWN		
SECONDARY CONAINMENT:	UNK		

OWNER INFORMATION

OWNER NAME: Hall Mack Co
OWNER ADDRESS: 558 MANNS RD
 Harrodsburg KY 40330

TANK INFORMATION

***Environmental FirstSearch
Site Detail Report***

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

SOLID WASTE LANDFILL SITE

SEARCH ID: 8 **DIST/DIR:** 0.71 SE **MAP ID:** 2

NAME: HARRODSBURG RECYCLING CENTER
ADDRESS: 892 MOBERLY RD
HARRODSBURG KY 40330
MERCER

REV: 03/29/07
ID1: 084-00007
ID2: 39330
STATUS: OPERATING
PHONE:

CONTACT:

SITE INFORMATION

FACILITY TYPE: COMMERCIAL RECYCLING CENTER-SW-RPBR
FACILITY STATUS: OPERATING

JOB: 07402.00

SEARCH ID: 12 **DIST/DIR:** 0.57 SE **MAP ID:** 3

Site Details Page - 11

Environmental FirstSearch Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA GENERATOR SITE

SEARCH ID: 4**DIST/DIR:** 0.87 SE**MAP ID:** 4**NAME:** MODINE MANUFACTURING COMPANY**REV:** 6/6/06**ADDRESS:** 551 TAPP ROAD
HARRODSBURG KY 40330
MERCER**ID1:** KYD000206417**ID2:****STATUS:** LGN**CONTACT:** MICHAEL DUNN**PHONE:** 8597341692**SITE INFORMATION****CONTACT INFORMATION:** MICHAEL C DUNN
P.O. BOX 367
HARRODSBURG KY 40330**PHONE:** 8597341692**CONTACT INFORMATION:** MICHAEL DUNN
P.O. BOX 367
HARRODSBURG KY 40330**PHONE:** 8597341692**UNIVERSE INFORMATION:****NAIC INFORMATION**

336391 - MOTOR VEHICLE AIR-CONDITIONING MANUFACTURING

331111 - IRON AND STEEL MILLS

332999 - ALL OTHER MISCELLANEOUS FABRICATED METAL PRODUCT MANUFACTURING

333415 - AIR-CONDITIONING AND WARM AIR HEATING EQUIPMENT AND COMMERCIAL AND INDUSTRIAL REFRIGERATION
EQUIPMENT MANUFACTURING**ENFORCEMENT INFORMATION:****AGENCY:** S - STATE **DATE:** 4/19/1993
TYPE: 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 4/11/1991
TYPE: 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 4/19/1993
TYPE: 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 4/11/1991
TYPE: 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 5/9/1990
TYPE: 120 - WRITTEN INFORMAL**AGENCY:** S - STATE **DATE:** 5/9/1990
TYPE: 120 - WRITTEN INFORMAL**VIOLATION INFORMATION:***- Continued on next page -*

Environmental FirstSearch Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

RCRA GENERATOR SITE

SEARCH ID: 4**DIST/DIR:** 0.87 SE**MAP ID:** 4

NAME: MODINE MANUFACTURING COMPANY
ADDRESS: 551 TAPP ROAD
 HARRODSBURG KY 40330
 MERCER
CONTACT: MICHAEL DUNN

REV: 6/6/06
ID1: KYD000206417
ID2:
STATUS: LGN
PHONE: 8597341692

VIOLATION NUMBER: 0002 **RESPONSIBLE:** S - STATE
DETERMINED: 3/27/1990 **DETERMINED BY:** S - STATE
CITATION:
RESOLVED: 4/11/1991
TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0003 **RESPONSIBLE:** S - STATE
DETERMINED: 4/11/1991 **DETERMINED BY:** S - STATE
CITATION: 401 KAR 35:040, SEC 4
RESOLVED: 5/31/1991
TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0004 **RESPONSIBLE:** S - STATE
DETERMINED: 4/11/1991 **DETERMINED BY:** S - STATE
CITATION: 401 KAR 37:010 SEC 7
RESOLVED: 5/1/1991
TYPE: GENERATOR-LAND BAN REQUIREMENTS

VIOLATION NUMBER: 0005 **RESPONSIBLE:** S - STATE
DETERMINED: 4/11/1991 **DETERMINED BY:** S - STATE
CITATION: 401 KAR 32:010 SEC 3
RESOLVED: 6/7/1991
TYPE: GENERATOR-GENERAL REQUIREMENTS

VIOLATION NUMBER: 0006 **RESPONSIBLE:** S - STATE
DETERMINED: 4/19/1993 **DETERMINED BY:** S - STATE
CITATION: 32:040 SEC 2 (1)
RESOLVED: 5/26/1993
TYPE: GENERATOR-RECORDKEEPING REQUIREMENTS

HAZARDOUS WASTE INFORMATION:**Lead**

The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, b

The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride and chlorinated fluorocarbons; all spent solvent mixtures/bl

Mercury

Ethene, trichloro- (OR) Trichloroethylene

Corrosive waste

Cadmium

Benzene

Trichloroethylene

Ignitable waste

The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane

Environmental FirstSearch

Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

EMERGENCY RESPONSE NOTIFICATION SITE

SEARCH ID: 6 **DIST/DIR:** 0.87 SE **MAP ID:** 4

NAME: DUPONT INC ADDRESS: 551 TAPP RD HARRODSBURG KY 40330 MERCER CONTACT:	REV: ID1: 292499 ID2: STATUS: UNKNOWN PHONE:
---	---

CERCLIS (Y/N):

MAT: DICHLORODIFLUOROMETHANE **QUANT:** 1 GALLONS

LOCATION: 551 TAPP RD
CITY: WILMINGTON DE 19898 **REPORTED:** 11/19/92

SOURCE: UNKNOWN **MEDIUM:** AIR
 TANK TRUCK / MATERIAL SPILLED DURING DELIVERY TO FACILITY
CAUSE: UNKNOWN

ACT: NONE
BY:

STATE

SEARCH ID: 7 **DIST/DIR:** 0.87 SE **MAP ID:** 4

NAME: MODINE MANUFACTURING CO ADDRESS: 551 TAPP RD HARRODSBURG KY 40330 MERCER CONTACT:	REV: 02/22/07 ID1: 05571 ID2: 3153 STATUS: ACTIVE PHONE:
--	---

SITE INFORMATION

DESCRIPTION: SIGNET SYSTEMS/MODINE
REGULATORY DESCRIPTION: STATE SUPERFUND
CLOSURE OPTION:
CLOSURE DATE:
OWNER INFORMATION: 551 TAPP RD
 HARRODSBURG KY 403330

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

CERCLIS NFRAP

SEARCH ID: 1**DIST/DIR:** 0.87 SE**MAP ID:** 4**NAME:** SIGNET SYSTEMS**REV:** 4/11/07**ADDRESS:** 551 TAPP ROAD**ID1:** KYD000206417

HARRODSBURG KY 40330

ID2: 0405571

MERCER

STATUS: NFRAP-N**CONTACT:****PHONE:****DESCRIPTION:**

FACILITY HAS GENERATED LARGE AMOUNTS OF TRICHLOROETHENE THROUGHOUT ITS 20 YEAR HISTORY. PRIOR TO 1980 THE DISPOSAL METHODS FOR THE TCE ARE UNKNOWN. TCE CONTAMINATION IN THE GROUNDWATER UNDERLYING THE ADJACENT PROPERTY HAS BEEN DOCUMENTED.

ACTION/QUALITY**AGENCY/RPS****START/RAA****END**

Environmental FirstSearch

Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

RCRA GENERATOR SITE

SEARCH ID: 5 **DIST/DIR:** 0.15 SE **MAP ID:** 5

NAME: TRIM MASTERS ADDRESS: 1120 INDUSTRY RD HARRODSBURG KY 40330 MERCER CONTACT: CHARLES COLLINS	REV: 6/6/06 ID1: KYR000036590 ID2: STATUS: VGN PHONE: 8597346000
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SITE INFORMATION

CONTACT INFORMATION: CHARLES COLLINS
 INDUSTRY RD
 HARRODSBURG KY 40330

PHONE: 8597346000

UNIVERSE INFORMATION:

NAIC INFORMATION

33636 - MOTOR VEHICLE SEATING AND INTERIOR TRIM MANUFACTURING

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

HAZARDOUS WASTE INFORMATION:

The following spent non-halogenated solvents: toluene, methyl ethyl ketone, carbon disulfide, isobutanol, pyridine, benzene, 2-ethoxyethanol, and 2-nitropropane; all spent solvent mixtures/blends containing, before use, a to Ignitable waste

The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/ blends containing, b

JOB: 07402.00

SEARCH ID: 9 **DIST/DIR:** 0.69 SE **MAP ID:** 6

TANK NUMBER:	1	TANK STATUS:	VERIFIED REMOVAL
TANK INSTALLED DATE:	1/1/1970	TANK CAPACITY:	500 GALLONS
REMOVED DATE:	12/12/1996		
INERT MATERIAL:		TANK CONTENTS:	USED OIL
CONSTRUCTION MATERIAL:	OTHER MATERIAL		
CORROSION PROTECTION:	UNKNOWN		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	UNKNOWN		
OVERFILL PROTECTION:	UNKNOWN		
SPILL PREVENTION:	UNKNOWN		
PIPE MATERIAL:	UNKNOWN		
PIPE TYPE:	UNKNOWN		
CORROSION PROTECTION:	UNKNOWN		
PIPE RELEASE DETECTION:	UNK		

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10**DIST/DIR:** 0.68 SE**MAP ID:** 7

NAME: HARRODSBURG EXPRESSMART
ADDRESS: 1096 N COLLEGE ST
 HARRODSBURG KY 40330
 MERCER
CONTACT: MARSHA SMITH

REV: 7/10/07
ID1: 1012084
ID2: 59096
STATUS:
PHONE:

OWNER INFORMATION

OWNER NAME: BOBBY THOMPSON
OWNER ADDRESS: 558 SHENANDOAH DR
 HARRODSBURG KY 40330
OWNER PHONE: 606734-9732

OWNER INFORMATION

OWNER NAME: MARSHA SMITH
OWNER ADDRESS: 1900 S HWY 27
 SOMERSET KY 42501
OWNER PHONE: 606-679-8289

TANK INFORMATION

TANK NUMBER:	1	TANK STATUS:	VERIFIED REMOVAL
TANK INSTALLED DATE:	1/1/1960	TANK CAPACITY:	1000 GALLONS
REMOVED DATE:	3/18/1998	TANK CONTENTS:	GASOLINE
INERT MATERIAL:			
CONSTRUCTION MATERIAL:	SINGLE WALL STEEL		
CORROSION PROTECTION:	UNKNOWN		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	UNKNOWN		
OVERFILL PROTECTION:	NONE		
SPILL PREVENTION:	NONE		
PIPE MATERIAL:	STEEL		
PIPE TYPE:	SUCTION		
CORROSION PROTECTION:	UNKNOWN		
PIPE RELEASE DETECTION:	NON		

TANK NUMBER:	2	TANK STATUS:	VERIFIED REMOVAL
TANK INSTALLED DATE:	1/1/1960	TANK CAPACITY:	1000 GALLONS
REMOVED DATE:	3/18/1998	TANK CONTENTS:	GASOLINE
INERT MATERIAL:			
CONSTRUCTION MATERIAL:	SINGLE WALL STEEL		
CORROSION PROTECTION:	UNKNOWN		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	UNKNOWN		
OVERFILL PROTECTION:	NONE		
SPILL PREVENTION:	NONE		
PIPE MATERIAL:	STEEL		
PIPE TYPE:	SUCTION		
CORROSION PROTECTION:	UNKNOWN		
PIPE RELEASE DETECTION:	NON		

- Continued on next page -

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB: 07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10**DIST/DIR:** 0.68 SE**MAP ID:** 7

NAME: HARRODSBURG EXPRESSMART
ADDRESS: 1096 N COLLEGE ST
 HARRODSBURG KY 40330
 MERCER
CONTACT: MARSHA SMITH

REV: 7/10/07
ID1: 1012084
ID2: 59096
STATUS:
PHONE:

TANK NUMBER:	3	TANK STATUS:	ACTIVE
TANK INSTALLED DATE:	8/15/1998	TANK CAPACITY:	10000 GALLONS
REMOVED DATE:			
INERT MATERIAL:		TANK CONTENTS:	GASOLINE
CONSTRUCTION MATERIAL:	FIBERGLASS REINFORCED PLASTIC		
CORROSION PROTECTION:	FIBERGLASS REIN. PLASTIC		
RELEASE DETECTION:	AUTOMATIC TANK GAUGING		
INTERNAL PROTECTION:	FIBERGLASS/DOUBLE WALL		
OVERFILL PROTECTION:	FLOW RESTRICTOR		
SPILL PREVENTION:	CATCHMENT BASIN		
PIPE MATERIAL:	FLEXIBLE WALL		
PIPE TYPE:	PRESSURIZED		
CORROSION PROTECTION:	FLEXIBLE WALL FIBERGLASS		
PIPE RELEASE DETECTION:	ELD		

TANK NUMBER:	4	TANK STATUS:	ACTIVE
TANK INSTALLED DATE:	8/15/1998	TANK CAPACITY:	10000 GALLONS
REMOVED DATE:			
INERT MATERIAL:		TANK CONTENTS:	GASOLINE
CONSTRUCTION MATERIAL:	FIBERGLASS REINFORCED PLASTIC		
CORROSION PROTECTION:	FIBERGLASS REIN. PLASTIC		
RELEASE DETECTION:	AUTOMATIC TANK GAUGING		
INTERNAL PROTECTION:	FIBERGLASS/DOUBLE WALL		
OVERFILL PROTECTION:	FLOW RESTRICTOR		
SPILL PREVENTION:	CATCHMENT BASIN		
PIPE MATERIAL:	FLEXIBLE WALL		
PIPE TYPE:	PRESSURIZED		
CORROSION PROTECTION:	FLEXIBLE WALL FIBERGLASS		
PIPE RELEASE DETECTION:	ELD		

TANK NUMBER:	5	TANK STATUS:	ACTIVE
TANK INSTALLED DATE:	8/15/1998	TANK CAPACITY:	4000 GALLONS
REMOVED DATE:			
INERT MATERIAL:		TANK CONTENTS:	DIESEL
CONSTRUCTION MATERIAL:	FIBERGLASS REINFORCED PLASTIC		
CORROSION PROTECTION:	FIBERGLASS REIN. PLASTIC		
RELEASE DETECTION:	AUTOMATIC TANK GAUGING		
INTERNAL PROTECTION:	FIBERGLASS/DOUBLE WALL		
OVERFILL PROTECTION:	FLOW RESTRICTOR		
SPILL PREVENTION:	CATCHMENT BASIN		
PIPE MATERIAL:	FLEXIBLE WALL		
PIPE TYPE:	PRESSURIZED		
CORROSION PROTECTION:	FLEXIBLE WALL FIBERGLASS		
PIPE RELEASE DETECTION:	ELD		

- Continued on next page -

***Environmental FirstSearch
Site Detail Report***

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 10 **DIST/DIR:** 0.68 SE **MAP ID:** 7

NAME:	HARRODSBURG EXPRESSMART	REV:	7/10/07
ADDRESS:	1096 N COLLEGE ST	ID1:	1012084
	HARRODSBURG KY 40330	ID2:	59096
	MERCER	STATUS:	
CONTACT:	MARSHA SMITH	PHONE:	

Environmental FirstSearch Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 11 **DIST/DIR:** 0.95 SE **MAP ID:** 8

NAME: LONG RENTAL PROPERTY ADDRESS: 986 COLLEGE ST HARRODSBURG KY 40330 MERCER CONTACT: LONG RENTAL PROPERTY	REV: 7/10/07 ID1: 1006084 ID2: 59092 STATUS: PHONE:
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OWNER INFORMATION

OWNER NAME: LONG RENTAL PROPERTY
OWNER ADDRESS: 921 BOB O LINK
 HARRODSBURG KY 40330
OWNER PHONE: 800-334-0005

TANK INFORMATION

TANK NUMBER: 1 TANK INSTALLED DATE: 1/1/1901 REMOVED DATE: 12/15/1998 INERT MATERIAL: CONSTRUCTION MATERIAL: DOUBLE WALL STEEL CORROSION PROTECTION: DST RELEASE DETECTION: NONE INTERNAL PROTECTION: FIBERGLASS/DOUBLE WALL OVERFILL PROTECTION: UNKNOWN SPILL PREVENTION: UNKNOWN PIPE MATERIAL: UNKNOWN PIPE TYPE: SUCTION CORROSION PROTECTION: UNKNOWN PIPE RELEASE DETECTION: NON	TANK STATUS: VERIFIED REMOVAL TANK CAPACITY: 500 GALLONS TANK CONTENTS: USED OIL
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Environmental FirstSearch Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 16 **DIST/DIR:** 0.95 SE **MAP ID:** 8

NAME: LONG RENTAL PROPERTY ADDRESS: 986 COLLEGE ST HARRODSBURG KY 40330 MERCER CONTACT:	REV: 4/10/03 ID1: 1006084 ID2: STATUS: CLW PHONE:
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SITE INFORMATION

WORK GROUP: CLOSURE WORKGROUP
CONTAMINATED: SOIL

UST INFORMATION

OWNER INFORMATION

OWNER NAME: LONG RENTAL PROPERTY
OWNER ADDRESS: 921 BOB O LINK
 HARRODSBURG KY 40330

TANK INFORMATION

TANK NUMBER: 1 TANK INSTALLED DATE: 1/1/2001 CONTAINED DATE: CLOSED DATE: INERT MATERIAL: CONSTRUCTION MATERIAL: DOUBLE WALL STEEL CORROSION PROTECTION: DST RELEASE DETECTION: NONE INTERNAL PROTECTION: FIBERGLASS/DOUBLE WALL OVERFILL PROTECTION: UNKNOWN SECONDARY CONTAINMENT: SPILL PREVENTION: UNKNOWN PIPE MATERIAL: UNKNOWN PIPE TYPE: SUCTION CORROSION PROTECTION: UNKNOWN PIPE RELEASE DETECTION: NONE SECONDARY CONAINMENT:	TANK STATUS: VERIFIED REMOVAL TANK CAPACITY: 500 GALLONS REMOVED DATE: 12/15/1998 TEMP CLOSED: 6/27/1996 TANK CONTENTS: USED OIL
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Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 18**DIST/DIR:** 0.63 NE**MAP ID:** 9

NAME: PARCEL 54
ADDRESS: 1122 LOUISVILLE RD
 HARRODSBURG KY 40330
 MERCER
CONTACT:

REV: 05/27/06
ID1: 1003084
ID2: 1003-084
STATUS: CLOSURE WORKGROUP
PHONE:

SITE INFORMATION

WORK GROUP: CLOSURE WORKGROUP
CONTAMINATED: SOIL

UST INFORMATION**OWNER INFORMATION**

OWNER NAME: KY DEPT OF HIGHWAYS/ENVIRONMENT
OWNER ADDRESS: 125 HOLMES ST
 FRANKFORT KY 40602 502-564-7250

TANK INFORMATION

TANK NUMBER: 2
TANK MASTER AI ID: 59098
TANK STATUS: UNVERIFIED REMOVAL/CLOSURE
TANK INSTALLED DATE: 1/1/1947
TANK CAPACITY: 1000 GALLONS
LAST CONTAINED PRODUCT DATE:
TEMP CLOSED DATE: 2/19/1996
TANK REMOVED DATE: 2/1/1996
CLOSED IN PLACE DATE:
INERT MATERIAL:
TANK CONTENTS: FUEL OIL
CONSTRUCTION MATERIAL: SINGLE WALL STEEL
CORROSION PROTECTION: UNKNOWN
RELEASE DETECTION: NONE
INTERNAL PROTECTION: UNKNOWN
OVERFILL PROTECTION: UNKNOWN
SPILL PREVENTION: UNKNOWN
PIPE MATERIAL: UNKNOWN
PIPE TYPE: UNKNOWN
CORROSION PROTECTION: UNKNOWN
PIPE RELEASE DETECTION: UNKNOWN
SECONDARY CONTAINMENT: UNK

TANK INFORMATION

TANK NUMBER: 1
TANK MASTER AI ID: 59098
TANK STATUS: UNVERIFIED REMOVAL/CLOSURE
TANK INSTALLED DATE: 1/1/1947
TANK CAPACITY: 1000 GALLONS
LAST CONTAINED PRODUCT DATE:
TEMP CLOSED DATE: 2/19/1996
TANK REMOVED DATE: 2/1/1996
CLOSED IN PLACE DATE:
INERT MATERIAL:
TANK CONTENTS: FUEL OIL
CONSTRUCTION MATERIAL: SINGLE WALL STEEL
CORROSION PROTECTION: UNKNOWN

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 18 **DIST/DIR:** 0.63 NE **MAP ID:** 9

NAME:	PARCEL 54	REV:	05/27/06
ADDRESS:	1122 LOUISVILLE RD	ID1:	1003084
	HARRODSBURG KY 40330	ID2:	1003-084
	MERCER	STATUS:	CLOSURE WORKGROUP
CONTACT:		PHONE:	

RELEASE DETECTION:	NONE
INTERNAL PROTECTION:	UNKNOWN
OVERFILL PROTECTION:	UNKNOWN
SPILL PREVENTION:	UNKNOWN
PIPE MATERIAL:	UNKNOWN
PIPE TYPE:	UNKNOWN
CORROSION PROTECTION:	UNKNOWN
PIPE RELEASE DETECTION:	UNKNOWN
SECONDARY CONTAINMENT:	UNK

Environmental FirstSearch **Site Detail Report**

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 14**DIST/DIR:** 0.63 NE**MAP ID:** 9

NAME: PARCEL 54
ADDRESS: 1122 LOUISVILLE RD
 HARRODSBURG KY 40330
 MERCER
CONTACT: KY DEPT OF HIGHWAYS/ENVIRONMENT

REV: 7/10/07
ID1: 1003084
ID2: 59098
STATUS:
PHONE:

OWNER INFORMATION

OWNER NAME: KY DEPT OF HIGHWAYS/ENVIRONMENT
OWNER ADDRESS: 200 MERO ST
 FRANKFORT KY 40622
OWNER PHONE: 502-564-7111

TANK INFORMATION

TANK NUMBER: 1
TANK INSTALLED DATE: 1/1/1947
REMOVED DATE: 2/1/1996
INERT MATERIAL:
CONSTRUCTION MATERIAL: SINGLE WALL STEEL
CORROSION PROTECTION: UNKNOWN
RELEASE DETECTION: NONE
INTERNAL PROTECTION: UNKNOWN
OVERFILL PROTECTION: UNKNOWN
SPILL PREVENTION: UNKNOWN

TANK STATUS: UNVERIFIED REMOVAL/CLOSURE
TANK CAPACITY: 1000 GALLONS
TANK CONTENTS: FUEL OIL

PIPE MATERIAL: UNKNOWN
PIPE TYPE: UNKNOWN
CORROSION PROTECTION: UNKNOWN
PIPE RELEASE DETECTION: UNK

TANK NUMBER: 2
TANK INSTALLED DATE: 1/1/1947
REMOVED DATE: 2/1/1996
INERT MATERIAL:
CONSTRUCTION MATERIAL: SINGLE WALL STEEL
CORROSION PROTECTION: UNKNOWN
RELEASE DETECTION: NONE
INTERNAL PROTECTION: UNKNOWN
OVERFILL PROTECTION: UNKNOWN
SPILL PREVENTION: UNKNOWN

TANK STATUS: UNVERIFIED REMOVAL/CLOSURE
TANK CAPACITY: 1000 GALLONS
TANK CONTENTS: FUEL OIL

PIPE MATERIAL: UNKNOWN
PIPE TYPE: UNKNOWN
CORROSION PROTECTION: UNKNOWN
PIPE RELEASE DETECTION: UNK

JOB: 07402.00

Site Details Page - 26

Environmental FirstSearch
Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 15	DIST/DIR: 0.97 SE	MAP ID: 10
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NAME: RED HED NO 40 ADDRESS: 989 N COLLEGE ST HARRODSBURG KY 40330 MERCER CONTACT: RED HED OIL CO INC	REV: 7/10/07 ID1: 2585084 ID2: 59099 STATUS: PHONE:
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INTERNAL PROTECTION:	INTERNAL LINING NOT APPLICABLE
OVERFILL PROTECTION:	FLOW RESTRICTOR
SPILL PREVENTION:	CATCHMENT BASIN
 PIPE MATERIAL:	 FIBERGLASS REINFORCED PLASTIC
PIPE TYPE:	PRESSURIZED
CORROSION PROTECTION:	FIBERGLASS REIN. PLASTIC
PIPE RELEASE DETECTION:	NON

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 13**DIST/DIR:** 0.68 SE**MAP ID:** 11

NAME: MERCER CO ROAD DEPT
ADDRESS: 894 MOBERLY RD
 HARRODSBURG KY 40330
 MERCER
CONTACT: MERCER CO FISCAL COURT

REV: 7/10/07
ID1: 1005084
ID2: 59095
STATUS:
PHONE:

OWNER INFORMATION

OWNER NAME: MERCER CO FISCAL COURT
OWNER ADDRESS: FISCAL COURT BLDG
 HARRODSBURG KY 40330
OWNER PHONE: 859-734-6300

TANK INFORMATION

TANK NUMBER:	1	TANK STATUS:	VERIFIED REMOVAL
TANK INSTALLED DATE:	1/1/1901	TANK CAPACITY:	1000 GALLONS
REMOVED DATE:	3/6/1996	TANK CONTENTS:	GASOLINE
INERT MATERIAL:			
CONSTRUCTION MATERIAL:	SINGLE WALL STEEL		
CORROSION PROTECTION:	UNKNOWN		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	UNKNOWN		
OVERFILL PROTECTION:	NONE		
SPILL PREVENTION:	NONE		
PIPE MATERIAL:	STEEL		
PIPE TYPE:	SUCTION		
CORROSION PROTECTION:	NONE		
PIPE RELEASE DETECTION:	NON		

Environmental FirstSearch Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

LEAKING UNDERGROUND STORAGE TANKS

SEARCH ID: 17**DIST/DIR:** 0.68 SE**MAP ID:** 11

NAME: MERCER CO ROAD DEPT
ADDRESS: 894 MOBERLY RD (CO RD)
 HARRODSBURG KY 40330

REV: 4/5/05
ID1: 1005084
ID2: 1005-084
STATUS: SITE INVESTIGATION WORKGROUP
PHONE:

CONTACT: JOHN TRISLER**SITE INFORMATION**

WORK GROUP: SITE INVESTIGATION WORKGROUP
CONTAMINATED: SOIL

UST INFORMATION**OWNER INFORMATION**

OWNER NAME: JOHN TRISLER
 MERCER CO FISCAL COURT
OWNER ADDRESS: FISCAL COURT BLDG
 HARRODSBURG KY 40330

TANK NUMBER:	1	TANK STATUS:	VERIFIED REMOVAL
TANK INSTALLED DATE:	1/1/2001	TANK CAPACITY:	1000 GALLONS
CONTAINED DATE:		REMOVED DATE:	3/6/1996
CLOSED DATE:		TEMP CLOSED:	1/18/1996
INERT MATERIAL:		TANK CONTENTS:	GASOLINE
CONSTRUCTION MATERIAL:	SINGLE WALL STEEL		
CORROSION PROTECTION:	UNKNOWN		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	UNKNOWN		
OVERFILL PROTECTION:	NONE		
SECONDARY CONTAINMENT:			
SPILL PREVENTION:	NONE		
PIPE MATERIAL:	STEEL		
PIPE TYPE:	SUCTION		
CORROSION PROTECTION:	NONE		
PIPE RELEASE DETECTION:	NONE		
SECONDARY CONAINMENT:			

Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

EMERGENCY RESPONSE NOTIFICATION SITE

SEARCH ID: 19**DIST/DIR:** 0.06 NW**MAP ID:** 12**NAME:** BAY WEST PAPER COMPANY**REV:** 6/21/98**ADDRESS:** INDUSTRY ROAD**ID1:** 585039

HARRODSBURG KY

ID2:

MERCER

STATUS: FIXED FACILITY**CONTACT:****PHONE:****SPILL INFORMATION****DATE OF SPILL:** 6/21/98**TIME OF SPILL:** 1730**PRODUCT RELEASED (1):** UNKNOWN MATERIAL**QUANTITY (1):** 0**UNITS (1):** UNK**PRODUCT RELEASED (2):****QUANTITY (2):****UNITS (2):****PRODUCT RELEASED (3):****QUANTITY (3):****UNITS (3):****MEDIUM/MEDIA AFFECTED****AIR:** NO**GROUNDWATER:** NO**LAND:** YES**FIXED FACILITY:** NO**WATER:** NO**OTHER:** NO**WATERBODY AFFECTED BY RELEASE:****CAUSE OF RELEASE****DUMPING:** NO**EQUIPMENT FAILURE:** NO**NATURAL PHENOMENON:** NO**OPERATOR ERROR:** NO**OTHER CAUSE:** NO**TRANSP. ACCIDENT:** NO**UNKNOWN:** NO**ACTIONS TAKEN:** NONE KNOWN BY CALLER**RELEASE DETECTION:** RECEIVING AREA / A LARGE PLASTIC CONTAINER / LEAK IN CONTAINER CAUSED RELEASE OF MATERIAL**MISC. NOTES:** MATERIAL SMELLS LIKE ROTTEN EGGS**DISCHARGER INFORMATION****DISCHARGER ID:** 585039**DUN and BRADSTREET :****TYPE OF DISCHARGER:** PRIVATE ENTERPRISE**NAME OF DISCHARGER:** BAY WEST PAPER COMPANY**ADDRESS:** INDUSTRY ROAD

HARRODSBURG KY

Environmental FirstSearch Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

EMERGENCY RESPONSE NOTIFICATION SITE

SEARCH ID: 20**DIST/DIR:** 1.25 SE**MAP ID:** 13

NAME: KENTUCKY UTILITIES CO
ADDRESS: HWY 127 and WARWICK PIKE
 HARRODSBURG KY
 MERCER
CONTACT:

REV:
ID1: 291960
ID2:
STATUS: UNKNOWN
PHONE:

CERCLIS (Y/N):

MAT: POLYCHLORINATED BIPHENYLS **QUANT:** 10 GALLONS

LOCATION: HWY 127 and WARWICK PIKE
CITY: LEXINGTON KY 40507 **REPORTED:** 11/12/92

SOURCE: UNKNOWN **MEDIUM:** WATER
 POLE MOUNTED TRANSFORMER/DAMAGED IN A STORM
CAUSE: UNKNOWN

ACT: USED SORBENTS TO COLLECT SPILLED PRODUCT IN STREET, BOOM DEPLOYE
BY:

EMERGENCY RESPONSE NOTIFICATION SITE

SEARCH ID: 21**DIST/DIR:** 1.25 SE**MAP ID:** 13

NAME: KENTUCKY UTILITIES CO
ADDRESS: HWY 127 AND WARWICK PIKE
 HARRODSBURG KY
 MERCER
CONTACT:

REV:
ID1: 291956
ID2:
STATUS: UNKNOWN
PHONE:

CERCLIS (Y/N):

MAT: POLYCHLORINATED BIPHENYLS **QUANT:** 10 GALLONS

LOCATION: HWY 127 AND WARWICK PIKE
CITY: LEXINGTON KY 40507 **REPORTED:** 11/12/92

SOURCE: UNKNOWN **MEDIUM:** WATER
 A POLE MOUNTED TRANSFORMER WAS DAMAGED IN A STORM
CAUSE: UNKNOWN

ACT: BOOMS WERE DEPLOYED AROUND STORM SEWER AND ABSORBENTS WERE USED
BY:

***Environmental FirstSearch
Site Detail Report***

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

STATE

SEARCH ID: 25	DIST/DIR: 0.85 SE	MAP ID: 14
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NAME: HARRODSBURG NATIONAL GUARD ARMORY ADDRESS: TAPP RD HARRODSBURG KY 40330 MERCER CONTACT:	REV: 02/22/07 ID1: KYST-1742 ID2: 52612 STATUS: CLOSED PHONE:
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SITE INFORMATION

DESCRIPTION: HARRODSBURG NAT. GUARD ARMORY (CLOSED: NO ACTION NECESSARY)
REGULATORY DESCRIPTION: PETROLEUM CLEANUP
CLOSURE OPTION: OPTION A NO ACTION NECESSARY
CLOSURE DATE: 3/12/1998
OWNER INFORMATION: NONE

Environmental FirstSearch

Site Detail Report

Target Property: HARRODSBURG KY 40330

JOB: 07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 30 **DIST/DIR:** 0.89 SE **MAP ID:** 15

NAME: KIDDE FENWAL INC ADDRESS: US 127 and TAPP RD HARRODSBURG KY 40330 MERCER CONTACT: HALL MACK CO	REV: 7/10/07 ID1: 48471 ID2: 48471 STATUS: PHONE:
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OWNER INFORMATION

OWNER NAME: HALL MACK CO
OWNER ADDRESS: 558 MANNS RD
 HARRODSBURG KY 40330
OWNER PHONE: 606-734-5423

TANK INFORMATION

TANK NUMBER: 1 TANK INSTALLED DATE: 1/1/1980 REMOVED DATE: 5/27/1987 INERT MATERIAL: CONSTRUCTION MATERIAL: SINGLE WALL STEEL CORROSION PROTECTION: UNKNOWN RELEASE DETECTION: NONE INTERNAL PROTECTION: UNKNOWN OVERFILL PROTECTION: UNKNOWN SPILL PREVENTION: UNKNOWN PIPE MATERIAL: STEEL PIPE TYPE: UNKNOWN CORROSION PROTECTION: UNKNOWN PIPE RELEASE DETECTION: UNK	TANK STATUS: TANK CLOSED PRIOR TO 1988 TANK CAPACITY: 500 GALLONS TANK CONTENTS: GASOLINE
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Environmental FirstSearch

Site Detail Report

Target Property:

HARRODSBURG KY 40330

JOB:

07402.00

REGISTERED UNDERGROUND STORAGE TANKS

SEARCH ID: 33**DIST/DIR:** 0.73 SE**MAP ID:** 16

NAME: PARCEL 7 (DEARING)
ADDRESS: US 127 HENSLEY HEIGHTS
 HARRODSBURG KY 40330
 MERCER
CONTACT: KY DEPT OF HIGHWAYS/ENVIRONMENT

REV: 7/10/07
ID1: 5401084
ID2: 66935
STATUS:
PHONE:

OWNER INFORMATION

OWNER NAME: KY DEPT OF HIGHWAYS/ENVIRONMENT
OWNER ADDRESS: 200 MERO ST
 FRANKFORT KY 40622
OWNER PHONE: 502-564-7111

TANK INFORMATION

TANK NUMBER:	1	TANK STATUS:	VERIFIED REMOVAL
TANK INSTALLED DATE:	1/1/1901	TANK CAPACITY:	1000 GALLONS
REMOVED DATE:	9/28/1993		
INERT MATERIAL:		TANK CONTENTS:	KEROSENE
CONSTRUCTION MATERIAL:	SINGLE WALL STEEL		
CORROSION PROTECTION:	NONE		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	NONE		
OVERFILL PROTECTION:	NONE		
SPILL PREVENTION:	NONE		

PIPE MATERIAL: STEEL
PIPE TYPE: UNKNOWN
CORROSION PROTECTION: NONE
PIPE RELEASE DETECTION: NON

TANK NUMBER:	2	TANK STATUS:	VERIFIED REMOVAL
TANK INSTALLED DATE:	1/1/1901	TANK CAPACITY:	1000 GALLONS
REMOVED DATE:	9/28/1993		
INERT MATERIAL:		TANK CONTENTS:	GASOLINE
CONSTRUCTION MATERIAL:	SINGLE WALL STEEL		
CORROSION PROTECTION:	NONE		
RELEASE DETECTION:	NONE		
INTERNAL PROTECTION:	NONE		
OVERFILL PROTECTION:	NONE		
SPILL PREVENTION:	NONE		

PIPE MATERIAL: STEEL
PIPE TYPE: UNKNOWN
CORROSION PROTECTION: NONE
PIPE RELEASE DETECTION: NON

Environmental FirstSearch Descriptions

NPL: EPA NATIONAL PRIORITY LIST - The National Priorities List is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money.

A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.

FINAL - Currently on the Final NPL

PROPOSED - Proposed for NPL

NPL DELISTED: EPA NATIONAL PRIORITY LIST Subset - Database of delisted NPL sites. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

DELISTED - Deleted from the Final NPL

CERCLIS: EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM (CERCLIS)- CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.

PART OF NPL- Site is part of NPL site

DELETED - Deleted from the Final NPL

FINAL - Currently on the Final NPL

NOT PROPOSED - Not on the NPL

NOT VALID - Not Valid Site or Incident

PROPOSED - Proposed for NPL

REMOVED - Removed from Proposed NPL

SCAN PLAN - Pre-proposal Site

WITHDRAWN - Withdrawn

NFRAP: EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM ARCHIVED SITES - database of Archive designated CERCLA sites that, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

NFRAP – No Further Remedial Action Plan

P - Site is part of NPL site

D - Deleted from the Final NPL

F - Currently on the Final NPL

N - Not on the NPL

O - Not Valid Site or Incident

P - Proposed for NPL

R - Removed from Proposed NPL

S - Pre-proposal Site

W – Withdrawn

RCRA COR ACT: EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.

RCRAInfo facilities that have reported violations and subject to corrective actions.

RCRA TSD: EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM TREATMENT, STORAGE, and DISPOSAL FACILITIES. - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.

Facilities that treat, store, dispose, or incinerate hazardous waste.

RCRA GEN: EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM GENERATORS - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984. Facilities that generate or transport hazardous waste or meet other RCRA requirements.

LGN - Large Quantity Generators

SGN - Small Quantity Generators

VGN – Conditionally Exempt Generator.

Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List) facilities.

Federal IC / EC: EPA BROWNFIELD MANAGEMENT SYSTEM (BMS) - database designed to assist EPA in collecting, tracking, and updating information, as well as reporting on the major activities and accomplishments of the various Brownfield grant Programs.

FEDERAL ENGINEERING AND INSTITUTIONAL CONTROLS- Superfund sites that have either an engineering or an institutional control. The data includes the control and the media contaminated.

ERNS: EPA/NRC EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) - Database of incidents reported to the National Response Center. These incidents include chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals, incidents where illegally dumped chemicals have been found, and drills intended to prepare responders to handle these kinds of incidents. Data since January 2001 has been received from the National Response System database as the EPA no longer maintains this data.

Tribal Lands: DOI/BIA INDIAN LANDS OF THE UNITED STATES - Database of areas with boundaries established by treaty, statute, and (or) executive or court order, recognized by the Federal Government as territory in which American Indian tribes have primary governmental authority. The Indian Lands of the United States map layer shows areas of 640 acres or more, administered by the Bureau of Indian Affairs. Included are Federally-administered lands within a reservation which may or may not be considered part of the reservation.

State/Tribal Sites: KYDEP STATE LEADS LIST - database of state level cercla/superfund sites. The data includes river basin affected, contaminant and the program overseeing the site.

State/Tribal SWL: KY DEP PERMITTED OPERATING LANDFILLS - database of the permitted contained landfills and the permitted construction/demolition debris landfills.

State/Tribal LUST: KYDEP SB 193(SENATE BILL 193) - database of facilities eligible for reimbursement from the Petroleum Storage Tanks Environmental Assurance Fund (OPSTEAF).

State/Tribal UST/AST: KY DEP STATEWIDE UST LISTING - database of all registered underground storage tanks. The data includes installation date, removed date, capacity and construction information.

RADON: NTIS NATIONAL RADON DATABASE - EPA radon data from 1990-1991 national radon project collected for a variety of zip codes across the United States.

Environmental FirstSearch Database Sources

NPL: EPA Environmental Protection Agency

Updated quarterly

NPL DELISTED: EPA Environmental Protection Agency

Updated quarterly

CERCLIS: EPA Environmental Protection Agency

Updated quarterly

NFRAP: EPA Environmental Protection Agency.

Updated quarterly

RCRA COR ACT: EPA Environmental Protection Agency.

Updated quarterly

RCRA TSD: EPA Environmental Protection Agency.

Updated quarterly

RCRA GEN: EPA Environmental Protection Agency.

Updated quarterly

Federal IC / EC: EPA Environmental Protection Agency

Updated quarterly

ERNS: EPA/NRC Environmental Protection Agency

Updated semi-annually

Tribal Lands: DOI/BIA United States Department of the Interior

Updated annually

State/Tribal Sites: KYDEP Kentucky Department for Environmental Protection, Division of Waste Management Superfund Branch.

Updated

State/Tribal SWL: KY DEP Kentucky Department for Environmental Protection, Division of Waste Management Solid Waste Program

Updated annually

State/Tribal LUST: KYDEP Kentucky Department for Environmental Protection

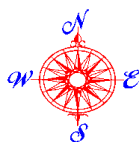
Updated quarterly

State/Tribal UST/AST: KY DEP Kentucky Department for Environmental Protection

Updated quarterly

RADON: NTIS Environmental Protection Agency, National Technical Information Services

Updated periodically



Environmental FirstSearch

.5 Mile Radius from Line

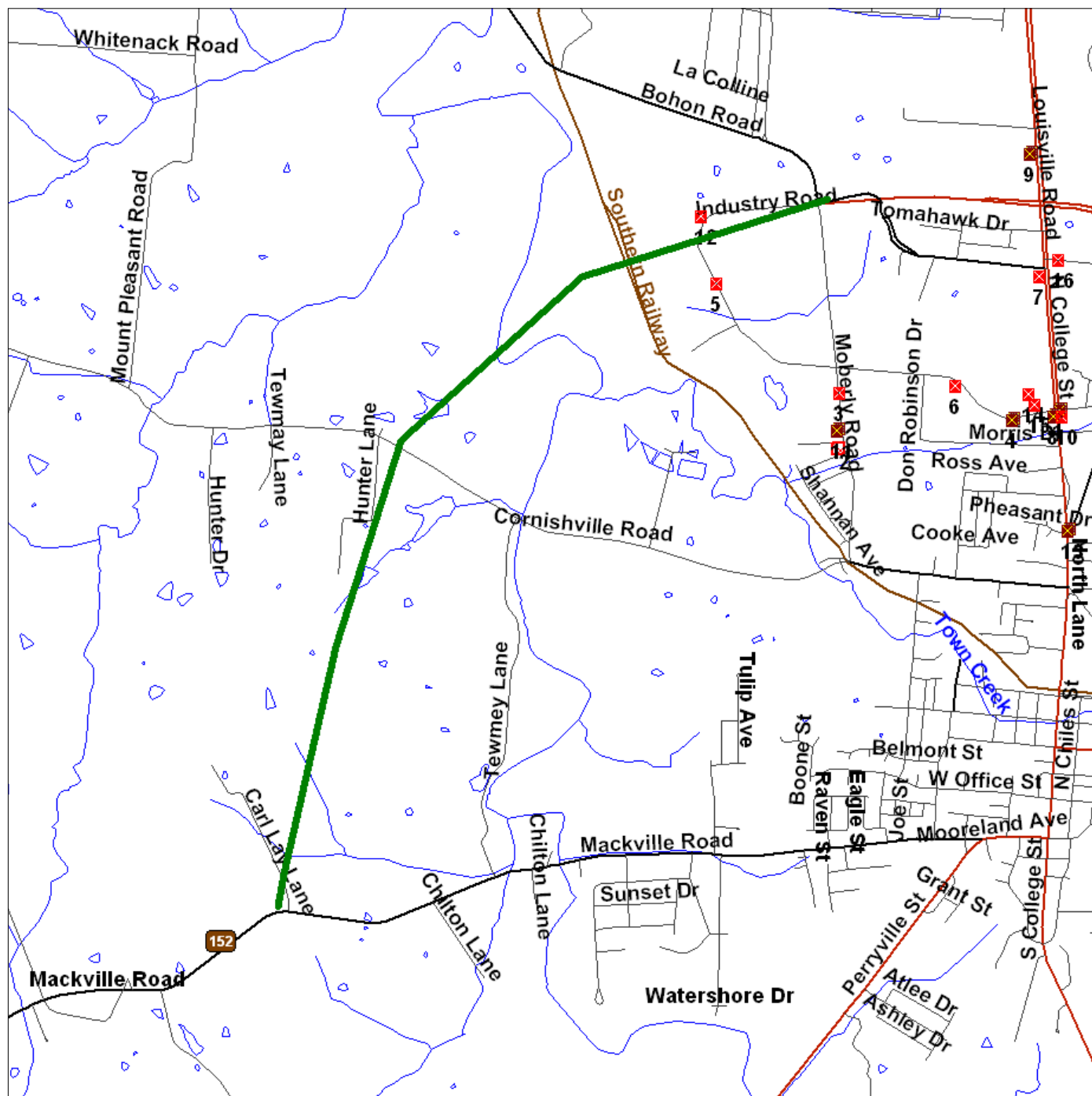
Single Map:

Appendix D - Page 45

Environmental FIRSTSEARCH



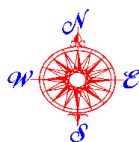
, HARRODSBURG KY 40330



Source: 2001 U.S. Census TIGER Files

Linear Search Line
Identified Site, Multiple Sites, Receptor
NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste
Triballand.....
Railroads





Environmental FirstSearch

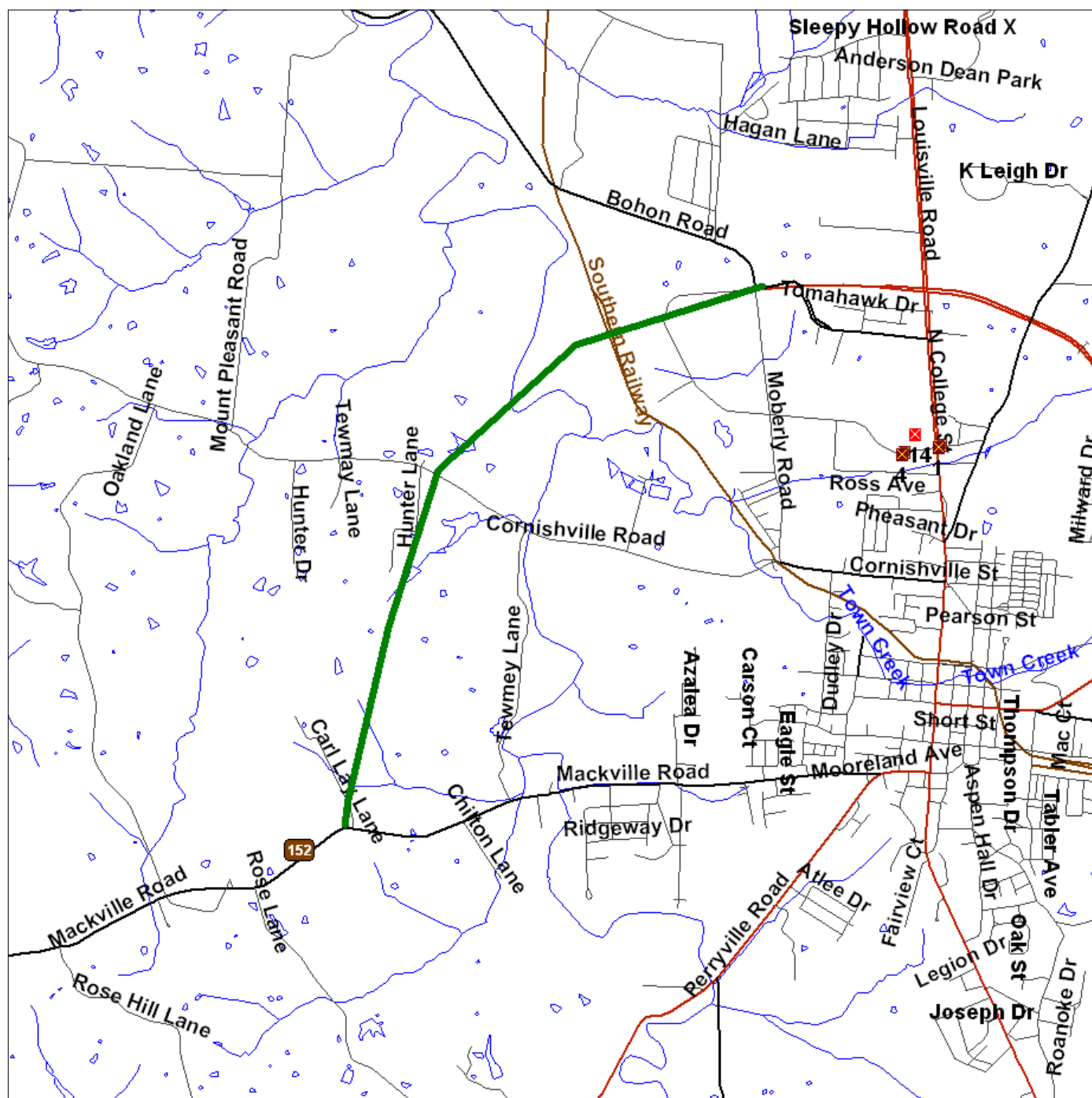
1 Mile Radius from Line
ASTM Map: NPL, RCRA COR, STATE Sites

Appendix D - Page 46

Environmental
FIRSTSEARCH

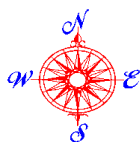


, HARRODSBURG KY 40330



Source: 2001 U.S. Census TIGER Files

Linear Search Line	
Identified Site, Multiple Sites, Receptor	
NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste	
Triballand.....	
Railroads	



Environmental FirstSearch

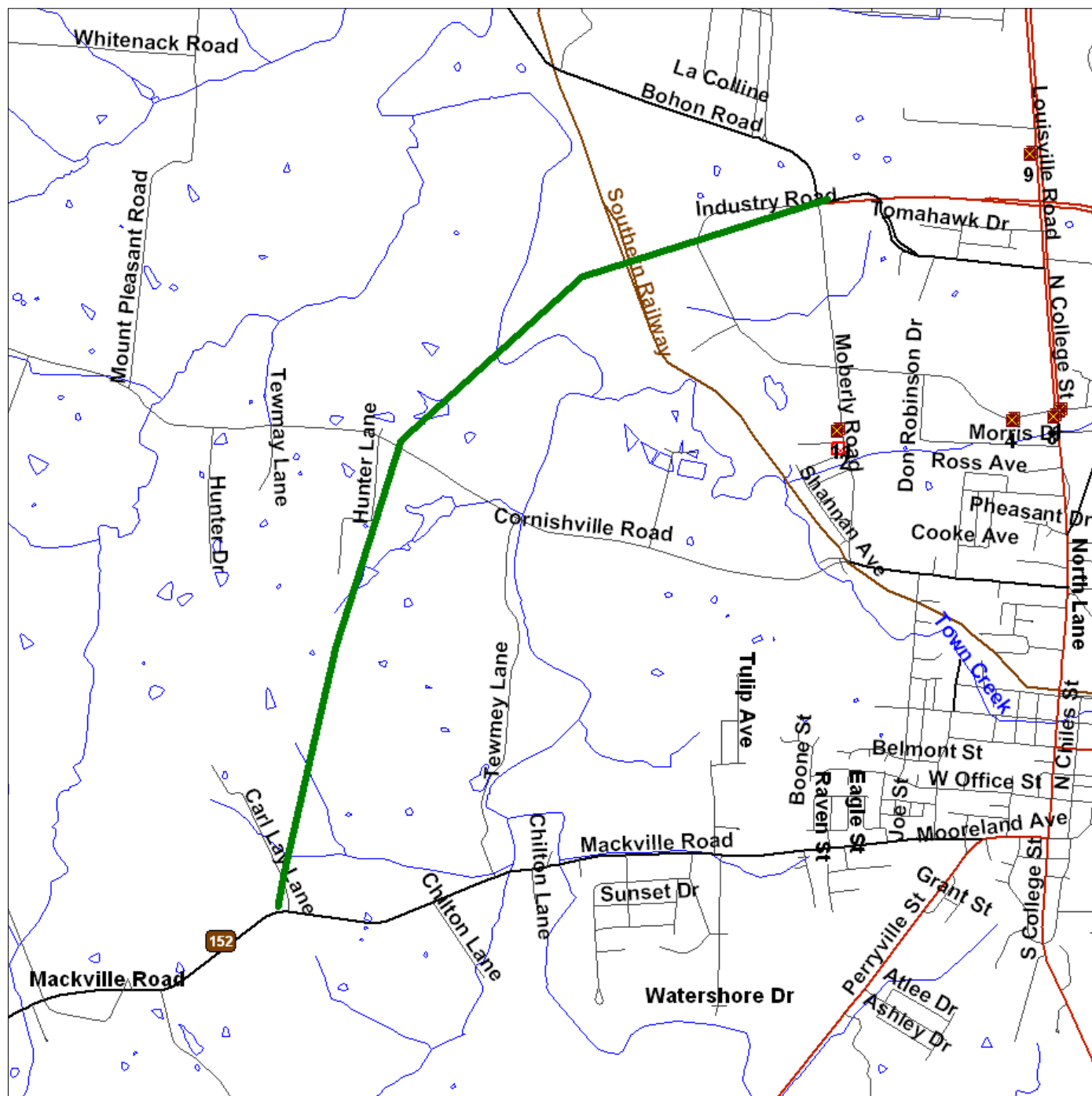
.5 Mile Radius from Line
ASTM Map: CERCLIS, RCRATSD, LUST, SWL

Appendix D - Page 47

Environmental
FIRSTSEARCH

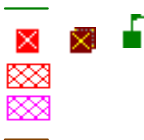


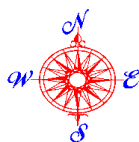
, HARRODSBURG KY 40330



Source: 2001 U.S. Census TIGER Files

Linear Search Line
Identified Site, Multiple Sites, Receptor
NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste
Triballand.....
Railroads





Environmental FirstSearch

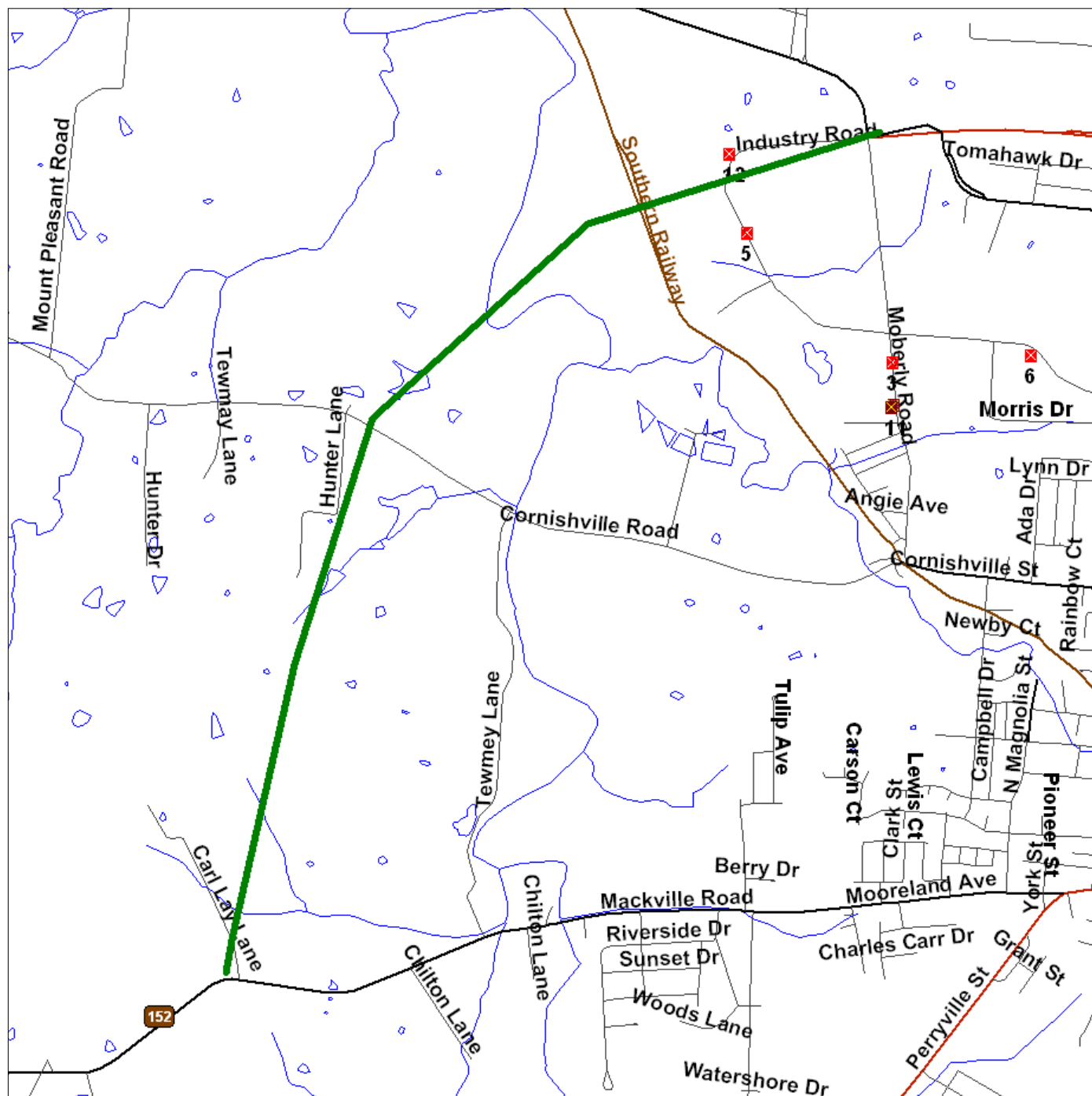
.25 Mile Radius from Line
ASTM Map: RCAGEN, ERNS, UST

Appendix D - Page 48

Environmental
FIRSTSEARCH

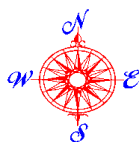


, HARRODSBURG KY 40330



Source: 2001 U.S. Census TIGER Files

Linear Search Line	
Identified Site, Multiple Sites, Receptor	
NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste	
Triballand.....	
Railroads	



Environmental FirstSearch

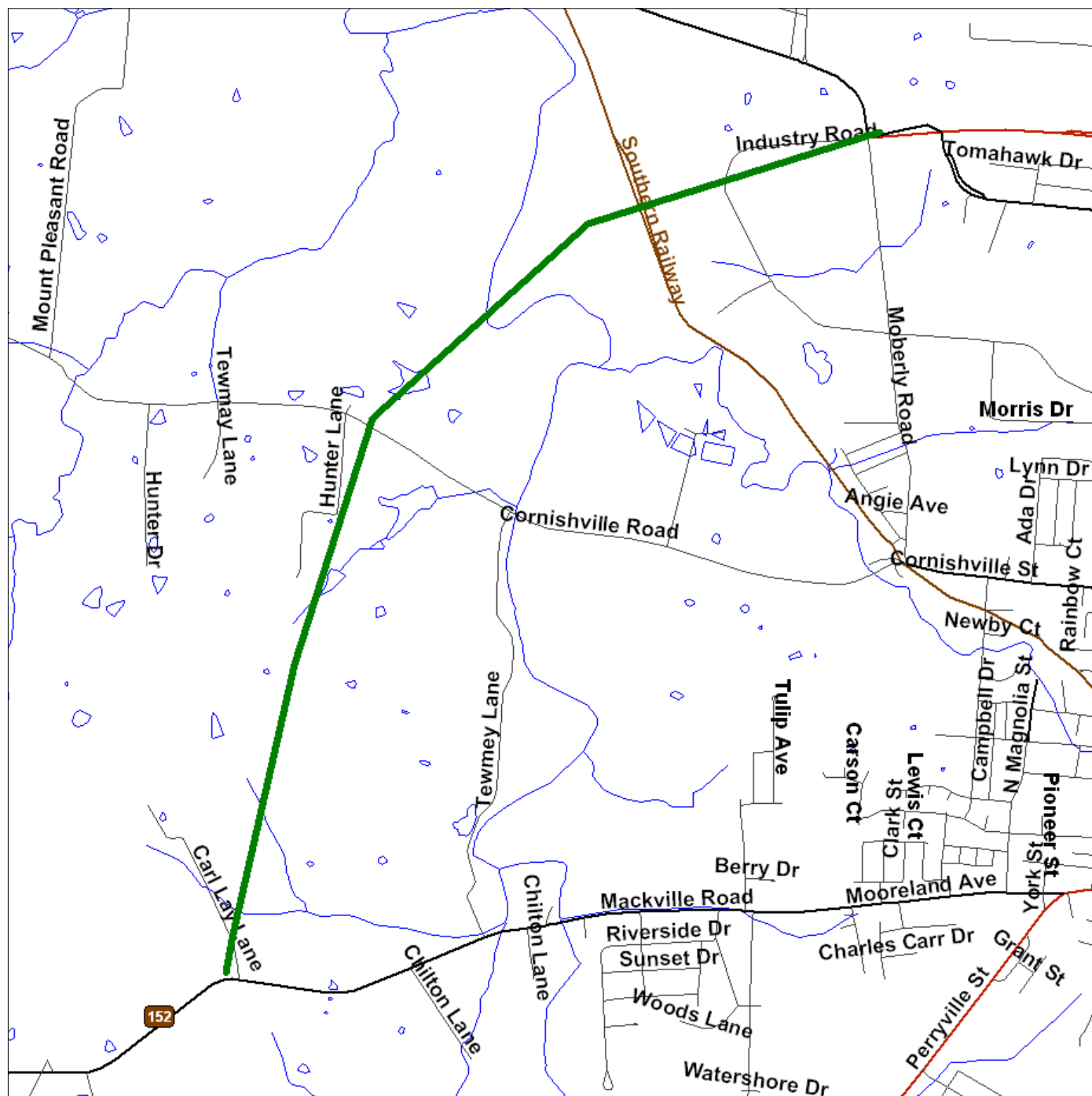
.25 Mile Radius from Line
Non-ASTM Map: No Sites Found

Appendix D - Page 49

Environmental
FIRSTSEARCH

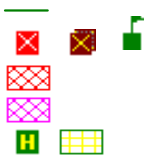


, HARRODSBURG KY 40330



Source: 2001 U.S. Census TIGER Files

Linear Search Line
Identified Site, Multiple Sites, Receptor
NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste
Triballand.....
National Historic Sites and Landmark Sites
Railroads



APPENDIX E

CULTURAL HISTORIC AND ARCHAEOLOGICAL OVERVIEW REPORTS

- AMEC Letter Report
- Helen Powell's Report

A CULTURAL HISTORICAL RESOURCE OVERVIEW FOR
NORTHWEST HARRODSBURG BYPASS
HARRODSBURG, MERCER COUNTY, KENTUCKY

KTYC Item No. 7-8344
SHPO No. FY08-0205

by

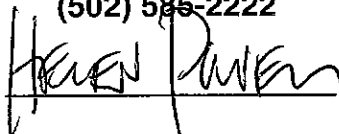
Helen C. Powell

H. Powell and Co., Inc.
838 East High Street
Box 253
Lexington, Kentucky 40502
(859) 233-9416

for

QK4
815 West Main Street
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Louisville, Kentucky 40202

(502) 585-2222

A handwritten signature in black ink, appearing to read 'Helen Powell', written over a horizontal line.

Helen Powell - Principal Investigator
July 2007

Lead Agency
Department of Transportation

Abstract: Northwest Harrodsburg Bypass Overview (7-8344)

Within the proposed project corridor for the Northwest Harrodsburg Bypass in Mercer County, there is one listed property. The Joseph Morgan House/ Round Ridge (Site B, ME-172) at 1060 Industry Road was listed on the National Register in 1990.

After a windshield survey, the following four additional individual properties appear to meet National Register criteria:

Site A:	Fountain Blue/ Hite's Station, Bohon Road (KY 390)
Site D:	Francis Kirby House, 1411 Cornishville Road (KY 1989)
Site E:	Daniel Stagg House (ME-115), 1477 Cornishville Rd.
Site H:	Trapnall House/Martindale (ME-201), 766 Moreland Ave. (KY 152)

The preliminary National Register boundaries for these sites are based upon property maps from the Mercer County Property Valuation Administrator's (PVA) office in Harrodsburg. For the location of sites listed on the National Register or meeting National Register criteria, see the project map (Figure III-1)

There are also potentially significant archeological sites associated with early white settlement, such as Hite and McAfee stations, within the study area which need to be assessed for their National Register potential. Figure II-1 shows the locations of these late eighteenth century settlements.

A final determination of National Register eligibility for sites within the study area will require additional research, photography, physical examination of the structures, an evaluation of these sites relative to the integrity standards established by similar properties in Mercer County, Kentucky which are currently listed on the National Register, and consultation with the State Historic Preservation Officer (SHPO) at the Kentucky Heritage Council in Frankfort.

TABLE OF CONTENTS

Abstract

Text

I.	Introduction	I-1
II.	Overview of Area	II-1
III.	Windshield Survey of Buildings	III-1
	Potential NR Boundary for Fountain Blue/ Hite's Station (Site A)	III-2
	NR Boundary for Joseph Morgan House (Site B, ME-172)	III-4
	Potential NR Boundary for Francis Kirby House (Site D)	III-14
	Potential NR Boundary for Stagg House (Site E, ME-115)	III-16
	Potential NR Boundary for Trapnall House/ Martindale (Site H, ME-201)	III-21
IV.	Conclusion	IV-1
V.	Bibliography	V-1

Figures

Figure I-1	Project Study Area Map: Mercer County	I-5
Figure I-2	Mercer County Farms (<u>Kentucky's Historic Farms</u>)	I-6
Figure II-1	Map of Hite and McAfee Pioneer Stations	II-6
Figure II-2	D.J. Beers Map, Mercer County, 1876	II-7
Figure III-1	Historic Sites, Northwest Harrodsburg Bypass Study Area (Oversize map in sleeve in back cover)	

I. INTRODUCTION

Project Description (QK4)

The purpose of this study is to examine possible corridors for a new northwest Harrodsburg Bypass in Mercer County, Kentucky. The study area includes the northern half of the western side of Harrodsburg, beginning at KY 152 in the south and extending north and then east to US 127, a distance of about 3.0 miles. The study area ends at the existing US 127/ US 127 Bypass intersection. The study area is approximately 1.4 miles wide and about 3.6 square miles in size.

The study area is bisected by the Salt River. The terrain is rolling and there is a mix of land uses, including several industries and school facilities in the north. A Norfolk-Southern (NS) rail line bisects the northern section of the study area and would need to be crossed by any alignment location. The local planning commission has designated a part of the county as the designated growth area. As a result a 600-plus unit residential subdivision has been recently approved. The proximity to the railroad could encourage future industrial growth in this designated area.

Records Search

To determine if there were individual sites or districts on the National Register within the study area for the proposed Northwest Harrodsburg Bypass in Harrodsburg, Mercer County, Kentucky the consultant did a GIS search and reviewed the survey files for Mercer at the Kentucky Heritage Council in Frankfort. Figure I-1 shows the location of the study area relative to highways and communities in Mercer County, Kentucky.

I-2

National Register Sites in Project Study Area**Joseph Morgan House (ME-172), Listed in 1990**

The Joseph Morgan House, also known as Round Ridge, is located on Industry Road. The dwelling is composed of two sections, one built in 1790 and the other in 1817. The owner, Joseph Morgan (1772-1860), was one of Mercer County's outstanding early nineteenth century businessmen.

Properties Determined Eligible in Project Study Area

No properties appear to have been Determined Eligible in the proposed study area for the Northwest Harrodsburg Bypass project.

Literature Search

A literature search on the project vicinity was conducted in the survey and National Register files, compliance report library of the Kentucky Heritage Council and the Harrodsburg-Mercer County Public Library. A multiple property National Register nomination entitled "Historic Resources of Mercer County" written by Helen Powell in 1988 contains the following contexts: Settlement, Transportation, Commerce for the period 1780-1830; Community Structuring, Transportation, Education, Politics for the period 1831-1860; Politics, Transportation, Economics for the period 1861-1900; and Commemoration, Engineering for the period 1901-1930. A more recent nomination entitled "Lexington, Harrodsburg, and Perryville Turnpike Historic District" by John Lewis in 2002 contained an agricultural context for Mercer County. The "Map of Boyle and Mercer Counties" published by D.G. Beers in 1876 (Figure I-2) was reviewed for the locations of potential historic properties. Property cards and maps from the Mercer

I-3

County Property Valuation Administrator were examined for dates of construction, addresses, and current property boundaries.

Books and Reports on Mercer County

Local historians George Chinn and Rebecca Conover collaborated on two books about Mercer County . These histories entitled Through Two Hundred Years: Pictorial Highlights of Harrodsburg and Mercer County and The History of Harrodsburg and the Great Settlement Area of Kentucky were published in 1974 and 1985 respectively. One of the earliest accounts of events in the area, The History of Boyle and Mercer Counties, was written in 1924 by Maria Thompson Daviess. Kentucky's Historic Farms published in 1994 by the Kentucky Heritage Council and the Kentucky Department of Agriculture contains a section on farms in Mercer County which is included here as Figure I-2. Since no deed work was included in the scope for the overview, it is not possible to determine if any of these farms are located within the project corridor. Frances B. Moseley, a prominent Harrodsburg historian was consulted about the significance of the early sites and was very generous with her files and knowledge.

Field Work

In July of 2007, the consultant did a windshield survey of the Northwest Harrodsburg Bypass study area in Harrodsburg and Mercer County, Kentucky. Included in the windshield survey were buildings visible from public roads. Buildings on the interiors of farms or structures which were not accessible were not included. Buildings which appeared to have potential to meet National Register criteria were noted on the project map (Figure III-1) and were given a preliminary National Register evaluation,

I-4

based primarily on Criterion C, architecture.

For the overview, no buildings were inspected in detail. A final determination of National Register eligibility relative to criteria A, B, and C will require additional research, photography, physical examination of the structures, evaluation of each site relative to the integrity standards established by similar property types in Mercer County which are currently listed on the National Register, and consultation with the State Historic Preservation Officer at the Kentucky Heritage Council in Frankfort.

GENERAL HIGHWAY MAP MERCER COUNTY KENTUCKY

PREPARED BY THE
KENTUCKY DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAYS
DIVISION OF PROJECT DEVELOPMENT
IN COOPERATION WITH THE
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

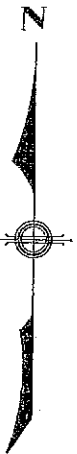


Figure I-1
Project Study Area
Mercer County
Northwest Harrodsburg
Bypass Overview, 2007

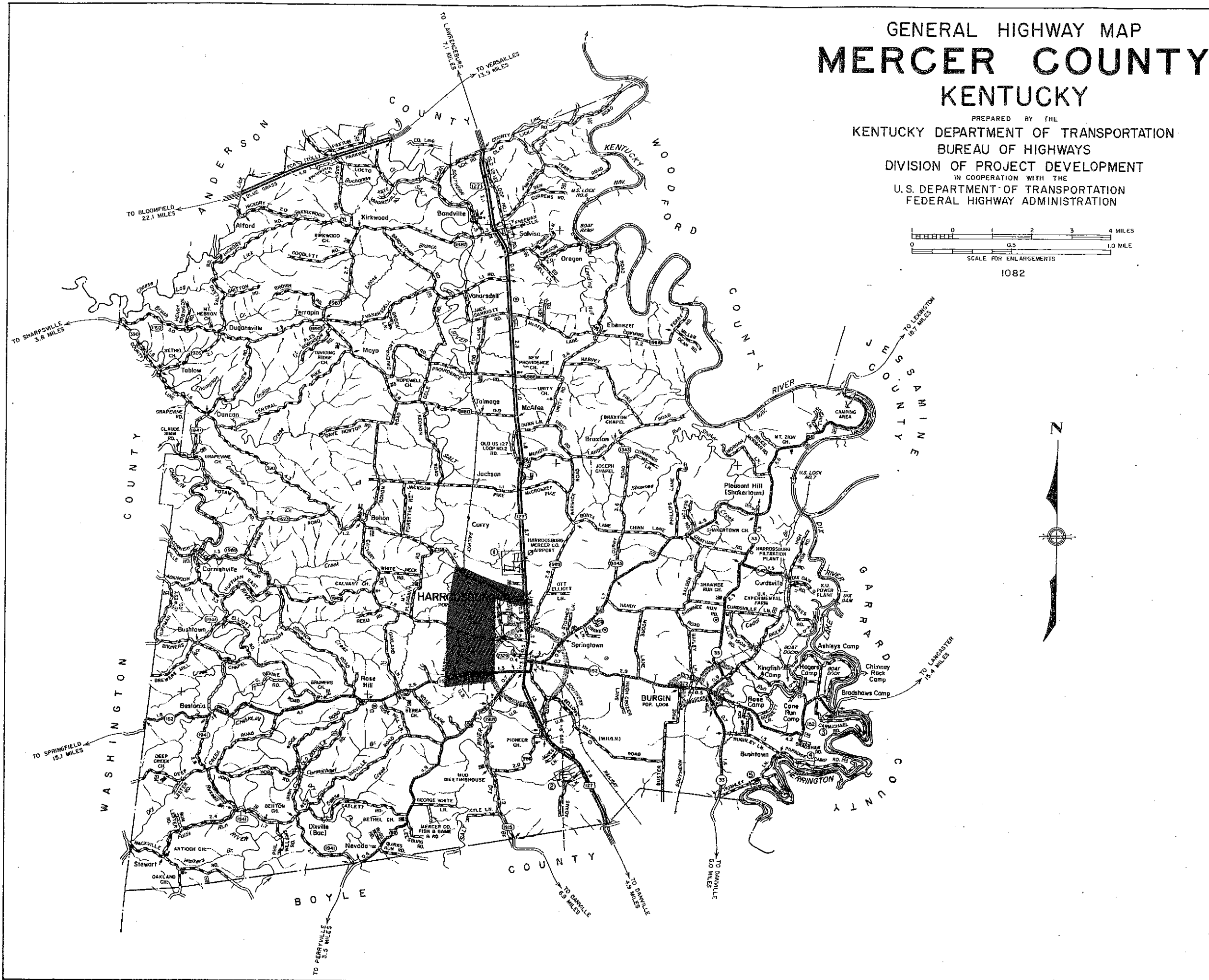


Figure I-2
Mercer County Farms
From Kentucky's Historic Farms
Pages 287-289
Northwest Harrodsburg Bypass
Overview, 2007

great-great-grand-uncle to the present owner. John Dean, cousin fourth removed, was willed the farm in 1841. Thomas McCrosky obtained the farm in 1859. In June 1868 the farm was owned by Camillus D. Thompson. Elizabeth J. Thompson (grandmother) was the next owner of the farm. Elmer Wiley, husband of Elizabeth, purchased the farm in 1938.



The original purchase included 200 acres. Of the original purchase 60 acres are presently retained. The farm now consists of 60 acres with 40 acres being actively farmed. They raise tobacco and hay.

Mercer - Centennial Farms

OLD STONE HOUSE. The Old Stone House, located in Harrodsburg, Kentucky, is owned by Jane Phillips Woods.

The farm was originally purchased in 1889 by R.S. and Laura M. Sea, great-grandparents. Thomas and R.H. Phillips, grandparent and father, purchased the farm in 1912. (Thomas Phillips was their foster-son raised by them sine pre-school age.) In 1943 R.H. Phillips, Sara Phillips Nash and Adeline Phillips Horn, father and aunts, obtained the farm. R.H. Phillips (Cammie Phillips), father and mother, purchased the farm in 1944. In 1966 Mary Phillips Moyer and Jane Phillips Woods, sister, owned the farm. Jane Phillips Woods became the owner in 1967.



The house on this farm is the stone house built by Samuel McAfee about 1790. It is listed on the state and national registry.

The original purchase included 117 acres. Of the original purchase 100 acres are presently retained. The farm now consists of these 100 acres with all acreage being actively farmed. They raise tobacco, corn, hay and cattle.

Mercer - Bicentennial Farms

McAFEE FARM. The McAfee Farm, located in Harrodsburg, Kentucky, is owned by Hudson McAfee Nichols and Betty Sharp Nichols.

The farm was originally part of a grant from the state of Virginia in 1773 to Samuel McAfee, great-great-grandfather. John Armstrong McAfee, great-great-grandfather, inherited the farm in 1782. In 1834 James Jackson McAfee, great-grandfather, inherited the farm. Bettie McAfee Hudson, grandmother, inherited the farm in 1894. In 1940 the farm was inherited by Martha Hudson Nichols, mother. Hudson McAfee Nichols inherited the farm in 1981.

The original grant included 1,400 acres. Of the original grant 18 acres are presently retained. The farm now consists of these 18 acres with about 15 acres being actively farmed. They raise tobacco, silage corn and wheat.

ELIZABETH AND ELMER WILEY FARM. The Wiley Farm, located in Harrodsburg, Kentucky, is owned by Elmer and Elizabeth Wiley.

The farm was originally owned by John Thompson and willed to his son Evan in 1792. Evan Thompson was

Mercer - Heritage Farms

CANAAN LAND FARM. Canaan Land Farm, located in Harrodsburg, Kentucky, is owned by Fred and Theo Bee.

The farm was originally purchased from Robert Pogue by Benjamin Daniel in 1808. In 1843 the farm was purchased by Mercer Daniel. John H. Champion owned the farm in 1890. In 1905 the farm was owned by John P. Champion. In 1944, T.W. and Thelma Beeler owned the farm. In 1957 the farm was owned by Garland May. Of the previous owners none were related to the present owners. Fred and Theo Bee obtained the farm in 1978.



The original purchase included 189 acres. Of the original purchase all 189 acres are presently retained. The farm now consists of these 189 acres with 100 acres being actively farmed. They raise sheep and lambs and produce wool for yarn.

The Benjamin Daniel House, circa 1795, one of the earliest known brick houses in Mercer County, is an especially clear illustration of a late-eighteenth century house form.

Canaan Land Farm, on which the house is located, was purchased by Benjamin Daniel from Robert Pogue in 1808. It remained in the Daniel family until sold to John H. Champion in 1890. Its historic name derives from the long association of the house with the Daniel family. The present owners, Mr. and Mrs. Fred Bee, purchased the farm in 1978 and have spent the last few years restoring the home.

The house is a one and one-half story, three-bay, hall-parlor plan with a one-room unit on the west. The north and south walls are laid in Flemish bond. Interior brick chimneys rise from east and west ends and an interesting, if not original, stone cellar entrance is located on the east gable end.

Fortunately numerous changes made in the early nineteenth century were additions to, rather than alterations of, the original structure so that all rooms contain the original ash floors, simple beaded baseboards, doors and window trim, portions of chair rails and Federal mantels.

DIVIDING RIDGE FARM. Dividing Ridge Farm, located in Salvisa, Kentucky, is owned by James A. and Elda Jackson Jr. and sons.

The farm was owned by James Smith until November 20, 1875 when M.B. Yocum purchased the 106 acre farm. James Bickers purchased 66 acres on March 27, 1902. Bicker's heirs (including Lucy Alford Comingo) obtained the 66 acres of the farm on November 3, 1930. Lucy Bickers

Alford Comingo purchased the 66 acres plus 40 acres on March 8, 1938. On January 3, 1947 Carl Robinson purchased 96+ acres. James F. and Dorothy Beasley purchased 96+ acres on April 17, 1952. On June 15, 1978 the 96+ acres was purchased by Votaw and Stratton Realty Group. George and Mary McVey purchased 32 acres on September 25, 1978. On May 29, 1984 32 acres were purchased by James A. and Elda Jackson Jr.

The original purchase by the present owners included 32 acres, all of which are presently retained. The farm now consists of 32 acres with approximately 22 acres being actively farmed. They raise beef cattle.

Our farm house is of colonial style and none of the deeds mention the house, but as far back as 1875 when M.B. Yocum purchased the farm from James Smith, reference is made as to the sale of the land along with its "appertinances" leading me to believe it is referring to the house which many say dates back at least to the 1860s.

Further proof of this was provided by Jerry and Joey Yocum, descendants of M.B. Yocum, who visited the farm in November 1992. Evidently, M.B. Yocum ran a sugar camp. He used a large sled to haul wood to the sugar camp's large furnace. He had a diverse farm operation that included cows, horses, sheep and hogs. In 1956, 54 years after leaving Dividing Ridge Farm, M.B. Yocum's sons visited the farm. At this time they reported that the property appeared to be well cared for, the house in good condition and the barn to have been rebuilt.

From the Yocum's November 1992 visit came the name of the farm as M.B. Yocum had always referred to the farm as his Dividing Ridge Farm.

We purchased our farm with the old homestead on it in 1984. On June 19, 1985, Col. Daniel B. Corman arrived at my door. He was 91 years old at that time and told me he had married Aileen Bickers at the house 67 years ago to the day, to the hour that he arrived on my doorstep. (His wife was already deceased when he visited me). Col. Corman and I exchanged a correspondence which I treasure in which he told me that the house appeared "old" even in 1906 when his family moved to Kirkwood. He described the various rooms and changes it went through by Mr. Bickers. Evidently the road in front of my house used to be a toll road and this residence was considered quite a move up in status for the Bickers family.

The farm was 106 acres according to boundaries. This included 66 acres (of which our 32 acres is a part) and 40 acres on the opposite side of Kirkwood-Ballard Rd. Then in 1947, a reference to an actual survey is made and at which time the property is listed as 96+ acres. Then in 1978, it was divided into the various parts of which we now own the original house and 32 acres.

PLEASANT VIEW FARM. The Pleasant View Farm, located in Mercer County, Kentucky, adjoining Shakertown at Pleasant Hill, is owned by Thomas E. Hickey.

The farm was traced as far back as Thomas M. Burford who owned the farm until December 7, 1852 when it was purchased by Abraham Chapline. Benjamin Long purchased the farm on August 29, 1857. On March 5, 1864 Allen W. Ashford purchased the farm. Thomas H. Reed

B L U E G R A S S R

became the owner on August 26, 1865. On October 22, 1868 Abram Chaplin owned the farm. Sallie K. Watkins became owner on January 1, 1896. On January 4, 1898 Laura B. Coleman obtained the farm. John H. Champion obtained the farm about 1903. Kate S. Ison became owner of the farm on April 3, 1905, in Champion will. On April 23, 1929 J.D. Guerrant and O.C. Moreland became owners. Robert W. King obtained the farm on May 8, 1950. On June 19, 1974 James C. Murphy became owner of the farm. Thomas E. Hickey obtained the farm on October 3, 1986.

The original log home is thought to have been built in the early 1800s and is still in use. Owners, if any, prior to Thomas M. Burford in 1852 have not been traced. Thomas M. Burford established a family cemetery on the farm. To date, the cemetery has not been located.

The original purchase included 48± acres. Of the original purchase all 48± acres are presently retained. Two acres were deeded for homes, however a recent survey still shows 48± acres with 41 acres being actively farmed. They raise tobacco, hay and pasture.

SALT RIVER BOTTOM FARM. The Salt River Bottom Farm, located in Harrodsburg, Kentucky, is owned by William R. Meredith. The farm was originally purchased prior to 1909 by A.G. Kyle. In 1913 the farm was obtained by Riker Kyle for life and remained to Henry Ridgely and Jane Kyle Ridgely. In 1943 the farm was owned by William R. Meredith, Hope Ann Meredith and Mary Jane Meredith. Mary Jane Meredith Allen, sister, to William R. Meredith and Hope Ann Meredith Lowe. December 1, 1967 Hope Ann Lowe et. al. establish joint ownership. December 29, 1972 Hope Ann Meredith Lowe et. al. to William R. Meredith.



This barn is more than 100 years old, as is a hemp house and maybe one other barn. The house burned in 1939(?). Only part of the foundation is visible.

The original purchase included 410-1/2 acres, all of which are presently retained. The farm now consists of 410-1/2 acres with all except woodland being actively farmed. They raise corn, soybeans and tobacco.

II-1

II. OVERVIEW OF THE PROJECT AREA**Harrodsburg and Mercer County**

Mercer County was created in 1785 from part of Lincoln County and named for General Hugh Mercer, a Scotsman who was killed at the battle of Princeton in the Revolutionary War. The county covers 250 square miles and is bordered by Anderson, Boyle, Garrard, Jessamine, Washington, and Woodford counties.

Located in the central section of Kentucky, the landscape of Mercer County is rolling or hilly with elevations ranging between 500 and 925 feet above sea level. The portion of the county located between the Kentucky, Dix, and Salt rivers is generally classified as belonging to the Inner Bluegrass. The land forms of the Inner Bluegrass are gently rolling and underlain with gray limestone. Since the limestone is subject to erosion, it forms a fairly deep, fertile soil. West of the Salt River, along Mercer County's borders with Anderson and Washington counties, the geology is characterized by calcic shales and thin limestones. The terrain here in the western part of the county is steeper and more susceptible to erosion. It is also less desirable for farming and contains more forested area than the eastern portion of the county. Traditionally, the subsistence farms of relatively small size have been found along the hills and valleys of the Salt and Chaplin rivers while the prosperous and large agricultural holdings were established in the eastern section of Mercer County.

Harrodsburg was founded on June 6, 1774 when James Harrod, an explorer and hunter from Pennsylvania, and a company of thirty men set up a permanent settlement near a large spring approximately one mile from the Salt River. Other early settlements

II-2

in present-day Mercer County included Boiling Spring, Fountain Blue, William McAfee's Station, Hugh McGary's Station on Shawnee Run, Trigg's Station at Viney Grove, Wilson's Station, and Liberty Fort near New Providence.

In a study of early central Kentucky settlement sites or stations entitled *Stockading Up*, archeologist Nancy O'Malley located two early sites, William McAfee's Station and Isaac Hite's Station, within the study area for the Northwest Harrodsburg Bypass (Figure II-1). William McAfee's Station is located on the east side of the Salt River, north of Town Branch near where Joseph Morgan's House (Site B, ME-172) was built in 1817. O'Malley found a spring and spring house foundations approximately 2,000 feet up Town Branch and the area has been designated as Site 15ME44 by the Office of State Archeology. North of KY 390 (Bohon Road) is Isaac Hite's Station, a camp near a boiling spring called Fountain Blue because of the purity of its water. Isaac Hite (1753-1794) had come to Kentucky in 1773 with Captain Thomas Bullitt's surveying party. On July 10, 1774, two of James Harrod's surveyors, James (also known as Jared) Cowan and James Hamilton, were killed by the Shawnee Indians at Fountain Blue as they cultivated a corn crop. This event prompted James Harrod and others to leave Kentucky to join Virginia troops in fighting Lord Dunmore's War against the Indians. In the course of this conflict, the Indians suffered severe losses in a battle at Pleasant Point. As the result of the Treaty of Camp Charlotte negotiated after the battle, the Indians agreed to stay north of the Ohio River and did not undertake a large-scale war against Kentucky's new settlements during their formative years from 1775 to 1777.

Additional archeological research will be necessary to determine if substantial

II-3

artifacts remain from either Hite's Station (Fountain Blue) or William McAfee's Station for these sites to meet National Register criteria and possibly require preservation in place.

George Rogers Clark, commander of the Virginia militia in Kentucky, attached his command to Harrodstown in the summer of 1775 and oversaw the construction of a fort which was defended by two substantial blockhouses. In 1776, Harrodstown became the county seat of Kentucky County of Virginia. Harrodstown was renamed Harrodsburg when it became the seat of Mercer County, Kentucky in 1785.

During the last decade of the eighteenth century and first half of the nineteenth century, Harrodsburg became the agricultural market for the surrounding countryside. In addition to being a economic, social and educational center, the community also supported several successful health resorts. Both Greenville Springs and Harrodsburg Springs were well known throughout the South for the medicinal qualities of their healing waters.

By the 1820s, the population of Mercer County had reached 15,587 and grew to 18,720 by 1840. When Boyle County was created in 1842, the city of Danville was removed and Mercer County's population dropped to 14,067 in the census of 1850. By 1860, there were 13,701 people in Mercer County.

During the Civil War, Mercer County was affected by the Battle of Perryville, which was fought in October, 1862 in a Boyle County community approximately ten miles to the southwest of Harrodsburg. Despite their holding the field against the Union forces at Perryville, the Confederate troops withdrew to Harrodsburg to prepare for another battle there. Approximately 1,700 wounded Confederate soldiers were

II-4

hospitalized in the public buildings and churches of Harrodsburg. These troops became prisoners when Union troops seized Harrodsburg two days after the battle enabling Union General Buell to establish his headquarters in the community. Harrodsburg was placed under Federal martial law for the remainder of the Civil War.

The loss of southern markets due to the Civil War had a major impact on Mercer County's agricultural economy. By 1870, only 129,050 acres in Mercer County were being farmed, almost 15% fewer acres than were in production in 1860. It was not until the late nineteenth century that the value of the county's farms rebounded from the effect of the Civil War.

Harrodsburg's recovery from the Civil War was aided by access to two major railroads, the Cincinnati Southern and the Louisville and Southern. In 1850, the Kentucky General Assembly had chartered the Lexington and Danville Railroad to build a line between the two cities and connect them with Harrodsburg. Complications involving the construction of a bridge to span the Kentucky River and funding shortfalls delayed completion of the rail line until 1877. At that time, Temple Burgin donated right-of-way through his farm to the Cincinnati Southern Railroad and the rail line was extended. It bypassed Harrodsburg, but the community financed a short-line railroad which provided a connection to the Cincinnati Southern.

In the late 1880s, the Louisville and Southern Railroad built a line connecting Lawrenceburg and Danville. The railroad ran west of the main road between Harrodsburg and Frankfort (present-day US 127) and into Harrodsburg.

In the twentieth century, industries came to Harrodsburg and began to compete

II-5

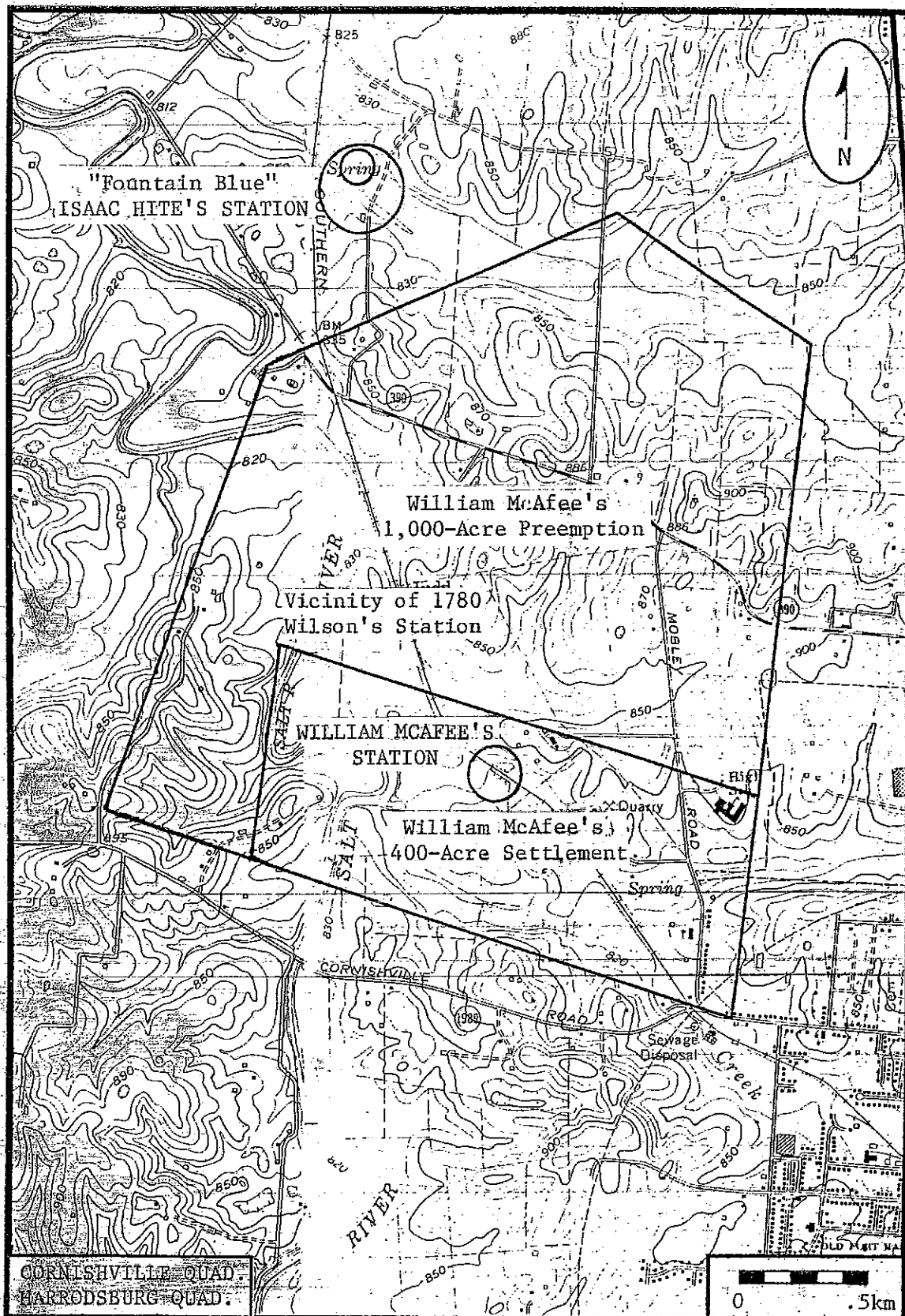
with the agrarian economy which had been dominant in the nineteenth century. Glass, clothing, electrical products, and housewares were produced in Mercer County. The shift to industry was aided by the completion of the Dix River Dam in eastern Mercer County in 1925. The Dix River Dam hydroelectricity complex provided central Kentucky with its earliest source of commercial electric power.

By the mid-twentieth century, tourism became an important element in the economy of Mercer County. A reconstruction of Fort Harrod, built near its original site, opened as Old Fort Harrod State Park in 1954. In 1968, Shaker Village, composed of 27 buildings associated with the Shakers, opened at Pleasant Hill in northern Mercer County.

II-6

Figure II-1

Map from Stockading Up by Nancy O'Malley
Locations of Isaac Hite's Station and William McAfee's Station in 1770s



II-7

Figure II-1
D.J. Beers Map, 1876
Mercer County
Northwest Harrodsburg
Bypass Overview, 2007



III-1

III. WINDSHIELD SURVEY

The windshield survey of the project study area was conducted in July of 2007. Sites were viewed from the public roads within the corridor. No sites were examined in detail. Individual structures within the corridor which appear to meet National Register criteria are briefly described in the paragraphs which follow. With each description is a preliminary evaluation. A final evaluation relative to National Register eligibility can not be made until more in-depth research is done for the formal cultural-historical baseline study for submission to the Kentucky Heritage Council (SHPO).

- NR** National Register: Buildings or districts which are either listed on the National Register or have been determined eligible for the National Register in previous compliance projects or nominations.
- NRP** National Register Potential: Buildings, which compared to others listed on the National Register, appear to meet criteria A, B, or C as either an individual property or contributing property within a potential district. These structures may also be a property type which the SHPO has determined eligible in other recent compliance projects.
- S** Survey: Buildings which would be documented in a baseline study, but appear to have no significant architectural characteristics or association with historic events or persons to meet National Register criteria.
- X** Destroyed: Site which was previously documented in the Mercer County files, but has either been torn down or removed from that location since the completion of the survey.
- ?** Unknown: Site which was not viewed during the windshield survey due to lack of access (locked gates or posted for no trespassing).

Preliminary National Register boundaries for eligible individual site are proposed, using the property maps from the office of the PVA in Mercer County. The surveyed sites are keyed to the map of the Study Area (Figure III-1).

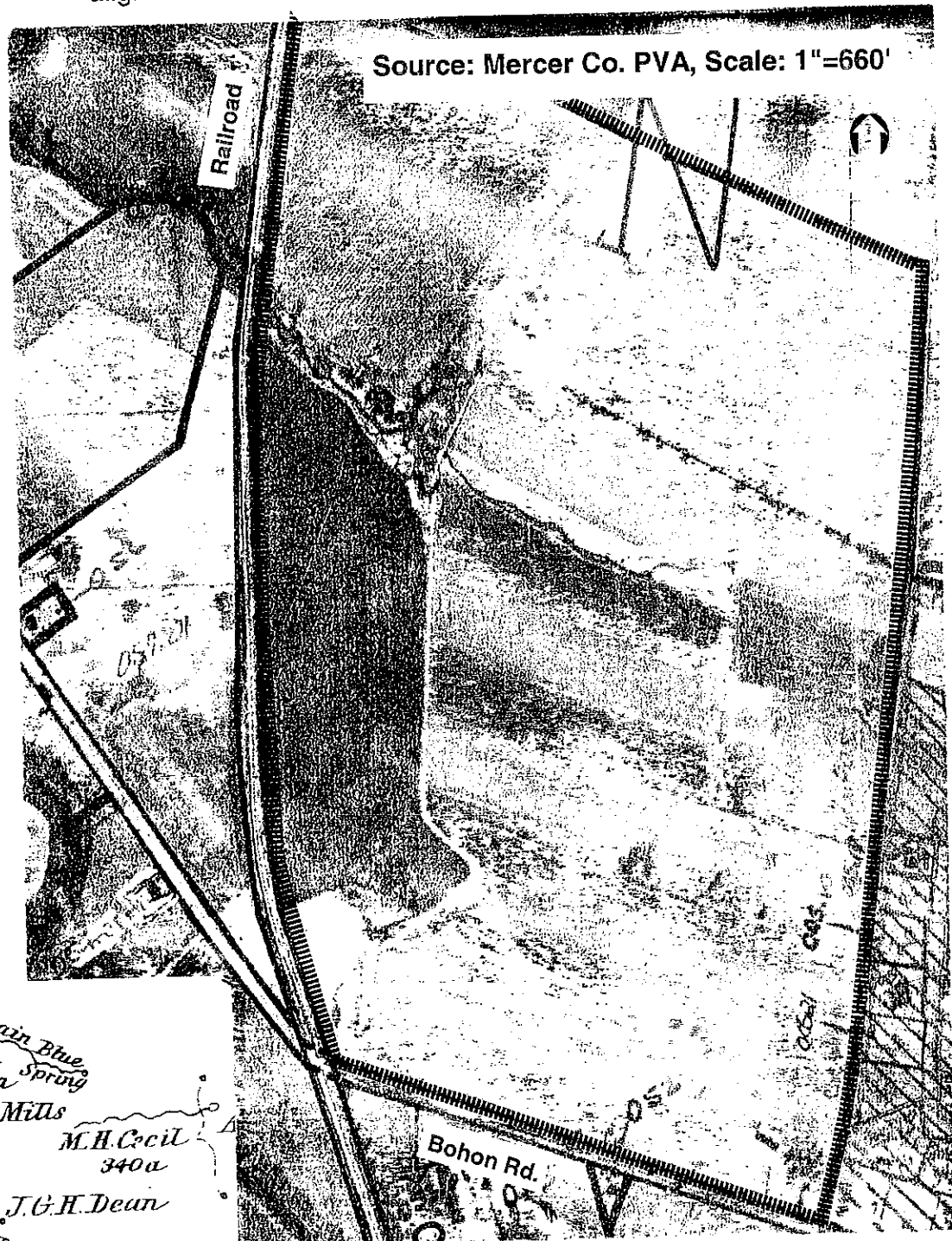
III-2

Site/ Evaluation
Site A/NRP

Description

Fountain Blue/ Hite's Station, KY 390

North of KY 390 (Bohon Road) is farm which is the location of a boiling spring known as Fountain Blue and Hite's Station, one of the early pioneer camps in Mercer County. In 1774, Isaac Hite established a camp here with James and Jacob Sadowski, David Williams, and others who had joined the Harrod company. To determine the exact location of the late 18th century camp, archeological testing should occur prior to the planning of roadway alignments on the farm associated with the spring.



III-3

Site B/ NR

Joseph Morgan House/ Round Ridge (ME-172) listed on National Register in 1990, 1060 Industry Road

Site B was the home of Joseph Morgan, one of the county's outstanding early nineteenth century businessmen. In 1798, Joseph Morgan (1772-1860) married Ann Bryan, the daughter of William and Elizabeth Bryan. Elizabeth Morgan, the daughter of Joseph Morgan, married John G. Chiles in 1823. Joseph Morgan financed and built the four brick units of Morgan Row (MEH-43) in Harrodsburg, which contained Chiles's tavern and lodging rooms, circa 1830.

The Morgan House, completed in 1817, is one-and-one-half-stories in height and has Flemish bond brickwork. The principal facade is five bays with a central entrance. The entry contains a six-light transom over the double-leaf, eight-panel doors. The windows have sixteen panes in the upper half and twelve in the lower. On the interior, the central passage is flanked by two rooms on either side. The mantels display sunbursts and reeding, stylistic elements often used in the Federal period. On the south end, the brick house is connected by a frame breezeway to a rectangular stone building which may have served as the original kitchen. The stone building has a large fireplace opening on the interior.



III-5

Site/ EvaluationDescription**Site C/ S****Dwelling (ME-119), 1283 Cornishville Rd.**

Site C is a two-story, three-bay, central passage, single pile frame house built after the Civil War. It is on the location of the G.W. Morgan House shown on the Beers Map in 1876. It retains one of the two brick chimneys which flanked the central hallway. Pairs of brackets ornament the cornice. Major alterations have been made to the exterior fabric, windows, and porch. The associated agricultural outbuildings appear to be modern.



III-6

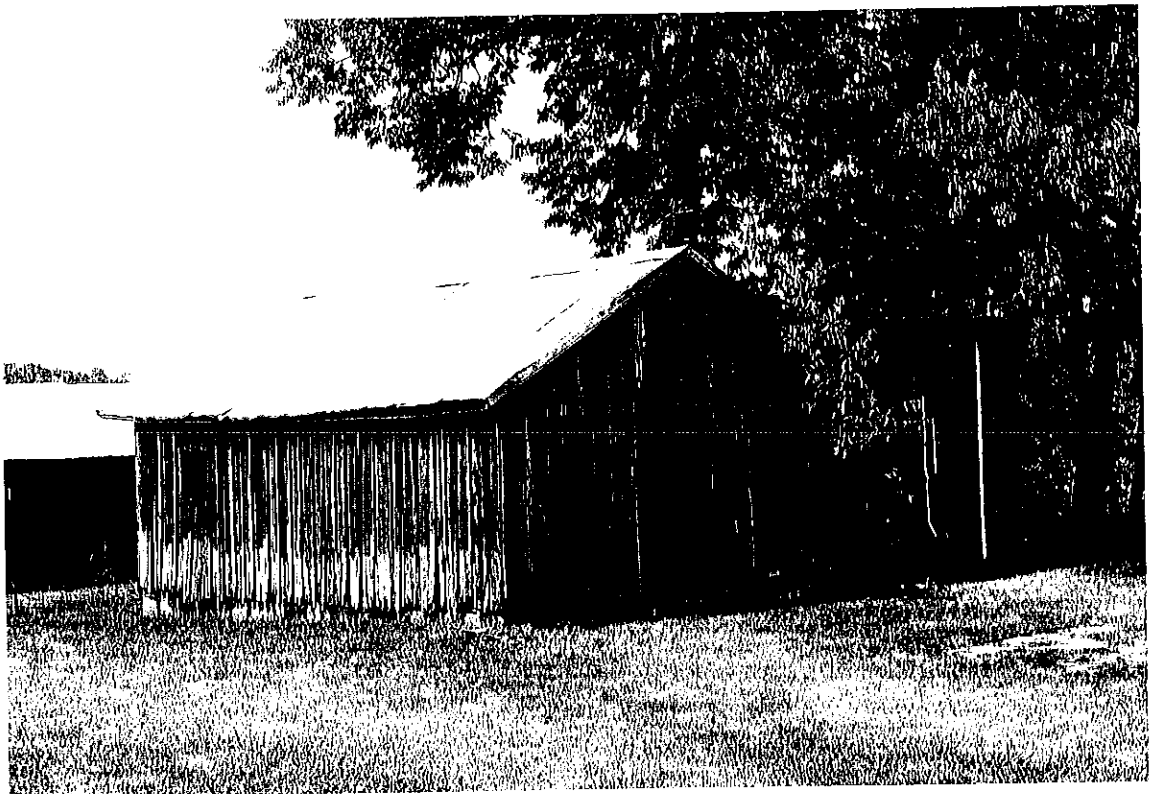
Site/ EvaluationDescription**Site D/ NRP****Francis Kirby House, 1411 Cornishville Rd.**

Site D is a five-bay, side-gabled, Federal brick house with a brick ell. The front porch has been enclosed. According to the current owner, the house was built in 1837. Since this property is not recorded in the SHPO's Mercer County survey, deed research was necessary. At the time of his death in 1884, Francis Kirby had accumulated approximately 500 acres west of the Salt River between the Bohon and Cornishville roads. Kirby bought the tract associated with the house in 1831 from the heirs of James Curry, who came to Kentucky in 1778 and served under Col. George Rogers Clark from 1778 through 1782. Additional research and a more thorough examination of the house will be required to determine if the dwelling was built by James Curry. Associated with the dwelling are numerous domestic outbuildings and agricultural buildings, including three tobacco barns and a general barn. The present-day farm contains approximately 137 acres. The property appears to have potential to meet National Register criteria A, B, and C.



Site D: F. Kirby House, 1411 Cornishville Rd.

III-7



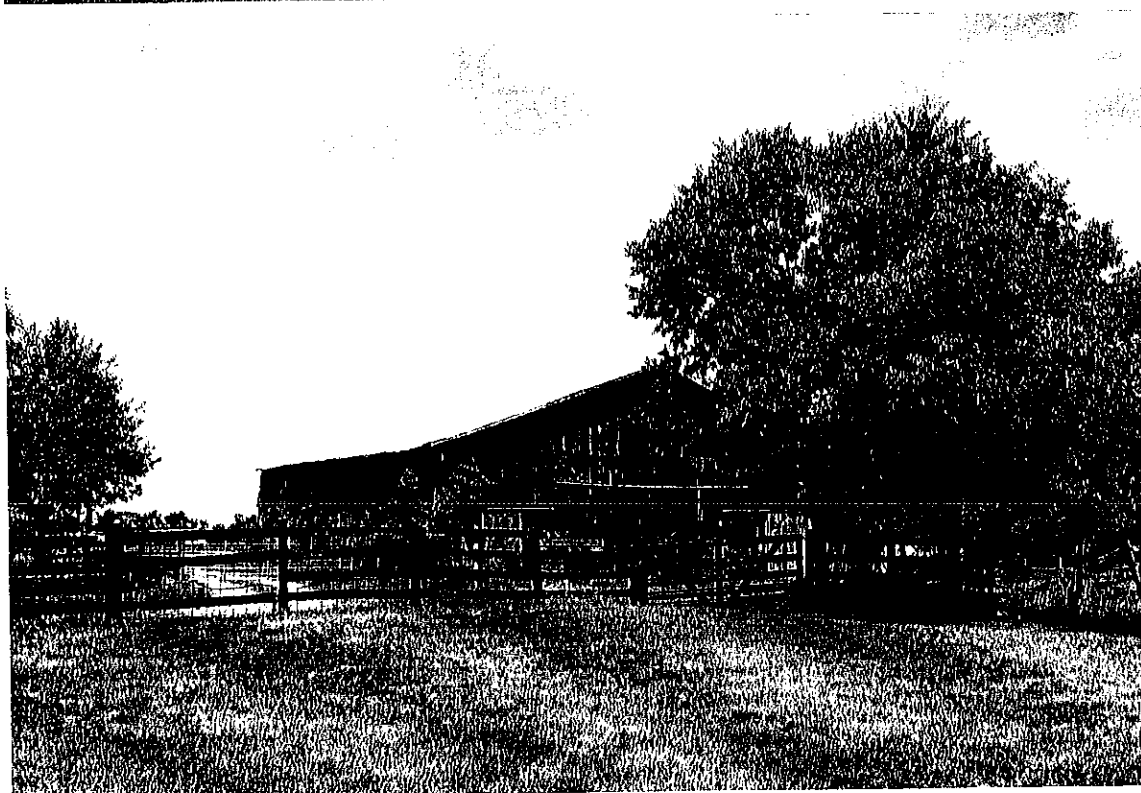
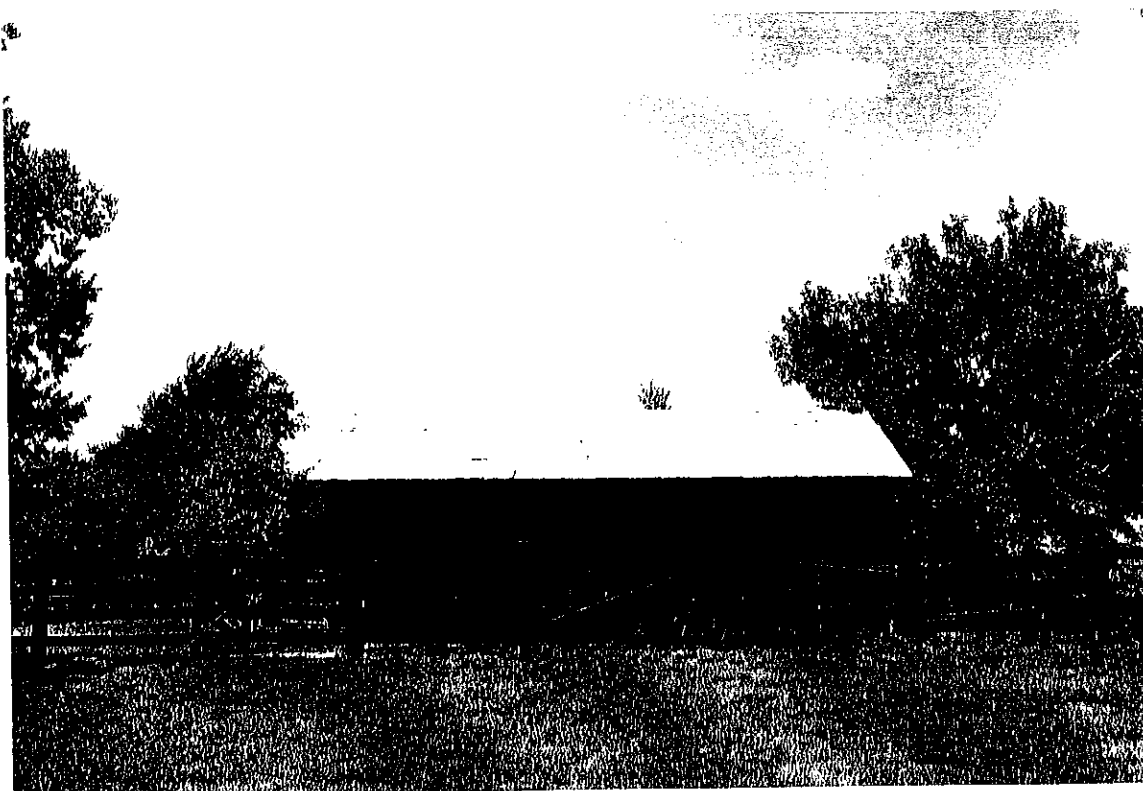
Site D: F. Kirby House, 1411 Cornishville Rd.

III-8



Site D: F. Kirby House, 1411 Cornishville Rd.

III-9



III-10

Deed Research for the Francis Kirby House

7/31/07

- 1983 Flora Johnson Hager to Howard and Betty L. Hager (DB 208/463) 137 acres
- 1923 G.J. (Jeff) Johnson to Flora Johnson (100/501) 117 acres; ½ interest to Flora Johnson from T.W. Johnson, Sr. (WB 20/ 435)
- 1920 G.J. (George Jefferson) Johnson and T.W. Johnson purchased the farm; bought ½ interest from Bennett J. (B.J.) Kirby in 1920 (DB 97/ 607); ½ interest from Isaac Kirby in 1918 (DB 94/ 230). Both had inherited the land from their father, Abe Kirby (aka A.B. or Abram B. Kirby) who died 11/30/ 1917. No further deed references.
- 1891-1900 A.B. Kirby, a son of Francis Kirby, reassembled parcels from siblings who had received them in the division of the lands of Francis Kirby (DB 52/111) whose will was probated 6/2/1884.
- 1900 A.B. Kirby from Mary McFatridge (DB 69/ 135)
- 1896 A.B. Kirby from F. (Frank) Kirby, A.B.'s nephew and son of James H. Kirby (DB 65/ 601)
- 1896 Frank Kirby from A.B. and Eugenia Kirby (DB 62/ 661)
- 1894 A.B. Kirby from Mary McFatridge, land inherited from John Kirby (DB 62/ 219)
- 1891 A.B. Kirby from Martha Bohon (DB 62/ 584)
- 1891 A.B. Kirby from Frank Kirby (DB 59/ 199)
- 1885 Deed of partition and conveyance of lands of Francis Kirby (DB 52/111) in 8 tracts dated 2/25/1885, 1885, between James H. Kirby, Abram B. Kirby, John Kirby, Martha Bohon, Sallie McFatridge, Mary McFatridge. Abram B. Kirby trustee for Martha Bohon and James H. Kirby trustee for John Kirby
- To Mary McFatridge, 2 tracts, 27 acres and 55 acres
- To John Kirby, 2 tracts, 16 acres and 55 acres
- To Abram B. Kirby, 66 acres
- To Martha Bohon, 88 acres (purchased by Francis Kirby from Edgar Alexander on Bohon Pike in 1875)
- Sallie McFatridge, 2 tracts, 30 acres (purchased by F. Kirby from Morgan heirs on Cornishville Turnpike and the home place tract of 51 ¾ acres

III-11

- 1884 Will of Francis Kirby (WB 18/ 357) produced in court on 6/2/1884
Will signed by F. Kirby in August 1876
- 1876 1. \$1,000 to wife Leah Kirby (appears to have been second wife, wife in 1850 census named Mary)
2. Son James E. Kirby to have the farm on which he lives, 114 acres (50 acres from H.S. McFatridge and 60 acres from R.R. Horst)
3. Sale of proceeds to be divided among Martha Bohon, Sallie McFatridge, Mary McFatridge, John Kirby, Abram B. Kirby
4. Appointed Abram B. Kirby as trustee for sister Martha Bohon
5. Equalize the share of James E. Kirby with others
6. ??
7. Appointed Abram B. Kirby and son-in-law Sidney S. McFatridge as executors. Sidney McFatridge was the husband of Sallie McFatridge who was 38 in 1860.
- 1877 Codicil
Daughter Martha Bohon is invalid. Executor is to raise money from the sale of 50 acres off farm purchased from Edward Alexander, now occupied by daughter Martha and her husband Benjamin F. Bohon
- 1875 Edgar Alexander to Francis Kirby, 98 acres for \$4,435 (DB 44/ 88)
(In 1877 Martha and B.F. Bohon lived here according to codicil of will)
- 1870 John W. Morgan and heirs to Joseph Morgan to Francis Kirby, western part of lot #6 of Joseph Morgan's land, 30 acres, \$2,400 (DB 40/ 34)
- 1862 Reuben R. Harsh (Hurst?) to Francis Kirby, 64 acres on the Bloomfield Pike, \$2,567.25 (DB 34/108)
- 1860 census lists Francis Kirby, age 65 as head of household. Others were Mary, age 63; John age 36; and Benjamin age 28. The value of F. Kirby's real estate was \$10,400 and estimated value of personal estate was \$8,220.
- 1857 Mary A. and Joel P. Williams to Francis Kirby, as the result of a lawsuit, a mill and lot of ground (4 acres) in Cornishville, property formerly owned by Cornish (DB 31/ 393)

III-12

1850 census lists Francis Kirby, a farmer who was born in Virginia, age 55; Mary, born in Kentucky, age 53; John H., age 26; James, age 24; Mary, age 23; and Abraham, age 15.

Deeds from Jacob Cozatt's heirs and others from 1836 to 1844. Deeds refer to land upon which Jacob Cozatt deceased, lived and died. Some members of the Cozatt family, but not Jacob, are buried in the cemetery associated with the Old Mud Meeting House. Another Jacob Cozatt is listed in the 1860 census as a miller.

- 1844 Abram W. Cozatt, child of Jacob Cozatt, to Francis Kirby, \$85.00
(DB 24/ 292)
- 1841 John C. Cozatt, son of Jacob Cozatt, to Francis Kirby, 56 acres, \$76.80
(DB 23/ 297)
- 1838 James Curry to Francis Kirby, 57 acres of land he had from the Cozatt heirs, \$200, land where John VanArsdale lives (DB 21/ 361)
- 1836 John B. and Catharine VanArsdale to Francis Kirby, 57 acres, notes that land adjoins that of Kirby (DB 21/ 363)

James and Ann Curry

- 1831 Abraham and Nancy Curry Brewer to Francis Kirby, 206 acres on Salt River on which James Curry, deceased, formerly lived and died, and being the same land upon which said Francis Kirby now lives (DB 17/ 169)
- 1810 Nancy Curry married Abraham Brewer in Mercer County and is buried in the Whiteneck Cemetery in Mercer County.

The 1810 census of Mercer County shows two people named James Curry living in Mercer County. According to a listing published by the Kentucky Sons of the American Revolution, there was a James Curry who received 4,000 acres for his service as a captain in the "Virginia Cont. line" for three years, 1783. On a plat of the original surveys in 1780 for the Harrodsburg-Stanford area, Neal Hammond shows a James Curry as having a 1,000-acre land grant in the vicinity of the Francis Kirby farm on the west side of the Salt River.

Curry genealogy on rootsweb. com indicates that, Nancy Curry Brewer, born circa 1786, was one of the five children of James and Ann Curry. In 1778, they were married in Rockingham County, Virginia. They also left Virginia for present-day Mercer County in Kentucky where they had relatives in 1778.

The information from rootsweb.com also says that James Curry, known as Irish Jimmy, served in the Virginia militia prior to his marriage and was at the Battle of Long Bridge. (There does not appear to have been a "Battle of

III-13

Long Bridge". The reference may be to the "Battle of Great Bridge", in which the Virginia militia participated, on December 9, 1775.) Curry joined Col. George Rogers Clark's Illinois regiment, first appearing on the payroll as a private in December 1778. The entry on rootsweb.com says that Curry served in all of the campaigns against the British and Indians. He was present at the capture of the British Governor Hamilton, the Battle of Blue Licks, the march to the Falls of the Ohio, and Chillicothe.

So far, the research to date for the bypass overview study has not uncovered records of James Curry's military service. A reference was found in a Revolutionary War pension folder index to Ann Curry's application as a widow for a pension W8646.

In 1782, James and Ann Curry's first child, John was born in Kentucky. Other children were James, Robert, Samuel, and Nancy.

1797 In May of 1794, they bought a 200-acre parcel in Mercer County from Henry Higgins and sold it in September of 1795 to Jacob Kurkendale. In March 1797, they bought 201-acre parcel on the west side of the Salt River adjacent to John Curry, Sr. from Elijah Craig; in August of 1807 bought a 5-acre parcel of adjoining land from John Curry, Sr.

Ann Curry and her daughter Nancy were members of Cane Run Church in 1813. James Curry appears to have died circa 1828.

Potential National Register Boundary for Site D, F. Kirby House

III-14



Source: Mercer Co. PVA, Scale: 1"=660'

III-15

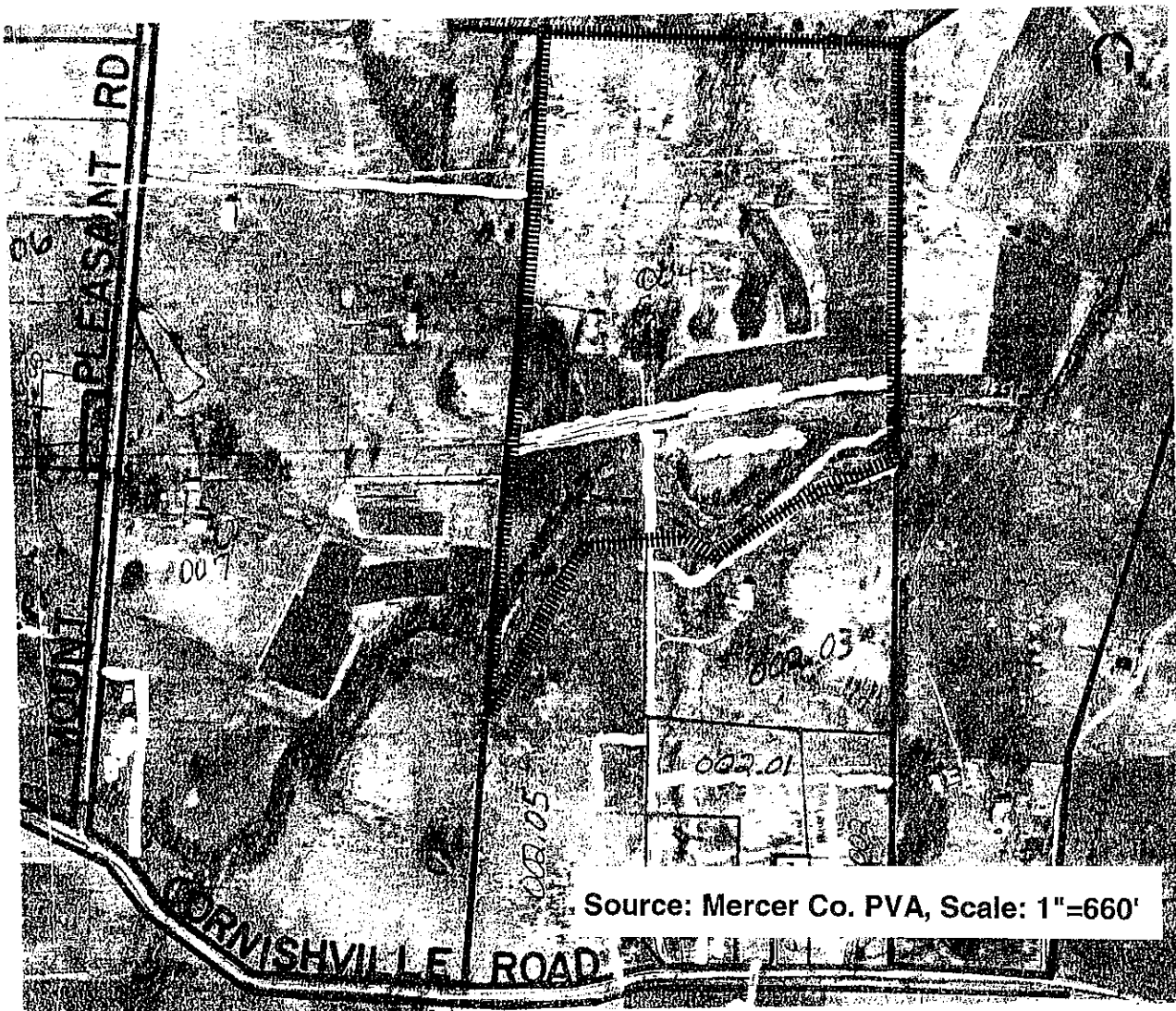
Site/ EvaluationDescription**Site E/ NRP****Daniel Stagg House (ME-115), 1477 Cornishville Rd.**

Site E is a one-and-one-half-story, side-gabled, timber frame, wattle and daub dwelling with two exterior stone chimneys on the gable ends. According to the survey form, the oldest section of the house is the present-day kitchen ell on the north which was originally detached, but later joined to the main block of the house. The ell is a single pen, one-story frame structure with a chimney on the north gable end. An inscription on the chimney of the ell reads "ready 1798". Perpendicular to the original structure and facing south towards Cornishville Road is a two pen addition which was completed, according to another chimney inscription, in 1809. Each of the two pens has an exterior door which opens onto the original front porch. A third centrally located exterior door, leads to an enclosed staircase between the two pens. Associated with the house are a family cemetery, smokehouse, root cellar, and several barns.

The Stagg House appears to meet National Register criteria for its construction method which uses the locally significant timber frame construction with an infill of wattle and daub and its association with agriculture. The potential boundary could include approximately 35 acres as shown on the Mercer PVA map on the following page.



Potential National Register Boundary for Stagg House (Site E, ME-115) III-16



Site F/ Evaluation **Description**

Site F/ S **Bungalow, 384 Tewmey Lane**

Site F is a one and one-half-story, three-bay, side-gabled, frame bungalow. On the roof is a front-gabled dormer.



III-17

Site/ Evaluation**Site G/ S****Description****C. Vandivier House, 150 Tewmey Lane**

Site G is a two-story, three-bay, frame, dwelling which is shown on 1876 Beers Map. Above each of the bays is a wall gable. Modern alterations have changed the siding, windows, and porch.

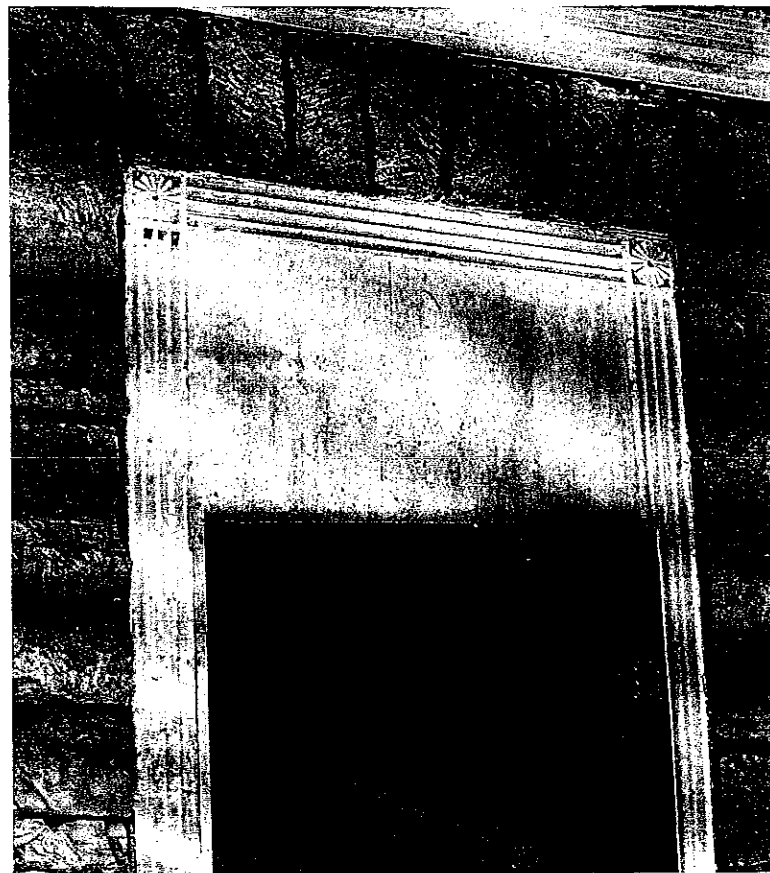
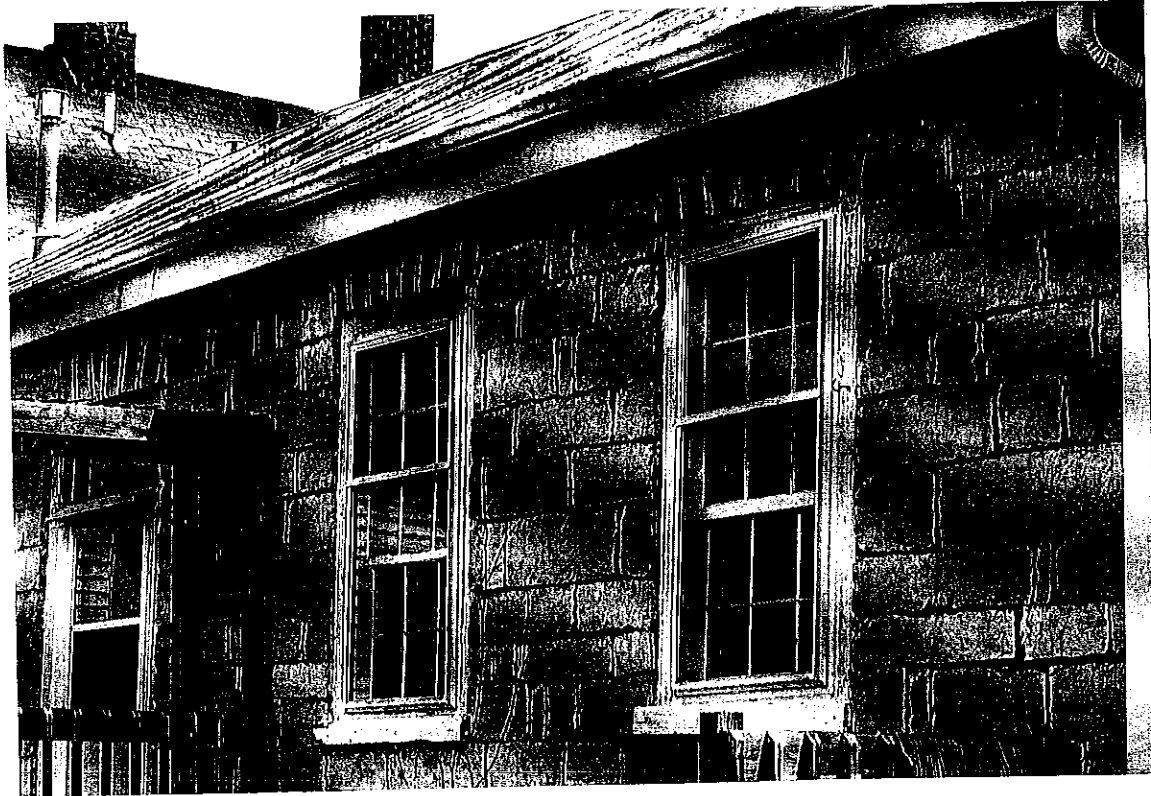
**Site H/ NRP****Trapnall House/ Martindale (ME-201), 766 Moreland Ave.**

The south section of Site H is a stone house built by Vincent Trapnall on land he bought from Azariah Davis in 1804. His son, Phillip Trapnall, who graduated from Pennsylvania Medical School in 1796, came to Harrodsburg in 1806 and inherited the property. Phillip Trapnall lived here until his death, circa 1853. The north section which faces Moreland Avenue (Mackville Rd.) is a two-story, three-bay, central passage, Gothic Revival House from the late nineteenth century. Tall brick chimneys frame the central hallway. Ornamental bargeboards follow the roof eaves above the three windows on the second floor. Site H appears to meet National Register criteria as an early 19th century stone house.



III-18

Details from Trapnall Stone House (Site H)



III-19

Trapnall Stone House on Site H



Gothic Revival House (Site H) Visible from Mackville Road



III-20

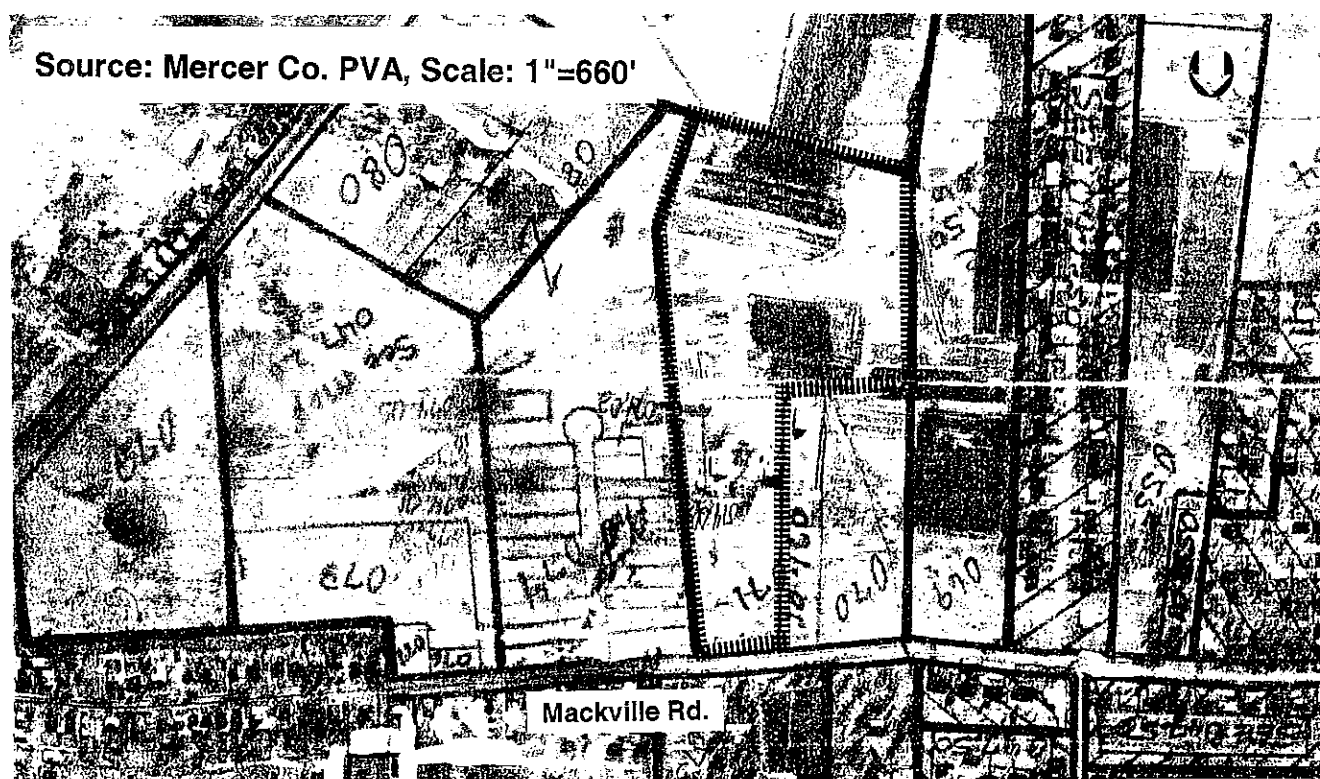
Agricultural Buildings associated with Site H



III-21



Potential National Register Boundary for (Site H, ME-201)



III-22

<u>Site/ Evaluation</u>	<u>Description</u>
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Site I/ S**Foursquare, 906 Mackville Rd.**

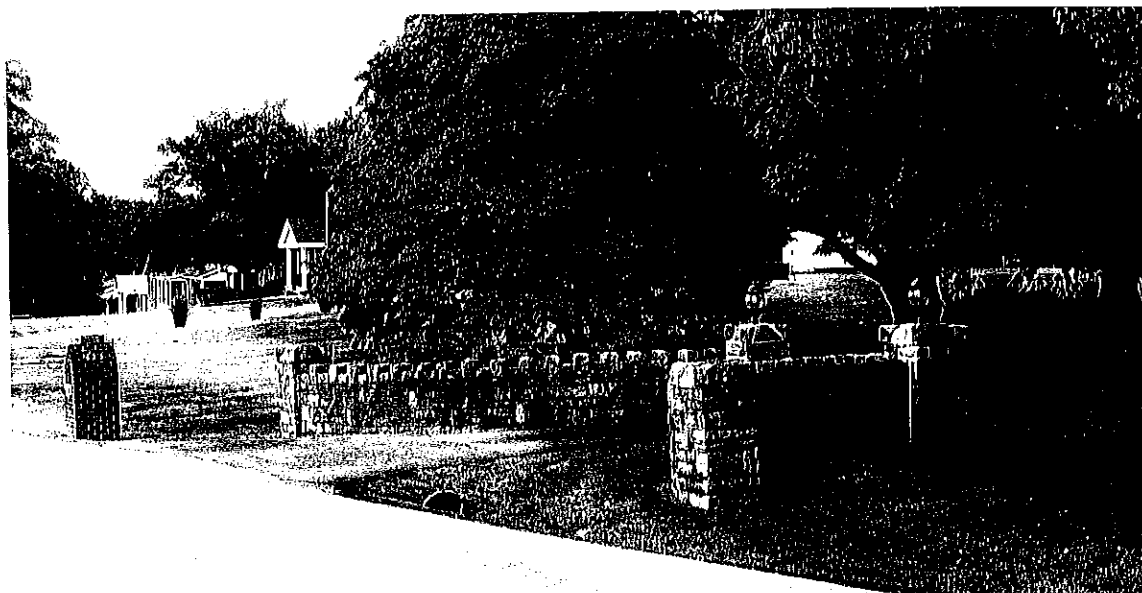
According to the Mercer County PVA, the two-story, three-bay, hip-roofed, frame Foursquare dates to 1901. It has a full-width, shed-roofed porch which is supported by squared wood columns.

**Site J/ S****Colonial Revival House, 823 Moreland Ave.**

Site J is a two-story, three-bay, brick, central passage, Colonial Revival dwelling. At the entry is a castellated stone wall.



III-23

Entry to Site J from Mackville Road**Site/ Evaluation**
Site K/ S**Description****Bungalow, 1005 Mackville Road**

Site K is a one-and-one-half-story, three-bay, central passage, side-gabled, frame bungalow. According to the Mercer County PVA, the house dates from 1915. On the roof is a front-gabled dormer. Associated with the dwelling are numerous barns.



III-24

Barns associated with Site K



Site/ Evaluation Site L/ S

Description

Water Works/ Swimming Pool Site, Mackville Road

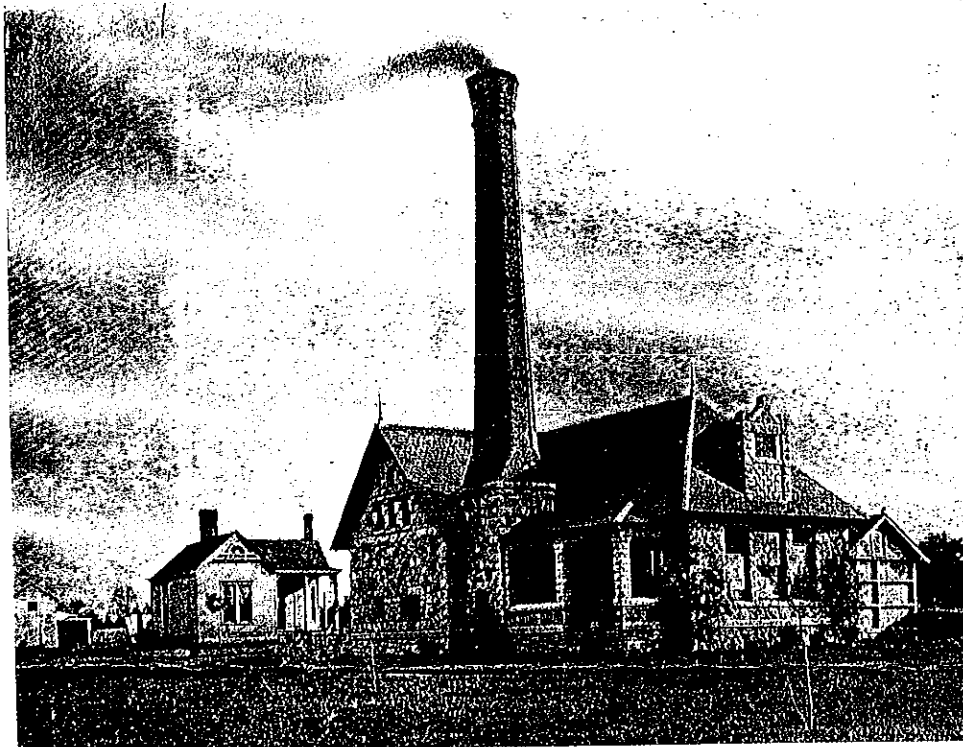
The Water Works site consists of a dam possibly associated with an earlier mill, a lake, and a one-story, frame T-plan. Earlier in the twentieth century, it was the site of a stone waterworks and swimming pool.



T-plan on Water Works Site (Site L)



Historic Photo of Water Works Site showing building from 1890s from Through Two Hundred Years: Pictorial Highlights of Harrodsburg and Mercer County by George Chinn and Rebecca Conover, p. 177.



**MUNICIPAL WATER PLANT
(now the site of the Harrodsburg City Swimming Pool)**

III-26

<u>Site/ Evaluation</u>	<u>Description</u>
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Site M/ S

Dwelling, 1029 Mackville Road

Site M is a two-story, three-bay, side-gabled, frame T-plan. Over two of the windows are wall gables. A wrap around porch supported by modern metal posts connects the south and north sides of the house.



Site N/ S

J. Wilson House (ME-279), 1309 Mackville Road

Site N is a two-story, three-bay, side-gabled, central passage frame house which may be shown on the 1876 Beers Map. Over the second story windows are wall gables. It has a full-width, flat-roofed porch. Associated with the dwelling are numerous agricultural outbuildings.



III-27

Site/ Evaluation

Description

Site O/ S

Dillard Brown House and Farm (ME-280), 316 Carl Ray Lane

Site O is a one-and-one-half-story, side-gabled, frame bungalow. According to the Mercer County PVA, the dwelling dates from 1933.



IV-1

IV. CONCLUSION

Within the proposed study area for the Harrodsburg Northwest Bypass in Mercer County, there is one listed property. The Joseph Morgan House/ Round Ridge (Site B, ME-172) at 1060 Industry Road was listed on the National Register in 1990.

After a windshield survey, the following four additional individual properties appear to meet National Register criteria:

Site A:	Fountain Blue/ Hite's Station, Bohon Road (KY 390)
Site D:	F. Kirby House, 1411 Cornishville Road (KY 1989)
Site E:	Daniel Stagg House (ME-115), 1477 Cornishville Rd.
Site H:	Trapnall House/ Martindale (ME-201), 766 Moreland Ave.

The preliminary National Register boundaries for these sites are based upon property maps from the Mercer County Property Valuation Administrator's (PVA) office in Harrodsburg. For the location of sites listed on the National Register or meeting National Register criteria, see the project map (Figure III-1).

There are also potentially significant archeological sites associated with early white settlement, such as Hite, Wilson, and McAfee stations, within the study area which need to be assessed for their National Register potential. Figure II-1 shows the locations of these late eighteenth century settlements.

A final determination of National Register eligibility for sites within the study area will require additional research, photography, physical examination of the structures, an evaluation of these sites relative to the integrity standards established by similar properties in Mercer County, Kentucky which are currently listed on the National Register, and consultation with the State Historic Preservation Officer (SHPO) at the Kentucky Heritage Council in Frankfort.

V-1

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V-2

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13 August 2007

Mr. Tom Springer
Qk4, Inc.
815 West Market Street
Louisville, KY 40202

Re: Archaeological Resource Overview for Design Location of Bypass Circle West of
Harrodsburg from KY 127 West to KY 152 West Scoping Study.
Item No. 7-8344.00
AMEC Project No. 02-4124-1900

Dear Mr. Springer:

Attached please find AMEC Earth & Environmental's letter report for the archaeological resource overview for the scoping study for the new northwest Harrodsburg bypass in Mercer County, Kentucky. Our reviews indicated that six archaeological surveys have been conducted within the study area and 12 archaeological sites have been identified within the study area. However, an additional five archaeological surveys have been identified within a 1.24-mile (mi) (2-kilometer (km)) buffer around the study area (see **Figure 1**). Of the six archaeological surveys located within the study area, three (Luckenbach 1977, Stallings and Ross-Stallings 1994, and Begley 2000) identified archaeological sites. The three additional archaeological surveys (Janzen 1991, Schock 1997, and Becraft and Peres 2003) did not identify archaeological sites within their survey area. Funkhouser and Webb (1932) identified known archaeological sites in Mercer County and listed one archaeological within the study area. The identified archaeological site within the study area is a prehistoric Woodland Period (1,000-200 B.C.) mound site (15ME2).

ARCHAEOLOGICAL RESOURCE OVERVIEW

This archaeological resource overview identifies potential archaeological issues likely to require consideration during the scoping study of Design Location of Bypass Circle West of Harrodsburg from KY 127 West to KY 152. The study area includes the northern half of the western side of Harrodsburg, beginning at KY 152 in the south and extending north and then east to US 127, a distance of about 3.0 miles (4.8 kilometers). The study area ends at the existing US 127/US 127 Bypass intersection. The study area is approximately 1.4 miles (2.25 kilometers) wide and encompasses approximately 3.6 square miles (932 hectares) in size. This overview summarizes the results of archaeological resource research, based upon available archival literature; the Office of State Archaeology, National Park Service and Kentucky Heritage Council databases; and historic map research. No fieldwork was conducted in association with this overview. This archaeological resource overview is for planning purposes only and does not provide a detailed analysis or assessment of any potential impacts to archaeological resources.

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Mr. Tom Springer
13 August 2007
Page 2

TOPOGRAPHY AND GEOLOGY

Physiographically, Mercer County is situated in the Inner Bluegrass Physiographic Area of Kentucky. The topography of the Inner Bluegrass is generally characterized as gently rolling. However, ridgetops are undulating with steep hillsides and vertical limestone bluffs are common along the rivers. In some areas of the county, karst topography, including sinkholes and depressions can be found. Most of Mercer County, including the study area is drained by the Salt River. The study area is underlain by limestones and shales of Ordovician age, consisting of the Tanglewood Limestone member of the Lexington Limestone Formation. The soils in Mercer County are characterized by nearly level to very steep, well-drained, deep to shallow soils that have clayey subsoil.

PREHISTORIC AND HISTORIC CONTEXTS

The history of human activity in Mercer County and the surrounding region of Kentucky span thousands of years. The earliest groups to leave a definitive material record of their presence were early Paleoindians who entered the region during the Late Pleistocene glacial epoch more than 10,000 years ago. Their descendants, and the descendants of other Native American groups who migrated to and through the region, lived along river ways for the next 10 millennia. This long prehistoric era lasted until the arrival of the first European explorers and settlers in the seventeenth and eighteenth centuries, the beginning of the Contact period. Subsurface cultural deposits from this time period are considered prehistoric archaeological sites.

Mercer County was the sixth county formed in Kentucky and was formed from a portion of Lincoln County on December 15, 1785. Mercer County was named in honor of Gen. Hugh Mercer, a Scotsman that was killed at the Battle of Princeton during the Revolutionary War. Generally, Mercer County exhibits rolling hills, with steep hillsides near the Kentucky and Dix Rivers. The deep soils are excellent for crops such as tobacco, corn and hay. The major water sources in the county are the Kentucky, Dix, and Salt Rivers and Chapline, Jennings, Lyon, McCoun, Thompson, Rocky, and Shawnee Run creeks.

One of the earliest settlements in Mercer County was Harrodsburg. Harrodsburg was founded on June 16, 1774 by James Harrod. It was originally referred to as Harrods's Town but was officially incorporated as Harrodsburg by the Virginia legislature in 1785 and incorporated on March 1, 1836. Harrodsburg thrived through the end of the eighteenth century and into the early nineteenth century. During the Civil War, the pro-Confederate Harrodsburg was the site of many skirmishes and raids. After the Civil War, Harrodsburg began to recover slowly and found a niche as a commercial center for a wealthy agrarian community. Harrodsburg widened their industrial base in the twentieth century to include glass, clothing, electric products, and bathroom accessories. Agricultural items including cattle, tobacco, corn, and hay continue to contribute to the County's economy. Tourism became an important economical factor when Pioneer Memorial Park (now Old Fort Harrod State Park) was reconstructed and opened on June 16, 1927 and Shakertown opened for tourism in 1962.

Mr. Tom Springer
13 August 2007
Page 3

Two unique settlements/sites were established in Mercer County, Pleasant Hill (now Shakertown) and the first meetinghouse of the Dutch Reformed Church west of the Allegheny Mountains. During the nineteenth century, Shakers built a large and prosperous community at Pleasant Hill. This community lasted from 1805-1910. The community buildings have been restored and make up what is now known as Shakertown. The first meetinghouse of the Dutch Reformed Church west of the Allegheny Mountains was erected in 1800. It was called the Old Mud Meeting House.

ARCHAEOLOGICAL RESOURCES

Document and database research revealed 12 previously recorded archaeological sites within the study area. These sites include 9 small prehistoric lithic scatters, 1 site (15ME69) with both prehistoric and historic components, 1 dense prehistoric lithic scatter (15ME73), and 1 prehistoric mound site (15ME2). Sites outside the study area include 19 archaeological sites, (11 prehistoric, 1 historic, 6 with both prehistoric and historic components, and 1 unknown archaeological sites) within a 1.24-mi (2-km)) buffer around the study area (see **Figure 1**). The 9 small prehistoric lithic scatters located within the study area were all considered not eligible for nomination to the NRHP. Site 15ME69 is a possible civil war bivouac (temporary living quarters) site and is considered possibly eligible for nomination to the NRHP. Site 15ME73 is a large Early Archaic prehistoric site that is considered potentially eligible for nomination to the NRHP. Site (15ME2) is a prehistoric mound site (Funkhouser and Webb 1932). According to Lewis, most mounds in the Bluegrass Region of Kentucky were constructed during the early Woodland Period (1,000-200 B.C.). Mounds may contain human remains as well as grave goods (i.e., burial offerings placed with the dead). During the early Woodland Period, habitations or settlements associated with mounds may or may not be located adjacent to the mound area. Site 15ME2 was identified but no archaeological work has been done to determine eligibility for the National Register of Historic Places. Site 15ME2 is located one and one-half miles northwest of Harrodsburg along the Salt River. The exact location of the site is not available.

The prehistoric sites outside the study area consist of three archaic period (8000-1000 BC) lithic scatters (a scatter of stone tools), five unidentified lithic scatters (stone flakes), and three prehistoric mound sites. The historic archaeological sites consisted of two late eighteenth century, one twentieth century, and three late nineteenth through early twentieth century residences/farmsteads (e.g. nails, window glass, and standing structures). According to files reviewed, two archaeological surveys (Janzen 1991 and Schock 1997) have been conducted within the study area. These archaeological surveys did not identify archaeological sites within the study area. It should be noted that archaeological sites may be present within the study area but they have not been documented at this time.

The presence of the mound site within the study area, the large Early Archaic prehistoric site, and the additional three mound sites within a 1.24-mi (2-km)) buffer around the study area, suggests potentially a large prehistoric population occurred in the area. Additionally, the presence of a possible Civil War bivouac sites suggests that additional Civil War era sites may be present within the study area. Any future work in the study corridor or general area should be preceded by a phase I archaeological survey to determine the extent of potential prehistoric and historic resources

Mr. Tom Springer
13 August 2007
Page 4

CULTURALLY SENSITIVE LOCATIONS

Six historic maps were reviewed to help determine culturally sensitive locations. These maps include the 1876 Map of Boyle and Mercer Counties, Kentucky; 1929 Map of Mercer County, Kentucky; Geologic Survey of Boyle and Mercer Counties, Kentucky (ND); 1952 USGS 7.5' Topographic Quadrangle of Cornishville, Kentucky; the 1952 USGS 7.5' Topographic Quadrangle of Harrodsburg, Kentucky; and the 1941 General Highway Map of Mercer County, Kentucky. Review of historic mapping revealed one culturally sensitive location, an unknown church, located on the 1929 Map of Mercer County Kentucky. However, on subsequent maps, the church is no longer depicted. The church was located at the interception of KY 390 and KY 35 (now US 127) (see **Figure 3**). No cemetery was depicted with the church. However, since small family cemeteries are common throughout the state, unmarked cemeteries may be located within the study area associated with former structures and farms.

A review of the National Park Service database did not identify any listed sites on the National Register of Historic Places (NRHP) within the study area.

ARCHAEOLOGICAL RESOURCE PROBABILITY

Various factors are considered in evaluating the potential for archaeological sites including topographic or landform setting (e.g., floodplains, hillsides); proximity to water; location along major routes of transportation; and the extent of ground disturbances within the area resulting from erosion, construction, or agricultural activities. The topography of the region consists of gently rolling hills. In some parts of the study area, karst topography, including sinkholes and depressions can be found. This type of topography is often the ideal location for seasonal prehistoric archaeological sites as well as more permanent prehistoric occupations and the long historic occupation of the county suggests the possible presence of historic archaeological sites relating to farmsteads and associated agricultural activities.

Within the study area are historic structures and resources that could be eligible for listing on the NRHP and these structures/resources could have associated archaeological sites. These archaeological sites could be related to agriculture (residences, barns, farms, and out buildings), commercial (taverns and smiths), or residential activities. Due to the documented Civil War activities in Mercer County, the potential exists for historic archaeological sites relating to Civil War battles or camp sites. Historic map review (1876 Map of Boyle and Mercer Counties, Kentucky (see **Figure 2**), 1929 Map of Mercer County, Kentucky (see **Figure 3**), Geologic Survey of Boyle and Mercer Counties, Kentucky (ND) (see **Figure 4**), 1952 USGS 7.5' Topographic Quadrangle of Cornishville, Kentucky and the 1952 USGS 7.5' Topographic Quadrangle of Harrodsburg, Kentucky (see **Figure 5**), and the 1941 General Highway Map of Mercer County, Kentucky) (see **Figure 6**) indicates approximately 70 historic structures with the potential for associated historic archaeological sites.

Generally, the study area has a moderate to high potential to contain significant prehistoric and historic archaeological sites (see **Figure 7**). Criteria for determining a high probability of archaeological sites included areas that have close proximity to water (streams), or

Mr. Tom Springer
13 August 2007
Page 5

transportation routes (roads and navigable waterways), and exhibit moderate to level elevation ranges. The criteria for determining a low probability of discovering archaeological sites included areas with steep elevation ranges and areas not in close proximity to water (streams) or transportation routes. Medium probability areas are those areas that did not fall within the high or low probability areas. The lack of widespread development (commercial and industrial) has probably left many archaeological sites relatively undisturbed in the study area.

RECOMMENDATIONS

Efforts should be made to avoid direct and indirect impacts to Site 15ME2, the prehistoric mound site identified within the study area; site 15EM69 the possible Civil War bivouac site; and site 15ME73 the Early Archaic prehistoric site. Given the ramifications of the presence of a mound site in the planning area, a site update is recommended to identify the precise location of Site 15ME2. To better determine the location of 15ME2, a windshield survey/ pedestrian reconnaissance would be useful.

If future projects are developed in the study area, a Phase I archaeological survey must be conducted when federal funds or a federal permit is involved. The Phase I survey will identify archaeological sites and help determine whether a site is eligible for listing on the NRHP to comply with Section 106 of the National Historic Preservation Act of 1966 (as amended), 16 U.S.C. 470(f), and Presidential Executive Order 11593, Protection and Enhancement of the Cultural Environment. If the project is funded by the Federal Highways Administration, a Section 4(f) evaluation must be conducted and avoidance options considered if the right of way overlaps any NRHP listed or eligible for listing archaeological site requiring preservation in place (e.g., a burial site or areas of a Civil War battlefield).

If you have any questions or would like additional information, please contact Hank McKelway or Marty Marchaterre at (859) 231-0070.

Sincerely,



John A. Hunter
Project Archaeologist



Henry S. McKelway
Cultural Resource Manager

Enclosures

/cf

1876 Map of Boyle and Mercer Counties, Kentucky

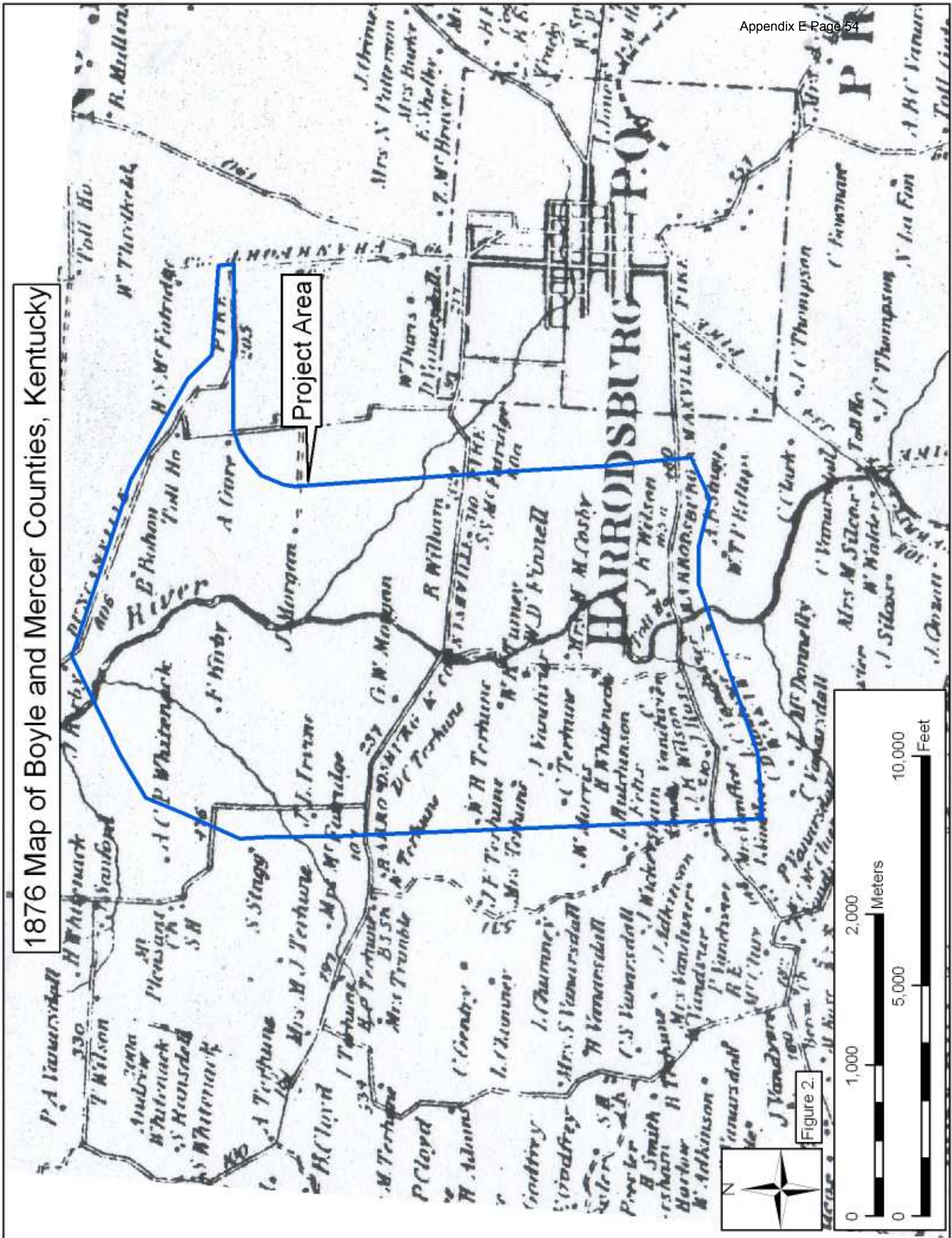
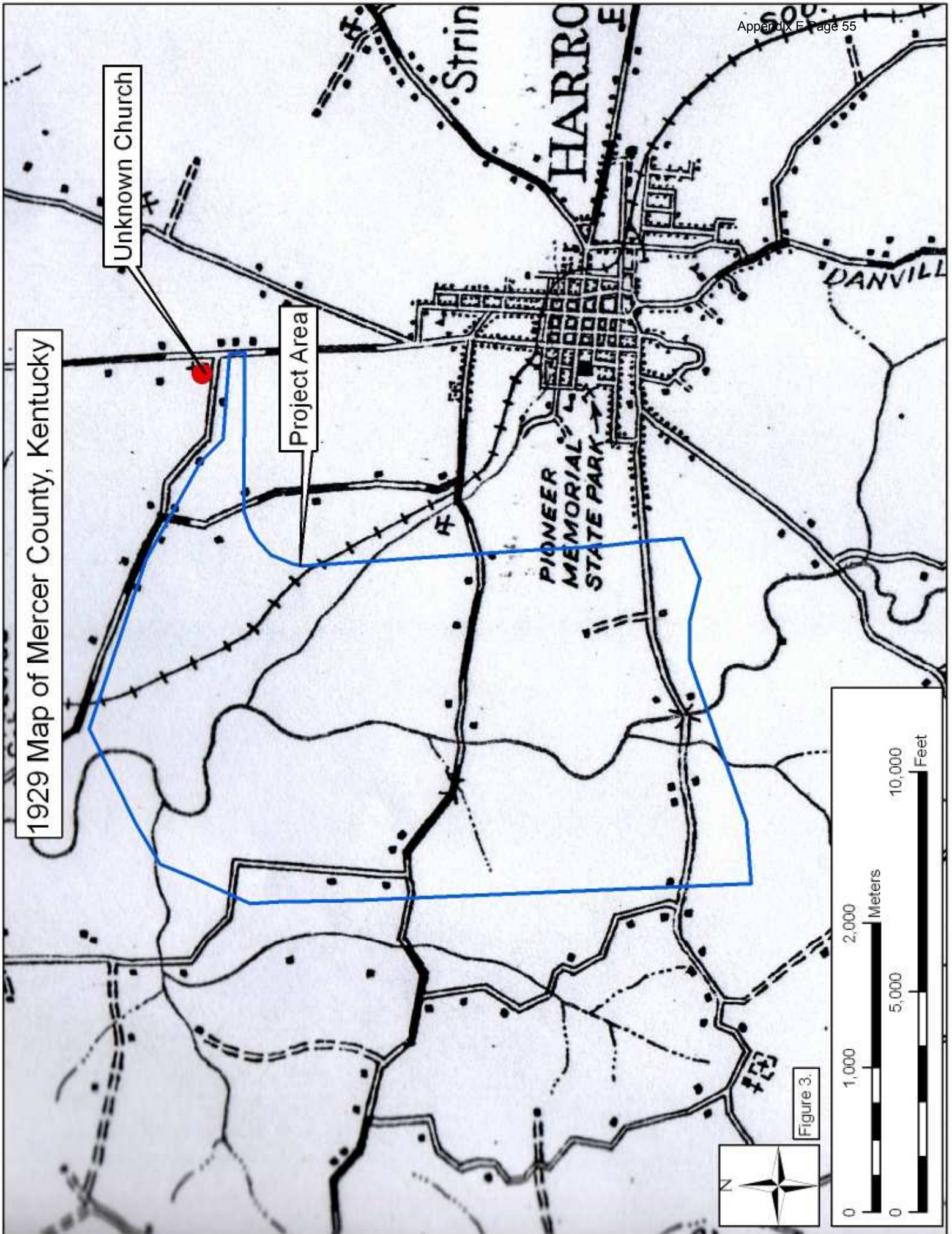
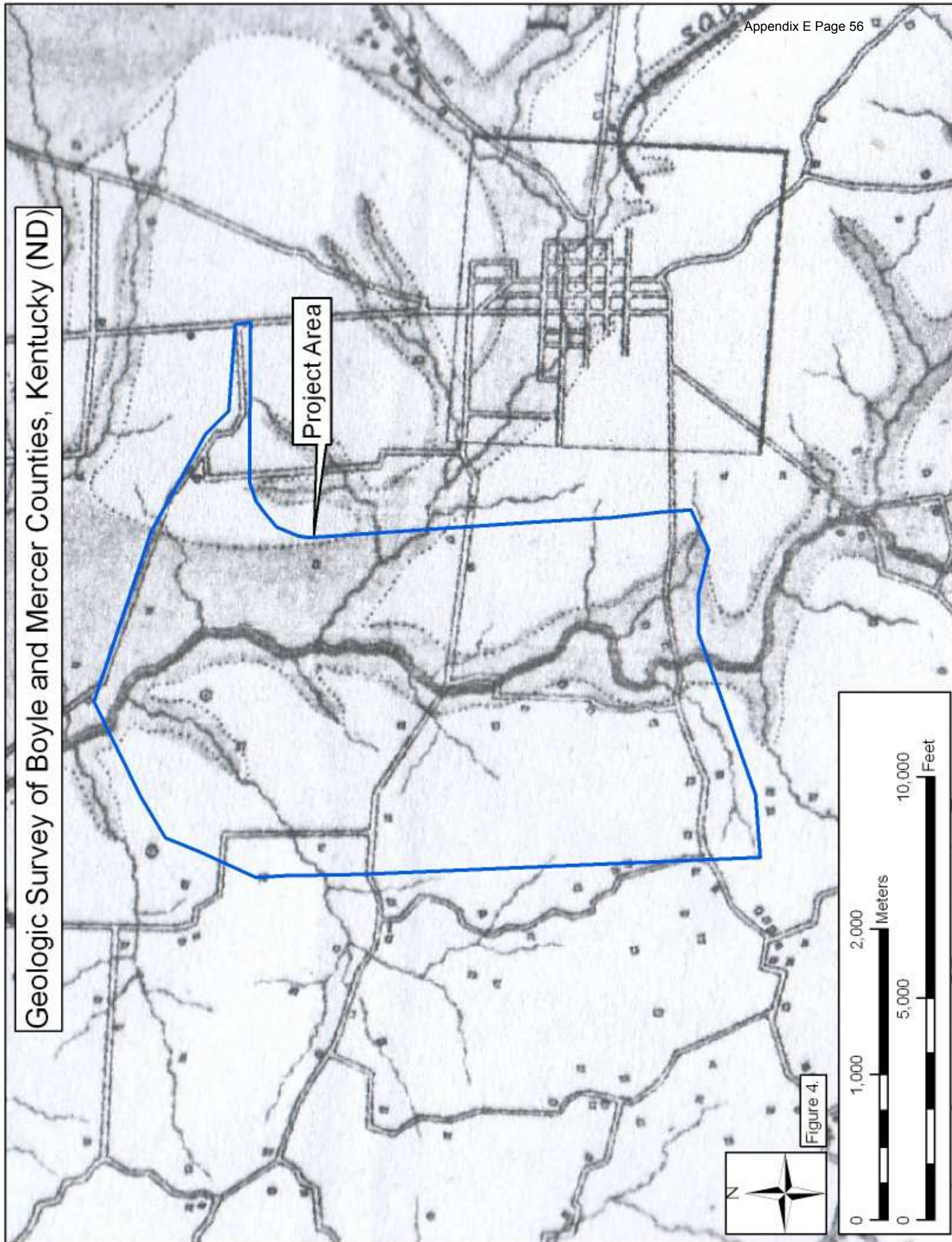


Figure 2.



Geologic Survey of Boyle and Mercer Counties, Kentucky (ND)



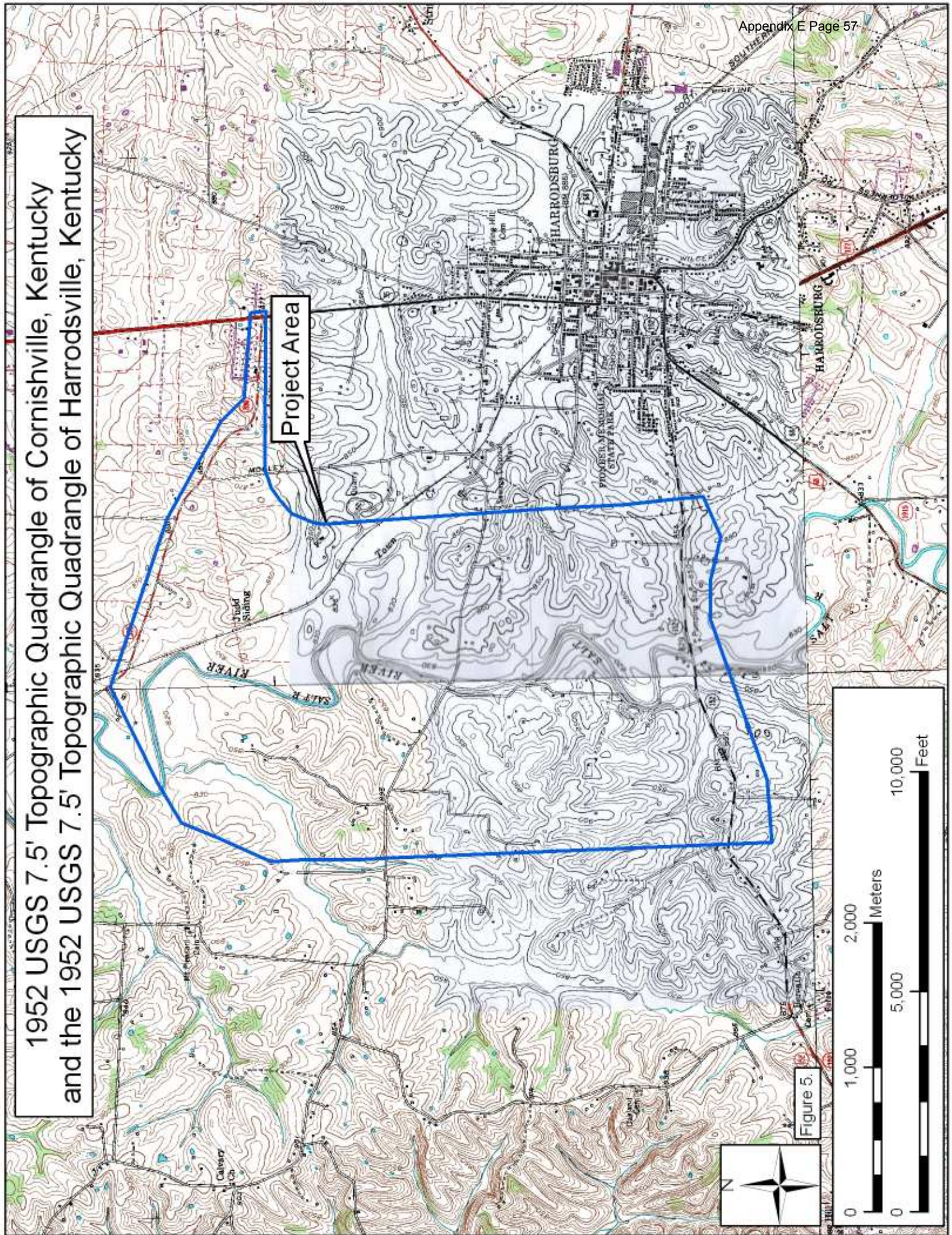
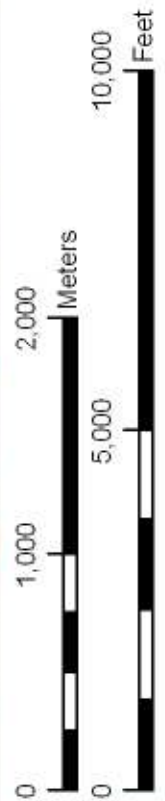
Project Area

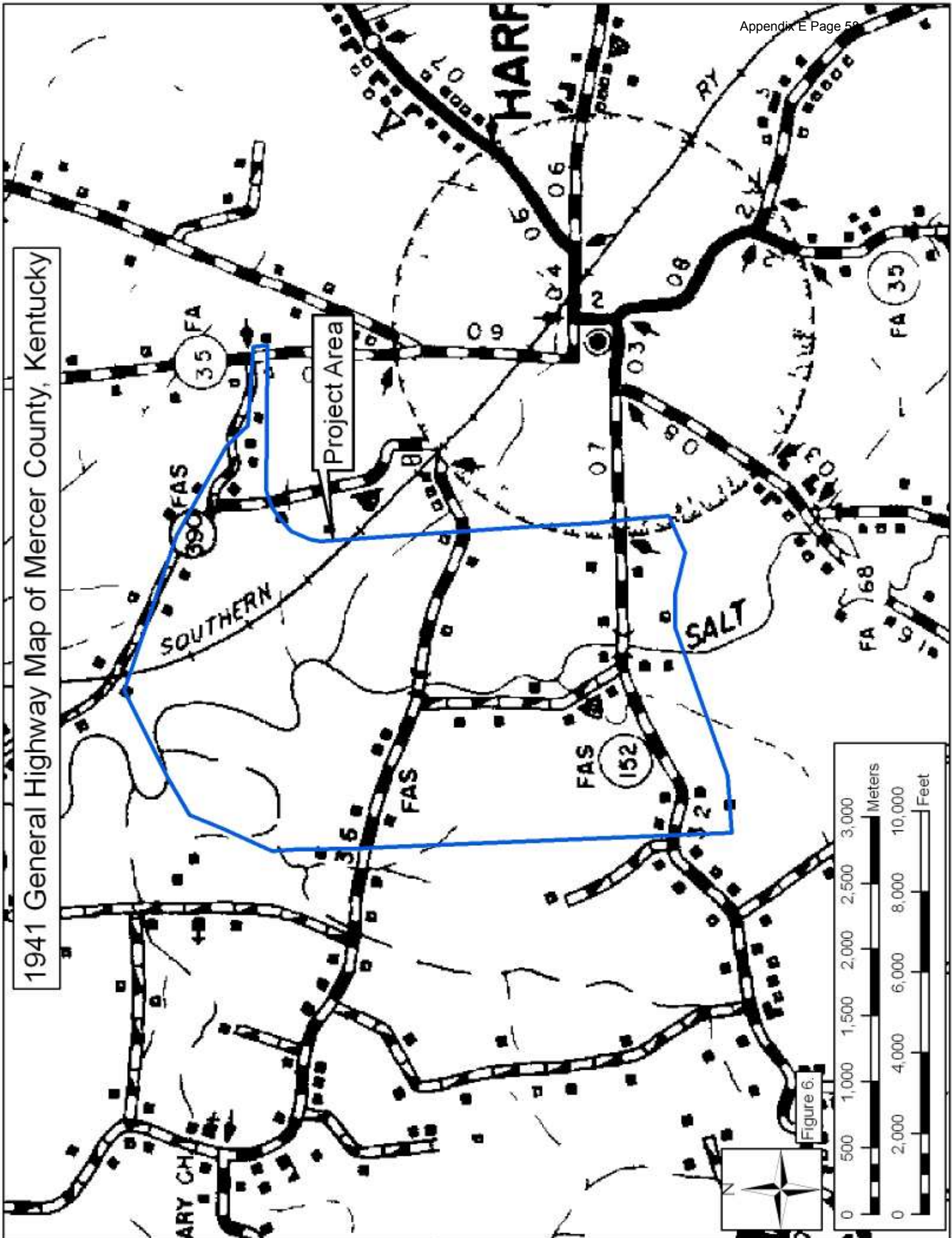
Figure 4.

1952 USGS 7.5' Topographic Quadrangle of Cornishville, Kentucky
and the 1952 USGS 7.5' Topographic Quadrangle of Harrodsburg, Kentucky

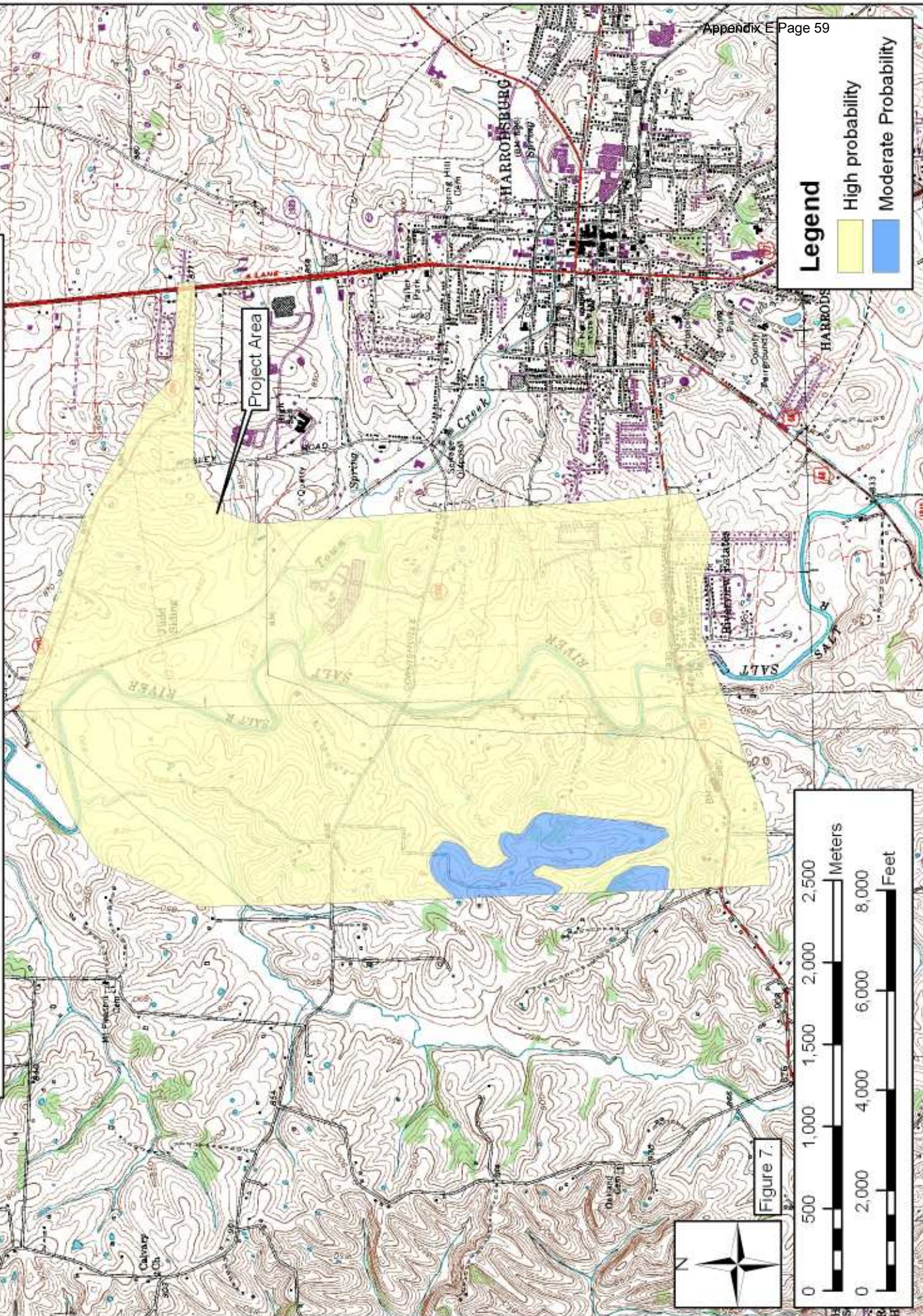
Project Area

Figure 5.





Probability of Archaeological Resource within the Study Area



APPENDIX F

ECOLOGICAL OVERVIEW AND USFWS 2008 ETC SPECIES LIST

- *Ecological Overview* Report
- U.S. Fish and Wildlife Service's 2008 Endangered, Threatened, and Candidate Species List

**PRELIMINARY RESEARCH AND FIELD INVESTIGATIONS FOR
POTENTIAL IMPACTS TO ECOLOGICAL ELEMENTS BY
THE PROPOSED HARRODSBURG BYPASS
MERCER COUNTY, KENTUCKY
(KYTC PROJECT ITEM NUMBER 7-8344.00)**



**Prepared for:
QK4 Engineers
And
Kentucky Transportation Cabinet**

**Prepared by:
Eco-Tech Consultants, Inc.
Frankfort, Kentucky**

September 2007





**PRELIMINARY RESEARCH AND FIELD INVESTIGATIONS FOR
POTENTIAL IMPACTS TO ECOLOGICAL ELEMENTS BY
THE PROPOSED HARRODSBURG BYPASS
MERCER COUNTY, KENTUCKY
(KYTC PROJECT ITEM NUMBER 7-8344.00)**

TABLE OF CONTENTS

1.0	INTRODUCTION.....	1
1.1	Project Description	1
1.2	Purpose.....	1
2.0	METHODS.....	1
3.0	PHYSICAL CHARACTERISTICS.....	2
3.1	Climate.....	2
3.2	Physiography, Topography and Geology	2
3.3	Floral Community.....	3
3.4	Soils	3
3.5	Watershed.....	3
3.6	Land Use.....	4
4.0	ECOLOGICAL IMPACTS	4
4.1	Aquatic Ecology	4
4.1.1	Wetlands and Ponds.....	4
4.1.2	Streams.....	5
4.1.3	Regulatory Issues	6
4.2	Terrestrial Ecology and Threatened & Endangered Species.....	6
4.2.1	Karst Areas	8
4.2.2	Special Designation Lands.....	9
5.0	SUMMARY AND CONCLUSIONS	9
	LITERATURE CITED	10

APPENDICES

Appendix A. Figures
Appendix B. Agency Coordination
Appendix C. Photographs

1.0 INTRODUCTION

1.1 Project Description

The Kentucky Transportation Cabinet (KYTC) proposes to construct the Harrodsburg Bypass in Mercer County, Kentucky (KYTC Project Item Number 7-8344.00). The proposed Harrodsburg Bypass is a new construction road just west of the Town of Harrodsburg on the Harrodsburg and Cornishville, United States Geographic Survey (USGS) Topographic Quadrangles (Appendix A, Figure 1). Eco-Tech Consultants, Incorporated (Eco-Tech) was retained by QK4 Engineers to conduct an environmental overview within the project study area.

The project study area is 2,342.5 acres (948 ha) extending south from KY 390 to just south of KY 152 and west of Moberly Road to east of Mount Pleasant Road and Carl Lay Lane, Mercer County, Kentucky. The proposed project encompasses the Salt River for approximately 4.2 river miles (6.8 km) (Appendix A, Figure 1).

The proposed Harrodsburg Bypass project is to extend and upgrade the existing highway by widening and reconstruction, constructing new roadway bed, access control of existing routes, and ultimately bypassing the town of Harrodsburg. Currently, this project is a Pre-Design Corridor Planning Study to determine and evaluate potential highway improvements and no specific alternatives are being considered at this time.

1.2 Purpose

The purpose of this study is to provide an overview evaluation of the biological resources in the immediate area of potential project impact (project study area). This overview evaluation is to assist KYTC and QK4 Engineers in the design of alternatives to minimize those impacts.

2.0 METHODS

Field investigations were conducted by biologists from Eco-Tech on July 12, 2007. Materials and literature supporting this investigation have been derived from a number of sources including USGS topographic maps, soil maps, U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, USGS National Hydrography Dataset (NHD), and aerial photographs. Database records of rare plants, animals, and ecological communities were obtained from the Kentucky State Nature Preserves Commission (KSNPC). The USFWS Kentucky Field Office (KFO) was contacted for a list of federally protected species that could potentially be affected by the project. The Kentucky Department of Fish and Wildlife Resources (KDFWR) was contacted for information regarding federally or state listed species, managed natural areas, and unique, sensitive or critical wildlife habitat that could be affected by this project. Information concerning

significant aquatic resources (wild and scenic rivers, outstanding water resources, municipal water intakes, groundwater recharge areas, toxic pollutants, and water quality) was requested from the Kentucky Division of Water (KDOW). Kentucky Division of Forestry (KDOW) coordination was requested for identification of state and national champion trees, and/or state forests that may be impacted by the proposed project. Responses from these resource agencies are included in Appendix B.

Wetlands identified by secondary sources within the study area were field verified but not delineated. Delineations are conducted using the 1987 United States Army Corps of Engineers (USACE) Delineation Manual (Environmental Laboratory), which is the legally accepted system for identifying a wetland. This method requires positive evidence of three criteria: hydrophytic vegetation, hydric soils, and wetland hydrology, before an area can be termed a wetland. Areas must have all three criteria (in most cases) to be designated wetlands. The Soil Survey of Mercer County, Kentucky (Craddock 1979) was consulted for the mapped locations of listed hydric and potentially hydric soils.

All streams encompassed by the study area that are shown as permanent (blue line) or intermittent (dashed blue line) on the topographic maps and NHD maps were field evaluated. Deep-water aquatic habitats (rivers, ponds and lakes) were identified using the topographic maps, NWI maps, NHD maps, and aerial photographs and then field verified.

3.0 PHYSICAL CHARACTERISTICS

3.1 Climate

Mercer County, Kentucky has “hot summers” and “moderately cold winters” (Craddock 1979). Yearly precipitation averages 45.9 inches with 15.7 inches of the total average precipitation being snowfall. The average yearly temperature of Mercer County is approximately 55°F (U.S. Department of Commerce 2006). The growing season, defined as the number of days between the last temperature of 32° F in spring and the first in fall, of Mercer County averages 175 days (Craddock 1979).

3.2 Physiography, Topography and Geology

Physiographically, the proposed study area is located in the Inner Bluegrass and Hills of the Bluegrass subsections of the Bluegrass section of the Interior Low Plateau physiographic province (Jones 2005). Woods et al. 2002 described the Inner Bluegrass and Hills of the Bluegrass subsections using a numerical system based on the U. S. EPA 2002 Level IV Ecoregions of the Continental United States (USEPA 2002). The Inner Bluegrass Ecoregion (711) is a region that is nearly level to rolling and contains extensive karst and intermittent streams. Ecoregion 711 is primarily underlain by Middle Ordovician Lexington Limestone (Woods et al. 2002). The southwest corner of the project area is located in the Hills of the Bluegrass Ecoregion (71k). The mostly forested Hills of the

Bluegrass is underlain by Upper Ordovician calcareous shale, siltstone, and limestone (Woods et al. 2002). Streams in these Ecoregions have moderate to low gradients, cobble or bedrock substrates, and low water quality due to agricultural and wastewater discharges, and residential runoff (Woods et al. 2002).

Reviews of topographic quadrangles of the area indicate elevations within the proposed study area range from 800 feet (244 meters) to 910 feet (277 meters).

3.3 Floral Community

Level IV Ecoregions 71l and 71k fall within the Western Mesophytic Forest/Oak-Hickory Forest region (Jones 2005). Increasing urban-suburban-industrial areas and agriculture have significantly decreased the acreage of forestland throughout the ecoregion. However, on drier sites forests are dominated by blue ash (*Fraxinus quadrangulata*) and oaks (*Quercus* spp.). In river drainages and gorges, the forests are dominated by oak-maple complexes and floodplain areas are dominated by sweetgum (*Liquidambar styraciflua*), pin oak (*Quercus palustris*), yellow poplar (*Liriodendron tulipifera*), box elder (*Acer negundo*), and hackberry (*Celtis laevigata*) (Woods et al. 2002).

3.4 Soils

Soils within Level IV Ecoregions 71l and 71k are deep, well-drained silt loams with high concentrations of calcium and phosphate. Soils that dominate the Inner Bluegrass subsection include Maury, Hampshire, and Loradale, and the soils that dominate the Hills of the Bluegrass subsection include Eden, Nicholson, and Lowell (Jones 2005).

Based on soil mapping for Mercer County, the majority of the project study area is underlain with well drained soils occurring in the Faywood, Maury, and McAfee soil series (Craddock, 1979). The McAfee soil series is considered to have a severe erosion hazard. One hydric soil, Dunning silty clay loam, occurs within the project study area. This soil unit is located just south of the water treatment facility near KY 1989. Dunning silty clay loam is typically found on floodplains, in narrow valleys, and on upland depressions.

3.5 Watershed

The proposed study area lies entirely within the Salt River Basin (HUC 05140102) (Appendix A, Figure 2). The Salt River Basin drains about 4,150 sq. miles (10,748 sq. kilometers) of north-central Kentucky. The project study also entirely lies within the Salt River Harrodsburg (HUC 05140102010) sub-watershed. The Salt River Harrodsburg watershed encompasses 138 sq. miles (357 sq. kilometers) and 282 river miles (454 kilometers) within the Salt River Basin (Kentucky Division of Water [KDOW] 2001).

Stream quality within the watershed is often affected by industrial, suburban, and agricultural practices. Urban-industrial waste discharges high levels of metals (Woods et al 2002). Suburban wastewater treatment plants cause effluent-dominated streams. Agriculture practices contribute sediment, nutrients, pesticides, and pathogens (Woods et al 2002).

3.6 Land Use

Agricultural areas comprise the majority of Mercer County's land area (Craddock 1979). The eastern portion of the study area closest to the Town of Harrodsburg is a mix of industrial and residential lots. However, the central and western portion of the study area is almost entirely comprised of agricultural fields and pasture land with a scattering of rural residential lots. The only noticeable forested areas occur along streambanks. Rural residential/agricultural areas comprised 90% (2,097 ac/845 ha), industry comprised 5% (121 ac/49 ha) and the remaining 5% (124 ac/50 ha) was forested (Appendix A, Figure 3).

4.0 ECOLOGICAL IMPACTS

4.1 Aquatic Ecology

Jurisdictional waters, as defined by the USACE, are located within the proposed project corridor. This includes a section of the Salt River and its associated Federal Environmental Management Agency (FEMA) 100-year floodplain. No aquatic macroinvertebrate, fishes, or water quality sampling was completed for this ecological overview.

Aquatic species in or near the study area are sensitive to increased turbidity and sediment and other adverse influences on water quality. KSNPC recommended an erosion control plan to be developed with stringent erosion control methods such as straw bales, silt fences, and erosion mats, and immediate seeding and mulching of disturbed areas. These measures should be placed in a staggered manner to provide several stages of sediment and erosion control. All measures should be monitored periodically to ensure they are functioning properly. Streams which may be impacted should be surveyed by a qualified biologist prior to in-stream disturbance.

4.1.1 Wetlands and Ponds

Review of the Cornishville and Harrodsburg NWI maps revealed one forested wetland and several palustrine unconsolidated bottom (PUB) ponds within the study area. Although no jurisdictional delineations were conducted, field surveys determined the NWI mapped palustrine forested wetland (PFO1A) within the project study area did not possess wetland hydrology. Field surveys also identified two small depressional areas that may be wetlands. One area is located within the hydric soil unit, Dunning silty clay loam, just south

of the water treatment facility near KY 1989. The other area is located just south of KY 1989 and east of the Salt River (Appendix A, Figure 2). Nine ponds were field identified within the study area and all were farm ponds with no connectivity to jurisdictional waters. Not all portions within the study area were easily accessible and more wetlands and ponds may exist. A formal jurisdictional delineation needs to be conducted in order to accurately determine the number of wetlands and ponds throughout the study area (Appendix A, Figure 2).

4.1.2 Streams

Streams were located and field-verified using the Cornishville and Harrodsburg USGS quadrangle maps. Nine intermittent and/or perennial streams were identified from mapping conventions within the proposed project corridor. These streams include the Salt River with seven unnamed tributaries, and Town Creek. However, field verification only identified five intermittent and perennial streams within the study area (Appendix A, Figure 2). These rivers and streams include the Salt River and three unnamed tributaries and Town Creek. Although ephemeral streams may also be considered jurisdictional, their evaluation did not fall within the scope of this overview. All streams are located or partially located within the study area and may be impacted by the proposed road construction associated with this project.

In compliance with the Fish and Wildlife Coordination Act, the USFWS was notified of the proposed Harrodsburg Bypass study area with regards to wetlands and other jurisdictional waters. Subsequently, they recommend developing future plans for the study area to avoid impacting wetlands and streams. It is also recommended that the U.S. Army Corps of Engineers (USACE) should be notified to assist with determining if wetlands or other jurisdictional waters are present or if a permit is required. If soil disturbances are required, Best Management Practices such as silt barriers should be established when working adjacent to all streams to prevent runoff of sedimentation. The USFWS requests having an inspector on-site during all construction activities to ensure work areas are stabilized.

The KDOW Water Quality Branch provided stream and fish data for the Mercer County area and indicated there are no Outstanding State Resource Waters or Wild Rivers within the study area. The KDOW also provided ecological data on macroinvertebrates and fish samplings sites along the Salt River. The sampling sites scored either fair or poor in macroinvertebrate and fish quality. (Appendix B).

The contractor will be required by the KDOW to prepare a plan to control non-point source pollution and to effectively implement the erosion and control program. Rigid application of the KYTC's Specific Specifications for Road and Bridge Construction and the

Federal Highway Administration's (FHWA) Best Management Practices for Erosion and Sediment Control should be used to alleviate most sedimentation problems.

4.1.3 Regulatory Issues

Since neither alternatives nor detailed plans have been developed for this project a final permitting strategy cannot be determined until an improvement footprint has been finalized and construction impacts are firmly quantified. The USACE, Louisville Regulatory District, Louisville, Kentucky, is the agency responsible for regulating waters, waterways, and wetlands ("Waters of the United States"). If jurisdictional impacts can be limited in size, consideration should be given to the use of Nationwide Permit (NWP) No. 14 (Linear Transportation Projects). The use of NWP No. 14 is limited to crossings that result in a filled area of no more than 0.5 acre of "Waters of the United States". The permittee must notify the District Engineer in accordance with General Condition 27 if the work involves discharges of dredged or fill material into wetlands and/or results in the loss of greater than 1/10 acre of waters of the United States. This permit does not authorize stream channelization, and the authorized activities must not cause more than minimal changes to the hydraulic flow characteristics of the stream, increase flooding, or cause more than minimal degradation of water quality of any stream in accordance with General Conditions 9 and 21. This nationwide permit only authorizes activities with minimal adverse effects on the aquatic environment. The USACE may exert discretionary authority and require an Individual Permit if avoidance and minimization have not been adequately addressed, or if appropriate mitigation is inadequate.

In addition to any permits issued by the USACE, a Section 401 Water Quality Certification (WQC) is required in each state for construction activities which may result in a discharge into "Waters of the United States" or for which a federal permit or license is required. A Floodplain Construction Permit will also be required if construction includes impacting an area within a 100-year floodplain of any stream in the state. The WQC and Floodplain Construction Permit are both administered through the KDOW.

KDOW also requires a Groundwater Protection Plan for all construction activities. Any area disturbed due to construction should be managed for stream siltation from stormwater runoff. Construction sites greater than five acres will require the filing of a Notice of Intent to be covered under the Kentucky Pollution Discharge Elimination System's (KPDES) General Stormwater Permit. This permit requires the creation of an Erosion Control Plan.

4.2 Terrestrial Ecology and Threatened & Endangered Species

The Kentucky Division of Forestry (KDOF) indicated there are no current state forests or champion trees located within the study area (Appendix B). KDOF recommended protection of trees that will remain after completion of the proposed construction. Heavy equipment should not come into contact with the base of trees to prevent harm to the trunk

KYTC Environmental Overview, Harrodsburg Bypass, Mercer Co. (# 7-8344.00)

and surface roots. Construction traffic should also stay away from the driplines of trees. This will reduce the amount of soil compaction around trees that are to remain. Soil compaction leads to a reduction in the amount of available water for the trees, which can lead to increased stress. Stressed trees are more susceptible to disease and insect infestation. KDOF also recommends that additional trees be planted after construction. Any proposed planting should be selected according to trees already existing within the site.

The USFWS provides a list of endangered, threatened, and candidate species for Mercer County (Appendix B). The USFWS lists five aquatic federally endangered mussel species that all have historic occurrences and one candidate species in Mercer County (Table 1). The USFWS was notified of the proposed project. The USFWS typically expresses concern over erosion and sedimentation control, stream bank stabilization, and maintaining water quality for highway projects during and post-construction. Recommendations are made to reduce impacts to aquatic resources and endangered species and habitat. If recommendations cannot be followed, it was suggested that surveys be conducted for the federally listed species in the project vicinity.

Table 1. USFWS Database Results for the Mercer County Environmental Overview.

Status ^a	Scientific Name	Common Name
E(h)	<i>Cyprogenia stegaria</i>	Fanshell
E(h)	<i>Obovaria retusa</i>	Ring pink
E(h)	<i>Epioblasma torulosa rangiana</i>	Northern riffleshell
E(h)	<i>Pleurobema clava</i>	Clubshell
E(h)	<i>Pleurobema plenum</i>	Rough pigtoe
C	<i>Lesquerella globosa</i>	Globe bladderpod

a. U.S. Fish & Wildlife Service Status: E= Endangered, C= Candidate, h=Historic

Coordination of this project with the KDFWR in Frankfort, Kentucky, indicated no federally endangered species within the study area (Appendix B). However, KDFWR did list state endangered and threatened species for Mercer County (Table 2).

Table 2. KDFWR Database Results for the Mercer County Environmental Overview.

KY Status ^a	Scientific Name	Common Name
S	<i>Thryomanes bewickii</i>	Bewick's wren
S	<i>Cryptobranchus alleganiensis alleganiensis</i>	Eastern hellbender
T	<i>Myotis leibii</i>	Eastern small-footed myotis
T	<i>Chondestes grammacus</i>	Lark sparrow
S	<i>Rana pipiens</i>	Northern leopard frog

a. KSNPC Status: S= Special Concern, T= Threatened

KSNPC reviewed their Natural Heritage Program Database to determine if any endangered, threatened, or special concern plants and animals or exceptional communities monitored by the KSNPC occurred within or near the project area (Appendix B). KSNPC applied three buffers to analyze the project area:

KYTC Environmental Overview, Harrodsburg Bypass, Mercer Co. (# 7-8344.00)

1. 1-mile for all records
2. 5-mile for aquatic records and federally listed species
3. 10-mile for monitored mammals and birds

Four records were found within the 1-mile buffer. Within the 5-mile buffer, one federally listed species was identified. Twelve records for mammals and birds were found within the 10-mile buffer (Table 3).

Table 3. KSNPC NHPD Results for the Mercer County Environmental Overview.

Buffer Distance (mi)	Status ^a	Scientific Name	Common Name	Water Body/Habitat
1	-	<i>Arabis hirsuta</i>	Western Hairy Rockcress	Salt River
1	C	<i>Lesquerella globosa</i>	Globe Bladderpod	Salt River
1	-	<i>Malvastrum hispidum</i>	Hispid Falsemallow	Salt River
1	-	<i>Dolichonyx oryzivorus</i>	Bobolink	Salt River
5	C	<i>Lesquerella globosa</i>	Globe Bladderpod	Salt River
10	-	<i>Dolichonyx oryzivorus</i>	Bobolink	Salt River
10	-	<i>Accipiter striatus</i>	Sharp-shinned Hawk	Kentucky River/Big Eddy
10	SOMC	<i>Myotis leibii</i>	Eastern Small-footed Myotis	Kentucky River/Big Eddy
10	SOMC	<i>Aimophila aestivalis</i>	Bachman's Sparrow	Chaplin River
10	-	<i>Chondestes grammacus</i>	Lark Sparrow	Chaplin River
10	-	<i>Passerculus sandwichensis</i>	Savannah Sparrow	Mocks Branch
10	SOMC	<i>Thryomanes bewickii</i>	Bewick's Wren	Chaplin River
10	-	<i>Tyto alba</i>	Barn Owl	Spears Creek and Mocks Branch
10	LE	<i>Myotis grisescens</i>	Gray Myotis	Dix River/Herrington Lake
10	-	<i>Nycticeius humeralis</i>	Evening Bat	Dix River/Herrington Lake

a. USESA – U.S. Fish & Wildlife Service Status: LE= Listed Endangered, C= Candidate, SOMC = Species of Management Concern

4.2.1 Karst Areas

According to the Kentucky Division of Water (KDOW) Groundwater Branch, the study area is composed of soluble rocks of the Clays Ferry Formation on hilltops and Lexington Limestones in the valley. These karst aquifers are groundwater recharge areas comprising most of the surface terrain of the study area. KDOW reported the following observations of the study area (Appendix B):

- Groundwater tracer tests conducted on Humane Spring, which is just east of the study area, but whose basin is within the northeastern portion of the study area.

-
- Groundwater tracer tests also conducted on Votah Spring, which lies north of the study area, but whose basin may also be within the study area.
 - No spring or wellhead protection areas occur within the study area.
 - Additional karst springs may exist within the study area especially along Salt River and Town Creek.
 - “Limited karst groundwater basin development” exists throughout the study area in alluvial deposits and on the Clay Ferry Formation. These will be small springs formed along fractures or lineaments.

4.2.2 Special Designation Lands

No state nature preserves or wildlife management areas are present within the project corridor. No state or national parks and forests are located in the corridor.

5.0 SUMMARY AND CONCLUSIONS

Jurisdictional wetlands and streams are present within the corridor. This project will likely require permits from the USACE for all stream alterations/crossings or filling of any jurisdictional wetlands required for the completion of the proposed project.

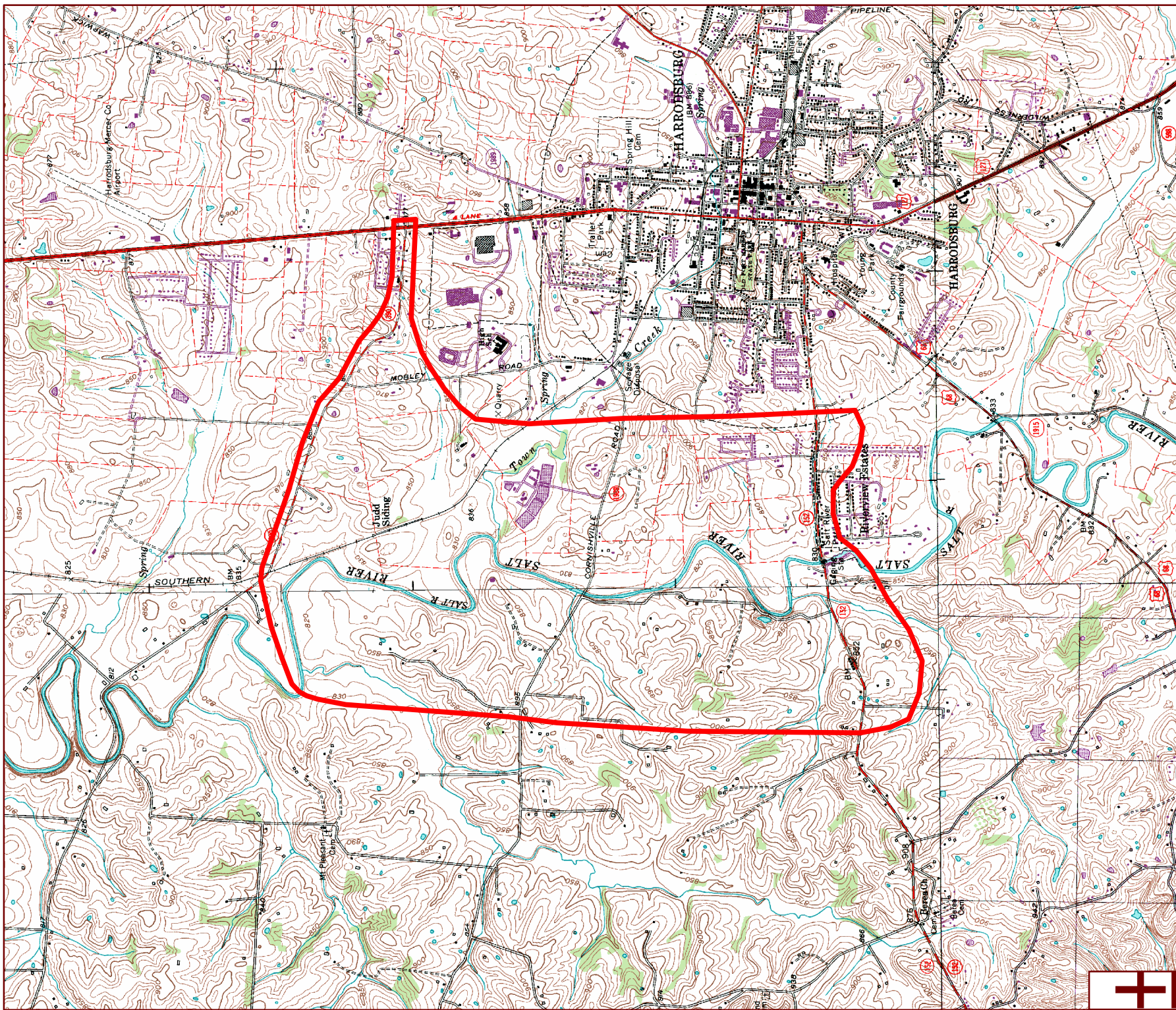
Five (5) federally endangered species and one (1) candidate species are known to occur within Mercer County. One (1) listed endangered species and three (3) KSNPC species of special concern/federal species of management concern occurs within ten miles of the study area.

It should be noted that this report is a preliminary ecological overview. More intensive field surveys will be required in order to assess the potential ecological impacts by this project when build alternatives are designed based on the findings of this preliminary research and field investigation.

LITERATURE CITED

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- Jones, R.L. 2005. Plant Life of Kentucky. An Illustrated Guide to the Vascular Flora. The University Press of Kentucky, Lexington. 834pp.
- KDOW (Kentucky Division of Water. 2001. Salt River Basins Assessment Reports. Frankfort, KY.
- Woods, A.J., Omernik, J.M., Martin, W.H., Pond, G.J., Andrews, W.M., Call, S.M., Comstock, J.A., and Taylor, D.D. 2002. Ecoregions of Kentucky (color poster with map, descriptive text, summary tables, and photographs): Reston, VA., U.S. Geological Survey (map scale 1:1,000,000).
- USDC (U.S. Department of Commerce). 2006. Local Climatological Data. National Climatic Data Center. Station of record: Bluegrass Airport, Lexington, KY.
- USEPA (U.S. Environmental Protection Agency). 2002. Level III Ecoregions of the Continental United States (revision of Omernik, 1987). Corvallis, Oregon, U.S. Environmental Protection Agency-National Health and Environmental Effects Research Laboratory, Map M-1, various scales.

APPENDIX A. FIGURES



Mercer
COUNTY:
Kentucky
STATE:



Project Area

1:35,000

Figure 1. PROJECT LOCATION MAP

Harrodsburg Bypass
(KYTC Project Item Number 7-8344.00)
USGS Harrodsburg and Cornishville, Kentucky Quadrangles



1003 E Main St
Frankfort, KY 40601
502-695-8060

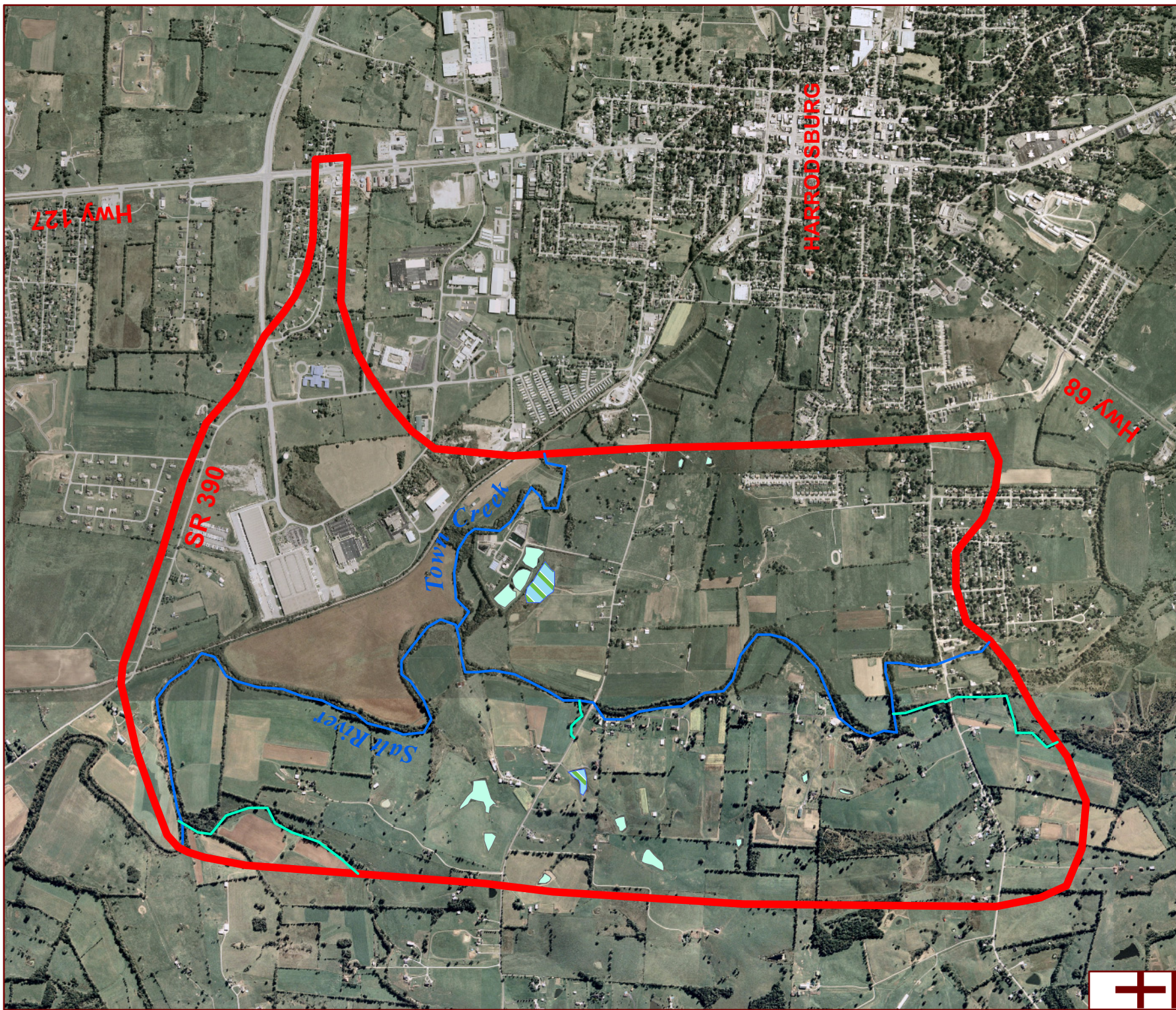





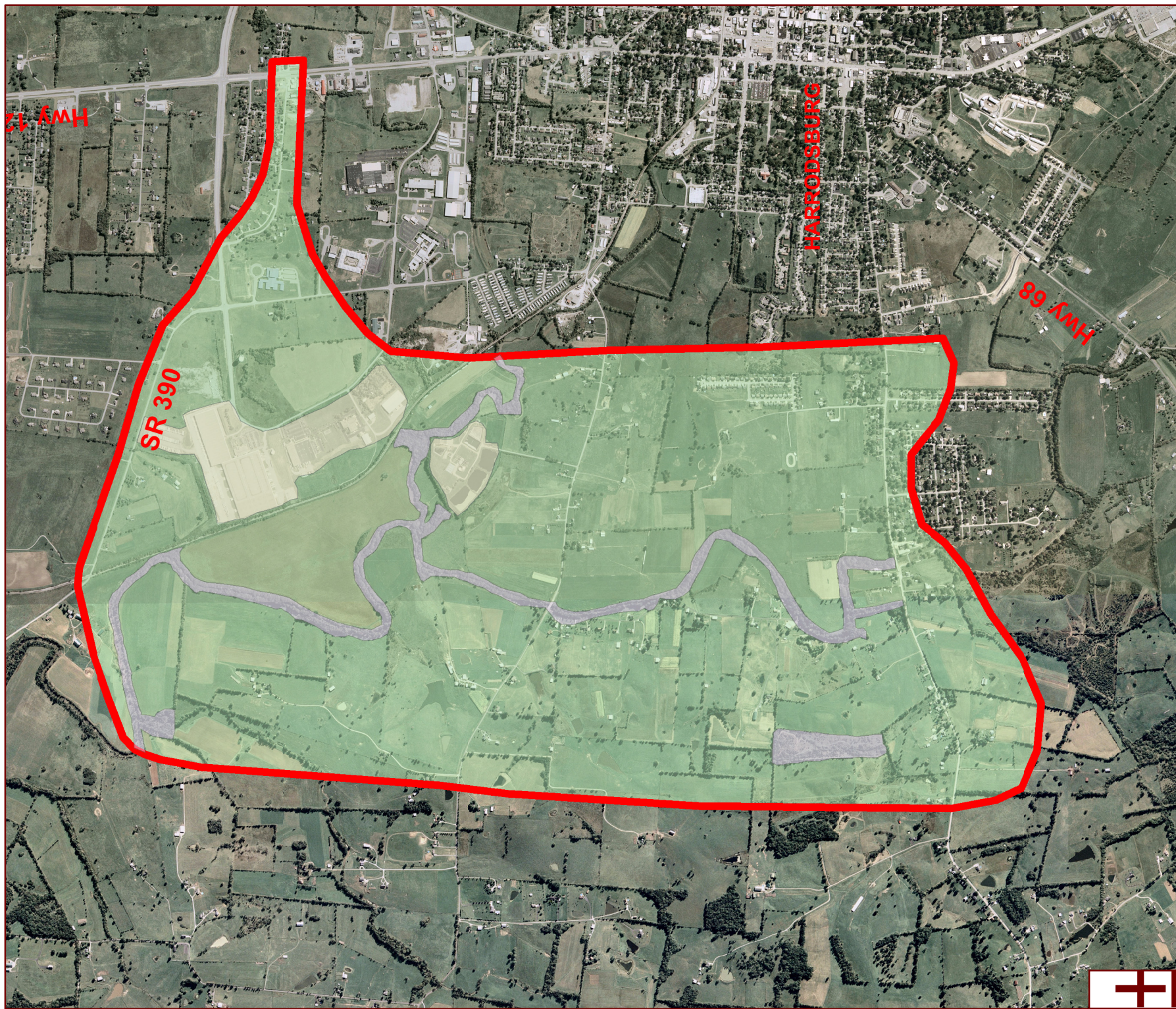


Figure 2. POTENTIAL JWD MAP
Harrodsburg Bypass
(KYTC Project Item Number 7-8344.00)
2004 NAIP DOQQ

 Project Area  Ponds  Wetlands Streams  Intermittent  Perennial	Mercer		
	COUNTY:	Mercer	
	STATE:	Kentucky	
			1:24,000



	Project Area	Mercer
	 Rural Residential/ Agricultural	COUNTY:
	 Forested	Kentucky
	 Industrial	STATE:
1:24,000		

Figure 3. LAND USE MAP
Harrodsburg Bypass
(KYTC Project Item Number 7-8344.00)
2004 NAIP DOQQ



1003 E Main St
Frankfort, KY 40601
502-695-8060

KYTC Environmental Overview, Harrodsburg Bypass, Mercer Co. (# 7-8344.00)

**APPENDIX B.
AGENCY COORDINATION**

Ernie Fletcher
Governor



Teresa J. Hill
Secretary
Environmental and Public
Protection Cabinet

Commonwealth of Kentucky
Kentucky State Nature Preserves Commission

Donald S. Dott, Jr.
Director

801 Schenkel Lane
Frankfort, Kentucky 40601-1403
502-573-2886 Voice
502-573-2355 Fax

September 6, 2007

Layna Thrush
Eco-Tech Consultants, Inc.
102 West Court Avenue
Jeffersonville, IN 47130

Data Request **08-006**

Dear Ms. Thrush:

This letter is in response to your data request of July 10, 2007 for the Proposed Harrodsburg Bypass project. We have reviewed our Natural Heritage Program Database to determine if any of the endangered, threatened, or special concern plants and animals or exemplary natural communities monitored by the Kentucky State Nature Preserves Commission occur near the project area on the Harrodsburg and Cornishville USGS Quadrangles, as shown on the map provided. Please see the attached reports for more information, which reflect analysis of the project area with three buffers applied:

- 1-mile for all records – 4 records
- 5-mile for aquatic records – no records
- 5-mile for federally listed species – 1 record
- 10-mile for mammals and birds – 12 records

The site is located within a karst landscape characterized by numerous sinkholes, underground conduits, or caves. Construction disturbance or release of pollutants within the specified area could easily cause contamination of groundwater. Caves are often associated with sensitive ecosystems and may provide habitat for a number of rare or endangered species. Cave organisms are heavily dependent on water quality, and steps should be taken to avoid introducing contaminants into the water system.

Lesquerella globosa (Globe Bladderpod, federal candidate, KSNPC Endangered) has been found in the area in the past. This plant has recently been designated as a candidate for listing by the United States Fish and Wildlife Service. The plant is found on calcareous rocks and barrens, and wooded cliff edges. Surveys for this species should be conducted prior to disturbance of the site.

Data Request 08-006
 September 6, 2007
 Page 2

Myotis grisescens (Gray myotis, federally listed endangered, KSNPC threatened) and *Myotis leibii* (Eastern small-footed myotis, federal species of management concern, KSNPC threatened) have been known to occur within ten miles of the study area. A thorough survey for this species should be conducted by a qualified biologist if suitable habitat will be disturbed. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat. Summer foraging habitats include upland forests, bottomland forests and riparian corridors. Suitable roost and winter sites include sandstone and limestone caves, rockhouses, clifflines, auger holes, and abandoned mines. In order to avoid impacts to bats, bottomland forests and riparian corridors, particularly near caves, should not be disturbed.

Nycticeius humeralis (Evening Bat, KSNPC special concern) occurs within your search area. Summer habitats include bottomland forests, swamps, and riparian corridors. In order to avoid impacts to bats, a thorough survey should be conducted. The survey should include a search for potential roost and winter sites, and a mistnetting census at numerous points within the proposed corridor, particularly in preferred summer habitat.

Accipiter striatus (Sharp-shinned Hawk, KSNPC special concern) can be found in a variety of habitats from semi-open farmland to woodland openings and borders. This species typically nests in areas of extensive forest, especially areas with some evergreen trees.

Aimophila aestivalis (Bachman's Sparrow, KSNPC Endangered, federal species of management concern) is associated with open pine woods with scattered bushes or understory, brushy or overgrown hillsides, overgrown fields, and grassy orchards.

Dolichonyx oryzivorus (Bobolink, KSNPC special concern) is generally associated with tall grass areas, flooded meadows, prairies, grain and hay fields.

Passerculus sandwichensis (Savannah Sparrow, KSNPC special concern) can be found in sparsely vegetated grasslands such as pastures.

Thyromanes bewickii (Bewick's Wren, KSNPC special concern, federal species of management concern) can be found in brushy areas, thickets, scrub in open country, open and riparian woodlands, and in country towns and farms.

Tyto alba (Barn Owl, KSNPC special concern) can be found in hollow trees, old buildings, barns, silos and other abandoned structures. Before demolition of existing structures, it should be determined that these birds are not present.

I would like to take this opportunity to remind you of the terms of the data request license, which you agreed upon in order to submit your request. The license agreement states "Data and data products received from the Kentucky State Nature Preserves Commission, including any portion thereof, may not be reproduced in any form or by any means without the express written authorization of the Kentucky State Nature Preserves Commission." The exact location of plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission,



Data Request 08-006
September 6, 2007
Page 3

may not be released in any document or correspondence. These products are provided on a temporary basis for the express project (described above) of the requester, and may not be redistributed, resold or copied without the written permission of the Kentucky State Nature Preserves Commission's Data Manager (801 Schenkel Lane, Frankfort, KY, 40601. Phone: (502) 573-2886).

Please note that the quantity and quality of data collected by the Kentucky Natural Heritage Program are dependent on the research and observations of many individuals and organizations. In most cases, this information is not the result of comprehensive or site-specific field surveys; many natural areas in Kentucky have never been thoroughly surveyed, and new plants and animals are still being discovered. For these reasons, the Kentucky Natural Heritage Program cannot provide a definitive statement on the presence, absence, or condition of biological elements in any part of Kentucky. Heritage reports summarize the existing information known to the Kentucky Natural Heritage Program at the time of the request regarding the biological elements or locations in question. They should never be regarded as final statements on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments. We would greatly appreciate receiving any pertinent information obtained as a result of on-site surveys.

If you have any questions or if I can be of further assistance, please do not hesitate to contact me.

Sincerely,

Sara Hines
Data Manager

SLD/SGH

Enclosures: Data Report and Interpretation Key

EOCODE	SNAME	SCOMNAME	GRANK	SRANK	SPROT	USFSA	OTHER STATUS	IDENT	LASTOB	PREC FORANK	COUNTY	QUADRANGLE	7.5 MINUTE LAT	LONG	EPA WATERBODY	DIRECTIONS	HABITAT
--------	-------	----------	-------	-------	-------	-------	-----------------	-------	--------	----------------	--------	------------	-------------------	------	---------------	------------	---------

Vascular Plants

PDBRA060U0*001	<i>Arabis hirsuta</i>	Western Hairy Rockcress	G5	S1S2	T			Y	1989-06- EARLY	M	E	Mercer	Danville	374326N	0845308W	05140102010 - Salt River Harrodsburg) 05140103110 - Chaplin River (Fairview - Perryville)	SAVANNA REMANANT ON US 68 TO PERRYVILLE.	Dry rocky woods.
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PDBRA1N0N0*024	<i>Lesquerella globosa</i>	Globe Bladderpod	G2	S1	E	C		Y	1916-05-13	G	H	Mercer	Danville	374557N	0844525W	05100205210 - Shaker Creek 05100205205 - Mocks Branch 05100205140 - Kentucky River/Big Eddy 05140102010 - Salt River Harrodsburg) 05100205170 - Dix River/Herrington Lake	BURGIN, DRY BANKS.	Calcareous rocks and barrens, wooded cliff edges.
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PDMAL0S060*002	<i>Malvastrum hispidum</i>	Hispid Falsemallow	G3G5	S2?	T			G	F	G		Mercer	Garrard	374557N	0844525W	05100205140 - Kentucky River/Big Eddy 05140102010 - Salt River Harrodsburg) 05100205210 - Shaker Creek 05100205205 - Mocks Branch 05100205170 - Dix River/Herrington Lake	BURGIN.	Dry open non-wooded areas such as prairies, both limestone and sandstone, glades, edges of bluffs, and barrens, sometimes open alluvial ground in valleys and along gravel bars (Steyermark 1963 in part); in KY, old fields.
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Breeding Birds

ABPBXA9010*017	<i>Dolichonyx oryzivorus</i>	Bobolink	G5	S2S3B	S			Y	2007-05-28	S	E			374816N	0845400W	Dorman Farm, on S side of KY 390, ca 0.65 air mi WNW of Salt River bridge.		
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THESE DATA ARE VALID ONLY ON THE DATE ON WHICH THE REPORT WAS GENERATED.
THESE DATA MAY ONLY BE USED FOR THE PROJECT NAMED ABOVE.

EOCODE	SNAME	SCOMNAME	GRANK	SRANK	SPROT	USESA	OTHER STATUS	IDENT	LASTOB	PREC FORANK	COUNTY	QUAD 7.5 MINUTE	LAT	LONG	EPA WATERBODY	DIRECTIONS	HABITAT
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PDBRA1N0N0*024	<i>Lesquerella globosa</i>	Globe Bladderpod	G2	S1	E	C		Y	1916-05-13	G	H	Harrodsburg	Danville	Jessamine	Boyle	Wilmore	Branch	05100205140 - Kentucky River/Big Eddy 05140102010 - Salt River Harrodsburg) 05100205170 - Dix River/Hermington Lake	BURGIN, DRY BANKS, Creek 05100205210 - Shaker 05100205205 - Mocks	374557N 0844525W	Calcareous rocks and barrens, wooded cliff edges.
----------------	----------------------------	------------------	----	----	---	---	--	---	------------	---	---	-------------	----------	-----------	-------	---------	--------	---	---	------------------	---

THESE DATA ARE VALID ONLY ON THE DATE ON WHICH THE REPORT WAS GENERATED.
THESE DATA MAY ONLY BE USED FOR THE PROJECT NAMED ABOVE.

EOCODE	SNAME	SCOMNAME	GRANK	SRANK	SPROT	USFSA	OTHER STATUS	IDENT	LASTOB	PREC FORANK	COUNTY	QUAD	7.5 MINUTE LAT	LONG	EPA WATERBODY	DIRECTIONS	HABITAT
--------	-------	----------	-------	-------	-------	-------	--------------	-------	--------	-------------	--------	------	----------------	------	---------------	------------	---------

ABNKC12020*047

Accipiter striatus

Sharp-shinned Hawk

G5

S3B,S4 N S

Y

1988-

G

E

Jessamine

Wilmore

05100205130 - Eddy Kentucky River/Big Jessamine Creek

05140103110 - Chaplin River (Fairview - Perryville) Co line in Washington Co.

05140103100 - Beech Creek (Willisburg)

05140103120 - Glens Perryville) Ashbrook Cardwell Mackville

0850160W

374630N

0845552W

05140103110 - Chaplin River (Fairview - Perryville)

Along Johnson Road, w/in 1.0 rd mi N and S of Johnson Creek.

Open pine woods with scattered bushes or understory, brushy or overgrown fields with thickets and brambles, grassy orchards.

(B83NAT01NA).

ABPBX91050*033

Amophila aestivalis

Bachman's Sparrow

G3

S1B E SOMC

Y

1948-06-09

G

X

Washington

Ashbrook Cardwell Mackville

05140103120 - Glens Perryville) Ashbrook Cardwell Mackville

05140103100 - Beech Creek (Willisburg)

05140103110 - Chaplin River (Fairview - Perryville)

Along Johnson Road, w/in 1.0 rd mi N and S of Johnson Creek.

Open situations with scattered bushes and trees, prairie, forest edge, orchards, fields with bushy borders, and savanna

(B83COM01NA).

ABPBX96010*022

Chondestes grammacus

Lark Sparrow

G5

S2S3B T

Y

1994-07

M

E

Mercer

Cornishville

05140103110 - Chaplin River (Fairview - Perryville)

Along Johnson Road, w/in 1.0 rd mi N and S of Johnson Creek.

Open situations with scattered bushes and trees, prairie, forest edge, orchards, fields with bushy borders, and savanna

(B83COM01NA).

ABPBXA9010*003

Doitichonyx oryzivorus

Bobolink

G5

S2S3B S

Y

1994-07

M

E

Boyle

Danville Junction City

05100205205 - Mocks Branch

05140102010 - Salt w/in ca 1.5 mi N of US Caldwell Lane, w/in 2.0 mi S of US 150 (003A) and along

05140102010 - Salt w/in ca 1.5 mi N of US Caldwell Lane, w/in 2.0 mi S of US 150 (003B).

Tall grass areas, flooded meadows, prairie, deep cultivated grains, alfalfa and clover fields. In migration and winter alka in rice fields, marshes, and open woody areas. (B83COM01NA).

THESE DATA ARE VALID ONLY ON THE DATE ON WHICH THE REPORT WAS GENERATED.

THESE DATA MAY ONLY BE USED FOR THE PROJECT NAMED ABOVE.

Provided to Eco-Tech

EPCODE	SNAME	SCOMNAME	GRANK	SRANK	SPROT	USESA	OTHER STATUS	IDENT	LASTOB	PREC FORANK	COUNTY	7.5 MINUTE QUADRANGLE	LAT	LONG	EPA WATERBODY	DIRECTIONS	HABITAT
--------	-------	----------	-------	-------	-------	-------	--------------	-------	--------	-------------	--------	-----------------------	-----	------	---------------	------------	---------

ABPBXA9010*017	<i>Dolichonyx oryzivorus</i>	Bobolink	G5	S2S3B	S			Y	2007-05-28	S	E		374816N	0845400W		Dorman Farm, on S side of KY 390, ca 0.65 air mi WNW of Salt River bridge.	Open areas, especially grasslands, tundra, meadows, bogs, farmlands, grassy areas with scattered bushes, and marshes in the Belting and Rostratus Groups (subtropical and temperate zones) (B83COM01NA).
ABPBX99010*005	<i>Passerculus sandwichensis</i>	Savannah Sparrow	G5	S2S3B, S2S3N	S			Y	1991-summer	S	E	Boyle	Danville	373944N 0844845W	Branch 05100205205 - Mocks	Along Blue Grass Road, ca. 1.1 rd mi N of Jct. US 150, 0.1 mi after 90 degree left turn.	Open areas, especially grasslands, tundra, meadows, bogs, farmlands, grassy areas with scattered bushes, and marshes in the Belting and Rostratus Groups (subtropical and temperate zones) (B83COM01NA).
ABPBG07010*044	<i>Thryomanes bewickii</i>	Bewick's Wren	G5	S3B	S	SOMC		Y	1990-06-10	S	E	Mercer	MacKville	374128N 0850025W	05140103110 - Chaplin River (Farview - Perryville)	Antioch Church, at jct Falls Run Road and Mackville Road.	Brushy areas, thickets and scrub in open country, open and riparian woodland, and chaparral, more commonly in arid regions but locally also in humid areas (subtropical and temperate zones) (B83COM01NA). Found in country towns and farms.

ABNSA01010*005	<i>Tyto alba</i>	Barn Owl	G5	S3	S			Y	1991	M	E	Boyle	Danville	373906N 0844656W	05100205200 - Spears Creek and Mocks Branch 05100205190 - Clarks Run	Danville, along Maple Avenue.	Open and partly open country in a wide variety of situations, often around human habitation (B83COM01NA). In northern winter often roosts in dense conifers; also roosts in nest boxes; if available (A85MAR01NA).
ABNSA01010*020	<i>Tyto alba</i>	Barn Owl	G5	S3	S			Y	1990	G	E	Jessamine	Wilmore	374848N 0843847W	05100205140 - Kentucky River/Big Eddy 05100205130 - Jessamine Creek	CE block of quad.	

THESE DATA ARE VALID ONLY ON THE DATE ON WHICH THE REPORT WAS GENERATED.
THESE DATA MAY ONLY BE USED FOR THE PROJECT NAMED ABOVE.

EOCODE	SNAME	SCOMNAME	GRANK	SRANK	SPROT	USESA	OTHER STATUS	IDENT	LASTOB	PREC FORANK	COUNTY	QUADRANGLE	7.5 MINUTE LAT	LONG	EPA WATERBODY	DIRECTIONS	HABITAT
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SENSITIVE ELEMENTS: Locational information for sensitive plants, animals, and natural communities, if released by the Kentucky State Nature Preserves Commission, may not be released in any document or correspondence. Please refer to the Data License Agreement for a full description of rights and restrictions.

Mammals

AMACCC01040*025	<i>Myotis grisescens</i>	Gray Myotis	G3	S2	T	LE		Y	1989-07-07	S	H?	Garrard	Wilmore	CONTACT KSNPC	CONTACT KSNPC	River/Hermington Lake	SENSITIVE ELEMENT-CONTACT KSNPC	Gray bats use primarily caves throughout the year, although they move from one cave to another seasonally. Males and young of the year use different caves in summer than females.
AMACCC01130*043	<i>Myotis leibii</i>	Eastern Small-footed Myotis	G3	S2	T	SOMC		Y	1970s	S	H	Mercer	Wilmore	CONTACT KSNPC	CONTACT KSNPC	Kentucky River/Big Eddy	SENSITIVE ELEMENT-CONTACT KSNPC	Lib's bats use a variety of habitats. They occur in caves, mines, protected sites along clifflines, abandoned buildings, and are occasionally found roosting under rocks on the ground or on the floors of caves. Summer habitat is currently unknown, but may be similar sites.
AMACCC006010*009	<i>Nycticeius humeralis</i>	Evening Bat	G5	S3	S				1982-08-20	S	F	Garrard	Wilmore	CONTACT KSNPC	CONTACT KSNPC	River/Hermington Lake	SENSITIVE ELEMENT-CONTACT KSNPC	The evening bat is a colonial species that roosts in trees and houses. It apparently migrates southward in winter.

Data Key for Element and Occurrence Reports (v. 9.05)

Kentucky State Nature Preserves Commission
Natural Heritage Program Data Services

Many of the data fields on the enclosed report are easily understood. Other fields, however, use abbreviations and formats that are not always self-explanatory. A key to these fields follows. Your report may contain some or all of the following data fields.

BEARING:	Bearing in degrees from a center point to an occurrence's latitude and longitude. This field is masked for sensitive occurrences; contact KSNPC in these cases. Omitted for G, U, and Q precision occurrence records.
BESTSOURCE:	Best available reference to the occurrence: literature citation, collector, collection number, museum or herbarium code, etc.
COMMENTS:	Additional information about the occurrence including identification, taxonomy, or date of occurrence.
DIRECTIONS:	Directions to an occurrence. This field is masked for sensitive occurrences; contact KSNPC in these cases.
DISTANCE:	Distance from a center point to an occurrence's latitude and longitude. Units coded as M (miles), K (kilometers), and F (feet). This field is masked for sensitive occurrences; contact KSNPC in these cases. Omitted for G, U, and Q precision occurrence records.
ELCODE:	Element (species) code.
EOCODE:	Element (species) code, occurrence number (last three digits), and state.
EODATA:	Occurrence population data: date of observation, number of individuals, health, size of colony, flowering data, etc.
EORANK:	Judgement of occurrence quality: A = excellent, B = good, C = marginal, D = poor, E = verified extant but quality not judged, O = obscure (not found at reported site but more searching needed), H = historically known from site but no known observation or collection since 1975, X = extirpated from site.
FIRSTOBS:	Year of first known observation or collection.
GENDESC:	Description of an occurrence's habitat.
GRANK:	Estimate of element abundance on a global scale: G1 = extremely rare, G2 = rare, G3 = uncommon, G4 = common, G5 = very common, GH = historically known and expected to be rediscovered, GU = uncertain, GX = extinct. Subspecies and variety abundances are coded with a 'T' suffix; the 'G' portion of the rank then refers to the entire species.
HABITAT:	General description of the element's habitat across its range.
IDENT:	Whether the identification has been checked by a reliable individual and is believed to be correctly identified: Y = identification confirmed and believed correct, N = No, identification determined to be wrong despite reports to the contrary, ? = Whether identification is correct or not is confusing or disputed, blank or U = unknown whether identification correct or not, assumed correct.
KSNPC:	Kentucky State Nature Preserves Commission status: N or blank = none, E = endangered, T = threatened, S = special concern, H = historic, X = extirpated.
LASTOBS:	Year(-month-date) of most recent known observation or collection.
LAT:	Latitude. This field is masked for sensitive occurrences; contact KSNPC in these cases.
LONG:	Omitted for G, U and Q precision occurrences.
PREC:	Longitude. This field is masked for sensitive occurrences; contact KSNPC in these cases. Omitted for G, U and Q precision occurrences.
PRECISION:	See PRECISION.
	Precision of the latitude, longitude, directions, and plotted location: S = location accurate to within three seconds of latitude-longitude, M = location accurate to within one minute of latitude-longitude, G = precision within about 8 km or 5 miles, or to place name precision only, Q = element known from the quadrangle but site-specific locations are not recorded by KSNPC because the species may be relatively frequent on the

quadrangle or is known to frequently move, U or blank = accuracy of location unknown or not specified.

The accuracy of an occurrence's location is designated by the precision code assigned to the record. Only 'S' precision occurrence records are reliably mapped at or near their precise locations. While an attempt is made to map 'M' precision occurrences as accurately as possible, the plotted locations, lat, long, directions, bearing, and distance data fields may or may not be correct. 'G' and 'Q' precision occurrence locations are very unreliable and only should be used to indicate the possibility that the species is in the area.

SPROT: See KSNPC.

SRANK: Estimate of element abundance in Kentucky: S1 = extremely rare, S2 = rare, S3 = uncommon, S4 = many occurrences, S5 = very common, SA = accidental in state, SE = exotic, SH = historically known in state, SN = migratory or nonbreeding, SR = reported but without persuasive documentation, SRF = reported falsely in literature, SU = uncertain, SX = extirpated.

USES: U.S. Fish and Wildlife Service status: N or blank = none, LT = listed as threatened, LE = listed as endangered, C=Candidate.

OTHER STATUS: SOMC = Designated by the U.S. Fish and Wildlife Service as a Species of Management Concern.

WATERBODY: Name of the 11-digit Hydrologic Unit Code EPA Waterbody in which the occurrence is plotted.

WATERSHED: See WATERBODY.

Layna Thrush

From: Lee Droppelman
Sent: Monday, July 23, 2007 9:59 PM
To: Layna Thrush
Subject: Fw: Project Item Number 7-8344.00
Attachments: image002.gif

Sent from my Verizon Wireless BlackBerry

-----Original Message-----

From: "Ray, Joe (EPPC DEP DOW)" <Joe.Ray@ky.gov>

Date: Thu, 19 Jul 2007 13:03:40

To: <ldroppelman@ecotechinc.com>

Cc: "Shuttleworth, John (EPPC DEP DOW)" <John.Shuttleworth@ky.gov>

Subject: Project Item Number 7-8344.00

Please forward to:

Layna Thrush
 Project Scientist
 Echo-Tech Consultants
 1003 East Main Street
 Frankfort, KY 40601

RE: REQUEST FOR STANDARD OCCURRENCE REPORT FOR THE PROPOSED HARRODSBURG BYPASS PROJECT, MERCER COUNTY, KENTUCKY (KYTC Project Item Number 7-8344.00)

The project area is composed of soluble rocks of the Clays Ferry Formation on the hilltops, down through the Lexington Limestones, including the Tanglewood Limestone Member in local valleys. These soluble rocks develop karst groundwater drainage, both in local and regional scale. These local karst basins comprise the "karst aquifers" of the area. Below is a clip from the Harrodsburg Karst Atlas Sheet (Currrens and others, 2003, Mapped Karst Groundwater Basins in the Harrodsburg 30 x 60 Minute Quadrangle, Map and Chart 58, Series XII), which basically matches the area of your Figure 1. The white portions of the map depict areas of "potential karst groundwater basin development". Humane Spring (9000-0527) is shown with groundwater tracer tests depicted with red lines and an arrowhead. The estimated basin boundary is illustrated with green dashes. Part of the outlined project area incorporates the northern fringe of this karst basin, but excludes the spring itself (in the past, Humane Spring has been contaminated by trichloroethene (TCE) from the Hallmack Facility and hydrocarbons from the adjacent Mercer County Garage). Also, a fragment of the basin of Votah Spring (9000-1203) lies just to the north, and is illustrated with green dashed lines and part of a red flow line. The project area may include part of the southern fringe of this karst basin.

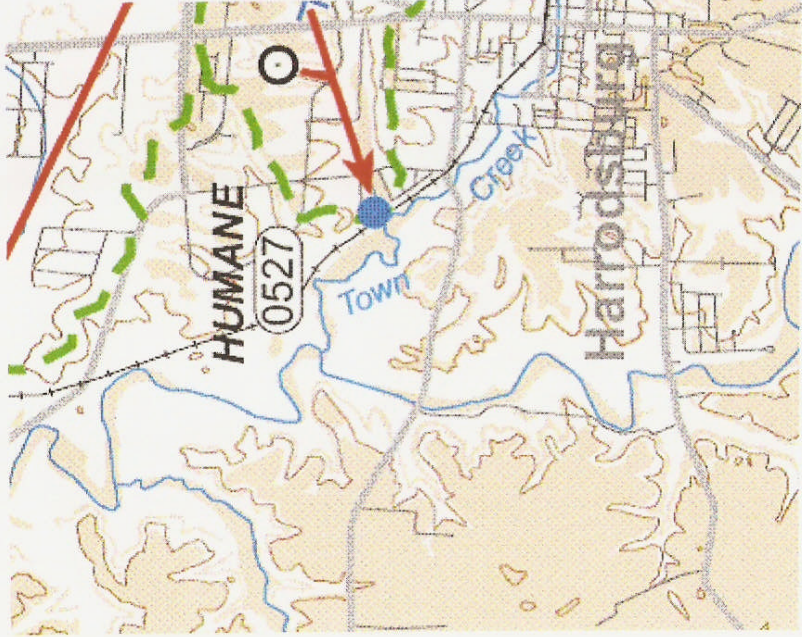
Otherwise, no additional karst data are available for the project area. However, additional karst springs will exist within the boundary. For example, a sinking stream is shown on the 1:24,000 topographic map, just northeast of the confluence of Salt River and Town Creek. This sinking stream will resurface as a spring or springs along Salt River or Town Creek. The watershed of this unmapped spring may be affected by runoff from the project area. Likewise, additional small springs will exist along the Salt River.

The light brown in this map indicates areas of "limited karst groundwater basin development", in alluvial deposits and on the Clays Ferry Formation. Although the Clays Ferry inter-bedded limestone and shale does not produce large springs, small karst-spring basins do develop in this formation, especially along fractures or lineaments.

Consequently, no springs are recorded within the delineated project area, although some springs exist that remain un-inventoried. Also, no domestic water wells are recorded for the area, but some older wells may exist.

As usual, a Groundwater Protection Plan (401 KAR 5:037) is required for highway construction activities. Stormwater runoff from disturbed areas must be managed to reduce siltation of the waters of the Commonwealth. Please reply if you have any questions or comments. Thank you.

Joseph A. Ray, P.G.
Groundwater Branch
Division of Water
14 Reilly Road
Frankfort, KY 40601
(502) 564-3410 ext. 644
FAX (502) 564-9899
<<mailto:joe.ray@ky.gov>> joe.ray@ky.gov



Layna Thrush

From: Olszowy, Diana (EPPC DNR DOF) [Diana.Olszowy@ky.gov]
Sent: Thursday, July 26, 2007 2:12 PM
To: Layna Thrush
Subject: KYTC Project Item #7-8322.00
Attachments: selecting and planting trees.pdf

This e-mail serves as a standard occurrence report for the proposed Harrodsburg Bypass project being initiated in Mercer County. There are currently no state forests or champion trees located in the project study area. However, special care should be taken around existing trees that will remain after the construction is complete. Heavy equipment should be kept away from the base of the tree to prevent wounding of the trunk or surface roots. Construction traffic should be routed away from the dripline of the tree to lessen the severity of soil compaction. Compacted soil reduces the amount of water available to the tree, and this lack of water can cause added stress. Stressed trees are vulnerable to insect and disease infestation.

After completion of the project, consider planting additional trees in the landscape. Trees selected should be matched to the site. I have enclosed a publication entitled "Selecting and Planting Trees," which will assist in determining the correct species for the correct site conditions.

If you need further assistance, please contact Sarah C. Gracey, State Urban Forester, at 502-564-4496.

Diana Olszowy
Kentucky Division of Forestry
diana.olszowy@ky.gov



KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES COMMERCE CABINET

Ernie Fletcher
Governor

#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

George Ward
Secretary

Dr. Jonathan W. Gassett
Commissioner

Layna Thrush
Eco-Tech Consultants
1003 East Main Street
Frankfort, KY 40601

RE: Harrodsburg Bypass Project
KYTC Item No. 7-8344.00
Harrodsburg, Mercer County, Kentucky

August 6, 2007

Dear Ms. Thrush:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) have received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that no federal/state threatened and/or endangered fish and wildlife species are known to occur within close proximity to the project area. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions.

It appears that the proposed project has the potential to impact wetland habitats. KDFWR recommends that you look at the appropriate US Department of Interior National Wetland Inventory Map (NWI) and the appropriate county soil surveys to determine where the proposed project may impact wetlands. Additionally, field verification may be needed to determine the extent and quality of wetland habitats within the project area. Any planning should include measures designed to eliminate and/or reduce impacts to wetland habitats. If impacts cannot be avoided, mitigation should be properly designed and proposed to offset the losses. KDFWR will recommend, at a minimum, a 2:1 mitigation ratio for any permanent loss or degradation of wetland habitats.

KDFWR recommends that you contact the appropriate US Army Corps of Engineers office and the Kentucky Division of Water prior to any work within the waterways or wetland habitats of Kentucky. Additionally, KDFWR recommends the following for the portions of the project that impact streams:

- Channel changes located within the project area should incorporate natural stream channel design.
- If culverts are used, the culvert should be designed to allow the passage of aquatic organisms.
- Culverts should be designed so that degradation upstream and downstream of the culvert does not occur.
- To compensate for unavoidable impacts to streams, we recommend that possible stream mitigation sites be identified on-site or within the Upper Salt River drainage. Restoration of those sites should incorporate natural stream channel design along with the restoration of its associated riparian areas.
- Development/excavation during low flow period to minimize disturbances.
- Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt into area streams.



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ERNIE FLETCHER
GOVERNOR

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION

TERESA J. HILL
SECRETARY

DIVISION OF WATER
14 REILLY ROAD
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

17 July 2007

Ms. Layna Thrush
Eco-Tech Consultants
1003 East Main St.
Frankfort, KY 40601

Subject: Proposed US 127 Bypass Project, Mercer County, KY

Dear Ms. Thrush,

The proposed US 127 bypass project in Mercer County, KY does not influence any Wild Rivers, Outstanding State Resource Waters or known Exceptional Waters. After review of our database, I found ecological data for three Salt River stations within the project area. Enclosed please find these reports. If there are any questions please feel free to call (502-564-3410) or email (john.brumley@ky.gov) me.

Sincerely,

A handwritten signature in dark ink, reading "John F. Brumley".

John F. Brumley
Ecological Support Section
Water Quality Branch
Division of Water
14 Reilly Rd.
Frankfort, KY 40601
(502) 564-3410

Macroinvertebrates Sample Results Data

Station ID: DOW12017002	Ecoregion: INTERIOR PLATEAU
Basin: SALT	Stream Name: SALT RIVER
County: MERCER	Map Name: CORNISHVILLE
Catchment Area: 43	River Mile: 130.2
Lat Dec: 37.7603	Long Dec: -84.8772
Location: TEWMEY LANE	Stream Order: 4
Collection Date: 8/31/1989	

RepNum: 1	Collection Method: MULTI-HABITAT	Program: INT
ID By: S. CALL	Collector: S. CALL	
Final ID	Individuals	
Dugesia sp	24	
Ferrissia rivularis	1	
Elimia semicarinata	45	
Sphaerium fabale	2	
Sphaerium simile	1	
Heptagenia sp	1	
Stenacron interpunctatum	17	
Stenonema femoratum	5	
Tricorythodes sp	1	
Baetis intercalaris	37	
Proclleon sp	1	
Argia sp	1	
Enallagma divagans	2	
Ischnura posita	1	
Nasiaeschna pentacantha	2	
Ranatra nigra	1	
Belostoma flumineum	2	
Rheumatobates rileyi	1	
Trepobates subnitidus	1	
Hydroptila sp	1	
Cheumatopsyche sp	225	
Chimarra sp	1	
Peltodytes duodecimpunctatus	1	
Cyphon sp	3	
Tropisternus blatchleyi blatchleyi	1	
Hydroporus blanchardi	3	
Dubiraphia vittata	6	
Stenelmis crenata	16	
Stenelmis sexlineata	3	
Stenelmis sp(larvae)	25	
Anopheles sp	2	
Glyptotendipes sp	2	
Omisis sp (Epler)	2	
Polypedilum flavum	9	
Stenochironomus sp	1	
Thienemannimyia gp	8	
Lirceus fontinalis	15	
Orconectes rusticus	17	

Genus Richness: 35
 Genus EPT Index: 9
 Hilsenhoff Biotic Index (HBI): 5.651
 Modified Percent EPT: 13.14
 Percent Ephemeroptera: 12.73
 Percent Chironomidae: 4.517
 Percent Oligochaetes:

Percent Clingers: 63.44
 Total No of Individuals (TNI): 487

Species Richness: 38
 Species EPT Index: 9
 Percent EPT: 59.34
 Family Richness: 24
 Family EPT Richness: 6
 Family HBI (FBI): 5.41
 Average Tolerance Value: 6.69
 Percent Dominant Five: 73.1
 Percent Nutrient Tolerant: 80.49

56.77

Fair

Collection Date: 10/10/1995

RepNum: 1	Collection Method: MULTI-HABITAT	Program: INT
ID By: S. CALL, M. VOGEL	Collector: S. CALL ET AL.	
Final ID	Individuals	
Dugesia sp	6	
Ferrissia rivularis	4	
Elimia semicarinata	200	
Helisoma anceps anceps	1	
Pisidium sp	1	
Sphaerium fabale	2	
Sphaerium simile	3	
Eclipidrilus sp	3	
Branchiura sowerbyi	4	
Erpobdella punctata	1	
Paraleptophlebia sp	3	
Stenacron interpunctatum	82	
Stenonema femoratum	6	
Caenis latipennis	4	
Acerpenna pygmaea	2	
Baetis intercalaris	2	
Callibaetis sp	1	
Argia moesta	14	
Argia tibialis	4	
Enallagma divagans	3	
Ischnura sp	2	
Calopteryx maculata	3	
Mesovelgia mulsanti	2	
Sialis sp	1	
Cheumatopsyche sp	158	
Chimarra sp	8	
Psephenus herricki	48	
Dubiraphia vittata	23	
Stenelmis sexlineata	38	
Stenelmis sp(larvae)	83	
Anopheles sp	1	
Dicranota sp	1	
Corynoneura sp	2	
Glyptotendipes sp	3	
Orthocladius sp	1	
Polypedilum flavum	2	
Brachydeutera sp	1	
Crangonyx sp	1	
Lirceus fontinalis	62	
Orconectes rusticus	10	

Genus Richness: 37
 Genus EPT Index: 9
 Hilsenhoff Biotic Index (HBI): 5.58
 Modified Percent EPT: 13.57
 Percent Ephemeroptera: 12.56
 Percent Chironomidae: 1.005
 Percent Oligochaetes: 1.01
 Percent Clingers: 56.65
 Total No of Individuals (TNI): 796

Species Richness: 40
 Species EPT Index: 9
 Percent EPT: 33.41
 Family Richness: 27
 Family EPT Richness: 6
 Family HBI (FBI): 5.41
 Average Tolerance Value: 6.47
 Percent Dominant Five: 73.49
 Percent Nutrient Tolerant: 85.80

56.38
Fair

Station ID: DOW12017004 Ecoregion: INTERIOR PLATEAU

Basin: SALT Stream Name: SALT RIVER

County: MERCER Map Name: CORNISHVILLE

Catchment Area: 61 River Mile: 125.3 Stream Order: 4

Lat Dec: 37.8 Long Dec: -84.8833

Location: DOWNSTREAM OF CONFLUENCE WITH TOWN CREEK

Collection Date: 10/10/1995

RepNum: 1 Collection Method: MULTI-HABITAT Program: INT

ID By: S. CALL, M. VOGEL Collector: S. CALL ET AL.

Final ID	Individuals
Dugesia sp	9
Ferrissia rivularis	33
Physella sp	1
Helisoma anceps anceps	1
Pisidium sp	1
Corbicula fluminea	11
UIWCS sp	1
Isonychia sp	1
Stenacron interpunctatum	30
Stenonema femoratum	19
Caenis latipennis	8
Baetis intercalaris	12
Argia sedula	1
Argia tibialis	35
Enallagma divagans	41
Calopteryx maculata	4
Nasiaeschna pentacantha	7
Neoplea striola	1
Belostoma lutarium	1
Corydalis cornutus	3
Cheumatopsyche sp	300
Chimarra sp	7
Dubiraphia vittata	18
Stenelmis sexlineata	43
Stenelmis sp(larvae)	68
Tipula sp	1
Chironomus decorus gp	2
Glyptotendipes meridionalis	6
Nanocladius sp	1
Polypedilum flavum	3
Polypedilum illinoense	2
Rheotanytarsus sp	1
Thienemanniella sp	1
Simulium vittatum	10
Hyalella azteca	11

Lirceus fontinalis
Orconectes rusticus

4
8

Genus Richness: 34

Species Richness: 37

Genus EPT Index: 7

Species EPT Index: 7

Hilsenhoff Biotic Index (HBI): 6.601

Percent EPT: 53.39

Modified Percent EPT: 10.91

Percent Ephemeroptera: 9.915

Percent Chironomidae: 2.266

Percent Oligochaetes: 0.14

Percent Clingers: 71.38

Total No of Individuals (TNI): 706

54.77

Fair

Family Richness: 26

Family EPT Richness: 6

Family HBI (FBI): 5.85

Average Tolerance Value: 6.94

Percent Dominant Five: 68.98

Percent Nutrient Tolerant: 67.56

Station ID: DOW12017005

Ecoregion: INTERIOR PLATEAU

Basin: SALT

Stream Name: SALT RIVER

County: MERCER

Map Name: HARRODSBURG

Catchment Area: 51

River Mile: 128.5

Lat Dec: 37.7797

Long Dec: -84.8711

Location: BELOW CONFLUENCE WITH TOWN CREEK

Stream Order: 4

Collection Date: 10/10/1995

RepNum: 1 Collection Method: MULTI-HABITAT Program: INT
ID By: S. CALL, M. VOGEL Collector: S. CALL ET AL.

Final ID	Individuals
Dugesia sp	5
Unid. Planariid sp	1
Ferrissia rivularis	34
Physella sp	2
Elimia semicarinata	45
Corbicula fluminea	5
Nais communis	1
Ilyodrilus templetoni	2
Limnodrilus hoffmeisteri	9
UIWCS sp	36
Helobdella stagnalis	1
Stenonema femoratum	3
Caenis latipennis	33
Argia sedula	2
Argia tibialis	10
Enallagma civile	4
Enallagma divagans	70
Enallagma signatum	3
Calopteryx maculata	2
Nannothemis bella	1
Neoplea striola	1
Trepobates sp	1
Cheumatopsyche sp	3
Peltodytes duodecimpunctatus	1
Peltodytes lengi	4
Berosus sp(larvae)	2
Stenelmis sp(larvae)	9
Chironomus decorus gp	95
Chironomus sp	5
Clinotanypus sp	1
Dicroutendipes simpsoni	4
Glyptotendipes sp	6
Goeldichironomus holoprasinus	9

Polypedium illinoense	3	
Lirceus fontinalis	5	
Orconectes rusticus	4	
Genus Richness:	31	Species Richness: 36
Genus EPT Index:	3	Species EPT Index: 3
Hilsenhoff Biotic Index (HBI):	7.65	Percent EPT: 9.241
Modified Percent EPT:	8.53	Family Richness: 21
Percent Ephemeroptera:	8.53	Family EPT Richness: 3
Percent Chironomidae:	29.14	Family HBI (FBI): 7.25
Percent Oligochaetes:	11.61	Average Tolerance Value: 8.03
Percent Clingers:	4.265	Percent Dominant Five: 66.35
Total No of Individuals (TNI):	422	Percent Nutrient Tolerant: 51.18
		27.22
		Poor

Diatoms Sample Results Data

Station ID: DOW12017002	Ecoregion: INTERIOR PLATEAU
Basin: SALT	Stream Name: SALT RIVER
County: MERCER	Map Name: CORNISHVILLE
Catchment Area: 43	River Mile: 130.2
Lat Dec: 37.7603	Long Dec: -84.8772
Location: TEWMEY LANE	Stream Order: 4
Collection Date: 8/31/1989	

RepNum: 1	Substrate: N	Program: INT
ID By: L. METZMEIER	Collector: L. METZMEIER	
Diatom Final ID		Individuals
Achnanthes pinnata		1
Achnanthidium minutissimum		3
Amphora perpusilla		6
Aulacoseira granulata		0
Caloneis bacillum		2
Cocconeis pediculus		3
Cocconeis placentula var. euglypta		12
Cyclotella atomus		5
Cyclotella pseudostelligera		0
Cymbella minuta		0
Diadesmis confervacea		0
Diatoma vulgare		0
Fistulifera pelliculosa		1
Gomphonema angustatum		8
Gomphonema parvulum		9
Gyrosigma spencerii var. curvula		0
Luticola mutica		0
Melosira varians		3
Navicula capitatoradiata		0
Navicula gregaria		0
Navicula hustedtii		0
Navicula menisculus var. upsaliensis		0
Navicula minima		316
Navicula radiosa var. tenella		69
Navicula secreta var. apiculata		0
Navicula subminuscula		12
Navicula symmetrica		1
Navicula tripunctata		1
Navicula viridula var. rostellata		0
Nitzschia amphibia		10
Nitzschia angustata var. acuta		1
Nitzschia dissipata		12
Nitzschia frustulum		0
Nitzschia palea		2
Nitzschia perminuta		1
Nitzschia sp.		3
Planothidium lanceolata		2
Rhoicosphenia curvata		15

Taxa Richness (TR): 38
Total No of Individuals (TNI): 498
Generic Richness: 19
Cymbella Group Richness (CGR): 1
Division Richness: 1
Fragillaria Group Richness (FGR):

Collection Date: 10/10/1995

Diversity (H): 0.659
Percent Sensitive Individuals: 11.44
Pollution Tolerance Index (PTI): 1.413
%Dominant Taxon: 63.454
%Cymbella/Achnanthes Complex: 1.2048
%Navicula+Nitzschia+Surirella : 86.145

24,34902
 Poor

<i>RepNum:</i> 1	<i>Substrate:</i> N	<i>Program:</i> INT
<i>ID By:</i> L. METZMEIER	<i>Collector:</i> S. CALL	
<i>Diatom Final ID</i>		<i>Individuals</i>
Achnanthidium minutissimum		5
Amphora ovalis var. pediculus		3
Amphora perpusilla		36
Aulacoseira granulata		5
Caloneis bacillum		1
Cocconeis pediculus		1
Cocconeis placentula var. euglypta		9
Cyclotella atomus		2
Cyclotella meneghiniana		10
Cyclotella pseudostelligera		4
Cyclotella stelligera		1
Diademsis confervacea		9
Fragilaria vaucheriae		0
Gomphonema abbreviatum		10
Gomphonema angustatum		0
Gomphonema augur		0
Gomphonema clevei		17
Gomphonema parvulum		4
Gyrosigma scalpoides		2
Luticola mutica		0
Melosira varians		1
Navicula arvensis		0
Navicula contenta var. biceps		0
Navicula cryptocephala		1
Navicula cryptocephala var. veneta		1
Navicula lanceolata		2
Navicula menisculus var. upsaliensis		6
Navicula minima		172
Navicula radiosa var. tenella		8
Navicula schroeteri var. escambia		3
Navicula seminulum		25
Navicula subminuscula		6
Navicula tripunctata var. schizonemoides		0
Nitzschia agnita		0
Nitzschia amphibia		99
Nitzschia capitellata		1
Nitzschia dissipata		7
Nitzschia frustulum		1
Nitzschia gracilis		1
Nitzschia inconspicua		2
Nitzschia palea		11
Nitzschia sp.1		0
Planorhithidium lanceolata		8
Planorhithidium lanceolata var. dubia		3

Rhoicosphenia curvata	16
Sellaphora pupula	2
Sellaphora pupula f. rostrata	1
Staurosira construens var. venter	1
Stephanodiscus subtilis	2
Synedra acus	1
Thalassiosira weissflogii	0

Taxa Richness (TR): 51
Total No of Individuals (TNI): 500

Generic Richness: 21

Cymbella Group Richness (CGR):

Division Richness: 1

Fragillaria Group Richness (FGR): 3

Diversity (H): 1.076

Percent Sensitive Individuals: 26.6

Pollution Tolerance Index (PTI): 1.602

%Dominant Taxon: 34.4

%Cymbella/Achnanthes Complex: 3.2

%Navicula+Nitschia+Surirella: 71.6

Station ID: DOW12017004 **Ecoregion:** INTERIOR PLATEAU
Basin: SALT **Stream Name:** SALT RIVER
County: MERCER **Map Name:** CORNISHVILLE
Catchment Area: 61 **River Mile:** 125.3 **Stream Order:** 4
Lat Dec: 37.8 **Long Dec:** -84.8833
Location: DOWNSTREAM OF CONFLUENCE WITH TOWN CREEK
Collection Date: 10/10/1995

RepNum: 1 **Substrate:** N **Program:** INT
ID By: L. METZMEIER **Collector:** S. CALL

Diatom Final ID	Individuals
Achnanthes lapponica var. ninckei	3
Achnanthidium minutissimum	3
Amphipleura pellucida	0
Amphora ovalis var. pediculus	7
Amphora perpusilla	31
Amphora submontana	1
Caloneis bacillum	1
Cocconeis pediculus	0
Cocconeis placentula var. euglypta	4
Cyclotella meneghiniana	2
Cymbella minuta	0
Cymbella tumida	2
Cymbella turgidula	0
Diademsis confervacea	0
Diploneis puella	0
Fistulifera pelliculosa	3
Fragilaria vaucheriae	2
Frustulia rhomboides var. amphipleuroides	0
Gomphonema gracile	1
Gomphonema parvulum	2
Gyrosigma scalpoides	0
Luticola mutica	9
Melosira varians	5
Navicula accomoda	0
Navicula capitatoradiata	1
Navicula cryptocephala	0
Navicula cryptocephala var. exilis	3
Navicula cryptocephala var. veneta	5
Navicula hustedtii	24
Navicula lanceolata	1
Navicula meniscus var. upsaliensis	0

Navicula minima	118
Navicula radiosa	0
Navicula radiosa var. tenella	23
Navicula schroeteri var. escambia	14
Navicula secreta var. apiculata	7
Navicula seminulum	20
Navicula tenelloides	18
Navicula tripunctata	0
Navicula tripunctata var. schizonemoides	7
Navicula viridula var. rostellata	15
Nitzschia amphibia	8
Nitzschia capitellata	1
Nitzschia chasei	2
Nitzschia coarctata	0
Nitzschia constricta	4
Nitzschia dissipata	101
Nitzschia hungarica	0
Nitzschia linearis	0
Nitzschia palea	13
Nitzschia perminuta	1
Nitzschia recta	0
Nitzschia sociabilis	14
Nitzschia sp.1	2
Nitzschia tropica	1
Pinnularia microstauroon	0
Planothidium lanceolata	0
Planothidium lanceolata var. dubia	0
Reimeria sinuata	1
Rhoicosphenia curvata	0
Staurosira construens var. venter	15
Surirella angustata	1
Surirella linearis var. helvetica	0
Surirella ovata	0
Thalassiosira weissflogii	3
Tryblionella victoriae	0
	2

Taxa Richness (TR): 66**Total No of Individuals (TND): 501****Generic Richness: 27****Cymbella Group Richness (CGR): 4****Division Richness: 1****Fragillaria Group Richness (FGR): 2****Diversity (H): 1.213****Percent Sensitive Individuals: 47.5****Pollution Tolerance Index (PTI): 2.139****%Dominant Taxon: 23.553****%Cymbella/Achnanthes Complex: 1.7964****%Navicula+Nitzschia+Surirella : 83.832**

45,4894

Fair

Station ID: DOW12017005**Ecoregion:** INTERIOR PLATEAU**Basin:** SALT**Stream Name:** SALT RIVER**County:** MERCER**Map Name:** HARRODSBURG**Catchment Area:** 51**River Mile:** 128.5**Lat Dec:** 37.7797**Long Dec:** -84.8711**Location:** BELOW CONFLUENCE WITH TOWN CREEK**Stream Order:** 4**Collection Date:** 10/10/1995**RepNum:** 1**Substrate:** N**ID By:** L. METZMEIER**Collector:** S. CALL**Program:** INT**Diatom Final ID****Individuals**

Achnanthidium minutissimum	5
Amphora ovalis var. pediculus	3
Amphora perpusilla	1

Tuesday, July 17, 2007

Page 4 of 6

<i>Amphora submontana</i>	1
<i>Caloneis bacillum</i>	0
<i>Cocconeis pediculus</i>	1
<i>Cocconeis placentula</i> var. <i>euglypta</i>	11
<i>Craticula cuspidata</i>	0
<i>Cyclotella atomus</i>	3
<i>Cyclotella meneghiniana</i>	2
<i>Cylindrotheca gracilis</i>	1
<i>Cymbella minuta</i>	0
<i>Diademsis confervacea</i>	17
<i>Diploneis puella</i>	0
<i>Fallacia pygmaea</i>	1
<i>Fistulifera pelliculosa</i>	22
<i>Gomphonema affine</i>	1
<i>Gomphonema angustatum</i>	2
<i>Gomphonema augur</i>	1
<i>Gomphonema gracile</i>	0
<i>Gomphonema parvulum</i>	18
<i>Gyrosigma spencerii</i> var. <i>curvula</i>	0
<i>Luticola mutica</i>	5
<i>Melosira varians</i>	3
<i>Navicula cryptocephala</i>	4
<i>Navicula cryptocephala</i> var. <i>veneta</i>	8
<i>Navicula hustedtii</i>	16
<i>Navicula lanceolata</i>	3
<i>Navicula menisculus</i> var. <i>upsaliensis</i>	0
<i>Navicula minima</i>	125
<i>Navicula secreta</i> var. <i>apiculata</i>	1
<i>Navicula seminulum</i>	33
<i>Navicula subminuscula</i>	74
<i>Navicula symmetrica</i>	0
<i>Navicula tripunctata</i>	1
<i>Navicula tripunctata</i> var. <i>schizonemoides</i>	4
<i>Navicula viridula</i> var. <i>linearis</i>	0
<i>Navicula viridula</i> var. <i>rostellata</i>	8
<i>Nitzschia acicularis</i>	1
<i>Nitzschia agnita</i>	2
<i>Nitzschia amphibia</i>	40
<i>Nitzschia constricta</i>	2
<i>Nitzschia dissipata</i>	0
<i>Nitzschia linearis</i>	0
<i>Nitzschia palea</i>	53
<i>Nitzschia perminuta</i>	2
<i>Nitzschia recta</i>	2
<i>Nitzschia</i> sp. I	1
<i>Nitzschia tropica</i>	1
<i>Pinnularia microstauroon</i>	1
<i>Planothidium lanceolata</i>	1
<i>Planothidium lanceolata</i> var. <i>dubia</i>	2
<i>Rhoicosphenia curvata</i>	7
<i>Sellaphora pupula</i>	4
<i>Staurosira construens</i> var. <i>venter</i>	5
<i>Surirella angustata</i>	0
<i>Surirella ovata</i>	0

Synedra ulna	0	
Thalassiosira weissflogii	1	
Tryblionella levidensis	0	
<hr/>		
<i>Taxa Richness (TR):</i> 60	<i>Diversity (H):</i> 1.183	
<i>Total No of Individuals (TNI):</i> 500	<i>Percent Sensitive Individuals:</i> 14.4	
<i>Generic Richness:</i> 27	<i>Pollution Tolerance Index (PTI):</i> 1.434	
<i>Cymbella Group Richness (CGR):</i> 1	<i>%Dominant Taxon:</i> 25	38% 34365
<i>Division Richness:</i> 1	<i>%Cymbella/Achnanthes Complex:</i> 1.6	poor
<i>Fragillaria Group Richness (FGR):</i> 2	<i>%Navicula+Nitschia+Surirella :</i> 86	

Fishes Sample Results Data

Station ID: DOW12017002 Ecoregion: INTERIOR PLATEAU
 Basin: SALT Stream Name: SALT RIVER
 County: MERCER Map Name: CORNISHVILLE
 Catchment Area: 43 River Mile: 130.2
 Lat Dec: 37.7603 Long Dec: -84.8772
 Location: TEWMEY LANE
 Stream Order: 4

Collection Date: 8/31/1989

RepNum: 1 Collection Method: SEINE
 ID By: SMATHERS Collector: CALL, COLTEN, COHN
 Duration: Program: INT

<u>Fish Final ID</u>	<u>Individuals</u>
Campostoma anomalum	2
Luxilus chrysocephalus	32
Lythrurus fasciolaris	35
Pimephales notatus	15
Cottus caroliniae	8
Lepomis macrochirus	24
Lepomis megalotis	2
Etheostoma blennioides	6
Etheostoma flabellare	13
Etheostoma nigrum	9

Native Species Richness: 10 Taxa Richness (TR): 10
 Darter + Madtom + Sculpin: 4 Total No of Individuals (TNI): 146
 Water Column Richness: 2 Percent Omnivores: 10.27 34
 Intolerant Richness: 1 Percent Insectivores excluding Tolerants: 50.00
 Top Carnivore Richness: 2 Percent Tolerants: 48.63
 Simple Lithophil Richness: 2 Percent Pioneers: 56.16 Fair
 Minnow Richness: 4 Percent Facultative Headwater: 85.61
 Headwater Richness: 2
 Darter Richness: 3

Collection Date: 10/10/1995

RepNum: 1 Collection Method: SEINE
 ID By: SMATHERS Collector: MILLS, ROTH, BESHOR
 Duration: Program: INT

<u>Fish Final ID</u>	<u>Individuals</u>
Campostoma anomalum	3
Hybopsis amblops	2
Luxilus chrysocephalus	42
Lythrurus fasciolaris	70
Notropis boops	1
Pimephales notatus	34
Cottus caroliniae	9
Lepomis humilis	2
Lepomis macrochirus	1
Lepomis megalotis	2
Micropterus punctulatus	4
Micropterus salmoides	1
Etheostoma blennioides	5
Etheostoma flabellare	4
Etheostoma nigrum	5

<i>Native Species Richness:</i> 15	<i>Taxa Richness (TR):</i> 15
<i>Darter + Madtom + Sculpin:</i> 4	<i>Total No of Individuals (TNI):</i> 185
<i>Water Column Richness:</i> 6	<i>Percent Omnivores:</i> 18.37
<i>Intolerant Richness:</i> 2	<i>Percent Insectivores excluding Tolerants:</i> 54.05
<i>Top Carnivore Richness:</i> 2	<i>Percent Tolerants:</i> 42.16
<i>Simple Lithophil Richness:</i> 4	<i>Percent Pioneers:</i> 46.48
<i>Minnow Richness:</i> 6	<i>Percent Facultative Headwater:</i> 92.97
<i>Headwater Richness:</i> 2	
<i>Darter Richness:</i> 3	

Station ID: DOW12017004 Ecoregion: INTERIOR PLATEAU
 Basin: SALT Stream Name: SALT RIVER
 County: MERCER Map Name: CORNISHVILLE
 Catchment Area: 61 River Mile: 125.3 Stream Order: 4
 Lat Dec: 37.8 Long Dec: -84.8833
 Location: DOWNSTREAM OF CONFLUENCE WITH TOWN CREEK
 Collection Date: 10/10/1995

RepNum: 1 Collection Method: SEINE
 ID By: SMATHERS Collector: MILLS, BESHOR, BRUMLEY
 Duration: Program: INT

<i>Fish Final ID</i>	<i>Individuals</i>
Camptostoma anomalum	9
Luxilus chrysocephalus	6
Lythrurus fasciolaris	116
Pimephales notatus	9
Semotilus atromaculatus	2
Gambusia affinis	3
Cottus caroliniae	2
Lepomis macrochirus	14
Lepomis megalotis	24
Etheostoma blennioides	8
Etheostoma flabellare	5

<i>Native Species Richness:</i> 11	<i>Taxa Richness (TR):</i> 11
<i>Darter + Madtom + Sculpin:</i> 3	<i>Total No of Individuals (TNI):</i> 198
<i>Water Column Richness:</i> 2	<i>Percent Omnivores:</i> 5.555
<i>Intolerant Richness:</i> 1	<i>Percent Insectivores excluding Tolerants:</i> 78.28
<i>Top Carnivore Richness:</i>	<i>Percent Tolerants:</i> 17.17
<i>Simple Lithophil Richness:</i> 2	<i>Percent Pioneers:</i> 27.77
<i>Minnow Richness:</i> 5	<i>Percent Facultative Headwater:</i> 95.45
<i>Headwater Richness:</i> 2	
<i>Darter Richness:</i> 2	

Station ID: DOW12017005 Ecoregion: INTERIOR PLATEAU
 Basin: SALT Stream Name: SALT RIVER
 County: MERCER Map Name: HARRODSBURG
 Catchment Area: 51 River Mile: 128.5 Stream Order: 4
 Lat Dec: 37.7797 Long Dec: -84.8711
 Location: BELOW CONFLUENCE WITH TOWN CREEK
 Collection Date: 10/10/1995

RepNum: 1 Collection Method: SEINE
 ID By: SMATHERS Collector: MILLS, COLTEN, BESHOR
 Duration: Program: INT

<i>Fish Final ID</i>	<i>Individuals</i>
Camptostoma anomalum	2
Luxilus chrysocephalus	3
Pimephales notatus	3

Gambusia affinis	2	
Cottus caroliniae	1	
Lepomis cyanellus	2	
Lepomis macrochirus	14	
Lepomis megalotis	61	
Micropterus salmoides	2	
Etheostoma blennioides	3	
Etheostoma flabellare	2	
<hr/>		
<i>Native Species Richness:</i>	11	<i>Taxa Richness (TR):</i>
<i>Darter + Madtom + Sculpin:</i>	3	<i>Total No of Individuals (TNI):</i>
<i>Water Column Richness:</i>	1	<i>Percent Omnivores:</i>
<i>Intolerant Richness:</i>	1	<i>Percent Insectivores excluding Tolerants:</i>
<i>Top Carnivore Richness:</i>	1	<i>Percent Tolerants:</i>
<i>Simple Lithophil Richness:</i>	2	<i>Percent Pioneers:</i>
<i>Minnow Richness:</i>	3	<i>Percent Facultative Headwater:</i>
<i>Headwater Richness:</i>	2	
<i>Darter Richness:</i>	2	

31
Pair

Chemistry Sample Results Data

Station ID: DOW12017002	Ecoregion: INTERIOR PLATEAU
Basin: SALT	Stream Name: SALT RIVER
County: MERCER	Map Name: CORNISHVILLE
Catchment Area: 43	River Mile: 130.2
Lat Dec: 37.7603	Long Dec: -84.8772
Location: TEWMEEY LANE	Stream Order: 4
Collection Date: 7/12/1989	

RepNum: 1	Equipment:	Program: INT
Collector: S. CALL, S. COHN, LC		
Chemical Parameter	Value	Collection Method
Alkalinity	142	Grab;reported
Ammonia	0.081	Grab;reported
Chloride	7.1	Grab;reported
Hardness	173	Grab;reported
Nitrate	1.02	Grab;reported
pH	8.4	Grab;reported
Specific Conductance	349	Grab;reported
TDS	206	Grab;reported
TKN	0.716	Grab;reported
Total P	0.2	Grab;reported
TSS	8	Grab;reported
Turbidity	5.3	Grab;reported

KYTC Environmental Overview, Harrodsburg Bypass, Mercer Co. (# 7-8344.00)

**APPENDIX C.
PHOTOGRAPHS**



Photo 1. Salt River looking downstream at the KY 152 bridge.



Photo 2. Salt River looking upstream from KY 1989 bridge.



Photo 3. Salt River near its confluence with Town Creek.



Photo 4. Town Creek west of the water treatment facility.



Photo 5. Town Creek behind water treatment facility.



Photo 6. Dam on Salt River upstream of the KY 152 bridge.



Photo 7. Mapped NWI PFO wetland in northwest corner of the study area that did not possess wetland hydrology.



Photo 8. Possible isolated wetland just south of the water treatment plant.



Photo 9. Two ponds located in the western portion of the study area near KY 1989.



Photo 10. Tributary to Salt River near the KY 152 bridge.



Photo 11. Tributary to Salt River in the northwest corner of the study area.




Photo 12. Typical pasture in the study area.



Photo 13. Industry within the study area.



Photo 14. Construction within the study area.

 U.S. Fish & Wildlife Service Kentucky Ecological Services Field Office						330 West Broadway, Rm 265 Frankfort, KY 40601 Phone: 502-695-0468 Fax: 502-695-1024					
Endangered, Threatened, & Candidate Species in _____ MERCER _____ County, KY											
Group	Species	Common name	Legal* Status	Known** Potential	Special Comments						
Mammals	<i>Myotis sodalis</i>	Indiana bat	E	P							
	<i>Myotis grisescens</i>	gray bat	E	K							
Mussels	<i>Pleurobema clava</i>	clubshell	E	K							
	<i>Cyprogenia stegaria</i>	fanshell	E	K							
	<i>Epiblasma torulosa</i>	Northern riffleshell	E	K							
	<i>Obovaria retusa</i>	ring pink	E	K							
Plants	<i>Lesquerella globosa</i>	globe bladderpod	C	K							
	<i>Trifolium stoloniferum</i>	running buffalo clover	E	P							

NOTES:

* Key to notations: E = Endangered, T = Threatened, C = Candidate, CH = Critical Habitat
 **Key to notations: K = Known occurrence record within the county, P = Potential for the species to occur within the county based upon historic range, proximity to known occurrence records, biological, and physiographic characteristics.

APPENDIX G

MEETING MINUTES AND SUMMARIES

Agenda
Harrodsburg N/W Bypass
Item # 7-8344.00
Scoping Study
Project Team Meeting # 1

Date: August 14, 2007
Time: 1:30 p.m.
Location: KYTC District 7, Lexington, KY

1. Introductions
2. Status of Study
 - a. Study Area
 - b. Scope of Work
 - c. Schedule
3. Other Projects in Area
 - a. Item 7-372.00 US 127 and US 68 Safety Projects (under construction)
 - b. Item 7-246.00 Reconstruct US 127/US 127 southern junction (design authorized)
 - c. Item 7-248.00 Reconstruct US 127/US 127 northern junction (design authorized)
4. Existing Conditions
 - a. Photo Tour of Area
 - b. Review Traffic, Crash, and HIS Information
 - c. 1991 Scoping Study
 - d. Review Environmental Footprint
5. Discuss Project Goals and Issues
6. Discuss Alternative Locations
7. Next Steps
 - a. Local Officials/Other Stakeholders meeting
 - b. Agency Coordination

MEETING MINUTES

Project: Harrodsburg N/W Bypass, Mercer County
Item Number 07-8344.00
Purpose: Project Team Meeting #1
Place: KYTC District 7 Office, Lexington
Meeting Date: August 14, 2007
Prepared By: Bruce S. Siria, P.E.
In Attendance:

Steve Ross	KYTC, Division of Planning
Jim Wilson	KYTC, Division of Planning
Thomas Witt	KYTC, Division of Planning
Stuart Goodpaster	KYTC, District 7 Planning
Randy Turner	KYTC, District 7 Planning
Tim Foreman	KYTC, Division of Environmental Analysis
Mary Murray	FHWA
Bruce Duncan	BGADD
Tom Springer	Qk4
Albert Zimmerman	Qk4
Bruce Siria	Qk4

Introductions: Following introductions from those listed above, Jim Wilson gave a brief history of the project, including an overview of a previous study conducted in 1991 which had recommended a “near-east” bypass of Harrodsburg; that bypass was constructed in 2001.

Power Point: Tom Springer facilitated a PowerPoint presentation that included a review of the project area; the scope of work, including the anticipated schedule and the public involvement plan; other KYTC projects in Mercer County; an overview of the existing highway information system data; a photo tour of the study area; traffic and crash data; and environmental overview, including land use, historical and archaeological resources, and aquatic/terrestrial resources. The presentation also included a blank slide titled Project Goals for the Project Team to complete. The final side was on the next steps, including an Elected Official/Stakeholders Meeting in September, and a pubic meeting in October.

Upcoming Local Officials/Other Stakeholders Meeting: An extensive discussion then ensued concerning several issues related to the first meeting of local officials and other project stakeholders:

- Bruce Duncan recommended that a preliminary list of project stakeholders should be prepared and discussed in advance with the Mayor and County Judge-Executive giving them opportunity to add to and/or delete from this proposed list. He also recommended having separate meetings with just the Mayor of Harrodsburg and the Mercer County Judge-Executive prior to the meetings with other project stakeholders.

Meeting Minutes

Item No.: 07-8344.00

Project Team Meeting #1, August 14, 2007

Page 2

- Suggestions for inclusion on a list of other project stakeholders included:
 - CEO of the local hospital
 - The Transportation Director, or other representative, of the Mercer County School System
 - A representative of the local industrial foundation
 - A representative of the local tourism commission
 - A representative of the local historical society
 - A representative of the Norfolk Southern railroad
 - John Crossfield (retired KYTC and current KTC ITS engineer and informal advisor to Judge-Executive Trisler)
 - A representative from city and/or county law enforcement
 - Wayne Davis or other representative of EMS
 - Chamber of Commerce
 - Historic Resources
- Bruce Duncan was going to attempt to schedule a meeting with the Judge/Executive the week of September 11-14.

Other Projects in Harrodsburg/Mercer County: A brief discussion ensued about other ongoing projects in the general study area:

- Item 7-372.00 US 127 and US 68 Safety Projects (under construction)
- Item 7-246.00 Reconstruct US 127/US 127B southern junction (design authorized)
- Item 7-248.00 Reconstruct US 127/US 127B northern junction (design authorized)

Cabinet officials were to see if additional information was available, especially regarding the project to redesign the northern junction of US 127/US 127B.

Existing Conditions: The consultant presented existing condition data for US 127 and the northernmost portion of the US 127 Bypass, KY 390 (US 127 Bypass extended), KY 1989 (Cornishville Street) and KY 152 (Mooreland Avenue). Issues of particular significance include railroad crossings on KY 1989 (albeit inside the nominal project study area) and on KY 390, narrow lane widths on KY 152, a portion of KY 390, and KY 1989, earthen shoulders on KY 1989, narrow shoulders on KY 152, limited passing opportunities on all roads except the US 127 Bypass, and high critical crash rate factors on KY 152 between Shewmaker Lane and Parkway Avenue and on KY 1989 at the railroad crossing.

Potential Historic Sites: The consultant provided a preliminary map of potential environmental constraints (attached) which included two potential historic properties completely within the study area, two additional potential historic properties partially within the study area, and one potential historic property just outside the study area.

Project Goals and Issues: After much discussion, the project team established the following draft project goals:

Meeting Minutes

Item No.: 07-8344.00

Project Team Meeting #1, August 14, 2007

Page 3

- Transportation System Connectivity
 - Schools and Industry
 - Emergency Response Travel Time
- Grade Separated RR Crossing
- Reduce Congestion on Area Roadways

RR Alternative: Steve Ross alerted the project team to an issue in Harrodsburg that will likely come up in discussions with local officials, other project stakeholders, and/or in public meetings. The location of a Norfolk Southern rail mainline through the city of Harrodsburg has long been an issue of local concern, both as it relates to transportation issues and on a broader basis. Steve indicated that a citizen proposal by a retired CSX railroad employee had been floated to local officials. That proposal would relocate the Norfolk Southern mainline service to a location that would begin northwest of Harrodsburg near the crossing of KY 390, then follow closely the vicinity of the Salt River southward to a point near the confluence of the Salt River and Dry Branch, then easterly crossing US 127 and tying back into the existing mainline, likely at a point south of Bellows Mill Road. Though this citizen suggestion has not been acted upon, neither has it been rejected outright by local officials. Those preliminary discussions have also mentioned the possibility of a parallel highway in the same general area. Such a highway proposal may form the basis of one alternative to be considered in this project.

End of Minutes

attachment: agenda



ENVIRONMENTAL CONSTRAINTS

Harrodsburg Northwest US 127
Bypass Alternatives Study
KYTC Item No. 7-8344.00

- | | | |
|--------------------------|-----------|-----------------------------|
| Water Source (Purchase) | HAZMAT | Potential Historic Property |
| Water Meter | Landfill | State Park |
| Water Pump Station | Airport | Ponds |
| Water Tank | Cemetery | Wetlands |
| Existing Waterline | Church | Potential Flood Area |
| Sanitary Treatment Plant | Park | Study Area |
| Lift Station | Hospitals | Sink Hole Area |
| Force Main Sewer | | Faults (24K) |
| Gravity Sewer | | |



Agenda
Harrodsburg N/W Bypass
Item # 7-8344.00
Scoping Study
Steering Committee Meeting # 1

Date: **October 22, 2007**
Time: **5:00 p.m.**
Location: **Mercer County Central Office Auditorium**

1. Introductions
2. Status of Study
 - a. Study Area
 - b. Scope of Work
 - c. Schedule
3. Other Projects in Area
 - a. Item 7-372.00 US 127 and US 68 Safety Projects (under construction)
 - b. Item 7-246.00 Reconstruct US 127/US 127 southern junction (design authorized)
 - c. Item 7-248.00 Reconstruct US 127/US 127 northern junction (design authorized)
4. Existing Conditions
 - a. Photo Tour of Area
 - b. Review Traffic, Crash, and HIS Information
 - c. 1991 Scoping Study
 - d. Review Environmental Footprint
5. Discuss Project Goals and Issues
6. Discuss Alternative Locations
7. Next Steps
 - a. Public Information Meeting
 - b. Agency Coordination



Architecture

Engineering

Construction

MEETING MINUTES

Project: Harrodsburg N/W Bypass, Mercer County

Item Number 07-8344.00

Purpose: Project Steering Committee Meeting #1

Place: Mercer County Schools Central Office Auditorium

Meeting Date: October 22, 2007

Prepared By: Bruce Siria

In Attendance:

John D. Trisler	Mercer County Judge/Executive
Lonnie Campbell	Mayor, City of Harrodsburg
Milward Dedman	Kentucky State Representative District 55
Donna Holiday	Representing Senator Dan Kelly, Ky Senate District 14
J. B. Claunch	Mercer County Magistrate
Kevin Perkins	Commissioner, City of Harrodsburg
Eddie Long	Commissioner, City of Harrodsburg
Mike Preston	Transportation Director, Mercer County Schools
Dave Weber	Acting Director, Mercer County EMA
Billy Humphrey	Supervisor, Mercer County Road Department
Dr. Earl Motzer	CEO, James B. Haggin Memorial Hospital
Linda McClanahan	UK Cooperative Extension Service, Mercer County Agent for Agriculture & Natural Resources
Bill Durham	E-911 Coordinator
Del White	Executive Director, Harrodsburg/Mercer County Industrial Development Authority
Shawn Moore	Harrodsburg/Mercer County Planning & Zoning Commission
John Crossfield	Mercer County Health Department Board
Stuart Goodpaster	KYTC, District 7 Planning
Randy Turner	KYTC, District 7 Planning
Jim Wilson	KYTC, Division of Planning
Thomas Witt	KYTC, Division of Planning
Bruce Duncan	BGADD
Tom Springer	Qk4
Albert Zimmerman	Qk4
Sherrill Smith	Qk4
Bruce Siria	Qk4

Introductions: Following introductions from those listed above, Jim Wilson gave a brief history of the project.

Meeting Minutes

Item No.: 07-8344.00

Project Steering Committee Meeting #1, October 22, 2007

Page 2

Power Point: Bruce Siria facilitated a PowerPoint presentation that included a review of the project area; the scope of work, including the anticipated schedule and the public involvement plan; other KYTC projects in Mercer County; an overview of the existing highway information system data; a photo tour of the study area; traffic and crash data; and environmental overview, including land use, historical and archaeological resources, and aquatic/terrestrial resources. The presentation also included a slide with preliminary Project Goals as defined by the KYTC Project Team. The final side outlined the next steps on the project.

Project Goals and Issues: The consultant presented the preliminary project goals that had been defined by the KYTC Project Team:

- Transportation System Connectivity
 - Schools and Industry
 - Emergency Response Travel Time
- Grade Separated RR Crossing
- Reduce Congestion on Area Roadways

The Project Steering Committee was then asked to review and comment on these preliminary project goals. The Committee felt that the goal regarding provision of transportation system connectivity for schools and industry should be amplified to stress that one objective would be to separate school and industry traffic to the extent possible. The Committee also felt that a goal should be added stating that any N/W Harrodsburg Bypass should be compatible with the concept of an ultimate extension beyond KY 152 to US 127 south. Thus, the revised project goals are now as follows:

- Transportation System Connectivity
 - Schools and Industries
 - Separate school & industry traffic
 - Emergency Response Travel Time
- Grade Separated RR Crossing
- Reduce Congestion on Area Roadways
- Compatible w/ Future S/W Bypass Possibility

Potential Corridors for Consideration: The consultant then provided Steering Committee members several copies of an aerial photograph of the project area depicting physical features and environmental constraints. Committee members were asked to show their ideas for a corridor for the Northwest Bypass. It was stressed that such lines should not be considered as specific alignments, but rather as center lines for one thousand foot wide corridors. After discussing this in small groups, each group was asked to present their ideas to the Committee as a whole. The consultant advised the Steering Committee members that each of their ideas would be considered and evaluated as part of the process of alternatives development and analysis.

Public Meeting: The consultant informed the Steering Committee of a meeting to solicit public input tentatively scheduled for November 15. That date was satisfactory to committee members. (Note: Subsequent to the Steering Committee meeting, KYTC determined that neither the Mercer County Schools Central Office Auditorium, the site for the committee meeting, nor the adjacent cafeteria, a

Meeting Minutes

Item No.: 07-8344.00

Project Steering Committee Meeting #1, October 22, 2007

Page 3

possible alternate site with better lighting that was discussed among KYTC and consultant personnel, were compliant with ADA accessibility requirements. Use of other school sites near the project area would require advance approval of the Mercer County Board of Education which likely could not be obtained in sufficient time to properly advertise for the public meeting. An alternative site near the Mercer County Schools Central Office Auditorium, the Lions Park Community Center, is believed to meet accessibility requirements and provide for adequate parking. However that facility was not available on November 15. A date of November 19 was ultimately set for the meeting.)

End of Minutes

SIGN - IN SHEET

INITIAL BOX	Member	Organization	Telephone	Address	Email
<i>JD</i>	John D. Trisler	Mercer County Judge/Executive	859-734-6300	134 S Main Street	itrisher@mercerry.com
	Lonnie Campbell	Mayor, City of Harrodsburg	859-734-7705	208 S Main Street	
<i>MD</i>	Milward Dedman	KY State Representative District 55	859-734-2880	300 S Chiles Street	mdedman@bellsouth.net
<i>DRH for Sen Kelly</i>	Dan Kelly	KY State Senator District 14	859-336-7723	324 W Main Street Springfield, KY 40069	donna.holiday@ky.gov (Denna Holiday)
<i>JBC</i>	J. B. Claunch	Magistrate, Mercer County Fiscal Court	859-865-2932	2750 Talmage-Mayo Road	
	Ronnie Sims	Magistrate, Mercer County Fiscal Court	859-734-2246	346 Rose Hill Lane	
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<i>EL</i>	Eddie Long	Commissioner, City of Harrodsburg	859-734-3518	810 E Lexington Street	7longbrauth@aol.com
	Bruce Johnson	Superintendent, Mercer County Schools	859-734-8400	371 E Lexington Street	
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<i>EC</i>	Dr. Earl Motzer	CEO, James B. Haggin Memorial Hospital	859-734-5441	464 Linden Ave.	emotzer@aol.com
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	Elizabeth Votaw	Plant Manager, Harrodsburg Waste Water Treatment Plant	859-734-2113	965 Cornishville Road	
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	David Wyatt	Norfolk Southern Railroad	404-529-1641		
	Bob Upchurch	Citizen At Large	859-734-7147	150 Spring Lake Drive	
<i>MC</i>	John Crossfield	Citizen At Large	859-865-4587	5606 Louisville Road	
	Amalie Preston	James B. Haggin Trust	859-865-2989	2072 Oregon Road Salvisa, KY 40372	

NOTIFICATION

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Debbie Jenkins Cook	The Harrodsburg Herald	859-734-2726	101 W Broadway Street	
Ann Harney	The Advocate Messenger	859-734-9032	247 Hurst Drive	
Chris Brewer	VP of Engineering, Bluegrass Energy Coop	859-885-2114 859-885-2854 (f)	PO Box 990 1201 Lexington Rd. Nicholasville, KY 40340	
Danny Collier	Inter County Energy, Engineer	859-936-7818 859-516-3314 c	1009 Hustonville Road Danville, KY 40423	
David Phelps	Inter County Energy, Engineer	859-936-7818 859-516-3314 c	1009 Hustonville Road Danville, KY 40423	

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JW	Jim Wilson	KYTC, Central Office			
TW	Thomas Witt	KYTC, Central Office			

BLUEGRASS AREA DEVELOPMENT DISTRICT

	Name	Organization	Telephone	Address	Email
BD	Bruce Duncan	BGADD	859-269-8021	699 Perimeter Drive Lexington, KY 40517	bduncan@bgadd.org

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	Name	Organization	Telephone	Address	Email
BD	Bruce Duncan	BGADD	859-269-8021	699 Perimeter Drive Lexington, KY 40517	bduncan@bgadd.org



COMMENT FORM

Public Information Meeting

November 19, 2007



Harrodsburg Northwest Bypass

Mercer County
From KY 152 North to US 127
KYTC Item No. 07-8344.00

We need your help! You can help us by completing this comment form. The information you provide will help us understand the transportation needs in your area, where problems might exist, determine where alternative corridors should or should not be located, identify areas to be avoided, and what impacts you believe any improvements would have on your community and region. Please complete this form and return it to Transportation Cabinet staff here tonight, or use the postage-paid envelope provided to submit your comments by December 7, 2007. We appreciate your participation and value your comments. Each person should complete a separate comment form.

Name: _____

Representing (title, agency, organization, if applicable): _____

Address: _____

Phone (optional): _____ **Date:** _____

All comments are welcome! We appreciate your participation!

1. How did you hear about this public meeting?

- | | | | |
|------------------------------------|----------------------------------|---|--|
| <input type="checkbox"/> Newspaper | <input type="checkbox"/> TV | <input type="checkbox"/> Friend/Family | <input type="checkbox"/> Do Not Recall |
| <input type="checkbox"/> Letter | <input type="checkbox"/> Radio | <input type="checkbox"/> Elected Official | |
| <input type="checkbox"/> Flyer | <input type="checkbox"/> Meeting | <input type="checkbox"/> Other | |

2. Do you feel there are transportation problems in northwest Harrodsburg that should be addressed with this project? (i.e., new Northwest Bypass, US 127 North, Industry Road, Cornishville Road, Mackville Road, Moberly Road, other north-south or east-west roads)

___ Yes ___ No

If "yes", please describe the problem, any specific locations, and types of improvements you feel are needed.

3. Do you think a new bypass route is needed in northwestern Harrodsburg?

___ Yes ___ No

Please explain why or why not.

4. How do you think a new bypass route in northwestern Harrodsburg would positively or negatively affect the human and natural environment in the community?

5. Are there sub-areas or sites in the project study area we should avoid (e.g., natural areas or habitats, cemeteries, recreational areas, historic or cultural sites, hazardous materials sites, scenic areas, viewsheds), or any additional environmental issues we need to address? Please identify and explain why.

6. Additional Comments.

Thank you for your comments. Use additional pages if necessary. If you fail to receive a postage-paid envelope, you may send your written comments to:

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Station: W5-05-01
Frankfort, KY 40622

**OR
CONTACT**

Jim Wilson, P.E.
Project Manager, Division of Planning
Kentucky Transportation Cabinet
Phone: (502) 564-7183
Fax: (502) 564-2865
E-Mail: jimmy.wilson@ky.gov

**Public Meeting Summary
Monday, November 19, 2007
Lions Park Community Center**

**Northwest Harrodsburg Bypass
Mercer County
KYTC Item No. 7-8344.00**

A public meeting was held on Monday, November 19, 2007 at the Lions Park Community Center from 4 p.m. to 7p.m. A total of 114 citizens and thirteen staff members signed in at the meeting. Handouts were provided to those signing in; these handouts included a map of the project study area and a survey questionnaire for respondents to offer their views about transportation needs in Harrodsburg in general and the concept of a northwest bypass in particular.

The main purposes of the public meeting were to 1) inform the public regarding the status of the study; and 2) solicit input on alternative corridors respondents would like to be considered. The meeting was conducted in an "open house" format. The attendees were given the opportunity to view exhibits and ask questions prior to offering their suggestions about proposed improvements. A Power Point presentation depicting the study area, scheduled study events, project issues and goals, and resource agency coordination, ran in a continuous loop for meeting attendees.

Large aerial photographs of the western half of Harrodsburg, including the northwest quadrant study area for this project and the southwest quadrant for information purposes, were shown and members of the public were asked to suggest their preferred location for the northwest bypass. Many participants also depicted their preference for locations in the southwest quadrant.

The attendees were asked to complete the survey questionnaire at the meeting. For those who did not complete the form at the meeting, postage-paid envelopes were provided for returning them to the Division of Planning. Summaries of the public comments received both at the meeting in through the mail, to date, are presented below.

The meeting was adjourned at approximately 7:00 p.m.

Summary of Responses and Comments

1. How did you hear about this public meeting?

18	Newspaper		TV	11	Friend/Family		Do Not Recall
	Letter		Radio	1	Elected Official	4	Multiple
1	Flyer	2	Meeting		Other		
					Chamber e-mail		

2. Do you feel there are transportation problems in northwest Harrodsburg that should be addressed with this project? (i.e., new Northwest Bypass, US 127 North, Industry Road, Cornishville Road, Mackville Road, Moberly Road, other north-south or east-west roads)

30 Yes 7 No

If "yes", please describe the problem, any specific locations, and types of improvements you feel are needed.

1. School traffic @ Moberly and Cornishville Roads (5);
2. Heavy traffic near school and factories (7);
3. Existing bypass needs advanced warning devices to alert motorists that signals are about to change;
4. Important to consider safety as the number one criterion in designing a northwest bypass;
5. Intersections (existing and new bypass) should be safe and lighted;
6. Widen College Street (US 127);
7. Get railroad out-of-town; overpass railroad (2)
8. Traffic signal needed at Mackville Road interchange;
9. Problems occur when schools and factories get out, but a bypass does not seem to be the answer; widening current streets (Moberly, Industry, Morris) preferable solution (2);
10. Special attention should be given to historic properties and view sheds;
11. Railroad overpass/underpass needed at Cornishville Rd;
12. College Street is too congested (4);
13. Moreland Avenue is a dangerous street;
14. KY 152/US 68 intersection is dangerous;
15. Tewmeyer Lane and Cornishville Roads used as "cut through" alternatives (3);
16. Tapp Road and Moberly Road intersection is too congested (2);
17. Believes in bypasses but prefers limited access;
18. Bypass is needed to relieve congestion on College Street, West Lane, Moberly Road, and Tewmeyer Lane (2);
19. Ban trucks on Moberly Road between Tapp Road and KY 390;
20. Signal needed at Moberly Road and Tapp Road;
21. Don't need a N/W bypass, but do need lights at intersections on existing east bypass;
22. Need to improve safety of Moberly Road/KY 390 intersection;
23. Eliminate curve on KY 390;
24. Need turning lanes on Moberly Road (5);
25. Do not put bypass through farmland;
26. Stagger starting times for schools;
27. Cornishville Road needs to be widened;
28. College Street needs to be restored to its previous striping scheme;
29. School traffic needs to make greater use of current bypass;
30. Train traffic seems to occur when traffic from schools and factories is the heaviest;
31. Existing bypass underutilized and unsafe;

- 32. Widen Moberly Road (3);
- 33. Improve Mackville Road/Perryville Road intersection
- 34. Improve Moreland Avenue/College Street intersection (2)

3. Do you think a new bypass route is needed in northwestern Harrodsburg?

__13__ Yes __19__ No

Please explain why or why not.

- 1. (Yes) Industrial growth;
- 2. (Yes) Improve traffic flow (3);
- 3. (Yes) Should include railroad overpass;
- 4. (No) Terminating a new bypass at Mackville Road would be unsafe and add to congestion (2);
- 5. (Yes) Original (east) bypass did not address issues on west side of Harrodsburg (3);
- 6. (No) Only need to address school and industry traffic; this does not require a bypass (3);
- 7. (Yes) Provide traffic relief on Moreland Avenue and on College Street (3);
- 8. (Yes) Need alternate route to schools and industry (4);
- 9. (Yes) Bypass is needed to relieve congestion on College Street, West Lane, Moberly Road, and Tewmeyer Lane (2)
- 10. (No) A bypass is not needed (7);
- 11. (No) Make improvements to College Street instead; restore to previous striping (3);
- 12. (No) Bypass would be a waste of taxpayers' money; Harrodsburg has no traffic problems that justify this kind of project;
- 13. (No) Don't see the traffic problems that would justify such an expenditure;
- 14. (No) Focus on Moberly Road and other existing facilities instead (4);
- 15. (No) Just need to overpass railroad (2);
- 16. (No) Loss of valuable farmland;
- 17. (Unstated) Only if projected population growth in the next 10-20 years justifies it;
- 18. (Yes) Relieve school traffic (3);
- 19. (No) Fears 2nd bypass would be as poorly designed as current bypass;
- 20. (No) Need to utilize existing transportation system more efficiently (5);
- 21. (No) Redesign existing bypass so that through movements are not turns;
- 22. (Yes) Improve access for commuters in southwestern Mercer County and eastern Washington County to Frankfort and Lexington (2);
- 23. (No) Existing bypass is insufficiently utilized;
- 24. (No) Widen Industry Road;
- 25. (No) Install signal at KY 390 junction (assume this means at Moberly Road);
- 26. (No) Synchronize traffic signals on US 127 through Harrodsburg

4. How do you think a new bypass route in northwestern Harrodsburg would positively or negatively affect the human and natural environment in the community?

1. Improve safety;
2. Negative (13);
3. Positive from human perspective;
4. No impacts on natural environment (3);
5. Potential negative impact on property owners/farmland (9);
6. Consider business, industry, and housing when developing bypass;
7. Current congestion stressful to residents (2);
8. Positive for Harrodsburg;
9. Negative effect on downtown businesses and other businesses along US 127 inside the bypass (4); first you'll waste money on an unneeded project then more government money will be needed to revitalize the downtown area negatively impacted by this project;
10. Prefers to live in a small/rural "community" (2);
11. If done properly, negative effects can be avoided;
12. Improve traffic flow (2);
13. A bypass would make it easier for development;
14. Noise impacts (2);
15. River crossing would be negative impact, but bypass would be immediately outdated if located inside river;
16. Building bridges would be waste of money and can be avoided;
17. Negative unless extended south to US 127 south;
18. East side bypass may have been all that was needed, as it has reduced truck traffic through town;
19. Would add traffic to Cornishville Road

5. Are there sub-areas or sites in the project study area we should avoid (e.g., natural areas or habitats, cemeteries, recreational areas, historic or cultural sites, hazardous materials sites, scenic areas, view sheds), or any additional environmental issues we need to address? Please identify and explain why.

1. Information as to proposed location is not available;
2. Only the historic house in the industrial park has any significance;
3. None known (3)
4. No impacts if you go out far enough (2);
5. Keep bypass east of river to protect farmland;
6. Avoid any cemeteries or historic sites;
7. Widen Tewmeyer Lane and Oakland Lane instead;
8. Scenic areas; farmland;

9. Concerned about (personal) safety if a bypass is built;
10. Construct in locations where the topography could easily accommodate future ramps for interchanges;
11. Homes are more important than any of the items listed (2);
12. Family cemeteries;
13. Historic buildings;
14. Caves;
15. A beautiful river (fishing and recreation)

6. Additional Comments.

1. Need complete western bypass connecting to existing eastern bypass at each end (6);
2. Prefer close-in location (5); prefer outer location (1);
3. Terminating northwest bypass @ KY 152 will create a hazard;
4. A more important project would be to straighten US 68 between Shakertown and Wilmore;
5. Widening Moberly Road more important to school traffic than a bypass;
6. Heavy traffic at intersection of Moberly Road and Industry Road; need signal
7. Return US 127 through town to former lane status;
8. Traffic signal needed at Moberly and Cornishville;
9. Traffic signal needed at Perryville Road and Mackville Road;
10. Traffic signal needed at Office Street and US 127;
11. Need to extend to US 68;
12. Fix problem of train traffic before anything else (2);
13. Locating bypass east of river should save money;
14. This project lacks foresight and justification (2)
15. Affected property owners should receive personal notice of meetings when this project is discussed;
16. Overpass railroad tracks (2);
17. Truck parking on Cornishville Road near railroad;
18. What is the true purpose of this project?
19. Close Moberly Road between Tapp Road and KY 390 to school traffic only;
20. Reduce speed limit on KY 390 west of US 127;
21. Fear of sprawl if bypass is built;
22. Need an Environmental Impact Statement;
23. Need to look at US 127/Moreland Avenue intersection;
24. Would like all intersections to be consistent about green turn arrows;
25. Improve sight distance at Bellows mill and US 127 bypass;
26. Improve super elevation on US 127/US 127 south intersection;
27. North bypass ramp to US 127 needs a stop sign or a yield sign;
28. Significant safety concerns about current eastern bypass;
29. Signalization should be consistent (with respect to use of left-turn arrows);

30. Inadequate sight distance from side roads on existing bypass;
31. Insurance industry has had to pay many claims resulting from crashes on current bypass;
32. Bypass should follow topography (ridge top or valley) to facilitate future ramps and interchanges;
33. Every intersection should have a traffic signal, and they should have only a green arrow (no green ball) in the turning lane, i.e. no "protected-permitted" turn option.
34. Every signal should have a 3-second all red phase;
35. Quantify use of existing bypass by school traffic and by residents before making this decision;
36. Opposed to northwest bypass; fears a "New Circle Road"
37. Address school traffic issue with less expensive, more effective options besides bypass;
38. Family member was killed on US 68 by a loaded coal truck; fears losing home with all memories of deceased family member if bypass is built;
39. Study downtown Harrodsburg and surrounding areas before proceeding on northwest bypass;
40. We need to know timeline/schedule as soon as the route is approved; keep me posted
41. Landowners have long-term plans for their property

Agenda
Harrodsburg NW Bypass
Item # 7-8344.00
Alternatives Study
Project Team Meeting # 2

Date: February 22, 2008

Time: 10:00 a.m.

Location: KYTC District 7, Lexington, KY

1. Introductions
2. Review
 - a. Schedule
 - b. Existing Conditions
 - c. Project Goals and Issues
3. Discuss:
 - a. Public Meeting Comments
 - b. Alternative Concepts
4. Northwest Bypass Options
5. Other Possible Stand Alone Projects in Northwest Quadrant
6. Ideas Outside Study Area for KYTC Considerations
7. Next Steps



Architecture

Engineering

Construction

MEETING MINUTES

Project: Harrodsburg N/W Bypass, Mercer County
Item Number 07-8344.00

Purpose: Project Team Meeting # 2

Place: KYTC District 7 Office, Lexington

Meeting Date: February 22, 2008

Prepared By: Bruce Siria

In Attendance:

Jim Wilson	KYTC, Division of Planning
Thomas Witt	KYTC, Division of Planning
Stuart Goodpaster	KYTC, District 7, Planning
Randy Turner	KYTC, District 7, Planning
Logan Baker	KYTC, District 7, Planning
Bob Nunley	KYTC, District 7, Design
Phil Logsdon	KYTC, District 7, Environmental
Becky Barrick	KYTC, District 7, Environmental
James Ballinger	KYTC, District 7, Pre-Construction
Jim Rummage	KYTC, District 7, CDE
Bruce Duncan	Bluegrass ADD
Tom Springer	Qk4
Mike Hudson	Qk4
Albert Zimmerman	Qk4
Bruce Siria	Qk4

Following introductions, Mr. Siria facilitated the meeting through a PowerPoint presentation accompanied by handouts that included a review of the project schedule, project goals and issues, and the public meeting comments. However, the primary focus of the presentation and discussion was alternative concepts for a bypass in the northwest quadrant of Harrodsburg, other possible stand-alone transportation projects in that quadrant, and transportation ideas outside the study area for consideration by KYTC officials.

Both the project steering committee (at its initial meeting on October 22, 2007) and the general public (at the November 19, 2007 public meeting) were asked for suggestions for a location of a bypass route in the northwest quadrant of Harrodsburg. All of those suggestions were compiled as shown on Attachment A. Minor differences were merged and a link-node depiction of suggested alternatives was developed as shown in Attachment B.

Various link-node combinations were considered and initially analyzed. From these, Qk4 presented 14 potential alternative corridors to the KYTC project team. Each alternative was described and then discussed based on anticipated impacts, cost, and the degree to which the alternative satisfied the project goals.

<u>Alternate</u>	<u>Nodes</u>
A	A-B-D-1-2-H-5-7-11-M
B	A-B-D-1-2-H-5-7-N
C	A-B-D-1-2-H-5-10-O
D	A-B-D-1-2-H-5-10-P
E	A-B-D-1-3-I-10-O
F	A-B-D-1-3-J-6-9-P
G	A-B-D-K-6-9-P
H	A-B-D-K-9-P
I	A-C-2-3-I-10-O
J	A-C-2-3-J-6-9-P
K	A-C-2-H-5-7-11-M
L	A-C-2-H-5-7-N
M	A-C-2-H-5-10-O
N	A-C-2-H-5-10-P
O	A-C-4-12-F-8-L
P	A-C-4-12-G-11-M
Q	A-C-4-E-8-L

After much discussion, the KYTC Project Team decided to take alternates E, F, H, and J (respectively shown in Attachments C, D, E, and F) to the Project Steering Committee and to the public for their consideration. Alternates O, P, and Q were thought to be encapsulated in one or more of the seven other possible projects described below. Alternates A, B, C, D, G, I, K, L, M, and N were deemed to be less desirable to carry forward in the project for the following reasons:

Alternates A and B were felt to pose too much difficulty for possible future extension south of KY 152;

Alternates C and D were each high cost alternates with significant stream impacts including the potential for multiple stream crossings as well as significant impacts on Prime and State Importance farmlands;

Alternates G and I were felt to be inferior to Alternates H and J respectively between KY 1989 and KY 152;

Alternates K and L were felt to pose too much difficulty for possible future extension south of KY 152;

Alternates M and N were felt to be inferior to similar Alternate J

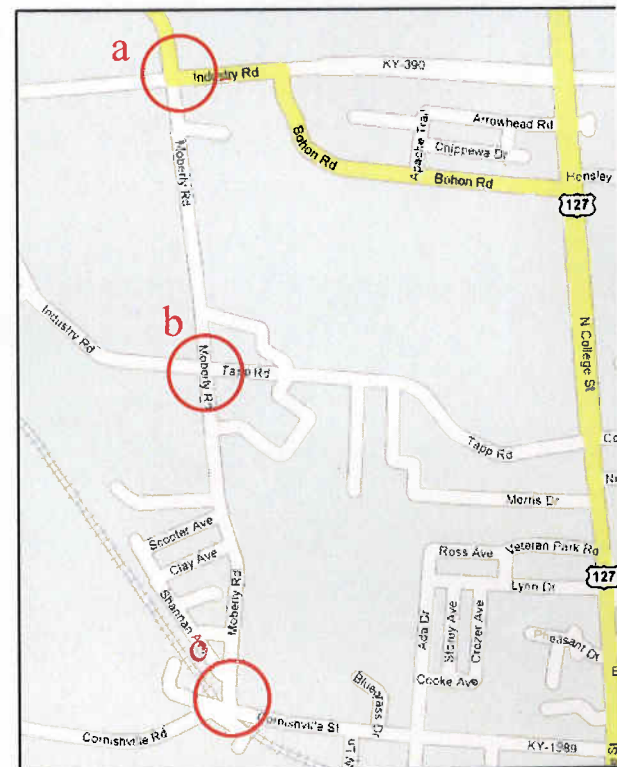
In addition to the alternatives for a northwest bypass, seven other northwest quadrant options were presented; these are shown in Attachment G:

1. Widen Moberly Road from KY 390 to KY 1989 as a stand-alone project
2. Reconstruct Moberly Road/KY 1989 intersection (with or without a railroad overpass)
3. Improvements to KY 1989 from RR east to College Street
4. Improvements to KY 1989 from RR west to Tewmeyer Lane
5. Improve Access from KY 1989 near or west of Tewmeyer Lane to Wausau Paper, Trim Masters, and US 127 North as a Stand-Alone project
6. Improvements to KY 152 from Tewmeyer Lane to US 127
7. Consider additional signalization, as shown in the map insert:
 - a. KY 390 and Moberly Road
 - b. Moberly Road and Tapp Road (city project)
 - c. KY 1989 and Moberly Road

The KYTC Project Team recommended that each of these seven other northwest quadrant options be advanced to the Steering Committee and to the public at the second public meeting.

Finally, several potential ideas for transportation improvements outside the northwest quadrant were presented to the KYTC Project Team for information only. These were based on comments received from the steering committee and at the public meeting and peripheral analyses by the consultant during the planning process. These potential transportation projects are:

1. Road Safety Audit of existing US 127 Bypass (possibly has already been requested or performed)

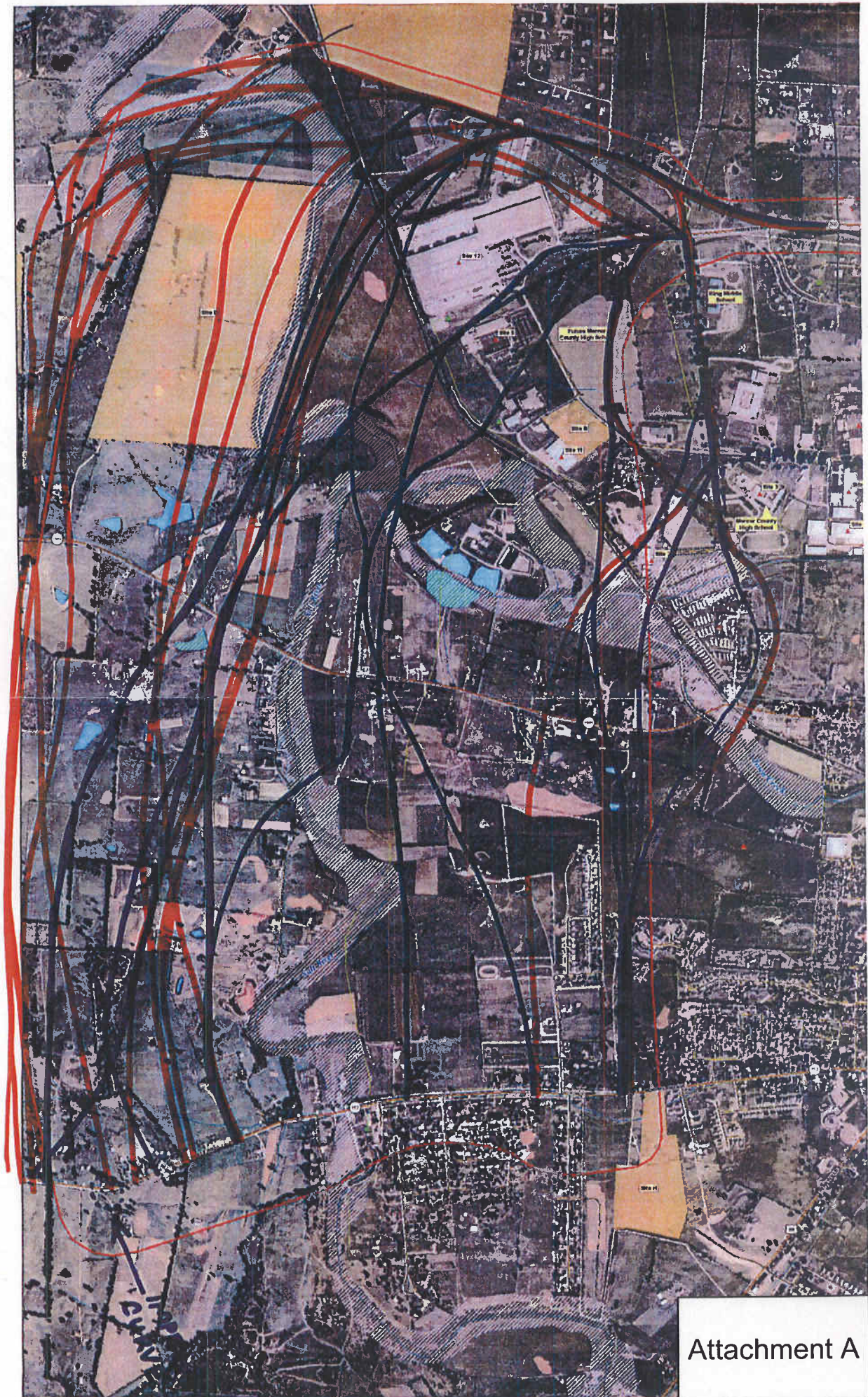


2. Additional public involvement opportunities for two ongoing US 127/US 127 Bypass intersection redesign projects
3. Re-examine striping of US 127 through town. Offer public meeting opportunity or meeting with local officials to discuss
4. Harrodsburg Area-wide Road Safety Audit, Small Urban Area Study, or TOPICS Study
5. In the absence of overall improvements to KY 152, consider stand-alone improvements to Moorland Avenue/College Street intersection
6. In the absence of overall improvements to KY 152, consider stand-alone improvements to US 68/KY 152 intersection
7. Consider Cotten's RR option or alternate RR option

The KYTC Project Team asked that these be documented in the final report, but that no further discussion be initiated about them with the Steering Committee or with the general public since they each fell outside the scope of the current study.

End of Minutes

cc: attendants



Attachment A



Attachment B



- HAZMAT
- Landfill
- Faults (24K)
- Sink Hole Area
- Potential Historic Property

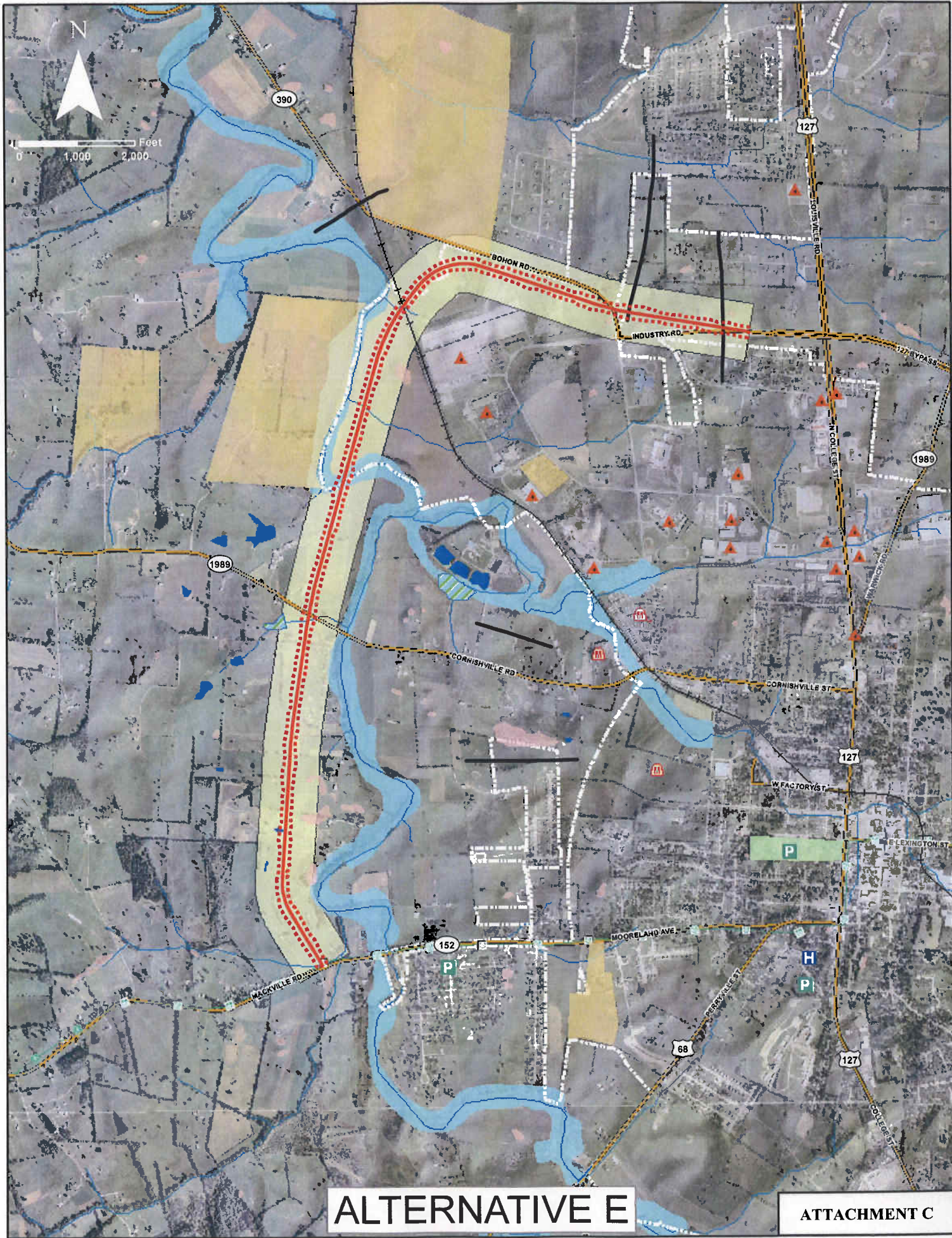
- Airport
- Cemetery
- Church
- Park
- Hospital
- State Park
- Ponds
- Wetlands
- Potential Flood Area



VICINITY MAP

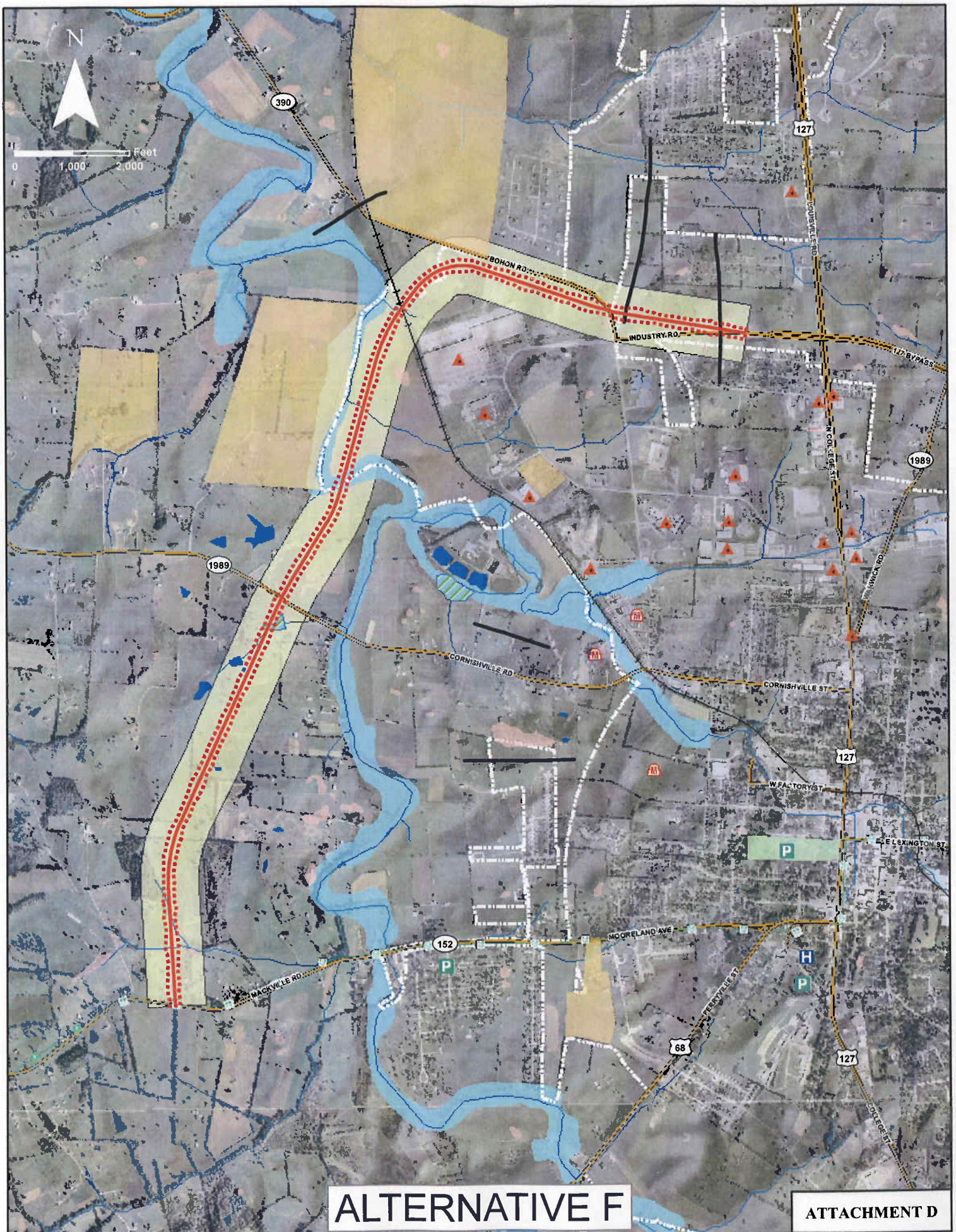
Exhibit 1
 ALL COORIDORS
 CONSIDERED
 Harrodsburg Northwest US 127
 Bypass Alternatives Study
 KYTC Item No. 7-8344.00

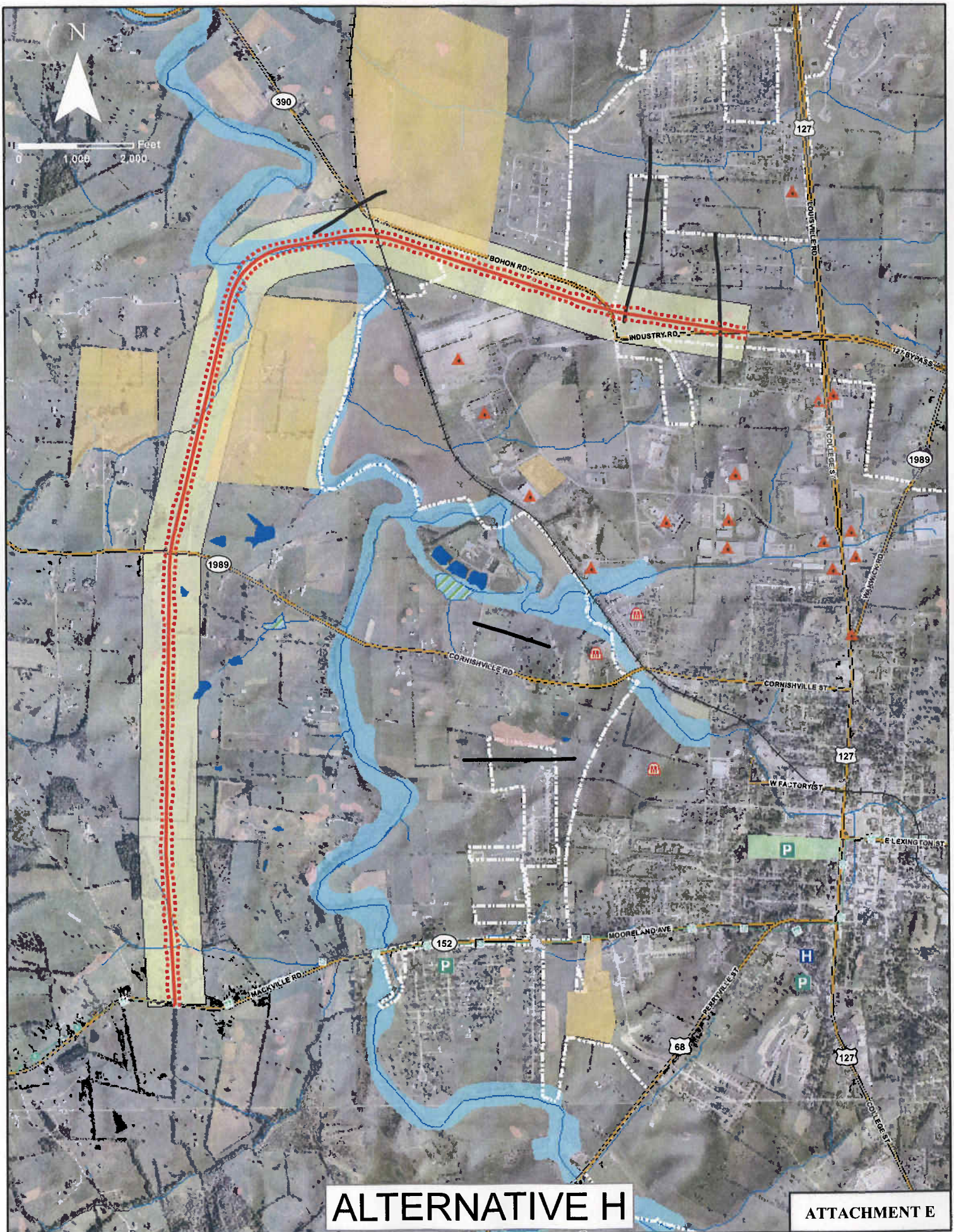
Sheet 1 of 1



ALTERNATIVE E

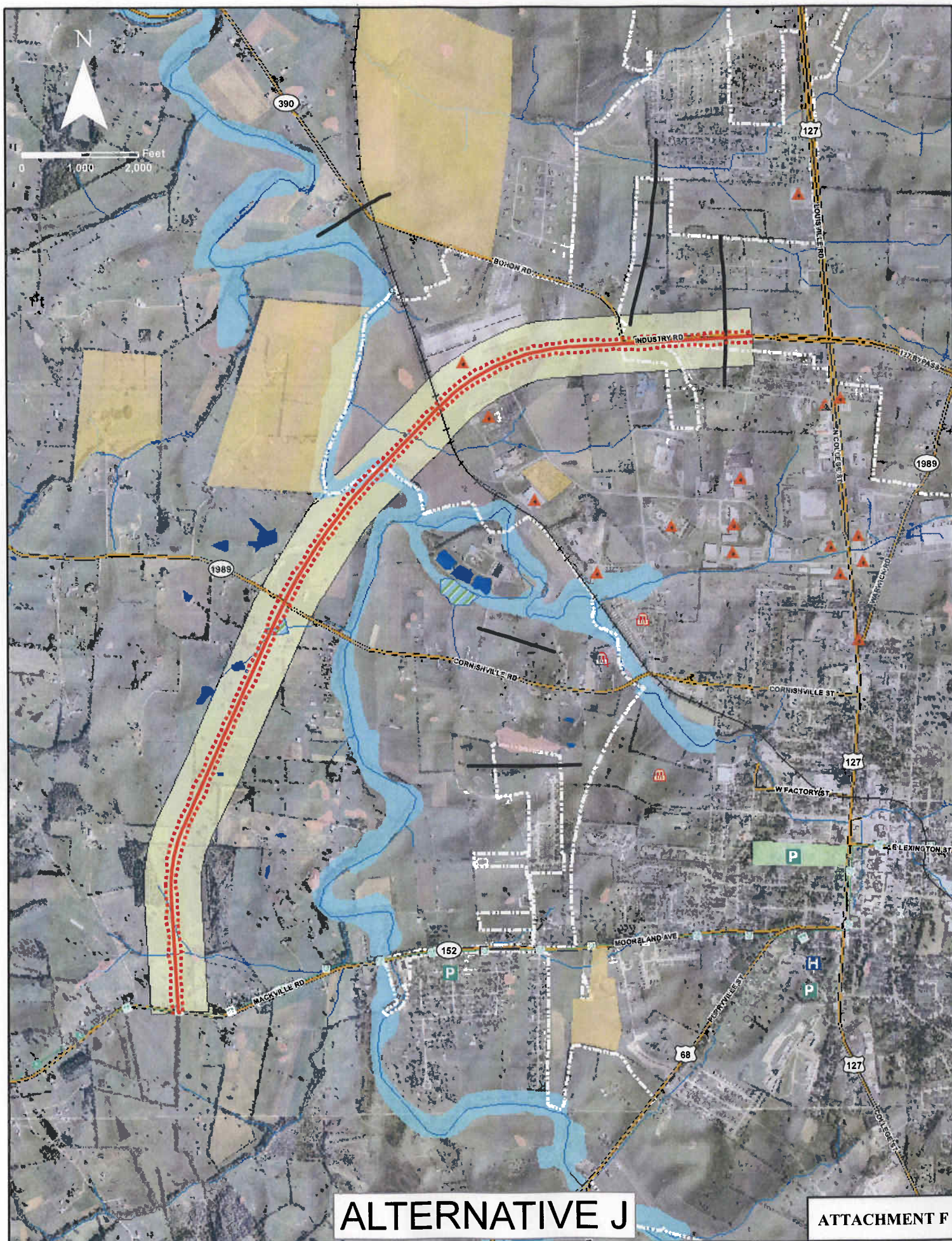
ATTACHMENT C





ALTERNATIVE H

ATTACHMENT E



Agenda
Harrodsburg NW Bypass
Item # 7-8344.00
Alternatives Study
Steering Committee Meeting # 2

Date: April 14, 2008
Time: 6:00 p.m.
Location: Lions Park Community Center
450 East Factory Street
Harrodsburg, KY

Meeting Objective: Review Alternative Recommendations and
Prepare for Second Public Meeting

1. Introductions
2. Review
 - a. Schedule
 - b. Project Goals and Issues
3. Discuss:
 - a. Public Meeting Comments
 - b. Alternative Concepts
 - Northwest Bypass Options
 - Other Possible Stand Alone Projects in Northwest Quadrant
4. Next Steps



Architecture

Engineering

Construction

MEETING MINUTES

Project: Harrodsburg N/W Bypass, Mercer County

Item Number 07-8344.00

Purpose: Project Steering Committee Meeting # 2

Place: Lions Park Community Center

Meeting Date: April 14, 2008

Prepared By: Doug Heberle

In Attendance:

John D. Trisler	Mercer County Judge/Executive
Billy Humphrey	Supervisor, Mercer County Road Department
Dr. Earl Motzer	CEO, James B. Haggin Memorial Hospital
Bill Durham	E-911 Coordinator
Bob Upchurch	Citizen-At-Large
Delmer Odell	Citizen-At-Large
Woodman Nalt	Citizen-At-Large
Joseph Hood	City of Harrodsburg
Bruce Johnson	Mercer County Superintendent
Tony Best	North Mercer Water
Keith Curtsinger	North Mercer Water
Stuart Goodpaster	KYTC, District 7 Planning
Randy Turner	KYTC, District 7 Planning
Jim Wilson	KYTC, Division of Planning
Bob Lewis	KYTC, District 7
Bruce Duncan	BGADD
Tom Springer	Qk4
Albert Zimmerman	Qk4
Bruce Siria	Qk4
Doug Heberle	Qk4

Meeting Minutes

Item No.: 07-8344.00

Project Steering Committee Meeting #2, April 14, 2008

Page 2

Introductions: Following introductions from those listed above, Jim Wilson gave a brief history and overview of the project.

Power Point: Bruce Siria facilitated a PowerPoint presentation that included a review of the project area, the scope of work, and the anticipated project schedule. The presentation also included the Project Goals as defined by the KYTC Project Team. The balance of the presentation was the introduction of the four possible bypass alternatives as well as the seven other “non-bypass” options for the northwest quadrant of Harrodsburg. The final slide outlined the next steps of the project.

Project Goals: The project goals were re-addressed in the presentation and everyone was reminded of the fact that the assumptions of the project goals will be relative to all the alternatives. The project goals are:

- Transportation System Connectivity
 - Schools and Industries
 - Separate school & industry traffic
 - Emergency Response Travel Time
- Grade Separated RR Crossing
- Reduce Congestion on Area Roadways
- Compatible w/ Future S/W Bypass Possibility

Public Meeting: A review of the three questions that were asked of the public and the answers they gave at the public meeting on 11/19/07 was presented. The questions and the majority percentage of the answers are listed below:

1. How did you hear about this public meeting? *Newspaper; 18%, Friend/Family; 11%*
2. Do you feel there are transportation problems in Northwest Harrodsburg that should be addressed with this project? *Yes; 81%, No; 19%*
3. Do you think a new bypass is needed in Northwestern Harrodsburg? *No; 60%, Yes; 40%*

At the public meeting, residents illustrated all of their suggestions on maps provided by the consultant. Those combinations were then reviewed by the KYTC and reduced to four feasible alternative bypass options.

Alternatives Discussion: The 4 lane typical section provided at the meeting will remain constant for all bypass alternatives. Bruce then presented the four alternative bypass corridors: Alternatives E, F, H, and J. The four bypass alternatives were assessed against the project goals in order to see how they ranked according to those criteria. The project goals were condensed to four assessment criteria which were used to assess the four bypass alternatives on four levels; Excellent, Good, Fair, and Poor. The four assessment goals are:

1. Separate school and industry traffic
2. Improves access time to Haggin Hospital
3. Reduce congestion on area roadways
4. Compatible with possible southwest bypass

Meeting Minutes

Item No.: 07-8344.00

Project Steering Committee Meeting #2, April 14, 2008

Page 3

Goals	Alt. E	Alt. F	Alt. H	Alt. J
1	Good	Good	Excellent	Good
2	Poor	Poor	Poor	Poor
3	Fair to Poor	Fair to Poor	Poor	Fair to Poor
4	Excellent	Excellent	Excellent	Excellent

In addition to ranking the bypass alternatives to the project goals, the Significant Metrics of each alternative (school impacts, environmental impacts, and cost) was presented for discussion and is listed below.

Alternative E:

- No school impacts
- Potential stream impact greater than ¼ mile
- Cost Estimate: \$30 million

Alternative F:

- No school impacts
- Potential wetlands impact
- Six potential stream impacts
- Potential stream impact greater than ¼ mile
- Cost Estimate: \$30.9 million

Alternative H:

- No school impacts
- Potential ROW impacts greater than 100 acres
- Potential state importance farmland impacts greater than 35 acres
- Potential floodplain impacts greater than 12 acres
- Six potential stream impacts of ¾ mile
- Cost Estimate: \$37 million

Alternative J:

- Potential school impacts
- Potential wetlands impacts
- Potential stream impact less than ¼ mile
- Cost Estimate: \$29.3 million

The “other” (non-bypass) options for the northwest quadrant of Harrodsburg were presented. These options and the corresponding cost estimates are listed below:

1. Widen Moberly Road from KY 390 to KY 1989 as a stand alone project (\$1.35 M)
2. Reconstruct Moberly Road/KY 1989 intersection with a railroad overpass (\$2.0 M)
3. Improvements to KY 1989 from the railroad east to College Street (\$1.1 M)
4. Improvements to KY 1989 from the railroad west to Tewmeyer Lane (\$1.6 M)
5. Improve access from KY 1989 near or west of Tewmeyer Lane to the industry, and US 127 North as a stand alone project (\$14.5 M)

Meeting Minutes

Item No.: 07-8344.00

Project Steering Committee Meeting #2, April 14, 2008

Page 4

6. Improvements to KY 152 from Tewmey Lane to US 127 (\$1.9 M)
7. Consider Additional Signalization (\$100,000 each)
 - a. KY 390 and Moberly Road
 - b. Moberly Road and Tapp Road (City Project)
 - c. KY 1989 and Moberly Road
8. New north-south road linking KY 1989 and KY 152. During the meeting it was noted that while this new road was shown on the mapping it was not included in the list of projects; therefore, it has been added to the list via these minutes.

Post Presentation Discussion: After the presentation, a hypothetical scenario was presented that suggested an emergency occur north of the railroad tracks, while a train was blocking the access for emergency vehicles originating from south of the tracks. The suggested solution to a scenario like this was to extend Broadway Street west to connect with the proposed north-south new road, identified as Item 8 above. This connection would allow emergency access despite the presence of a train.

One of the assumptions (and a project goal) of the improvement alternatives is that the roadway will overpass the railroad. The purpose of this is to eliminate the need for any new at-grade railroad crossings. The concept of relocating the railroad to bypass downtown was considered. However, the cost estimate of the option would be around \$50 million, which is more than the cost of any alternatives suggested herein.

The next steps are the second round of resource agency coordination and the second public meeting to discuss the refined alternatives.





A question was raised by a meeting attendee about the feasibility of a southern connector from south of Mooreland to US 127 South. It was noted that any connections south of Mooreland Ave. are neither in the Enacted KYTC Six-Year Highway Plan, nor the scope for the project and therefore will not be specifically addressed in this project. However, considering that one of the project goals of the study is to accommodate a similar southern connector to US 127, at some point in the future, its general connectivity with all possible bypass alternatives is being addressed.

A Citizen of Harrodsburg who owns land along Tewmey Lane, expressed concern regarding the voice of citizens being heard as it relates to private property takings during new road construction. He pointed out that there was a possibility, depending on which alternatives were chosen, that his land could be subject to a taking for new roadway right of way. It was explained that during this stage of the project study, no right of way will be acquired and that every effort is made on the part of highway department engineers and practitioners to respect the individual rights of property owners.





Note: Since the conclusion of the Steering Committee Meeting, the public meeting has been scheduled for Monday May 12, 2008 from 4pm to 7pm at the Lions Park Community Center.

End of Minutes

CONSULTANTS

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	Jim Wilson	KYTC, Central Office		
	Thomas Witt	KYTC, Central Office		

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	Leo Vaughn			371 West Factory Street	
	Robert Norman			3024 Shakerstown Road	
	Amalie Preston	James B. Haggin Trust	859-865-2989	2072 Oregon Road	

Joseph Hood Harrodsburg City Comm 734-5000 202 Park Ave.

Wooden & Hall



734 0171 201 Rose Ln.

Bob Lewis KYTC D-7

734-5322-384 Twomey Lane

Delmer O'Neil

SIGN - IN SHEET

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	Milward Dedman	KY State Representative District 55	859-734-2880	300 S Chiles Street	mdedman@bellsouth.net
	Dan Kelly	KY State Senator District 14	859-336-7723	324 W Main Street Springfield, KY 40069	donna.holiday@lrc.kv.gov
	J. B. Claunch	Magistrate, Mercer County Fiscal Court	859-865-2932	2750 Talmage-Mayo Road Salvis, KY 40372	
	Ronnie Sims	Magistrate, Mercer County Fiscal Court	859-734-2246	346 Rose Hill Lane	
	Brenda Sexton	Ex. Director, Mercer County Chamber of Commerce	859-734-2365	488 Price Avenue	info@mercarchamber.com
	Kevin Perkins	Commissioner, City of Harrodsburg	859-734-3149	551 Chesapeake Drive	kperkins@caldwellbanks.com
	Eddie Long	Commissioner, City of Harrodsburg	859-734-3518	810 E Lexington Street	elongbranch@adelphia.net
	Bruce Johnson	Superintendent, Mercer County Schools	859-734-8400	371 E Lexington Street	<i>Bruce O. Johnson</i>
	Mike Preston	Transportation Director, Mercer County Schools	859-734-4364 Ext. 5-5301	371 E Lexington Street	mike.preston@merc.kyschools.us
	Dave Weber	Mercer County EMA Director (Acting)	859-734-6333	PO Box 760	mcema@mercerkv.com

	Glen Phillips	Fire Chief, Mercer County Fire Protection District	859-734-4688	200 Morris Drive	
<i>B.H.</i>	Billy Humphrey	Supervisor, Mercer County Road Dept.	859-619-1820	894 Moberly Road	
<i>Dr. Earl Motzer</i>	Dr. Earl Motzer	CEO, James B. Haggin Memorial Hospital	859-734-6340	464 Linden Ave.	emotzer@aol.com
	Roy Short	Chair, North Mercer Water District	859-734-5441	PO Box 79	
	Linda McClanahan	Ext. Agent for Agriculture & Natural Res., Mercer County	859-865-2292	Saliva, KY 40372	
	Terry Sampson	President, Harrodsburg Historical Society	859-734-4378	PO Box 324	linda.mcclanahan@ukv.edu
	Lora Gilkerson	City of Harrodsburg Engineer (GRW, Inc.)	859-734-5985	PO Box 316	
<i>B.D.</i>	Bill Durham	E-911 Coordinator	800-432-9537	801 Corporate Drive Lexington, KY	
	Ernie Kely	Chief, Harrodsburg Police Department	859-613-8185	208 S Main Street	bdurham@mercerkv.com
	Elizabeth Votaw	Plant Manager, Harrodsburg Waste Water Treatment Plant	859-734-3311	411 N Greenville Street	
	Karen Hackett	Ex. Director, Harrodsburg/Mercer County	859-734-2113	965 Cornishville Road	
		Ex. Director, Harrodsburg/Mercer County/Industrial Development Authority	859-734-2364	PO Box 283	khackett@harrodsburgky.com
	Del White		859-734-0063	488 Price Ave. Ste 4	hmcida@mercerkv.com

NOTIFICATION

Name	Organization	Telephone	Address	E-mail
Debbie Jenkins Cook	The Harrodsburg Herald	859-734-2726	101 W Broadway Street	
Ann Harney	The Advocate Messenger	859-734-9032	247 Hurst Drive	
Chris Brewer	VP of Engineering, Bluegrass EnergyCoop	859-885-2114 859-885-2854 (f)	PO Box 990 1201 Lexington Rd. Nicholasville, KY 40340	
Danny Collier	Inter County Energy, Engineer	859-936-7818 859-516-3314 c	1009 Hustonville Road Danville, KY 40423	
David Phelps	Inter County Energy, Engineer	859-936-7818 859-516-3314 c	1009 Hustonville Road Danville, KY 40423	

Tony Best North Mercer water 859-865-2292 P.O. Box 79
5210153 KY, 40372

Keith Cuntzinger North Mercer water 8 11

COMMENT FORM

Public Information Meeting

May 12, 2008



HARRODSBURG NORTHWEST BYPASS

Mercer County
KYTC Item No. 07-8344.00



We need your help! You can help us by completing this comment form. At the previous public meeting, nearly 80 percent of those who provided comments agreed that there were transportation issues in northwest Harrodsburg. However, two-thirds did not think a northwest bypass was needed. After considering nearly two dozen initial possible corridors for a northwest bypass, those options have been narrowed to the four most promising corridors shown below. In addition, other possible transportation solutions have been evaluated. As part of the study, KYTC would like your assistance (1) in identifying which of the four alternative northwest bypass corridors you prefer or whether you do not favor any of them, and (2) which alternative non-bypass improvement you would prefer to see implemented in lieu of a full northwest bypass corridor. Please complete this form and return it to Transportation Cabinet staff here tonight, or use the postage-paid envelope provided to submit your comments by May 27, 2008.

We appreciate your participation and value your comments! Each person should complete a separate comment form.

Name: _____

Representing (title, agency, organization, if applicable): _____

Address: _____

Phone (optional): _____ **Date:** _____

Email (optional): _____

The objective of this form is to solicit your views on the segments and alternatives you think should be prioritized in this study. Each form will be read and tabulated by the project team. All comments are welcome! We appreciate your participation!

1. How did you hear about this public meeting?

☐ Newspaper
☐ Letter
☐ Flyer

☐ TV
☐ Radio
☐ Meeting

☐ Friend/Family
☐ Elected Official
☐ Other

☐ Do Not Recall

2, Do you favor a Northwest Bypass of Harrodsburg?

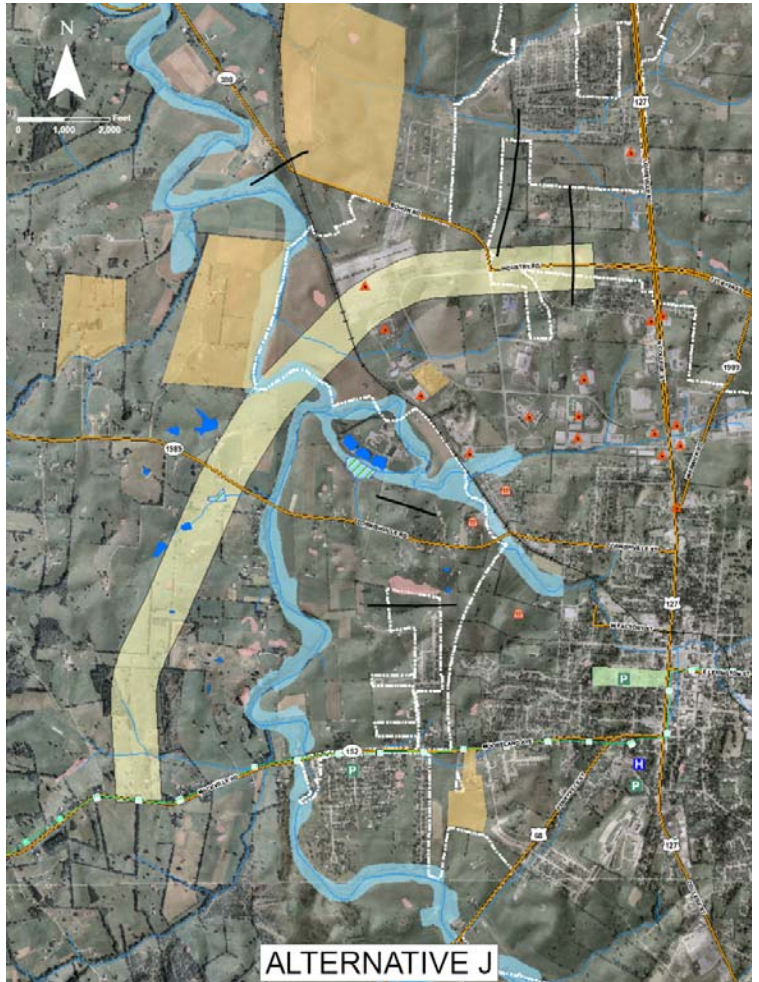
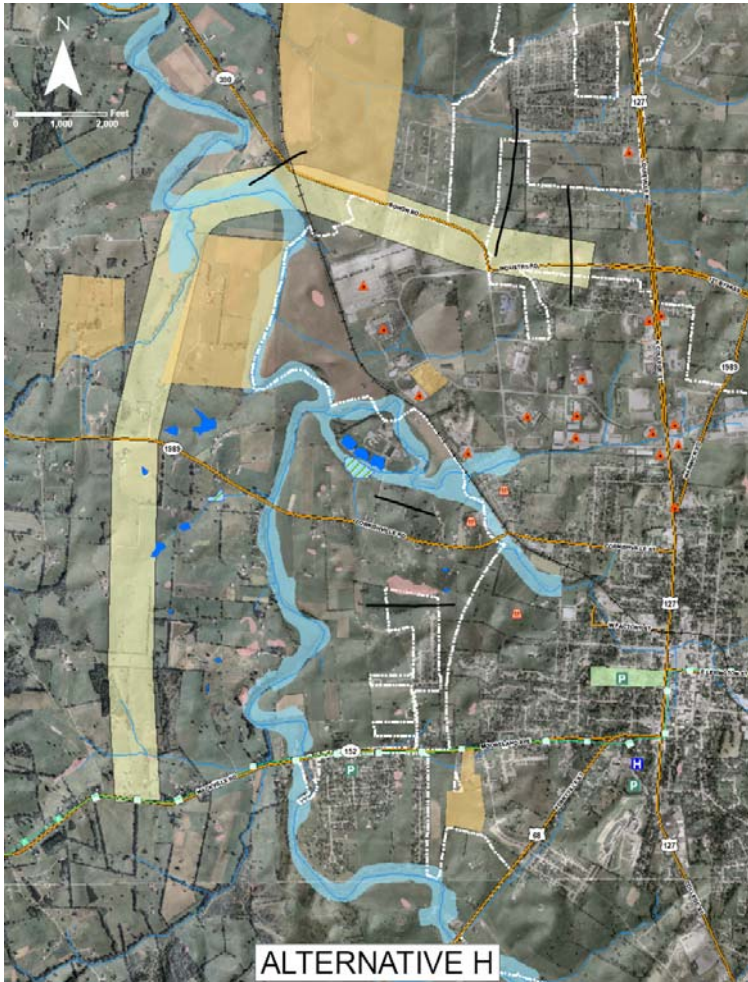
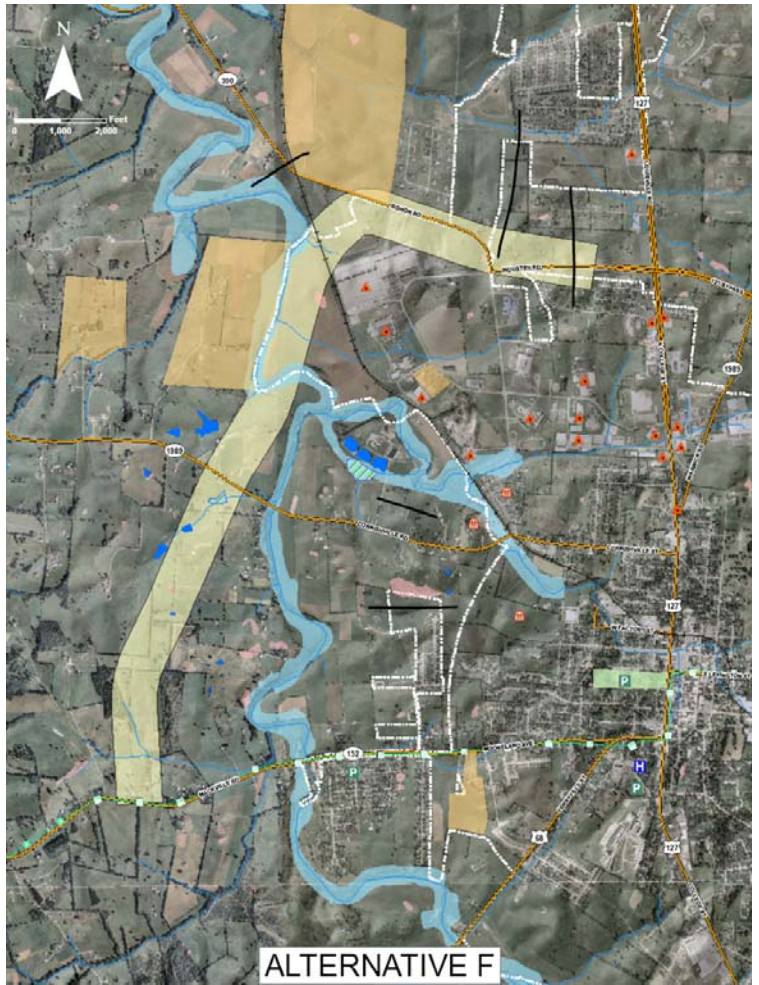
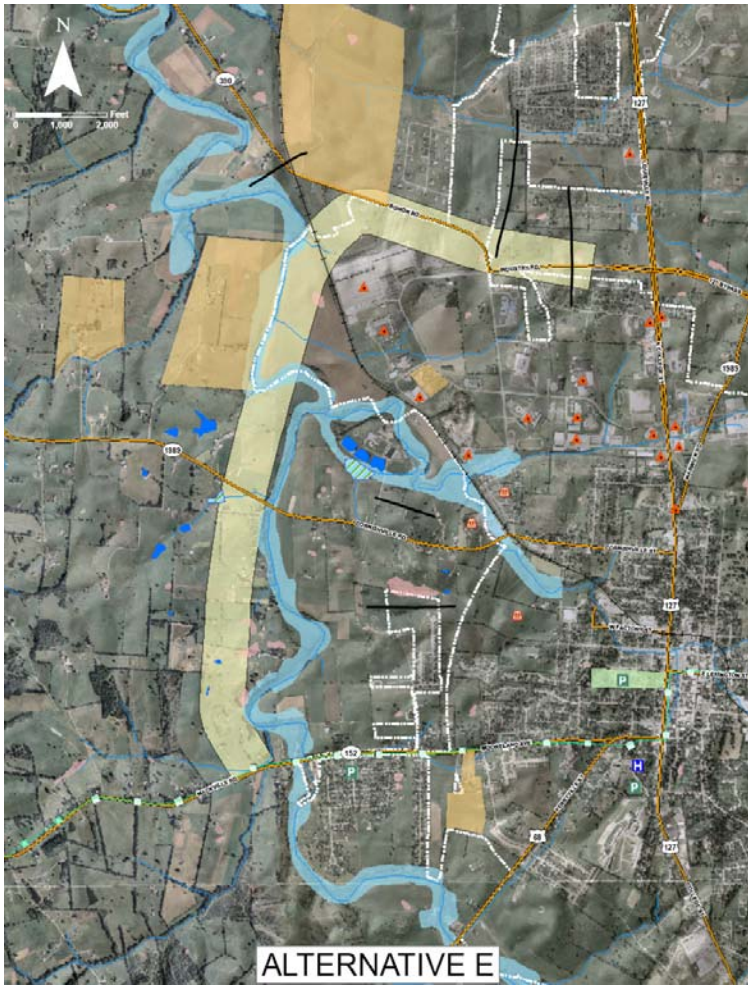
Yes: _____ **No:** _____

3. If yes, then rank the alternates in order of priority from 1 to 4 with 1 being your highest priority (the one you would like to see constructed).

BYPASS ALTERNATES	SCORE			
	Highest Priority			Lowest Priority
Alternate E	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Alternate F	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Alternate H	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>
Alternate J	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>

Please explain your preference (optional):

[illegible]



4. Do you favor any of the improvements listed below?

Yes: _____ **No:** _____

5. If yes, please rank the improvements with "1" being your highest priority, "2" being your second highest priority, up through as many projects that you wish to rank.

1. Make improvements to Moberly Road from Industry Road to Cornishville Road _____
- 2a. Reconstruct Moberly Road/Cornishville Road intersection with railroad overpass _____
- 2b. Reconstruct Moberly Road/Cornishville Road intersection without railroad overpass _____
3. Make improvements to Cornishville Road from RR crossing east to College Street _____
4. Make improvements to Cornishville Road from RR crossing west to Tewmeyer Lane _____
5. Construct a new street from Cornishville Road near or west of Tewmeyer Lane to Wausau Paper, Trim-Masters, and Bohon Road _____
6. Make improvements to Mackville Road from Tewmeyer Lane to College Street _____
7. Extend Moberly Road from Cornishville Road south to Mackville Road _____
- 7a. Extend Broadway West to new Cornishville Road/Mackville Road connector _____
8. Rebuild Tewmeyer Lane as an improved 2-lane road _____
- 9a. Install traffic signal at Moberly Road and Industry Road _____
- 9b. Install traffic signal at Moberly Road and Tapp Road _____
- 9c. Install traffic signal at Moberly Road and Cornishville Road _____ - _____

Improvement Options

- ★ Intersection Improvement
- Additional Signalization
- Re-build 2-Lane Road
- New 2-lane Connector
- Short Term Reconstruction
- Road Widening



5) Improve Access from KY 1989 near or west of Twemey Lane to Wausau Paper, Tim Masters, and US 127 as a Stand-Alone Project

8) Consider Signalization

1) Widen Moberly Road from KY 390 to KY 1989 as a Stand-alone project

8) Consider Signalization

See Intersection Exhibit

2) Reconstruct Moberly Road KY 1989 Intersection with railroad overpass

4) Rebuild KY 1989 from RR west to Twemey Lane

8) Consider Signalization

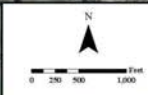
3) Rebuild KY 1989 from RR east to Collins Street

5) Rebuild Twemey Lane

7) Construct New 2-Lane Connector

7a) Construct New 2-Lane Connector

6) Improvements to KY 152 from Twemey Lane to US 127



OTHER NORTHWEST QUADRANGLE OPTIONS

Harrodsburg Northwest US 127 Bypass Alternatives Study
KYTC Item No. 7-8344.00

- Airport
- Cemetery
- Church
- Park
- Hospital
- School
- Landfill
- HAZMAT
- Faults (24K)
- Bike Trail
- Active Rail
- Stream
- Ponds
- Wetlands
- Potential Flood Area
- Sink Hole Area
- Potential Historic Property
- Study Area

A) Construct a bypass

B) Make other improvements:

Thank you for your comments. Use additional pages if necessary. If you fail to receive a postage-paid envelope, you may send your written comments to:

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Station: W5-05-01
Frankfort, KY 40622

Jimmy C. Wilson, P.E.
Project Manager, Division of Planning
Kentucky Transportation Cabinet
Phone: (502) 564-7183
Fax: (502) 564-2865
E-Mail: Jimmy.Wilson@ky.gov

SUMMARY OF COMMENT FORMS
Public Information Meeting
May 12, 2008
HARRODSBURG
NORTHWEST BYPASS
Mercer County
KYTC Item No. 07-8344.00

This public information meeting was conducted to receive public input and comments in order to (1) identify which of the 4 alternative northwest bypass corridors the public prefers and (2) if they do not favor an alternative, then which of the 13 alternative non-bypass improvements are preferred. Citizens were provided a handout consisting of a project fact sheet and illustrations of the alternatives, a comment form to submit, as well as the KYTC Central Office point of contacts for additional information on both.

A staffed information table with a sign-in sheet was present at the entrance, and the handout/comment forms distributed to attendees. The open house type meeting was conducted from 4:00-7:00 pm at the Lion's Park Community Center, located at 450 East Factory Street, Harrodsburg, KY. Several exhibits on display illustrated the various bypass alternatives as well as other individual improvements in lieu of a bypass. Staff members from KYTC and Qk4 were available to answer questions and elicit comments and discussion. Forty four (44) people attended the meeting and signed the sign-in sheets.

The pre-printed comment forms were returned by twenty-seven (27) people. The answers from the comment form questions are listed below with the representative statements of all the comments received:

1. Do you favor a Northwest Bypass of Harrodsburg?

Yes: 5

However, one (1) person of those five (5) people actually prefers that the other alternatives be employed rather than a bypass.

2. If yes, then rank the alternates in order of priority from 1 to 4 with 1 being your highest priority (the one you would like to see constructed).

Of those five (5) people however, Alternative H was the first choice, followed by J, F, and E.

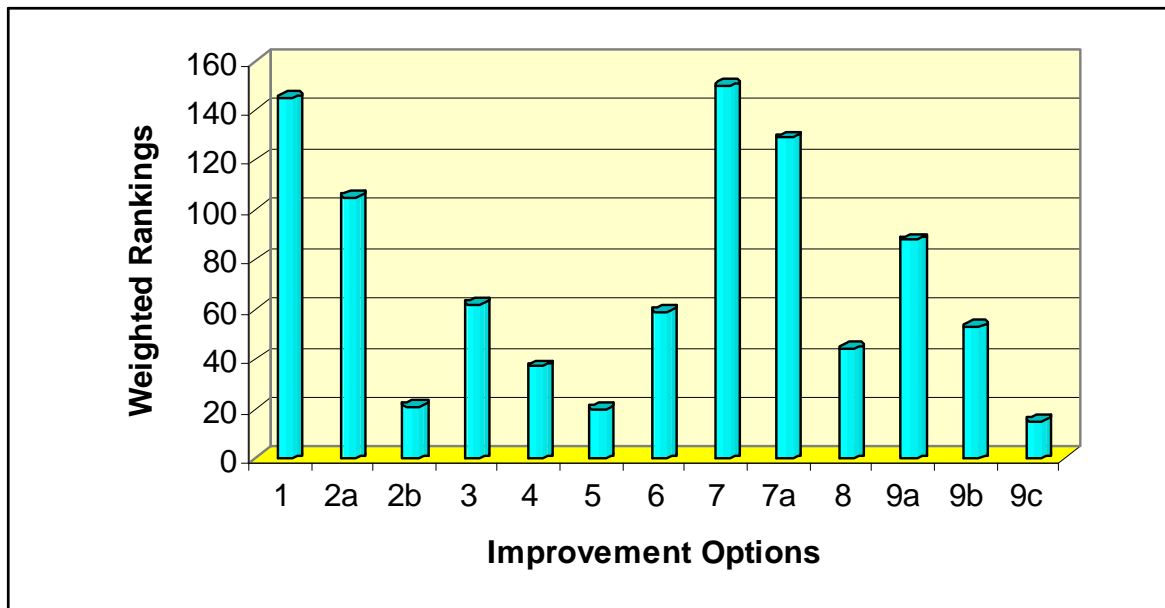
BYPASS ALTERNATES	RANKING			
	Highest Priority			Lowest Priority
Alternate E				#4 Last Choice
Alternate F			#3 Third Choice	
Alternate H	#1 First Choice			
Alternate J		#2 Second Choice		

Please explain your preference (optional):

Twenty-three (23) out of twenty-seven (27) respondents do not prefer a bypass of any kind; they prefer one or some combinations of the other alternatives presented.

4. Please rank the improvements with "1" being your highest priority, "2" being your second highest priority, up through as many projects that you wish to rank.

The ranking by the public of the thirteen (13) other alternatives in order of preference is as follows: 7, 1, 7a, 2a, 9a, 3, 6, 9b, 8, 4, 2b, 5, 9c.



The rankings of the alternatives were calculated by how many times a particular alternative was ranked the same. Then, rankings were weighted beginning with the number 13 (assigned to rank # 1) in decreasing order by one (1) increment. The numbers of same rankings for each alternative were then multiplied by the corresponding weight. Then, the weighted rankings were totaled for each alternative, providing a numerically sound prioritization.

5. Please discuss any other suggestions for transportation improvements in northwest Harrodsburg or provide us with any other comments you have:

Other suggestions for transportation improvements and general comments are reflected below, with the frequency (in parenthesis) with which they appeared:

- (3) Install traffic light at Moberly Road and KY 390.
- (2) Don't spend the money; leave Harrodsburg alone.
- (2) Extend Broadway west to new Cornishville Road/Mackville Road Connector.
- (2) Extension of Moberly Road from Cornishville south to Mackville is best.
- (2) Need left turn signal at intersection of Cornishville Road and US 127.
- (2) Do not widen Tewmeyer Lane.
- (2) Put College Street back the way it was.
- Decrease speed limit from KY 127 to Industry Road.
- Build Railroad overpass at Moberly Road and Cornishville Road.
- The northwest bypass is needed for the schools.
- Keep the project cost and disruption to a minimum.
- Bypass is not needed; construct a railroad overpass and improve existing roads.
- Improve the intersection of KY 152 and US 68.
- Close Moberly Road to all traffic except school traffic.
- Select the most reasonable and economical solution.
- Make improvements to Mackville Road
- A connector to Mackville Road will produce problems on Mackville Road.

Odell Petition: A petition against any North West bypass alternative was signed by thirteen (13) residents along Tewmeyer Lane. Four (4) of these thirteen (13) signatories filled out public survey forms. Concern was expressed in this petition of the effects that widening Tewmeyer lane would have in terms of higher traffic volumes and increased vehicle speed. The signatories requested that the integrity and character of their properties not be adversely affected by the construction of a northwest bypass.

Agenda
Harrodsburg NW Bypass
Item # 7-8344.00
Alternatives Study
Project Team Meeting # 3

Date: June 18, 2008

Time: 9:00 a.m.

Location: KYTC District 7, Lexington, KY

1. Introductions
2. Review
 - a. Schedule
 - b. Project Goals and Issues
3. Discuss:
 - a. Public Meeting Comments
 - b. Recommended Project List (Bypass alternatives or other improvements)
4. Next Steps
 - a. Steering Committee Meeting



Architecture

Engineering

Construction

MEETING MINUTES

Project: Harrodsburg Northwest Bypass Study
Item Number 07-8344.00
Purpose: Project Team Meeting #3
Place: Lexington, Kentucky; KYTC District 7 Conference Room
Meeting Date: June 18, 2008 9:00 am EST
Prepared By: Doug Heberle
In Attendance: Stuart Goodpaster KYTC, D7, Planning
Randy Turner KYTC, D7, Planning
Thomas Witt KYTC, CO, Planning
David Martin KYTC, CO, Planning
Albert Zimmerman Qk4
Tom Springer Qk4
Doug Heberle Qk4

Doug Heberle welcomed everyone to the meeting and asked all attendees to introduce themselves and sign the sign in sheet. He explained that the purpose of this project team meeting was to review the public comments from the public meeting on 5/12/08 and to discuss the prioritized project recommendations proposed by Qk4. Meeting attendees were given handouts which consisted of: a meeting agenda, copy of the power point presentation, the public comment form summary, and a project area map exhibiting the other “non-bypass” alternatives.

Doug Heberle proceeded through the power point presentation and reviewed the project schedule, and the summarized public comments. The facts from the summary of the public comment forms were:

- 27 of the 44 people that attended the meeting on 5/12/08 completed a public comment form.
- 4 of those 27 prefer a northwest Harrodsburg bypass. Their ranked preferences of the bypass alternatives are; H, J, F, E.
- 23 of the 27 attendees prefer one or a combination of “other” alternatives. Those alternatives in order are: 7, 1, 7a, 2a, 3, 6, 9b, 8, 4, 2b, 5, 9c.
- As another sign of further opposition to the bypass, a petition was submitted to KYTC, signed by 13 residents of Tewmeyer Lane requesting that no bypass be built and that Tewmeyer Lane not be altered.

PTM # 3 Meeting Minutes

June 18, 2008

It was noted that no Resource Agency Comments of any significance were received.

Note: Thomas Witt reported that Judge Trisler suggested to him that the intersection at Moberly Road and Cornishville Road should be realigned farther to the east than is currently indicated on the suggested improvement for that intersection. This suggested revision will be addressed and discussed at the Steering Committee Meeting.

After the project team discussed the proposed projects in detail, the following short-term and long-term recommendations were made:

Short-Term:

- 1) Consider three intersection improvements at Moberly Road/Industry Road, Moberly Road/Tapp Road, Moberly Road/ Cornishville Road, including but not limited to signal warrant analyses, signage, and striping. If signals are warranted at these intersections, then it should be considered that they be synchronized with each other.
- 2) Due to need and public support, add the intersection of Mackville Road and US 68 as a spot improvement, despite the fact that this is out of the study area.

Long-Term:

- 3) Reconstruct and extend the Moberly Road Corridor:
 - a. Reconstruct Intersection of Moberly Road/Cornishville Road with a rail road overpass
 - b. Widen Moberly Road between Cornishville Road and Industry Road.
 - c. Construct the Moberly Road extension (on new alignment) to the south from Cornishville Road to Mackville Road, with a connector to Broadway.

Other Future Recommendations:

- 4) Conduct a Small Urban Area (SUA) Study for Harrodsburg.
- 5) After the short-term and long-term projects have been implemented, conduct a planning study for a western Harrodsburg bypass to complete the loop around the city and provide connectivity with the existing eastern bypass. This study would reexamine the purpose and need, including traffic studies, for a western bypass.
- 6) Recommend a rail road relocation study.

PTM # 3 Meeting Minutes

June 18, 2008

Miscellaneous Discussion Items: in regard to the proposed railroad overpass, we will include recommendations for the use of retaining walls at grade separations as well as other design elements to minimize ROW impacts.

Qk4 will provide a map of the recommended short and long term recommendations.

With respect to the Rail road realignment; Qk4 will include in the planning study a short section about the various studies that have been done.

Next Steps The third Steering Committee Meeting will be targeted for either Monday, 7/28, or Monday, 8/4. KYTC will propose the dates to Judge Executive Trisler for confirmation.

END OF MINUTES

Agenda
Harrodsburg NW Bypass
Item # 7-8344.00
Alternatives Study
Steering Committee Meeting # 3

Date: July 28, 2008
Time: 5:00 p.m.
Location: Lions Park Community Center
450 East Factory Street
Harrodsburg, KY

Meeting Objectives:

- Review Comments from Second Public Meeting
- Discuss Recommended Short and Long-Term Projects

1. Introductions
2. Review
 - a. Schedule
 - b. Project Goals and Issues
3. Discuss:
 - a. Summary of Public Meeting Comments
 - b. Recommended Short and Long-Term Projects



Architecture

Engineering

Construction

MEETING MINUTES

Project: Harrodsburg N/W Bypass, Mercer County

Item Number 07-8344.00

Purpose: Project Steering Committee Meeting # 3

Place: Lions Park Community Center

Meeting Date: July 28, 2008

Prepared By: Doug Heberle

In Attendance:

John D. Trisler	Mercer County Judge/Executive
Billy Humphrey	Supervisor, Mercer County Road Department
Michael Freeman	Norfolk Southern Railroad
Bob Upchurch	Citizen-At-Large
Delmer Odell	Citizen-At-Large
Ronnie Sims	Mercer Fiscal Court
Tony Best	North Mercer Water
Keith Curtsinger	North Mercer Water
Stuart Goodpaster	KYTC, District 7 Planning
Randy Turner	KYTC, District 7 Planning
David Martin	KYTC, Division of Planning
Thomas Witt	KYTC, Division of Planning
Tom Springer	Qk4
Albert Zimmerman	Qk4
Bruce Siria	Qk4
Doug Heberle	Qk4

Introductions: Following introductions from those listed above, Stuart Goodpaster gave a brief history and status report of the project.

Power Point: Tom Springer facilitated a PowerPoint presentation that included a review of the project area, the scope of work, and the anticipated project schedule. The results of the public meeting held on May 12, 2008 were also reviewed. The public responses indicated a strong opposition to a northwest bypass in Harrodsburg, but substantial support for “other” improvements. The presentation proceeded with an examination of the four possible bypass alternatives in terms of satisfaction of project goals, cost, traffic volumes, and public support. The recommended projects were then presented in three stages and are as follows:

First Recommendation:

A Northwest Bypass is currently not recommended because of the following facts:

- Costs are \$35 to \$40M
- Low Traffic Forecasts (1,700 to 7,700 ADT in 2030)
- Lack of public support
- Marginally satisfies the project goals

Second Recommendation:

Advance the following short-term projects:

- 1) Consider intersection improvements at Moberly Road/Industry Road, Moberly Road/Tapp Road, and Moberly Road/Cornishville Road (KY 1989). These improvements may include, but are not limited to, signal warrant analyses, signage, and striping. If signals are warranted at these intersections, then it should be considered that they be synchronized with each other.
- 2) Due to need and public support, the intersection of Mackville Road (KY 152) and US 68 should be considered as a spot improvement, despite the fact that this is out of the study area.

Third Recommendation:

Advance the following long-term projects:

- 3) Reconstruct and extend the Moberly Road Corridor:
 - a. Reconstruct Intersection of Moberly Road/Cornishville Road with a rail road overpass.
 - b. Widen Moberly Road between Cornishville Road and Industry Road.
 - c. Construct the Moberly Road extension (on new alignment) south, from Cornishville Road to Mackville Road, with a connector to West Broadway Street.

Meeting Minutes

Item No.: 07-8344.00

Project Steering Committee Meeting #3, July 28, 2008

Other Future Recommendations:

- 4) Conduct a Small Urban Area (SUA) Study for Harrodsburg.
- 5) Upon implementation of the short and long term projects, conduct a planning study for a Western Harrodsburg Bypass to complete the loop around the city and provide connectivity with the existing eastern bypass
- 6) Conduct a rail road relocation study.

Overall, these set of recommendations were found acceptable to the Steering Committee members in attendance.

Post Presentation Discussion: Much interest was expressed in the recommended projects, especially the possibility of executing a Small Urban Area Study for the City of Harrodsburg and surrounding area.

Once the long-term projects are constructed, the resulting traffic patterns will be studied before deciding whether to implement any of the future recommendations.

Interest was also expressed with the conceptual design options for the intersection of Cornishville Road and Moberly Road. The Steering Committee was desirous of the opportunity for public input with regard to the intersection design option. Three conceptual design options were presented: Alternative 1, Alternative 2, and the extension of the new 2-lane connector. The committee discussed each concept and the majority supported Alternative 1, rejected Alternative 2, and supported the extension of the new 2-lane connector. Furthermore, the suggestion was made to modify the latter option to locate the western Cornishville Road approach south of the rail road, in an effort to reduce cost. Final design would be determined in the design phase, if and when that particular project was initiated.

KYTC and Qk4 are available to make a presentation to inform Mercer County Fiscal Court of the results of the study.

End of Minutes

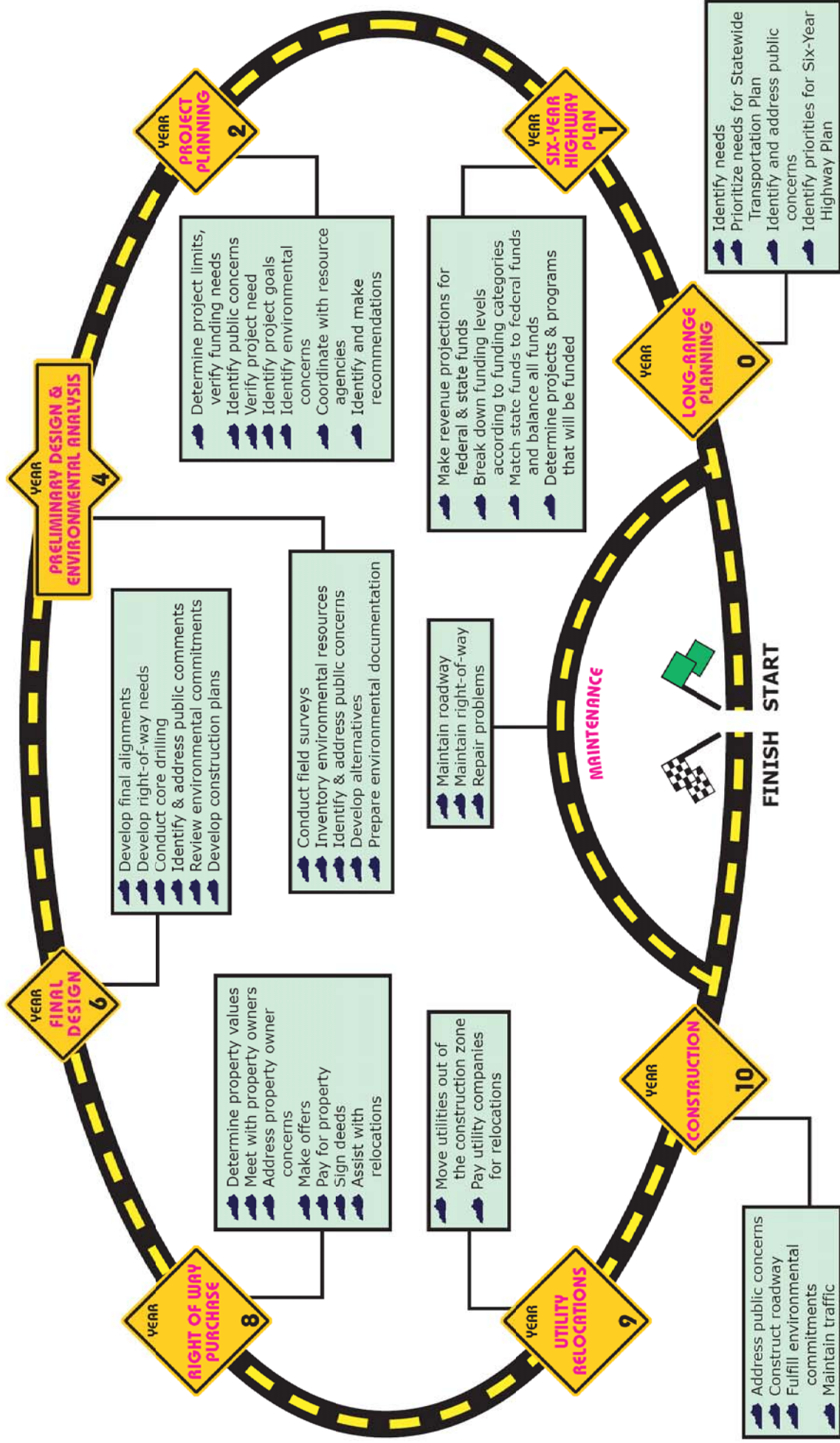


Illustration by Reid Webb, KYTC / Division of Planning

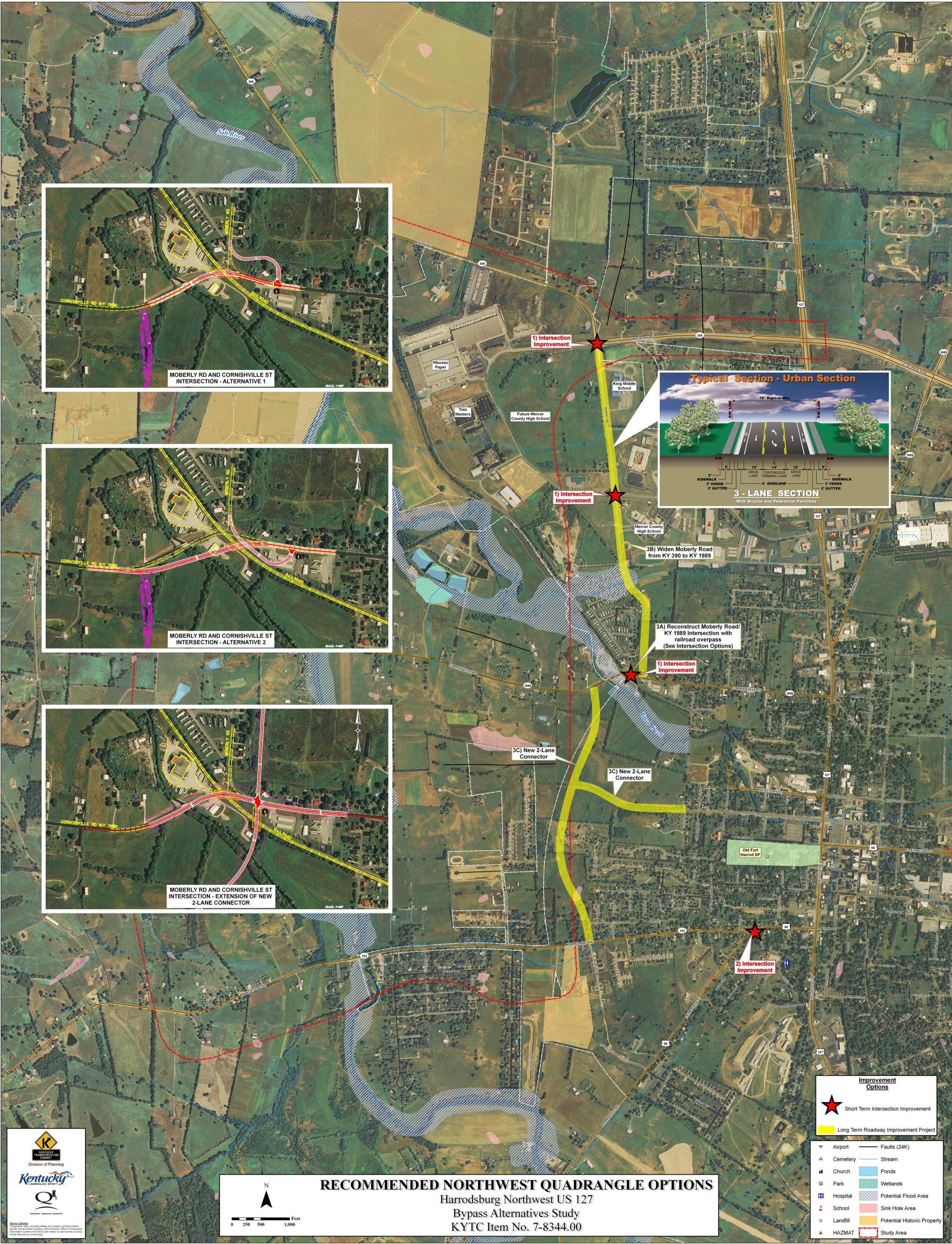
Harrodsburg Northwest Bypass Alternatives Study
Steering Committee Meeting # 3
July 28, 2008

NAME	REPRESENTING	PHONE #	EMAIL
Delmer Odell	Tewmoy Lane	859-734-5822	delo@bluegrass.org
MICHAEL FREEMAN	NORFOLK SOUTHERN	704-936-6156	michael.freeman@stvinc.com
BG Upchurch		859-734-1187	upchurch@magacoast.com
Billy Humphrey	Road Dept	859-734-6340	
Don Best	North maver water	859-734-9784	
Kath Embarger	North Mercer water	859-865-2292	
John Parker	Newman Farm Court	(859) 734-6300	Husker@kentucky.com
Ronnie Davis	Merced Special Const	859-734-2246	

KY TC & CONSULTANTS

Harrodsburg Northwest Bypass Alternatives Study Steering Committee Meeting # 3 July 28, 2008

NAME	REPRESENTING	PHONE #	EMAIL
Tom Spengler	QK4	502-585-2222	tspengler@qk4.com
Doug Heberle	QK4	502-585-2222	dheberle@qk4.com
Randy Turner	Ky TC D7	859-266-2355	
Bruce Siria	QK4	502-585-2222	bsiria@qk4.com
DAVID MARTIN	KYTC-PLANNING	502-544-7183	charles.martin@ky.gov
BOB HUMMER	KYTC D7 PLANNING	859-246-2355	Stuart.Goodpastor@ky.gov
Bobby Upchurch		859-734-1187	upchurch@magconst.com
Tony Best	North Mercer Water	859-734-9788	
Keith Cuttlinger	North Mercer Water	859-865-2292	
Albert Zimmerman	QK4	502-585-2222	azimmerman@qk4.com
Thomas Witt	Ky TC Planning	502-564-7183	Thomas.Witt@ky.gov



APPENDIX H

RESOURCE AGENCY COORDINATION CORRESPONDENCE

- First Resource Agency Coordination
- Second Resource Agency Coordination



Ernie Fletcher
Governor

TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.kentucky.gov

November 30, 2007

Bill Nighbert
Secretary

Crystal Murray Ducker
Deputy Secretary

«Mailing_Title» «First_Name» «Last_Name»«Suffix»
«Title»
«Organization»
«Address1»
«Address2»
«City» «State» «Zip»

Dear «Letter_Title» «Last_Name»:

Subject: Planning Study
Mercer County
Harrodsburg Northwest Bypass
KY 152 to US 127
Item No. 07-8344.00

We are requesting your agency's input and comments on a planning study to determine the need and potential impacts for a proposed highway project. The Kentucky Transportation Cabinet has assembled a study team to evaluate a proposed new northwest bypass of Harrodsburg from KY 152 (Mackville Road) to US 127 north of town in Mercer County, Kentucky. The primary goals of this project would be to improve transportation system connectivity for the schools, industries, and emergency response vehicles in the area, provide a grade separated railroad crossing, and reduce congestion on area roadways. The study is currently in the initial data-gathering stage.

We ask that you identify specific issues or concerns of your agency that could affect the development of the project. This planning study will include a scoping process for the early identification of potential alternatives, environmental issues, and impacts related to the proposed project. We believe that early identification of issues or concerns can help us develop highway project alternatives to avoid or minimize negative impacts. In particular, we are asking that you provide the following information:

- Comments on the project goals or purpose and need for the project,
- Significant issues or concerns in the project area that may need to be addressed so that the project can be adequately scoped,
- Any conservation or development plans your agency or organization has ongoing or is aware of in the project area,
- Locations of any known areas, issues, or resources within the project area that should be considered when developing alternatives so that impacts can be minimized, mitigated, or avoided early in the process, and

«Mailing_Title» «First_Name» «Last_Name»«Suffix»

Page 2

November 30, 2007

- Any mitigation strategies that should be considered in the development of the project.

We respectfully ask that you provide us with your comments by January 15, 2008, to ensure timely progress in this planning effort.

During the development of this planning study, comments will be solicited from federal, state, and local agencies, as well as other interested persons and the general public, in accordance with principles set forth in the National Environmental Policy Act (NEPA) of 1969. The Federal Highway Administration is partnering with us in these efforts.

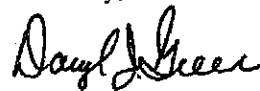
Other Transportation Cabinet offices or consultants working on behalf of the Transportation Cabinet may also contact you seeking more detailed data or information to assist them in completing their environmental studies for this phase of the project.

We have enclosed the following project information for your review and comment:

- Study Purpose, Issues, and Draft Project Goals
- Project Location Map
- Traffic Data
- Aerial Photography Environmental Footprint
- USGS Environmental Footprint

We appreciate any input you can provide concerning this project. Please direct any comments, questions, or requests for additional information to Jim Wilson of the Division of Planning at (502) 564-7183 or at Jimmy.Wilson@ky.gov. Please address all written correspondence to Daryl J. Greer, P.E., Director, Division of Planning, Kentucky Transportation Cabinet, 200 Mero Street 5th Floor, Frankfort, KY 40622.

Sincerely,



Daryl J. Greer, P.E.

Director

Division of Planning

DJG/JCW/NH

Enclosures

c: Jose Sepulveda, FHWA (w/e)
 Mary Murray, FHWA (w/e)
 Lenny Stoltz, Bluegrass ADD (w/e)
 Tom Springer, Qk4
 Jim Rummage
 James Ballinger
 Stuart Goodpaster
 Phil Logsdon
 David Waldner
 Ananias Calvin

Wailing Title	Letter Title	First Name	Last Name	Suffix	Title	Organization	Address1	Address2	City	State	Zip
Mr.	Mr.	Phillip	Braden		District Office Manager	Memphis Airports District Office, Federal Aviation Administration	2802 Business Park Drive Building G		Memphis	TN	38118-1655
Mr.	Sir and/or Madam	Donald C.	Storm		Adjutant General	American Association of Truckers		P.O. Box 487	Benton	KY	42026
Mr.	Mr.	John	Kingdon		Deputy Commissioner	Department of Military Affairs	Boone Natl Guard Ctr., 100 Munsterman Pky.		Frankfort	KY	40601
Mr.	Mr.	George	Owens		Director, Office of State Archaeology	Department of Parks	10th Floor, Capital Plaza Tower	500 Metro Street	Frankfort	KY	40601
Mr.	Mr.	William	Staw	Ph.D.	Regional Environmental Officer	Federal Emergency Management Agency, Region IV	211 Lafayette Hall		Lexington	KY	40508-0024
Mr.	Mr.	Jack	Fish		President	Kentucky Department of Transportation	3003 Chamblee-Tucker Road		Atlanta	GA	30341-4130
Mr.	Sir and/or Madam	Mark	Blowhalell		Secretary	Kentucky Department of Transportation	10332 Bluegrass Parkway		Louisville	KY	40239
Mr.	Mr.	John	Bob		Executive Director	Cabinet for Health and Family Services	105 Reams Street	P.O. Box 1450	London	KY	40743
Mr.	Mr.	John	Arnold		Executive Director	Kentucky Airport Zoning Commission	275 East Main		Frankfort	KY	40601
Mr.	Mr.	Dave	Addison		President	Kentucky Chamber of Commerce Executives, Inc.	380 King's Daughters Drive	200 Metro Street	Frankfort	KY	40601
Mr.	Mr.	Richie	Fanner		Commissioner	Kentucky Department of Agriculture	484 Chennault Road		Frankfort	KY	40601
Ms.	Ms.	Cleary A.	Taylor		Commissioner	Kentucky Department of Fish and Wildlife Resources	32 Fountain Place		Frankfort	KY	40601
Dr.	Dr.	Jonathan	Gaessert		Commissioner	Kentucky Department of Fish and Wildlife Resources	300 Fair Oaks Lane		Frankfort	KY	40601
Ms.	Ms.	Susan	Bush		Commissioner	Kentucky Department of Fish and Wildlife Resources	1 Sportmen's Lane		Frankfort	KY	40601
Mr.	Mr.	Stephen A.	Colman		Director	Kentucky Department of Fish and Wildlife Resources	#2 Hudson Hollow		Frankfort	KY	40601
Mr.	Mr.	John	Adams		Commissioner	Kentucky Department of Fish and Wildlife Resources	919 Versailles Road		Frankfort	KY	40601
Mr.	Mr.	Paul	Rothman		Director	Division of Mine Reclamation and Enforcement	#2 Hudson Hollow		Frankfort	KY	40601
Mr.	Sir and/or Madam	John	Lyns		Director	Kentucky Division of Air Quality	803 Schenkel Lane	P.O. Box 1589	Frankfort	KY	40601
Ms.	Ms.	Leah W.	MacSwords		Director	Kentucky Division of Forestry	627 Conanche Trail		Frankfort	KY	40601
Mr.	Mr.	Greg	Howard		Commissioner	Kentucky Department of Vehicle Enforcement	125 Holmes Street, 3rd Floor		Frankfort	KY	40601
Mr.	Mr.	R. Bruce	Scott		Director	Kentucky Division of Wildlife Management	14 Rolly Road		Frankfort	KY	40601
Mr.	Mr.	David	Morgan		Director	Kentucky Division of Water	14 Rolly Road		Frankfort	KY	40601
Mr.	Mr.	John	Hindman		Secretary	Kentucky Cabinet for Economic Development	Old Chennault Road	300 West Broadway	Frankfort	KY	40601
Mr.	Mr.	John	Bird		Executive Director	Kentucky Geological Survey, University of Kentucky	228 Mining and Mineral Resources Bldg.		Frankfort	KY	40601
Ms.	Ms.	Jim	Cobb		Executive Director	Kentucky Geological Survey, University of Kentucky	300 Washington Street		Frankfort	KY	40601
Ms.	Ms.	Donna M.	Nesty		Executive Director	Kentucky Geological Survey, University of Kentucky	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Ken	Whitworth		Director	Kentucky Geological Survey, University of Kentucky	2281 Lawrenceburg Road, Bldg. B, Suite 4		Frankfort	KY	40601
Mr.	Sir and/or Madam	Sylvia L.	Lovely		Executive Director	Kentucky Geological Survey, University of Kentucky	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	James	Emke		President/CEO	Kentucky League of Cities, Inc.	2281 Lawrenceburg Road, Bldg. B, Suite 4		Frankfort	KY	40601
Ms.	Ms.	James	Emke		President/CEO	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Donald S.	Dell	Jr.	Secretary	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Victoria	Boima		Executive Director	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Bescher	Hudson		Executive Director	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Marchia	Sparrow		President	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	George	Ward		Secretary	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Allan	Frank		Director	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Greta	Smith		Director	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	David	Waldner		Director	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Bill	Broyles		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Duane	Thomas		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Tom	Napier		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Tiffani	Jackson		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Laura	Owens		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	James	Aldridge		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Keith P.	Elkon		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	William	Angulo		Branch Manager	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Sir and/or Madam	Kenneth A.	Westlake		Chief	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Heinz	Wueller		Attorney	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Michael D.	Hubs		State Conservationist	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Kenneth W.	Holt		Field Supervisor	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Lee	Andrews		Bridge Administrator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Roger	Wibesch		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
The Honorable	Senator	Jim	Bumling		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
The Honorable	Colonel	Raymond E.	McConnell		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
The Honorable	Congressman	Ben	Chandler		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Krista	Mills		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Buddy	Yount		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Reck	Lally		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	Tony	Reck		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Linda Stille	Muraine		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Ms.	Ms.	Sue	Sunder		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
Mr.	Mr.	John D.	Trisler		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
The Honorable	Mayor	Lonnie	Campbell		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601
The Honorable	Representative	Midward	Dedman		United States Senator	Kentucky League of Cities, Inc.	100 W. Broadway		Frankfort	KY	40601

The Honorable Mr.	Senator Mr.	Dan J. B.	Kelly Clanch	Kentucky State Senator, District 14	Kentucky State Legislature	324 West Main Street	Springfield KY	40060
Mr.	Mr.	J. B.	Clanch	Magistrate	Mercer County Fiscal Court	2750 Talmage-Mayo Road	Salvisa KY	40372
Ms.	Ms.	Ronnie	Sims	Executive Director	Mercer County Chamber of Commerce	346 Rope Hill Lane	Harrodsburg KY	40330
Mr.	Mr.	Brenda	Sexton	Commissioner	City of Harrodsburg	488 Price Avenue	Harrodsburg KY	40330
Mr.	Mr.	Kevin	Perkins	Commissioner	Mercer County Schools	551 Chesapeake Drive	Harrodsburg KY	40330
Mr.	Mr.	Eddie	Long	Superintendent	Mercer County EMA	810 East Lexington Street	Harrodsburg KY	40330
Mr.	Mr.	Bruce	Johnson	Acting EMA Director	Mercer County Fire Protection District	371 East Lexington Street	Harrodsburg KY	40330
Mr.	Mr.	Mike	Preston	Fire Chief	James B. Haggin Memorial Hospital	PO Box 760	Harrodsburg KY	40330
Mr.	Mr.	Dave	Weber	Superior	North Mercer Water District	200 Morris Drive	Harrodsburg KY	40330
Mr.	Mr.	Glen	Phillips	CEO	Mercer County Extension Service	854 McBerly Road	Harrodsburg KY	40330
Dr.	Dr.	Billy	Humphrey	Chair	Harrodsburg Historical Society	P.O. Box 79	Salvisa KY	40372
Mr.	Mr.	Roy	Short	President	Harrodsburg Police Department	P.O. Box 324	Harrodsburg KY	40330
Ms.	Ms.	Linda	McClanahan	F-911 Coordinator	Harrodsburg Waste Water Treatment Plant	P.O. Box 316	Lexington KY	40503
Ms.	Ms.	Terry	Sampson	Police Chief	Harrodsburg/Mercer County Industrial Development Authority	208 South Main Street	Harrodsburg KY	40330
Mr.	Mr.	Lora	Gilkerson	Plant Manager	Greater Harrodsburg/Mercer County Planning & Zoning Commission	411 North Greenville Street	Harrodsburg KY	40330
Mr.	Mr.	Bill	Durham	Executive Director	Northfolk Southern Railroad	965 Cornishville Road	Harrodsburg KY	40330
Ms.	Ms.	Emile	Kelly	Executive Director	Northfolk Southern Railroad	P.O. Box 283	Harrodsburg KY	40330
Ms.	Ms.	Elizabeth	Hackitt	Engineer, Public Improvements	Bluegrass Energy Coop	488 Price Avenue, Suite 4	Harrodsburg KY	40330
Mr.	Mr.	Karen	White	Vice President of Engineering	Inter County Energy	109 Short Street	Harrodsburg KY	40330
Mr.	Mr.	Shawn	Moore	System Engineer	Inter County Energy	1200 Peachtree, NE	Atlanta GA	30309
Mr.	Mr.	Jim	Kazmierczak	System Engineer	Inter County Energy	1200 Peachtree, NE	Atlanta GA	30309
Mr.	Mr.	David	Wyatt	System Engineer	Inter County Energy	P.O. Box 950	Nicholasville KY	40340
Mr.	Mr.	Chris	Brewer	System Engineer	Inter County Energy	1009 Hustonville Road	Nicholasville KY	40340
Mr.	Mr.	Danny	Collier	System Engineer	Inter County Energy	1009 Hustonville Road	Danville KY	40423
Mr.	Mr.	Dave	Phelps	System Engineer	Inter County Energy	1009 Hustonville Road	Danville KY	40423

STUDY PURPOSE, ISSUES, AND DRAFT PROJECT GOALS

HARRODSBURG NORTHWEST BYPASS MERCER COUNTY

STUDY PURPOSE

The purpose of the Harrodsburg Northwest Bypass Scoping Study is to identify and evaluate potential corridors for a new or improved route in the northwest quadrant of Harrodsburg between US 127 and KY 152. The "Enacted Kentucky Six-Year Highway Plan FY 2007 – 2012" includes no further project development activity other than the Scoping Study. The study is further intended to help define the purpose of the project and better meet Federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA). Tasks included in this study include:

- Discuss project needs and issues with the Project Team and a Steering Committee of local officials and other interested stakeholders,
- Define project goals,
- Identify any known environmental concerns,
- Identify and evaluate potential alternative locations for a northwest bypass, and
- Recommend a preferred location (or alternative locations) to be further examined in any subsequent project development phases.

ISSUES

Major issues and concerns have been identified within the study area that will be addressed in the Scoping Study. These include:

- Several schools and industries are located in the northwest quadrant of Harrodsburg. A new Mercer County High School is being constructed near the corner of KY 390 (Industry Road) and Moberly Road. This concentration of trip origins and destinations at similar times of the day contributes to traffic congestion in the vicinity.
- Emergency response travel times to the James B. Haggin Memorial Hospital and to other locations are lengthened by congestion along and west of US 127.
- At-grade railroad crossings of the Norfolk Southern Railroad, which runs through Harrodsburg from northwest to southeast, carry more than twenty trains daily. The unique "diagonal" routing of this rail line results in multi-directional street blockages during passage of these trains.
- Location of any northwest bypass in Harrodsburg should be compatible with possible future expansion south of KY 152 and connecting with US 127 south.

DRAFT PROJECT GOALS

For the Harrodsburg Northwest Bypass project, several draft project goals have been identified. These include:

- Improve Transportation System Connectivity,
- Provide Grade Separated Railroad Crossings,
- Reduce Congestion on Area Roadways, and
- Facilitate Future Expansion to the South.

CONTACTS

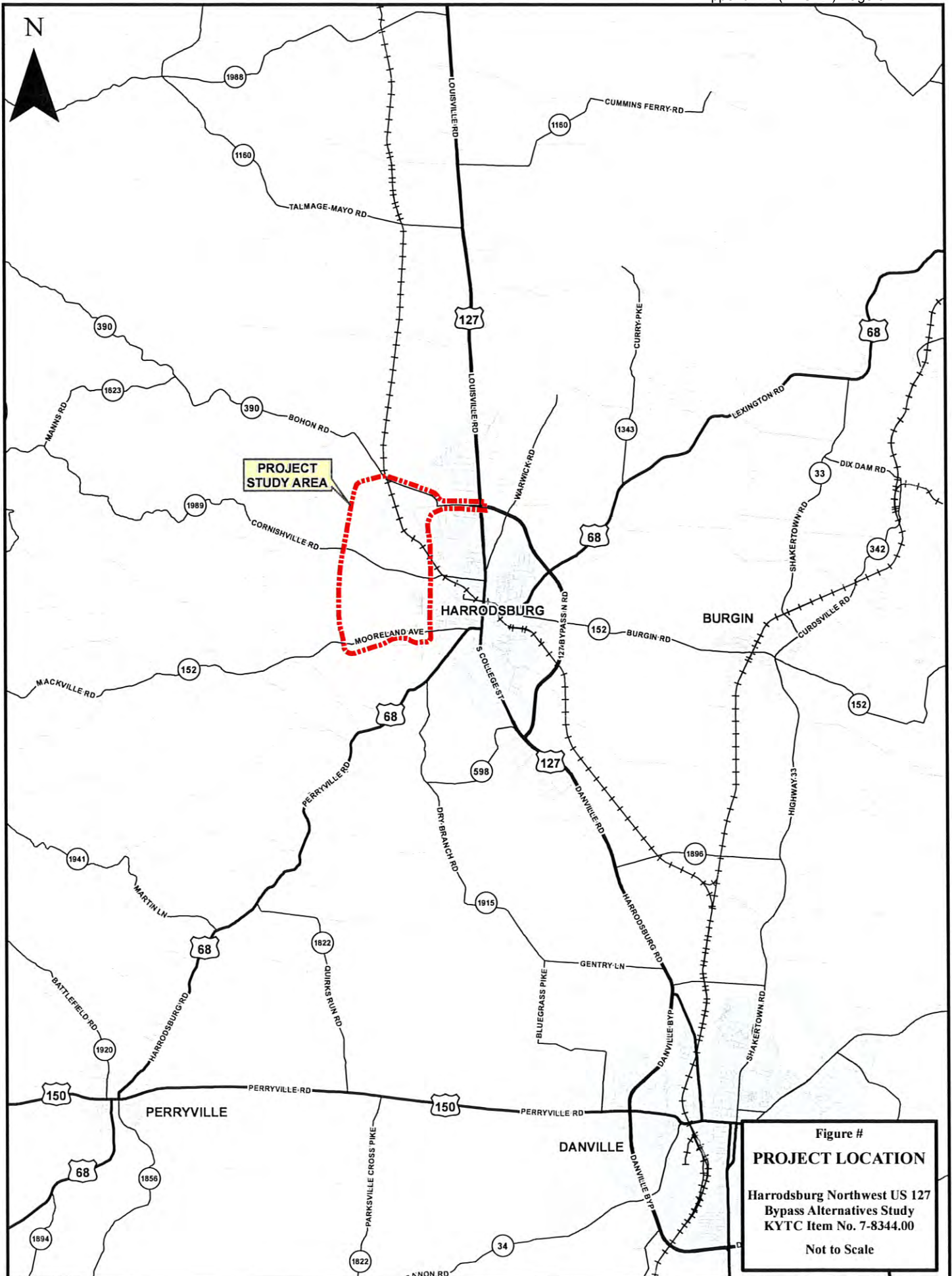
Address written comments to:

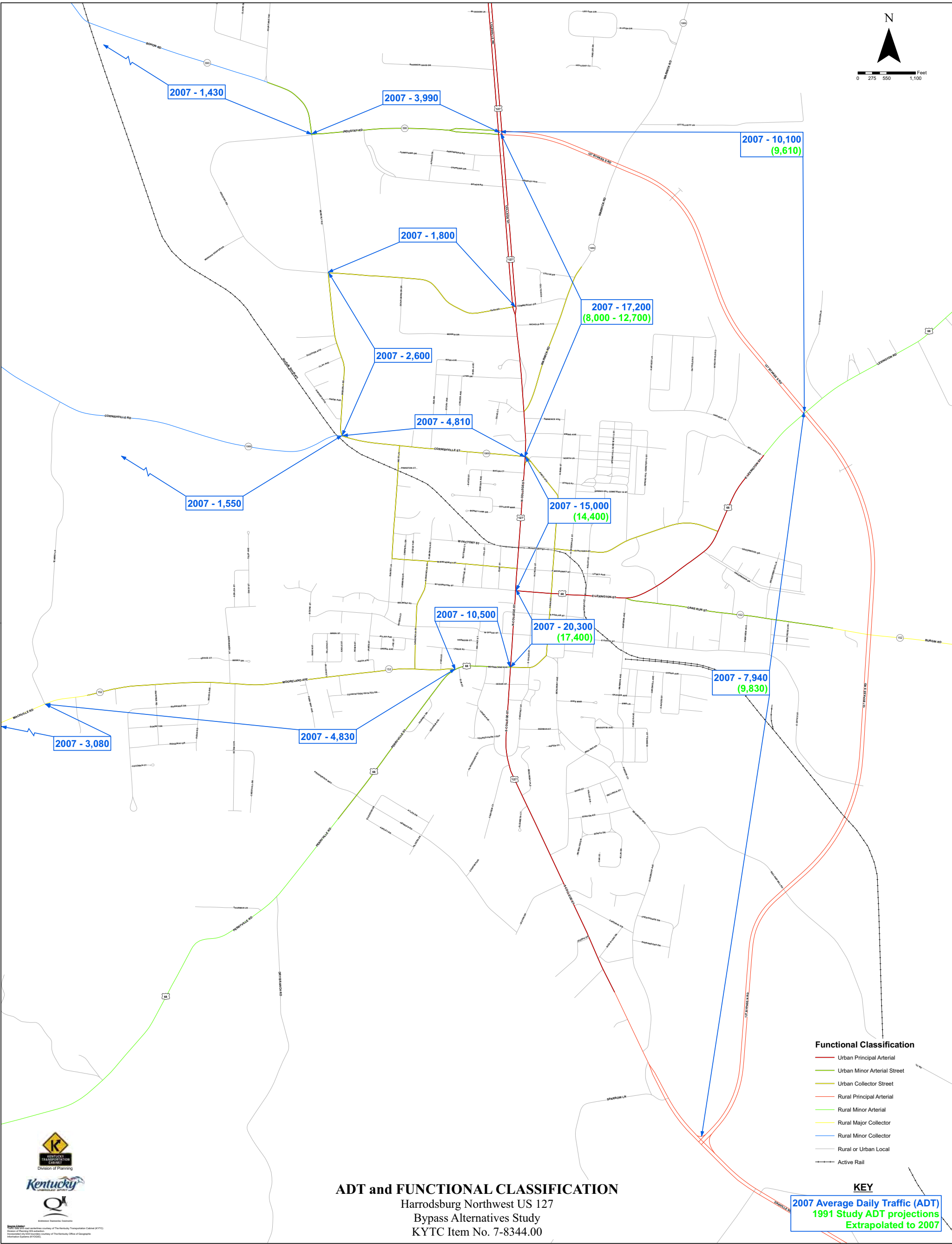
Daryl Greer, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
Station W5-05-01
200 Mero Street
Frankfort, KY 40622

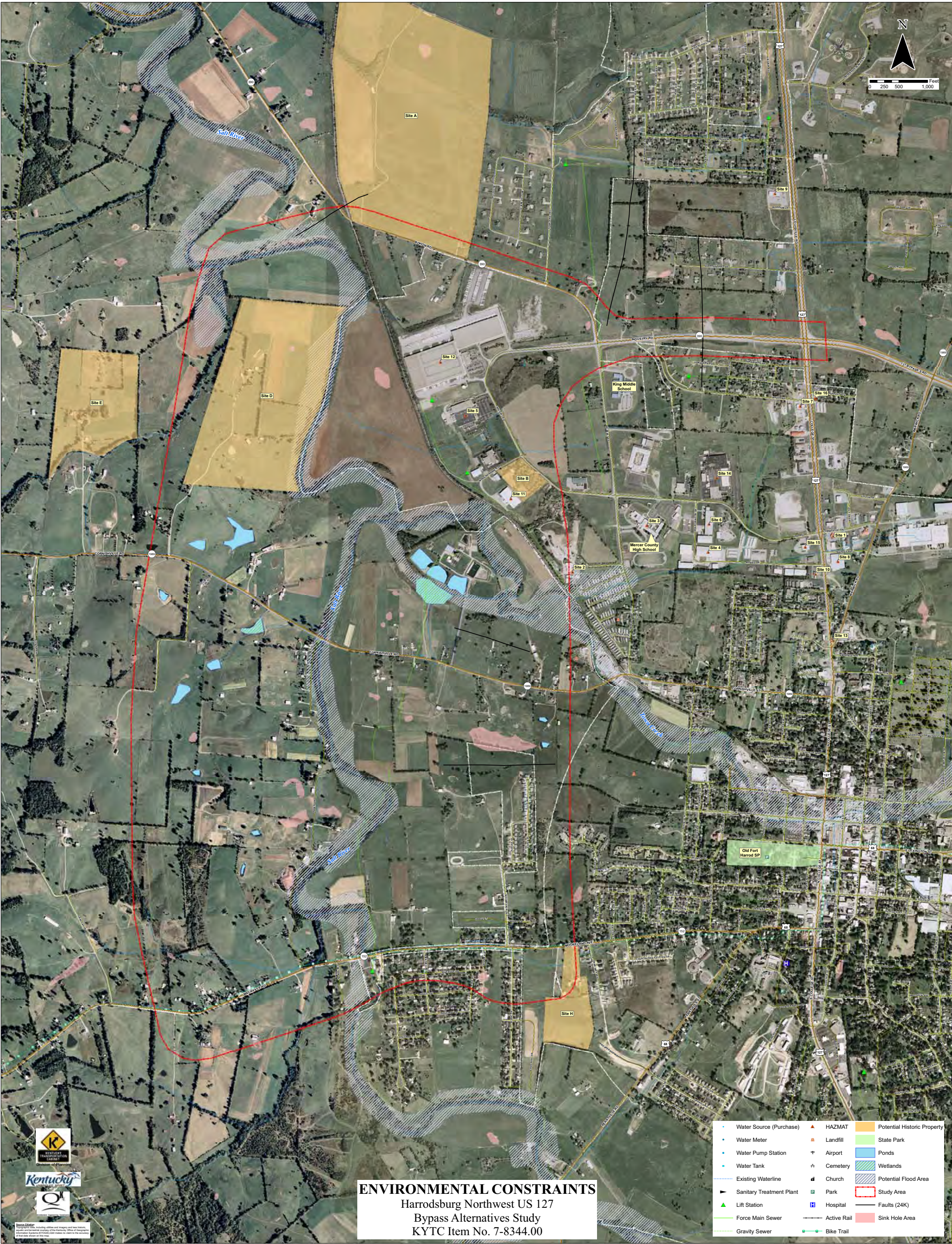
Or, you may contact by phone or e-mail:

Jim Wilson, P.E.
Project Engineer
Division of Planning
Kentucky Transportation Cabinet
(502) 564-7183
jimmy.wilson@ky.gov

Visit our web page at: <http://transportation.ky.gov/planning>







ENVIRONMENTAL CONSTRAINTS
Harrodsburg Northwest US 127
Bypass Alternatives Study
KYTC Item No. 7-8344.00

- | | | |
|--------------------------|-------------|-----------------------------|
| Water Source (Purchase) | HAZMAT | Potential Historic Property |
| Water Meter | Landfill | State Park |
| Water Pump Station | Airport | Ponds |
| Water Tank | Cemetery | Wetlands |
| Existing Waterline | Church | Potential Flood Area |
| Sanitary Treatment Plant | Park | Study Area |
| Lift Station | Hospital | Faults (24K) |
| Force Main Sewer | Active Rail | Sink Hole Area |
| Gravity Sewer | Bike Trail | |



Kentucky
Department of Transportation



Source: Google Earth, Kentucky Department of Transportation, and Harrodsburg Area Chamber of Commerce. All data is current as of the date of the map.

**Environmental Review Process
Resource Agencies Responding (1st Mailing)**

	Agency	Date	Response
1	US Natural Resources Conservation Service	12/11/2007	Recommended contacting local NRCS representative and provided Mercer County soils data
2	US Department of Health and Human Services	1/23/2008	Provided a list of recommend topics to be considered during the NEPA process; requested a draft copy of the document
3	US Coast Guard	12/13/2007	No Impact
4	Mercer County Judge Executive	12/6/2007	Recommended roadway improvements as soon as possible
5	KYTC Permits	12/14/2007	Recommended suggestions relating to future access management and acquiring ROW
6	KYTC Division of Environmental Analysis	2/5/2008	Provided the checklist for environmental review considerations for Division of Planning Studies
7	KYTC Geotechnical	1/24/2008	Assessment of underlying rock formations and recommendations for the negotiations of the rock formations during construction
8	Kentucky Department of Agriculture	12/5/2007	Recognized the information, but provided no comment
9	Kentucky Department of Military Affairs	12/17/2007	No issues or concerns
10	KY EPPC DEP Division of Water	1/28/2008	No objection; KYTC Best Management Practices must be adhered to
11	KY EPPC Division of Waste Management	1/28/2008	Any waste generated must be properly disposed of and any contaminants encountered must be properly addressed
12	KY EPPC DEP Division for Air Quality	1/28/2008	Referenced the Fugitive Emissions Regulation and noted that open burning is prohibited except under certain circumstances
13	KY EPPC DEP DWM (HAZMAT)	12/7/2007	Identified one (1) instance of groundwater contamination near, but outside of the study area
14	KY EPPC DEP DWM (SW)	1/9/2008	Identified three (3) landfills on the eastern boundary of the study area
15	KY EPPC DEP DWM (UST) Branch	12/10/2007	Identified one (1) facility with one (1) removed underground storage tank in the area
16	KY EPPC DEP DWM	12/21/2007	Provided a list of superfund sites in Mercer County
17	KY EPPC Division of Conservation	1/18/2008	Provided map of adjacent agricultural district and recommended the use of Best Management Practices to minimize impact
18	KY EPPC Department for Natural Resources	12/10/2007	No indication of past, present, or future mining activities within the area
19	Kentucky Justice and Public Safety Cabinet (KVE)	1/31/2008	Recommended making the roadway a designated route
20	Kentucky State Police	1/11/2008	No Impact
21	US Department of Transportation FAA	1/10/2008	No apparent impacts so long as construction activities do not exceed 200 feet in height above ground level
22	Mercer County Emergency Management	1/10/2008	Project needed, but concerns expressed about non-local drivers' and truck traffic at two US 68 intersections
23	KY Commerce Cabinet Kentucky Heritage Council	1/3/2008	Recommended a full survey of both archaeological and cultural resources
24	KY Department of Fish and Wildlife Resources Commerce Cabinet	1/7/2008	Recommended contacting USFWS and USACE and more wetland study; and suggested recommendations for mitigating stream impacts
25	KY Cabinet for Health and Family Services FMD	12/26/2007	No issues or concerns
26	KY Cabinet for Health and Family Services Office of the Secretary	12/27/2007	Recommended contacting local health departments in each county regarding septic systems and water run off.
27	Kentucky Geological Survey	12/18/2007	Provided list to summarize any geologic concerns

United States Department of Agriculture



Natural Resources Conservation Service
771 Corporate Drive, Suite 210
Lexington, KY 40503

RECEIVED

DEC 14 2007

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street 5th Floor
Frankfort, KY 40622

December 11, 2007

RE: Proposed Harrodsburg Bypass from KY 152 to US 127

Dear Mr. Greer:

The USDA-Natural Resources Conservation Service (NRCS) is concerned with potential impacts that any proposed highway project might have upon prime farmland soils and additional farmlands of statewide importance. If federal dollars are to be used to convert these important farmlands from agricultural uses to non-agricultural uses, a Form AD-1006 (or Form NRCS-CPA-106 if the project is a corridor type project) must be submitted to the local NRCS office. These forms may be obtained from the local NRCS office and are also available as electronic forms on the web at http://www.nrcs.usda.gov/programs/fppa/pdf_files/AD1006.PDF and http://www.nrcs.usda.gov/programs/fppa/pdf_files/CPA106.pdf. If you need assistance in identifying important farmlands in Mercer County, please contact:

Robert B. Campbell, District Conservationist, NRCS
227 Morris Drive, Harrodsburg, KY 40330, Phone: 859-734-6889.

To further assist with the planning efforts, I am enclosing a CD containing ArcView GIS shapefiles of soils information for Mercer County. The GIS shapefiles are in UTM projection, nad83, zone 16. The soil database table includes a column for "farmland classification-all components" (farmclac) that identifies prime farmlands and soils of statewide importance. A legend file has been provided (Mercer_farmland_classif.avl), which may be used with GIS software to more clearly display the soils that are considered prime farmlands and soils of statewide importance.

Sincerely,

A handwritten signature in dark ink, appearing to read "M. Hubbs", followed by the text "acting for" in a cursive script.

MICHAEL D. HUBBS
State Conservationist

cc:

Jacob Kuhn, ASTC, NRCS, Lexington, KY
J. David Stipes, ASTC/FO, NRCS, Lexington, KY
Robert Campbell, District Conservationist, NRCS, Harrodsburg, KY

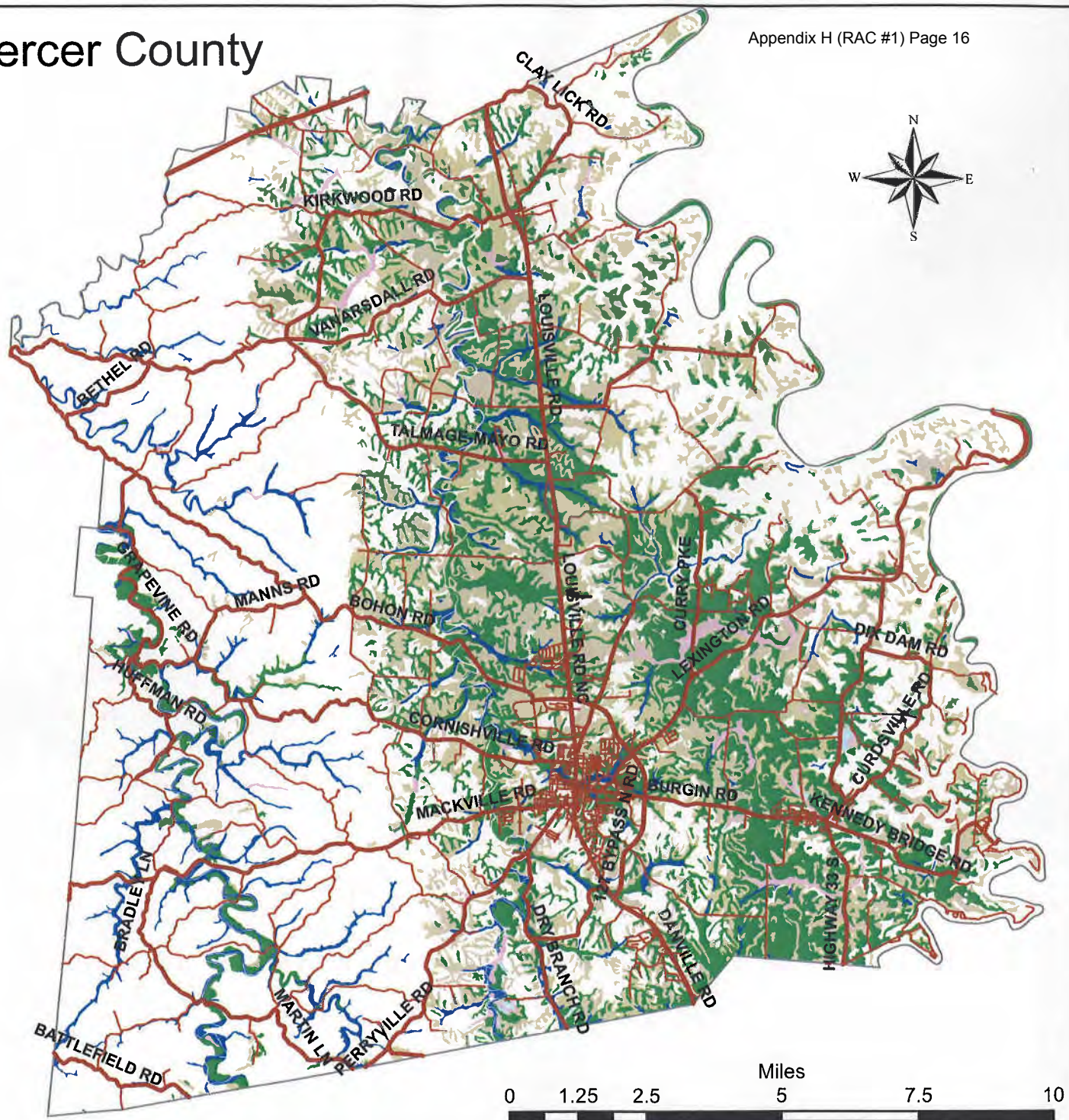
Helping People Help the Land

An Equal Opportunity Provider and Employer



Mercer County

Appendix H (RAC #1) Page 16



Legend

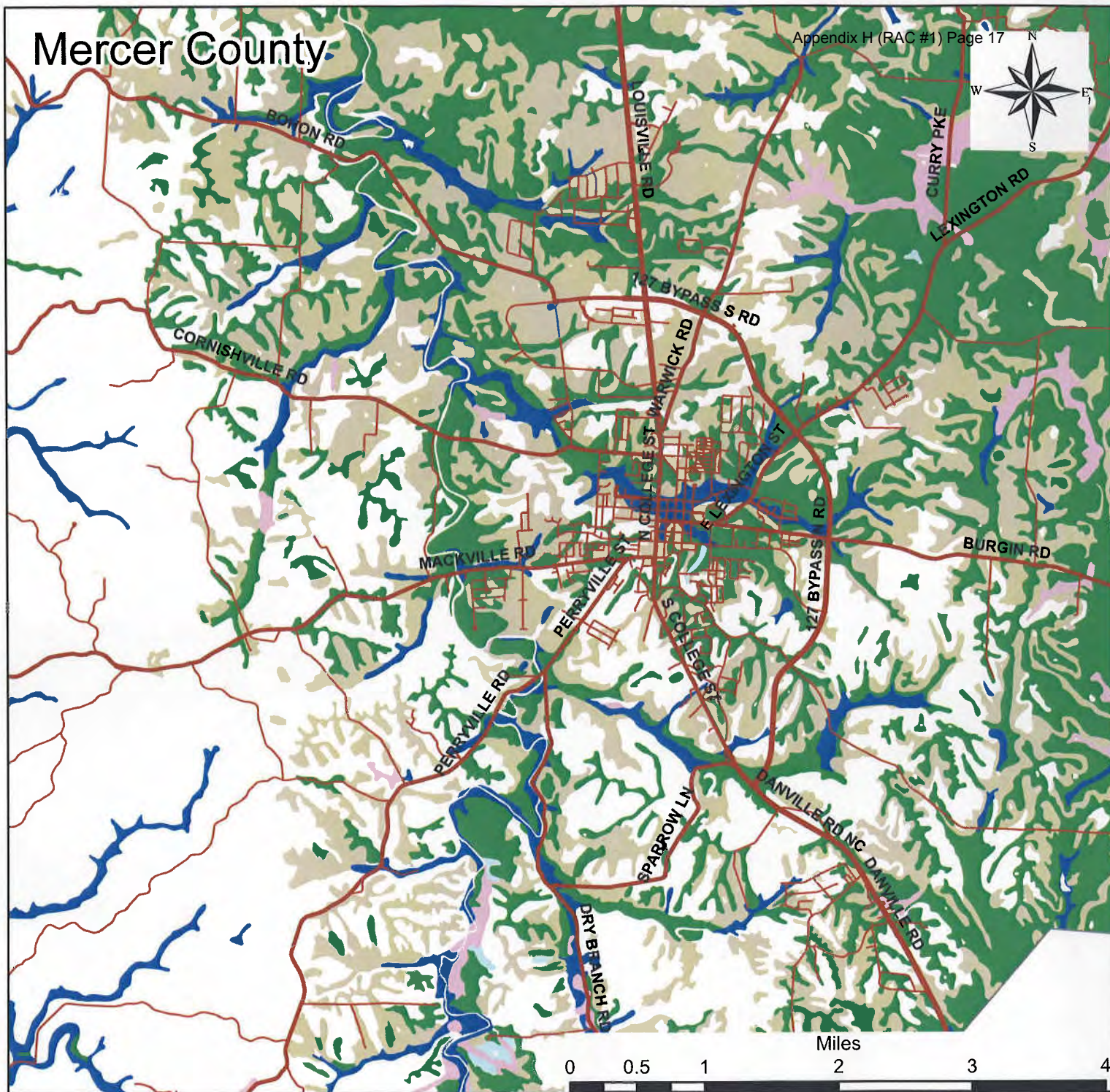
- County/Local Roads
- State Roads
- County Line
- All areas are prime farmland
- Prime farmland if drained
- Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
- Prime farmland if protected from flooding or not frequently flooded during the growing season
- Farmland of statewide importance

Natural Resources Conservation Service Harrodsburg Bypass from KY 152 to US 127

Robert B. Campbell, District Conservationist, NRCS
227 Morris Dr., Harrodsburg, KY 40330
(859) 734-6889

Mercer County

Appendix H (RAC #1) Page 17



Legend

County/Local Roads

State Roads

County Line

All areas are prime farmland

Prime farmland if drained

Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season

Prime farmland if protected from flooding or not frequently flooded during the growing season

Farmland of statewide importance

Natural Resources Conservation Service Harrodsburg Bypass from KY 152 to US 127

Robert B. Campbell, District Conservationist, NRCS
227 Morris Dr., Harrodsburg, KY 40330
(859) 734-6889



January 23, 2008

Centers for Disease Control
and Prevention (CDC)
Atlanta GA 30333

RECEIVED

JAN 30 2008

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street 5th Floor
Frankfort, KY 40622

Dear Mr. Greer:

This is in response to your agency's advance notification concerning the Planning Study, Mercer County, Harrodsburg Northwest Bypass, KY 152 to US 127, Item No. 07-8344.00. We are responding on behalf of the Department of Health and Human Services (DHHS), U.S. Public Health Service.

We understand the purpose of the Harrodsburg Northwest Bypass Scoping Study is to identify and evaluate potential corridors for a new or improved route in the northwest quadrant of Harrodsburg between US 127 and KY 152. This proposed bypass would serve industrial, commercial, residential, and public land uses in and adjacent to the study area. We commend your efforts to address present and future traffic congestion in the corridor and emergency response travel times. We particularly noted that there are several schools in the northwest quadrant of Harrodsburg and that a new high school is now being constructed near the corner of KY 390 and Moberly Road. Proper planning of mitigation measures to address pedestrian infrastructure and transportation congestion can be developed to protect and promote public health. We would like for you to consider all public health options during the Planning Study.

Although we understand that this Scoping Study was included in the "Enacted Kentucky Six-Year Highway Plan FY 2007-2012" and no other project activity is planned at present other than the Scoping Study, it is extremely important that this evaluation consider potential future impacts in the study corridor. While this Scoping Study will provide needed infrastructure guidance for the future if plans for the bypass are implemented, it is also important to recognize that there may be land use changes that occur well in advance of the actual bypass construction. Without proper implementation and adherence to land use controls, piecemeal development and land speculation problems may cause unwanted problems in the future when the bypass is actually implemented. There must be close involvement by Harrodsburg city and the Mercer County officials in all study planning efforts in order to minimize potential future problems.

Planning with *health in mind* for future development along this corridor can help to: increase multi-modal transport options that facilitate increased physical activity and reduce air pollution; reduced traffic congestion; and, ensure reduced injuries from vehicular crashes to other motorists, bicyclists, and pedestrians. Our agency is particularly concerned about: an adequate and safe pedestrian infrastructure including safe and convenient walking and crossings for all ages and abilities, adequate signage and signaling, sufficiently marked lanes for bicyclists and HOV/carpools, and appropriate speed limit transitions. Mitigation measures that benefit both environmental and human health also include landscaped sidewalk buffers to separate pedestrians

Page 2, Mr. Daryl Greer, P.E.

from vehicular traffic and landscaped medians to serve as pedestrian crossing refuges as well as to aid in traffic calming. Aside from the health benefit of reduced injuries, landscaped buffers and medians offer the co-benefits of increasing air quality through carbon sequestration, improving pedestrian environment, and may also offer economic benefit to the surrounding community through increased property values.

Although we have no other specific comments to offer at this time, we do recommend that the topics listed below be considered during the study process, and addressed if appropriate. Mitigation plans protective of the environment and that act to protect and promote public health should be described in the Study Report wherever warranted.

AREAS OF POTENTIAL PUBLIC HEALTH CONCERN:

1. Air Quality

- dust control measures during project construction, and mitigation of potential releases of air toxins after project completion
- compliance with air quality standards

II. Water Quality/Quantity

- special consideration to private and public potable water supply, including ground and surface water resources
- ground and surface water contamination (e.g. runoff)
- compliance with water quality and wastewater treatment standards

III. Wetlands and Flood Plains

- potential contamination of underlying aquifers
- construction within flood plains which may endanger human health
- contamination of the food chain

IV. Hazardous Materials/Wastes

- identification and characterization of hazardous/contaminated sites (we note there are several hazardous waste sites in this study area).
- safety plans/procedures, including use of pesticides/herbicides; worker training
- spill prevention, containment, and countermeasures plan

V. Non-Hazardous Solid Waste/Other Materials

- measures regarding solid waste generation, reduction, and disposal should be considered

VI. Noise

- identify projected elevated noise levels and sensitive receptors (i.e. residential, schools, hospitals) and appropriate mitigation plans during and after construction

VII. Occupational Health and Safety

- compliance with appropriate criteria and guidelines to ensure worker safety and health

VIII. Land Use -- Community and Neighborhood Impacts

- special consideration and planning for pedestrian infrastructure, including sidewalks that are continuous, accessible, safe, and aesthetically pleasing.
- adequate pedestrian crossings that are convenient and easily identified by motorists
- sufficiently marked, continuous lanes and infrastructure needs for bicyclists
- ADA accessibility compliance for all project areas

Page 3, Mr. Daryl Greer, P.E.

- consideration of beneficial and adverse long-term land use impacts, including the potential influx of people into the area as a result of a project and associated impacts
- demographic special considerations (e.g. hospitals, nursing homes, day care centers, schools)
- special consideration and appropriate mitigation for necessary relocation and other potential adverse impacts to residential areas, community cohesion, community services

IX. Environmental Justice

- minority groups in study area
- economic characteristics of study area residents and workers

While this is not intended to be an exhaustive list of possible impact topics, it provides a guide for typical areas of potential public health concern that may be applicable to this project. Any other health related topics potentially associated with the proposed project should also receive consideration.

Please furnish us with one copy of all NEPA related project documents to the address listed below when they become available for review. Please feel free contact us for further discussion of any topics raised in this response letter.

Sincerely yours,



Andrew L. Dannenberg, MD, MPH
Associate Director for Science
Division of Emergency and Environmental Health Services
National Center for Environmental Health
Centers for Disease Control and Prevention
4770 Buford Highway, MS F-60
Atlanta, GA 30341

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
Eighth Coast Guard District

Appendix H (RAC #1) Page 23

1222 Spruce Street
St. Louis, MO 63103-2832
Staff Symbol: dwb
Phone: (314)269-2378
Fax: (314)269-2737
Email:

RECEIVED

16591.1/ Mercer County
December 13, 2007

DEC 19 2007

Mr. Daryl Greer, Division of Planning
Kentucky Transportation Cabinet
Station W5-05-01
200 Mero Street
Frankfort, KY 40622

Subj: HARRODSBURG TRANSPORTATION CORRIDOR IMPROVEMENT PROJECT,
MERCER COUNTY

Dear Mr. Greer:

Please refer to your correspondence of November 30, 2007. We have determined that the proposed improvements will involve work over the Salt River, Dry Fork Creek, and Tewmey Creek. Pursuant to the Coast Guard Authorization Act of 1982, the subject project does not involve bridges over navigable waters of the United States. Therefore, a Coast Guard bridge permit is not required for this project.

We appreciate the opportunity to comment on the project.

Sincerely,

A handwritten signature in dark ink, appearing to read "R. K. Wiebusch".

ROGER K. WIEBUSCH

Bridge Administrator

By direction of the District Commander

RECEIVED

JOHN TRISLER
MERCER COUNTY JUDGE EXECUTIVE

DEC 07 2007



FISCAL COURT BUILDING / 134 SOUTH MAIN STREET
HARRODSBURG, KY. 40330 / 859-734-6300

December 6, 2007

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street 5th Floor
Frankfort, KY 40622

Dear Planning Director Greer,

Thank you for your letter requesting the input of the Mercer County Fiscal Court on the proposed Harrodsburg Northwest Bypass. I worked with your team and the consultant to help develop the study purpose, issue and goals and I agree with draft of these points.

The only additional issue that I would recommend would be the following:

The lack of a bypass puts greatly increased traffic on narrow, curvy and dangerous county roads through this area.

We look forward to working together with your team to reduce congestion and improve the safety in this area.

Sincerely,

A handwritten signature in blue ink, appearing to read "John D. Trisler". The signature is stylized and fluid.

John D. Trisler
Mercer County Judge/Executive

JT/ss



RECEIVED

DEC 17 2007

Steven L. Beshear
Governor


TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.kentucky.gov

Joseph W. Prather
Secretary

TO: Daryl J. Greer
Director
Division of Planning

ATTN: Jim Wilson

FROM: Cass T. Napier 
Branch Manager
Permits

DATE: December 14, 2007

RE: Mercer County
Harrodsburg Northwest Bypass
KY 152 to US 127
Item No. 07-8344.00

The Permits Branch has reviewed the data provided for subject study site and wish to offer the following.

1. We urge the Cabinet to classify this project and all new projects as partially or fully controlled access facilities.
2. Assuming the project is partial control access, we encourage all possible access points be set on the plans in accordance with 603 KAR 5:120, even if they are not to be constructed at that time.
3. When buying R/W for this and all reconstruction routes, assuming the access control is partial control, new deed for all adjoining property owners need to be executed to identify the access control even if no new R/W is acquired.
4. In addition, we would like to make every effort possible to have the design speed to be the same as anticipated posted speed when the project is complete.
5. We would like to see access control fence installed with the project.
6. If the proposed roadway is to be on the N. H. S., early notification of the final line and grade is needed. This enables us to monitor outdoor advertising devices prior to road construction being completed.
7. Please notify this office if the proposed roadway is to be placed on the National Highway System. This information is needed to assist this office in regulating the installation of any outdoor advertising device.

Thank you for the opportunity to verbalize our concerns.

CTN/RLI



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FEB 07 2008

Steven L. Beshear
Governor

TRANSPORTATION CABINET

Frankfort, Kentucky 40622
www.kentucky.gov

Joseph W. Prather
Secretary

February 5, 2008

Mr. Daryl J. Greer, P.E.
Director
KYTC, Division of Planning
Transportation Office Building
200 Mero Street
Frankfort, KY 40622

RE: Planning Study
Mercer County
Harrodsburg Northwest Bypass
KY 152 to US 27
KYTC Item No. 7-8344

Dear Mr. Greer,

This is in response to your letter dated November 30, 2007 requesting our input on the above referenced project. The DEA staff has reviewed the information provided by your office. Please see the attached Environmental Review checklist for our comments.

We appreciate the opportunity to provide input on your planning project in Mercer County. If you have any questions concerning this matter, please contact myself or Tim Foreman at your convenience.

Sincerely,

A handwritten signature in blue ink, reading "David M. Waldner".

David M. Waldner, P.E.
Director
Division of Environmental Analysis

Cc: J. Wilson (Planning) w/a
Central file w/a



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Division of Environmental Analysis

Environmental Review Considerations for Division of Planning Studies

Indicate whether the Area/Corridor(s)/Alternatives selection might potentially be influenced by any known information or reasonable extrapolations from available data.

Y	N	Archaeology
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there known archaeological sites within the proposed study areas that are either listed or potentially eligible for listing to the NRHP?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there study areas that, due to certain landform characteristics, have a higher potential for sites, especially NRHP eligible archaeological sites?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there study areas that could be recommended as having a lower potential for sites, especially NRHP eligible archaeological sites?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Does the distribution of sites suggest anything of importance to project location selection?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there any special concerns/considerations/circumstances that should be considered early in project development, such as a historical structure survey, that would further identify potential issues from an archaeological perspective?

Identify any areas that should be avoided, if possible, to minimize resource impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the known or potential resource(s).

Comments: Archaeological site 15Me2 is located within the potential historic property site D. Site 15Me2 is a prehistoric mound and is likely to be considered eligible for listing. It should be avoided. The "bluffs" along the west side of the Salt River have a higher potential for substantial prehistoric settlements and mounds. These have a greater likelihood of being eligible for listing. A previous archaeological survey for a wastewater treatment system resulted in the identification of multiple sites along the floodplain of the Salt River. Given the depositional history of the floodplain, there is a higher potential for buried archaeological sites. As a prehistoric resource area, the floodplains of the Salt River and Town Creek are expected to have a high number of archaeological sites. Conversely, the upland areas east of the river (closer to Harrodsburg) should have few archaeological sites and fewer potentially significant prehistoric sites. A historic structure survey would aide in the early identification of potential historic archaeological sites. If the area near 15Me2 is within one of the potential alignments, it is recommended that early archaeological reconnaissance be conducted to confirm the location of the site.

Y	N	Cultural Historic Resources
X	<input type="checkbox"/>	Are there known historic sites, districts, objects or structures within the proposed corridors that are either listed or potentially eligible for listing to the NRHP?
<input type="checkbox"/>	X	Has historic context of the area been developed that would allow the elimination of any buildings, districts, structures or objects that meet the 50 year old NRHP criterion?

X	<input type="checkbox"/>	Are there study areas that could be recommended as having a lower potential for historic sites, especially NRHP eligible historic sites?
X	<input type="checkbox"/>	Does the distribution of sites suggest anything of importance to project location selection?
Identify any areas that should be avoided, if possible, to minimize resource impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the known or potential resource(s).		
Comments: Please see attached comments		
Y	N	Socioeconomic
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there any low-income or minority communities identified within the proposed corridors?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there Prime Farmland soils identified within the proposed corridors?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there any communities and/or business districts within the proposed corridors?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are there any public recreation areas, such as parks or waterfowl refuges, located within the proposed corridors?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Can one or more of the proposed corridors be recommended as having a lower potential for impacts to any of the resources identified above?
Identify any areas that should be avoided, if possible, to minimize resource impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the consideration of this known or potential impact. Please refer to the attached information for a detailed description of the soils present in the area.		
Comments: The project study area is located within the U.S. Census Tract 9602. This tract, which is significantly larger than the defined study area, has 15% of the population living at or below poverty level, compared to 13% of Mercer County and 16% of the entire State. Approximately 11% of Census Tract 9602 is of some race other than White, compared to 6% for Mercer County and 10% for the State. Therefore, there appears to be some potential for low income and minority populations to be present within the study area and further analysis is recommended for future phases of project development.		
Y	N	Air Quality
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Is the project in a conforming plan? (Planning will identify if in a nonattainment area)
<input type="checkbox"/>	<input type="checkbox"/>	Considering the project setting (urban/rural), design features (off ramps, etc.), and locations where traffic flow might be interrupted with signalization or other traffic control devices, is there reasonable potential for the project to have an Air Quality impact?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is it expected that a base study or hot spot analysis will be required?
Identify any areas that should be avoided, if possible, to minimize air quality impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the consideration of this impact.		
Comments: Air quality and noise should not be major issues on this project.		

Y	N	Noise
<input checked="" type="checkbox"/>	<input type="checkbox"/>	How many, what type and where are sensitive receptors within proximity to the proposed project?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Indicate whether a base study will be required based upon the project adding through-lane capacity.
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Will further study be required due to areas of the project anticipated to have a significant change in the vehicle types that drive the road? What type of and how much traffic will utilize the road? Is the traffic volume anticipated to be above 20,000 ADT?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Will there be a significant change in the grade of the road with regard to braking noise and downshifting engine noise?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	With the spatial distribution of potential sensitive receptors, can recommendations be made regarding project location selection?
Identify any areas that should be avoided, if possible, to minimize noise impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the consideration of this impact.		
Comments: None		
Y	N	Underground Storage Tanks/Hazardous Waste
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there any known or listed State or Federal Superfund sites within proximity to the project and have they been addressed (closed)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are there any known or listed landfills, dumps or scrap yards within proximity to the project?
<input type="checkbox"/>	<input type="checkbox"/>	Have there been any reportable releases of regulated substances in or near the project area and have they been addressed (closed)?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Suggest limited phase 1 work by the consultant (costs = \$1,500 to \$3,000) including ERD search – attach to planning document for review when submitted to DEA.
<input checked="" type="checkbox"/>	<input type="checkbox"/>	When provided by Planning, comment on information from the public with regard specifically to UST/HAZ issues. For example, people may know of situations that have been unreported and that may be of concern such as spills of chemicals, unauthorized storage of discarded tires and materials, abandoned drum piles and above ground tanks etc...
Identify any areas that should be avoided, if possible, to minimize impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the consideration of this impact.		

Comments: The map provided of the project location contains 15 locations identified as hazmat sites. Three sites, 5, 11 and 12 are located within the study area footprint. Site 2 and one landfill are located just outside the study area footprint and should be considered a potential impacted hazmat site. All five sites are located in the northeast corner of the study area, between Cornishville Road KY 1989 and Bohon Road. It is the opinion of this office that the remaining sites on the map do not pose a hazmat concern to this project due to their distance from the study area. It is the recommendation of this office that any alternatives developed to meet the Purpose and Need for the proposed action be designed in a way that would avoid the located landfills and that a full Phase I Hazardous Materials study be conducted on any alternatives carried forward for consideration.

Y	N	Ecology
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is there potential for the project to effect endangered species? Have the USFWS, KSNPC, and KDFWR species lists and/or websites identified any T&E species in the project area?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Would stringent erosion controls and/or stream avoidance be required?
<input type="checkbox"/>	<input checked="" type="checkbox"/>	Are any outstanding resource, special use waters, etc., present in the project area?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Is habitat for any listed T&E species known to exist in the project area?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Would a biological assessment or habitat assessment be required?
Identify any areas that should be avoided, if possible, to minimize impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the consideration of this impact.		
<p>Comments: Running buffalo clover (RBC), Indiana bat (IB), and gray bat (GB) all have the potential to exist in the project area. RBC could occur on historic properties with partial shade and near stream banks. GB and IB could exist throughout the project area; GB along forested riparian corridors and IB along forested corridors. My list does not show any caves listed for Mercer County, however it is an incomplete list. Sinkholes are present, so care should be taken to avoid open-throated sinkholes as these could harbor bats. Clubshell mussel, fanshell mussel, Northern riffleshell mussel, and ringpink mussel all are known to occur within Mercer County according to USFWS (KSNPC has them as extirpated). These mussel species will occur within large streams, such as Salt River.</p>		
Y	N	Permits
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Are any known or potential wetlands present in the project area?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Will floodplains be impacted by the project?
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Will any of the following likely be required for any of the study areas: 401 permit, 404 permit, ACE Section 10 permit, Coast Guard permit, FEMA map revision, other? (specify below by study area)
Identify any areas that should be avoided, if possible, to minimize impacts. Unless the concerns noted above are equally distributed across all alternatives, corridors or study areas (should be so noted below), provide a specific explanation of varying degrees by which the areas studied would be influenced or affected by the consideration of this impact.		

Comments:

1. Permits : Due to the location of this proposed road it is likely that there could be a impact to Salt River, if possible this river should be clear spanned to avoid an impact. Also due to the nature of the vicinity of the proposed project location. There will be a potential to impact wetlands that should be avoided if possible due to big flood plain areas of the Salt River and topography of the Study area. It is desired that no stream or wetland impact breaks .10 acre or 300' linear ft. in length. This will greatly reduce all 404 & 401 fee's for the proposed project along with greatly speeding up processing times.

Cultural Historic Comments:

Five sites are identified by the study as potentially historic: Sites A, B, D, E, and H. There is no mention of Sites C, F, or G. The northeast corner of the study area contains one previously surveyed site, Site B on the map. This site has a Kentucky Heritage Council (KHC) survey number of ME-172 and it is listed on the National Register. However, much of this area, located east of the railroad and south of KY 390, has been developed as an industrial park. It has a low potential for other significant above-ground resources. The remaining study area is predominantly rural and has historically served as farmland. The Salt River bisects the study area and would have been a draw for early settlers as an important water source. The site identified as Site A is previously surveyed by the KHC as ME-130. From aerial photographs, it appears the house is no longer standing. The buffer placed over Site A in the study seems overly large, but the site needs to be field checked by a qualified architectural historian to verify its status. Site B, as mentioned previously, is listed on the National Register. Site D does not appear to have been previously surveyed and needs to be field verified. The same goes for Site E. It is possible that these sites are ME-120 and 121, early house and mill sites. Once again, the buffer may not be appropriate, but eligibility and boundary recommendations need to be made by an architectural historian. Site H has not been previously surveyed and is surrounded by newly constructed homes. In the area west of the Salt River and south of Cornishville Road, there appear to be several historic sites that will need evaluation. These have the potential to be large farms that would be eligible for the National Register. On aerial photographs there appear to be cemeteries off of Tewmey lane, but what look like headstones may actually be plantings of some sort. Any cemeteries will need to be identified and evaluated in the field. There are two previously surveyed sites north of Cornishville Road that are not identified by the study. ME-116 and ME-115 both have the potential to be eligible sites. As a historically rural area in a county rich with historic resources there is a great potential for many eligible sites in the study area. Without field verification and study by a qualified architectural historian it is not possible to eliminate any potentially historic sites at this point. A full cultural historic report will be required and its findings will need to be coordinated with the State Historic Preservation Office.

Soils and Prime Farmlands

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Bq	Boonesboro silt loam	3.4	0.1%
CaB	Caleast silt loam, 2 to 6 percent slopes	38.9	1.7%
CaC	Caleast silt loam, 6 to 12 percent slopes	25.4	1.1%
Du	Dunning silty clay loam	9.9	0.4%
EdD	Eden silty clay loam, 6 to 20 percent slopes	342.9	14.7%
EkA	Elk silt loam, 0 to 2 percent slopes	77.0	3.3%
EkB	Elk silt loam, 2 to 6 percent slopes	97.4	4.2%
FaC	Fairmount-Rock outcrop complex, 6 to 12 percent slopes	60.3	2.6%
FaD	Fairmount-Rock outcrop complex, 12 to 30 percent slopes	100.8	4.3%
FdC	Faywood silt loam, 6 to 12 percent slopes	245.6	10.5%
FdD	Faywood silt loam, 12 to 20 percent slopes	11.9	0.5%
FwD3	Faywood silty clay, 12 to 20 percent slopes, severely eroded	46.7	2.0%
LoB	Lowell silt loam, 2 to 6 percent slopes	156.1	6.7%
LoC	Lowell silt loam, 6 to 12 percent slopes	125.0	5.3%
LoD	Lowell silt loam, 12 to 20 percent slopes	60.7	2.6%
LwC3	Lowell silty clay loam, 6 to 12 percent slopes, severely eroded	40.4	1.7%
MaB	Maury silt loam, 2 to 6 percent slopes	99.1	4.2%
MaC	Maury silt loam, 6 to 12 percent slopes	62.0	2.7%
McB	McAfee silt loam, 2 to 6 percent slopes	203.7	8.7%
McC	McAfee silt loam, 6 to 12 percent slopes	276.3	11.8%
McD	McAfee silt loam, 12 to 20 percent slopes	43.8	1.9%
MeD	McAfee-Rock outcrop complex, 12 to 20 percent slopes	12.5	0.5%
Ne	Newark silt loam	0.3	0.0%
NhB	Nicholson silt loam, 2 to 6 percent slopes	12.8	0.5%
No	Nolin silt loam	147.1	6.3%
Pt	Pits, quarries	0.6	0.0%
W	Water	38.7	1.7%

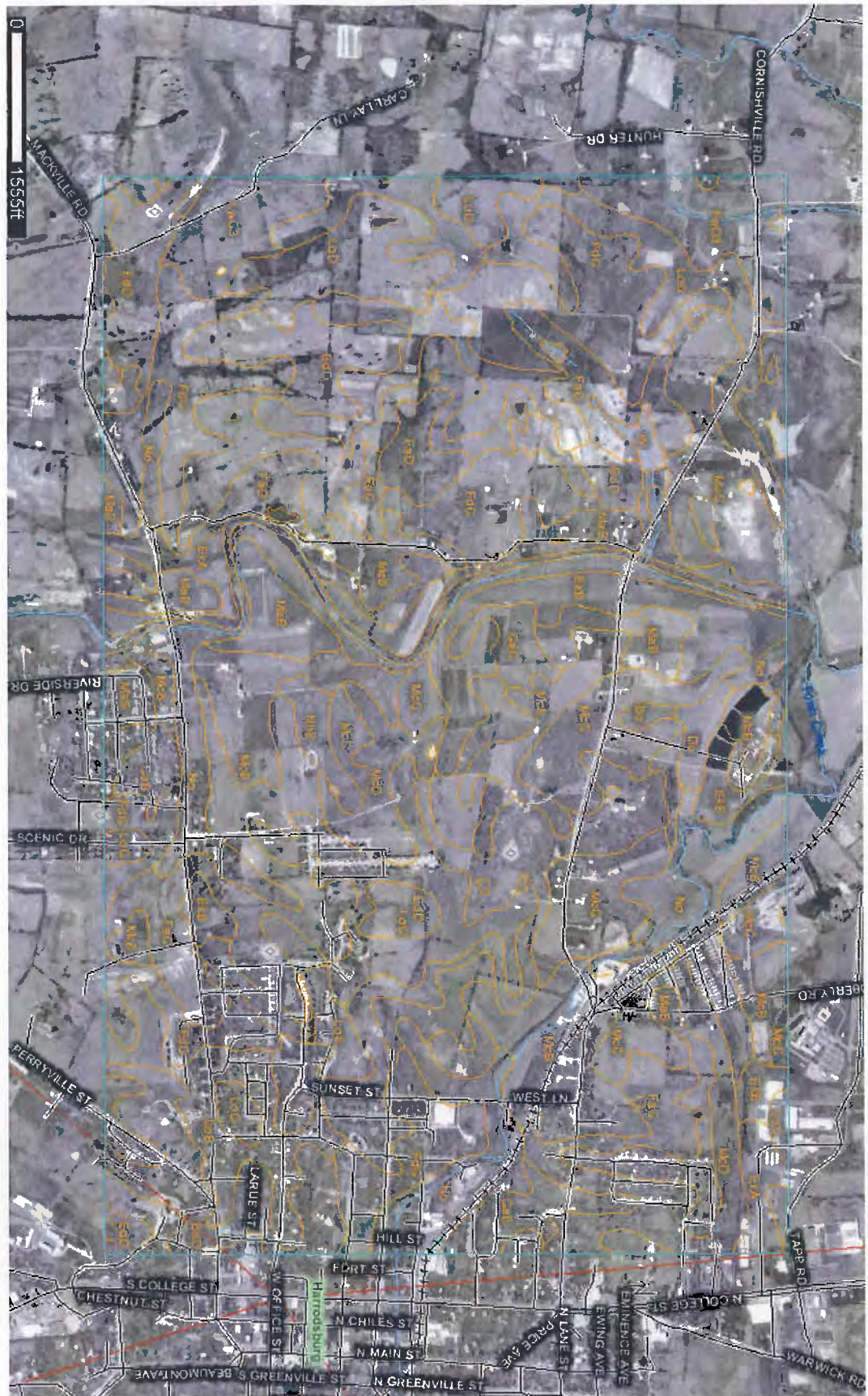
= Prime Farmland Soils –

+/- 692.8 acres 28.5 % of Project Area

Map Symbol	Map Unit Name	Farmland Classification
Bq	Boonesboro silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
CaB	Caleast silt loam, 2 to 6 percent slopes	All areas are prime farmland
CaC	Caleast silt loam, 6 to 12 percent slopes	Farmland of statewide importance
Du	Dunning silty clay loam	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
EdD	Eden silty clay loam, 6 to 20 percent slopes	Not prime farmland
EkA	Elk silt loam, 0 to 2 percent slopes	All areas are prime farmland
EkB	Elk silt loam, 2 to 6 percent slopes	All areas are prime farmland

FaC	Fairmount-Rock outcrop complex, 6 to 12 percent slopes	Not prime farmland
FaD	Fairmount-Rock outcrop complex, 12 to 30 percent slopes	Not prime farmland
FdC	Faywood silt loam, 6 to 12 percent slopes	Farmland of statewide importance
FdD	Faywood silt loam, 12 to 20 percent slopes	Not prime farmland
FwD3	Faywood silty clay, 12 to 20 percent slopes, severely eroded	Not prime farmland
LoB	Lowell silt loam, 2 to 6 percent slopes	All areas are prime farmland
LoC	Lowell silt loam, 6 to 12 percent slopes	Farmland of statewide importance
LoD	Lowell silt loam, 12 to 20 percent slopes	Not prime farmland
LwC3	Lowell silty clay loam, 6 to 12 percent slopes, severely eroded	Not prime farmland
MaB	Maury silt loam, 2 to 6 percent slopes	All areas are prime farmland
MaC	Maury silt loam, 6 to 12 percent slopes	Farmland of statewide importance
McB	McAfee silt loam, 2 to 6 percent slopes	All areas are prime farmland
McC	McAfee silt loam, 6 to 12 percent slopes	Farmland of statewide importance
McD	McAfee silt loam, 12 to 20 percent slopes	Not prime farmland
MeD	McAfee-Rock outcrop complex, 12 to 20 percent slopes	Not prime farmland

Ne	Newark silt loam	Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season
NhB	Nicholson silt loam, 2 to 6 percent slopes	All areas are prime farmland
No	Nolin silt loam	Prime farmland if protected from flooding or not frequently flooded during the growing season
Pt	Pits, quarries	Not prime farmland
V	Water	



MEMORANDUM

P-019-2007

TO: Daryl Greer
Director
Division of Planning

FROM: William Broyles, PE
Geotechnical Engineering
Branch Manager
Division of Structural Design

BY: Michael Blevins, PG
Geotechnical Branch

DATE: January 24, 2008

SUBJECT: Mercer County
FD04 084 7442 000-000 P
Harrodsburg Northwest Bypass
Planning Study
Item # 07-8344.00
Mars # 7969101P
Geotechnical Review

The Geotechnical Branch has completed a review of the project study area and offers the following comments.

GEOLOGIC OVERVIEW

The project is underlain by Quaternary Alluvium (Qal), the Clays Ferry Formation (Ocf), and the following Members of the Lexington Limestone; Sulphur Well Member (Ols), Brannon Member (Olb), Perryville Limestone Member (Olpc & Olps or Olpcs) and the Tanglewood Limestone Member (Olt).

The Alluvium consists of silt, sand and gravel deposits and is mainly confined to the flood plain along the Salt River and Town Creek. The depth of the deposits can be up to 60 feet.

The Clays Ferry Formation contains interbedded limestone and shale with limestone percentages ranging from 25% at the base, to 50% in the middle and upper portions of the Formation. The Clays Ferry is approximately 80 feet thick and is mainly found West of the Salt River with the exception of an area West of Harrodsburg as shown on the attached Harrodsburg and Cornishville Geologic Quadrangle Maps.

The Lexington Limestone includes a number of Members as stated above. The Perryville Limestone Member and the Tanglewood Member contain various types of Limestone

Memorandum
Daryl Greer
January 24, 2008
Page-2-

that should be suitable for Roadway applications. The Brannon Member consists of interbedded Limestone (50%) and Shale. The Limestone is generally argillaceous (shalely) and the Member is a good location for spring lines to occur. The Brannon is not suitable for roadway applications and is approximately 0-7 feet thick.

Several East–West trending Faults are indicated on the Geologic Map and the displacement is approximately 10-15 feet. The bedrock dips 7-10 feet in the proximity of the faulted area. The Faults should not present any major problems.

Sinkholes are present within the project area and are indicated on the attached Geologic Map. Most of the Sinkholes located above the Brannon Member should only extend 20 feet or less from the surface to the top of the Brannon Mbr. Any sinkholes located below the Brannon Member may extend deeper.

GEOTECHNICAL CONCERNS

Structures founded in alluvium may require deeper than normal types of foundations (piles or drilled shafts).

Cuts constructed in the Clays Ferry may require flatter than normal cut slopes and extra Right-of-Way for slopes to be stable. Embankments constructed from this material may require flatter than normal fill slopes. The Branch prefers to avoid this Formation due to the type of material not being suitable for roadway applications and flatter than normal cut and fill slopes.

No problems are anticipated to be encountered with the cuts in the Lexington Limestone. The Branch prefers a corridor to be founded on the Lexington Limestone where possible due to the better quality of bedrock that can be used for roadway construction applications.

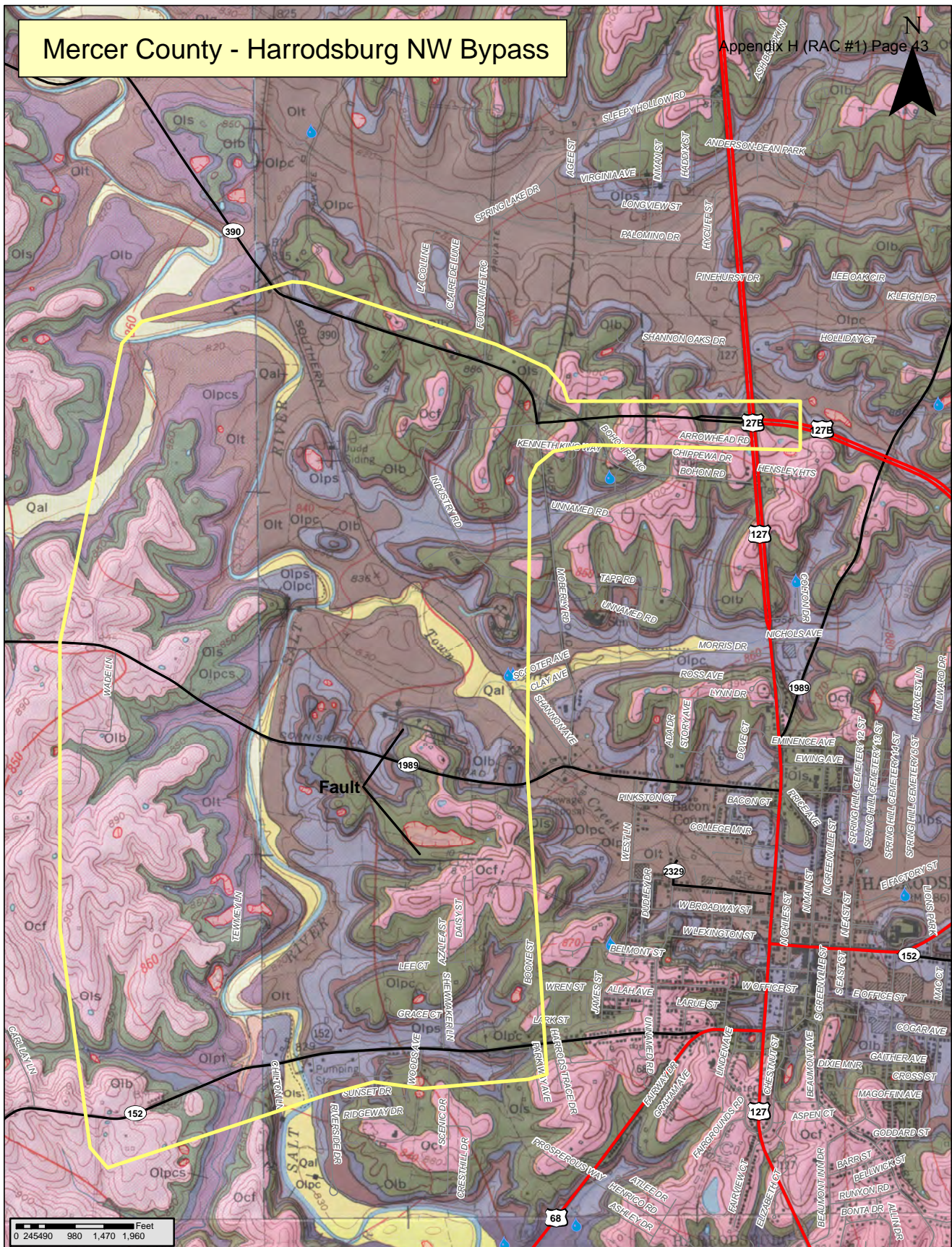
The Branch recommends avoiding any sinkholes when possible. Sinkholes are indicated on the attached Geologic Map. Additional sinkholes not shown on the map may also be encountered.

The Branch also prefers to avoid any faults within the project area. If the faults can not be avoided, the roadway corridor should intersect the faults perpendicular to the strike (or direction of fault) to minimize any possible construction problems.

If there are any questions, please advise.

Mercer County - Harrodsburg NW Bypass

Appendix H (RAC #1) Page 43



Legend

Lexington Limestone Members

Ols	Sulphur Well Member
Olb	Brannon Member
Olt	Tanglewood Member
Olpc	Cornishville Bed of the Perryville Limestone Member

	Study Area
	Fault Line
Ocf	Clays Ferry Formation
Qal	Alluvium
QTI	High-level fluvial deposits

	Springs
	Sinkholes
	US Highways
	State Roads
	Local Roads

Richie Farmer, Commissioner
32 Fountain Place
Frankfort, KY 40601



Phone: (502) 564-5126

Fax: (502) 564-5016

E-mail: richie.farmer@ky.gov

**Kentucky
Department of
Agriculture**

A Consumer Protection And Service Agency

RECEIVED

DEC 07 2007

December 5, 2007

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street 5th Floor
Frankfort, Kentucky 40622

RE: Mercer County Item No. 07-8344.00

Dear Mr. Greer:

The Kentucky Department of Agriculture recognizes receipt of information relating to the above noted Item No. At this time, the Department has no comment on the proposed project.

We appreciate the opportunity to provide input.

Yours truly,

A handwritten signature in dark ink, appearing to read "Richie Farmer".
Richie Farmer, Commissioner



Springer, Tom

From: Wilson, Jimmy (KYTC) [Jimmy.Wilson@ky.gov]
Sent: Monday, December 17, 2007 10:53 AM
To: Siria, Bruce; Springer, Tom
Cc: Witt, Thomas (KYTC)
Subject: FW: Planning Study, Harrodsburg Northwest Bypass, KY 152 to US 127, Mercer County, Item No. 07-8344.04

-----Original Message-----

From: Wilkins, Joe N MR NGKY [mailto:joe.wilkins@us.army.mil]
Sent: Friday, December 14, 2007 10:52 AM
To: Wilson, Jimmy (KYTC)
Cc: Berthold, Julius L BG(R) NGKY
Subject: Planning Study, Harrodsburg Northwest Bypass, KY 152 to US 127, Mercer County, Item No. 07-8344.04

Mr. Wilson,

The Department of Military Affairs can not identify any issues or concerns that affect the development of subject project.

The Kentucky National Guard has an Armory located West of US 127 at 500 Tapp Road. It is expected that such a bypass would facilitate accessibility to the Armory for military vehicles coming from The South and West.

Joe N. Wilkins
Director, Facilities Division
Boone National Guard Center
Frankfort, KY 40601-6168
502-607-1535
DSN 667-1535
502-382-7270 (Cell)
502-607-1270 (Fax)
Joe.Wilkins@ky.ngb.army.mil

RECEIVED



FEB 04 2008

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Steven L. Beshear
Governor

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-2150
FAX (502) 564-4245
www.dep.ky.gov

Robert D. Vance
Secretary

R. Bruce Scott
Commissioner

January 28, 2008

Mr. Daryl J. Greer, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

Re: Planning Study Mercer County Harrodsburg Northwest Bypass KY 152 to US 127. Item
No. 07-83344.00 (SERO 2007-31)

Dear Mr. Greer,

The Environmental and Public Protection Cabinet serves as the state clearinghouse for review of environmental documents generated pursuant to the National Environmental Policy Act (NEPA). Within the Cabinet, the Commissioner's Office in the Department for Environmental Protection coordinates the review for Kentucky state agencies.

The Kentucky agencies listed on the attached sheet have been provided an opportunity to review the above referenced report. Responses were received from 3 of the reviewing agencies. Comments were received from the Kentucky Divisions of Water, Waste Management, and Air Quality.

If you should have any questions, please contact me at (502) 564-2150, ext. 112.

Sincerely,

A handwritten signature in blue ink, appearing to read "Larry C. Taylor".

Larry C. Taylor
State Environmental Review Officer

Enclosures

Division of Water Comments

Planning Study for the Harrodsburg Northwest Bypass from KY 152 to US 127

Endorsement:

A request for review of the Planning Study for the Harrodsburg Northwest Bypass from KY 152 to US 127 in Mercer County, Kentucky was received on December 21, 2007. The Division of Water (DOW) completed this review and found that the information provided warranted an endorsement of this project. Below are the comments that were received.

Water Quality Branch:

This area of study and road construction for the Harrodsburg Bypass could cause water quality degradation to Johnson Creek which ultimately flows into Chaplin River. Chaplin River below the mouth of Johnson Creek is an Exceptional Water listed in 401 KAR 5:030 based on mussels and fish. Care should be taken to avoid any drainage to Johnson Creek by this road construction.

Groundwater Branch:

The Kentucky Transportation Cabinet recognizes that construction in karst terrane, which underlies approximately 55% of the state, presents unique challenges because of the inherent sensitivity of karst groundwater. Because of this, they have developed the following to address these challenges, including: KYTC Best Management Practices, the Kentucky Department of Highways Standard Specifications, and the KYTC Generic Groundwater Protection Plan. If, during construction in any area of the state, but especially in moderately-developed karst terrane such as central Kentucky, these measures are found to be inadequate, KYTC is strongly encouraged to consult with the Kentucky Geological Survey and the Groundwater Branch of the Kentucky Division of Water in the development of any new measures that may be necessary.

Water Resources Branch:

Any excess material generated from the project activity, if disposed outside the Right of Way of Department of Highways and in the regulatory floodplain will require permit from DOW per KRS 151.250.

Enforcement Branch:

The Division of Enforcement does not object to the project proposed by the applicant.

Division of Waste Management Comments

Project Number: SERO 2007-31

All solid waste generated by this project must be disposed at a permitted facility. If underground storage tanks are encountered they must be properly addressed. If asbestos, lead paint, and/or other contaminants are encountered during this project, they must be properly addressed.

Division for Air Quality Comments

Kentucky Division for Air Quality Regulation **401 KAR 63:010** Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm

Kentucky Division for Air Quality Regulation **401 KAR 63:005** states that open burning is prohibited. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed on the Open Burning Fact Sheet located at http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm

The Division also suggests an investigation into compliance with applicable local government regulations.

Springer, Tom

From: Burton, Dale (EPPC DEP DWM) [Dale.Burton@ky.gov]
Sent: Friday, December 07, 2007 9:17 AM
To: Gilbert, George (EPPC DEP DWM)
Cc: Jump, John (EPPC DEP DWM); Hall, Clifford (EPPC DEP DWM); Webb, April (EPPC DEP DWM); Logsdon, Kenneth (EPPC DEP DWM)
Subject: RE: Planning Study Mercer Co..pdf

We do have some comments on this proposal. The Kidde-Fenwal site, formerly Hallmack-Nutone ("Hallmack"), is located just NW of site #15 (on the last 2 figures in the attachment). The Hallmack site is a hazardous waste facility with groundwater contamination.

Hallmack is outside the project area. However, there is offsite groundwater contamination of trichloroethylene (TCE) at levels above the drinking water standards which originates from Hallmack and probably Signet (which appears to be site #14 on the maps) that surfaces at Humane Spring, which appears to be site #2 on the figures, which is right on the boundary of the project area. Humane Spring is a large spring, but is currently not used for any purpose.

Based on the westerly flow of both groundwater and surface water, it is unlikely the study area would directly impact the contaminated groundwater flow to Humane Spring. Areas that could impact the stream would be between site 2 and the quarry and the portion of the study area connecting 127. The latter area could potentially be at or near a groundwater surface divide.

However, steps should be taken to avoid any disturbance that would in any way affect Humane Spring itself. Humane Spring has signs posted to warn the public not to drink or have contact with the water, and is sampled routinely to monitor the levels of TCE in the spring.

Dale Burton, PG

Kentucky Division of Waste Management
(502) 564-6716 (x284)
Fax (502) 564-2705

From: Webb, April (EPPC DEP DWM)
Sent: Thursday, December 06, 2007 1:08 PM
To: Jump, John (EPPC DEP DWM); Burton, Dale (EPPC DEP DWM)
Subject: FW: Planning Study Mercer Co..pdf

April J. Webb PE, Manager

Hazardous Waste Branch
14 Reilly Road
Bldg 6
Frankfort, KY 40601
(502)564-6716 ext 676

From: Gilbert, George (EPPC DEP DWM)
Sent: Thursday, December 06, 2007 11:35 AM
To: Daniell, Robert (EPPC DEP DWM); Gruzesky, Ron (EPPC DEP DWM); Maybriar, Jon (EPPC DEP DWM); Sherkat, Fazi (EPPC DEP DWM); Webb, April (EPPC DEP DWM)
Cc: Funkhouser, Lloyd (EPPC DEP DWM)
Subject: FW: Planning Study Mercer Co..pdf

Please forward comments on the proposed TC project by COB Fri., Jan. 7. Thx.

From: Perry, Jennie (EPPC DEP DWM)
Sent: Thursday, December 06, 2007 11:22 AM
To: Gilbert, George (EPPC DEP DWM)
Subject: Planning Study Mercer Co..pdf

Springer, Tom

From: Cooley, Tony (EPPC DEP DWM) [Tony.Cooley@ky.gov]
Sent: Wednesday, January 09, 2008 2:37 PM
To: Gilbert, George (EPPC DEP DWM)
Cc: Anderson, Danny (EPPC DEP DWM); Gruzesky, Ron (EPPC DEP DWM)
Subject: RE: Planning Study Mercer Co..pdf
Attachments: harrodsburg bypass.pdf

There are three landfill sites on the eastern boundary of the study area as shown.

The recycling site – AI 39330 is stated as never having had waste disposed there. It has SW 084-00007 as a permit. Owned and operated by Mercer Co. and City of Harrodsburg.

The Corning Glass site – AI 43582 is an industrial dump for Corning glass, It has SW 084-00003 and SW 084-00006 permits.

The Harrodsburg Site – AI 71316 has little info. According to D. Sample who visited the site in 2001, it was operated by City of Harrodsburg, operational by 1970. He observed two spots with exposed glass. Property owned by Alvin Alderson. It has SW 084-00001 as a permit.

I noted that the DOT attachment "Planning Study Mercer Co..pdf" had illustrations on pages 6 and 7 showing these three landfills, but in the wrong locations. These appear to have been generated by GIS. Bryan Bunch has created a solid waste landfills theme using data drawn directly from my database that is updated by query I think on a weekly basis. This is the "Solid Waste Landfills" theme in the EPPC layers of the EPPC GIS Portal. The query generates an attribute table containing permit no., AI no., primary landfill name, and various status and other information about the landfills. I made the above attachment using this theme. This theme provides current information as it is generated weekly from the unique place where we maintain our own data on the landfills. I don't mind looking up and providing summary data on landfills, but as long as DOT is generating a GIS map that shows landfills, they should be pointed to a source of more accurate data. Their landfills theme is out of date. They can contact Bryan Bunch at 564-6743 ext 178 or at Bryan.Bunch@ky.gov for information on obtaining access to this theme.

Tony L. Cooley P.E., P.G.

Environmental Engineer II
EPPC-DEP Division of Waste Management
Solid Waste Branch, Closure Section
502-564-6716 or
502-564-8158 ext 298 direct

From: Gilbert, George (EPPC DEP DWM)
Sent: Tuesday, January 08, 2008 2:14 PM
To: Gruzesky, Ron (EPPC DEP DWM); Daniell, Vinetta
Cc: Funkhouser, Lloyd (EPPC DEP DWM); Cooley, Tony (EPPC DEP DWM)
Subject: FW: Planning Study Mercer Co..pdf

Any comments? I need then by COB Friday, if possible.

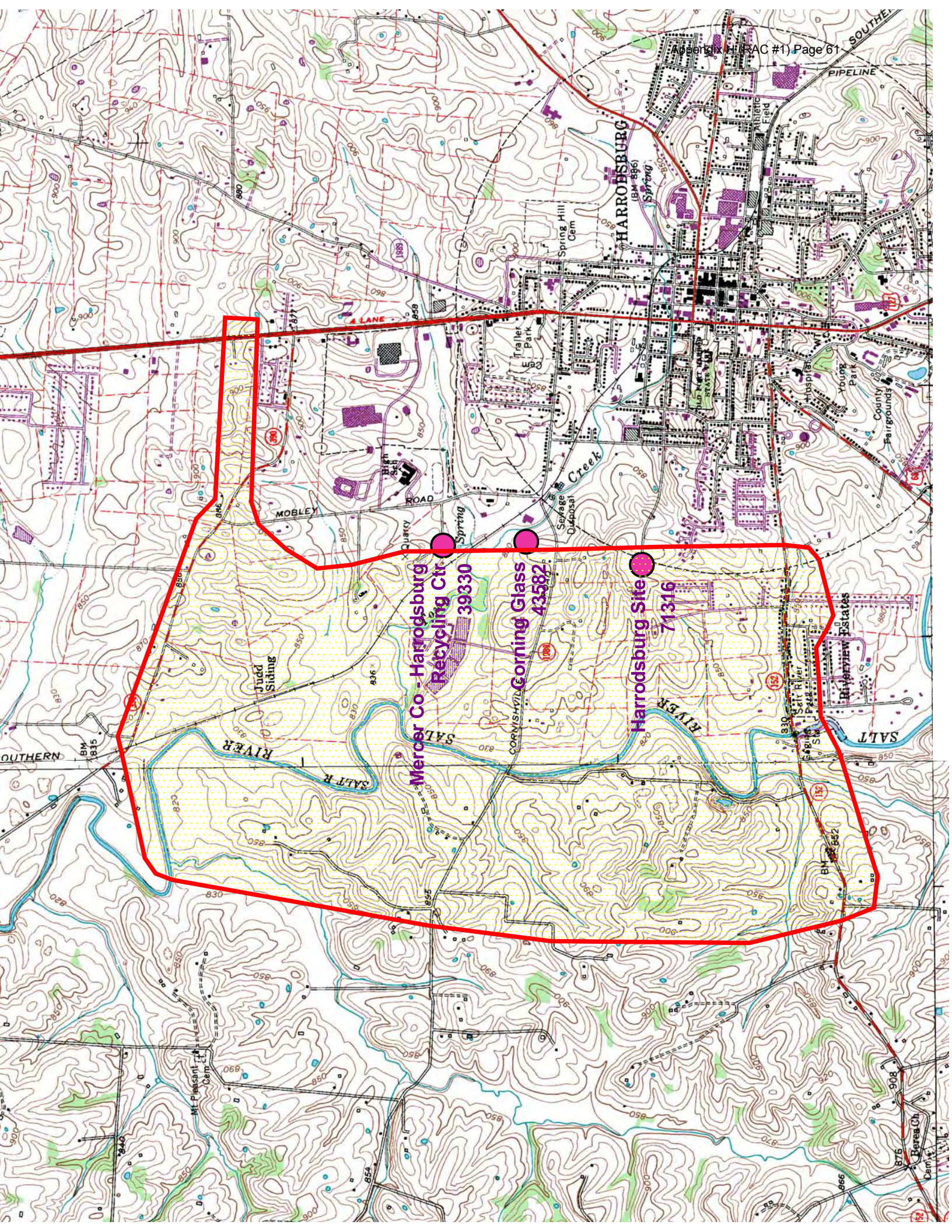
From: Gilbert, George (EPPC DEP DWM)
Sent: Thursday, December 06, 2007 11:35 AM
To: Daniell, Robert (EPPC DEP DWM); Gruzesky, Ron (EPPC DEP DWM); Maybriar, Jon (EPPC DEP DWM); Sherkat, Fazi (EPPC DEP DWM); Webb, April (EPPC DEP DWM)

4/14/2008

Cc: Funkhouser, Lloyd (EPPC DEP DWM)
Subject: FW: Planning Study Mercer Co..pdf

Please forward comments on the proposed TC project by COB Fri., Jan. 7. Thx.

From: Perry, Jennie (EPPC DEP DWM)
Sent: Thursday, December 06, 2007 11:22 AM
To: Gilbert, George (EPPC DEP DWM)
Subject: Planning Study Mercer Co..pdf



From: Baase, Dawn (EPPC DEP DWM)
Sent: Monday, December 10, 2007 12:46 PM
To: Daniell, Robert (EPPC DEP DWM)
Subject: RE: Planning Study Mercer Co..pdf

UST Branch sends the following comments regarding Item No. 7-8344.00

The USTB identified one (1) facility (AI# 59095) with one (1) registered tank that was removed in 1996 and NFA'd in 2005. The facility is located at the following coordinates along the eastern edge of the project area (37.775833 / -84.860278). It appears there are no facilities undergoing corrective actions within the project area.

Please notify the UST Branch if additional information is required.

Dawn Langford Baase
AEI Section, USTB
Division of Waste Management
81 C. Michael Davenport Blvd
Frankfort, KY 40601
phone: 502-564-5981 ext. 250
fax: 502-564-5047

Springer, Tom

From: Sherkat, Fazi (EPPC DEP DWM) [Fazi.Sherkat@ky.gov]
Sent: Friday, December 21, 2007 8:13 AM
To: Gilbert, George (EPPC DEP DWM)
Cc: Gritton, Sharon (EPPC DEP DWM)
Subject: FW: Planning Study Mercer Co..pdf
Attachments: Planning Study Mercer Co..pdf; Superfund Mercer Co sites as of 12-20-2008.xls

George,

Attached is a list of SF sites in Mercer Co. Please send the future inquiry of this nature to Sharon Gritton. She will run the report and send it to you. Have a Merry Christmas. Fazi

From: Gilbert, George (EPPC DEP DWM)
Sent: Thursday, December 06, 2007 11:35 AM
To: Daniell, Robert (EPPC DEP DWM); Gruzesky, Ron (EPPC DEP DWM); Maybriar, Jon (EPPC DEP DWM); Sherkat, Fazi (EPPC DEP DWM); Webb, April (EPPC DEP DWM)
Cc: Funkhouser, Lloyd (EPPC DEP DWM)
Subject: FW: Planning Study Mercer Co..pdf

Please forward comments on the proposed TC project by COB Fri., Jan. 7. Thx.

From: Perry, Jennie (EPPC DEP DWM)
Sent: Thursday, December 06, 2007 11:22 AM
To: Gilbert, George (EPPC DEP DWM)
Subject: Planning Study Mercer Co..pdf

Selected Report Condition(s):																								
AI County = 'Mercer'																								
AI ID	AI Name	SI County	AAZZ#	SI Desg	SI Description	Regulatory Desc	Site Status	Closure Opt	Closure Dt	SI Long.	SI Lat.	AI Addr Line	AI Addr Line	AI City	AI St	AI Zip	AI Lat	AI Long	AI County	SI Addr Line	SI Addr Line	SI City	SI St	SI Zip
3143	Corning Inc	Mercer		1	32364	CORNING I State Superfund	Closed	Option C Re #####				680 E Office St		Harrodsburg	KY	40330	37.757500	-84.829444	Mercer	680 EAST OFFICE ST		Harrodsburg	KY	
3148	KY Utilities Co - Brown S			1	17562	KENTUCKY State Superfund	Active					815 Dix Dam Rd		Harrodsburg	KY	40330	37.787778	-84.713056	Mercer	NONE				
3150	Mercer Co S	Mercer		2		92 MOA State Superfund	Active			-84.85056	37.76667	356 Magnolia St		Harrodsburg	KY	40330	37.766111	-84.850556	Mercer	455 W. Factory Street		Harrodsburg	KY	40422
3153	Modine Mar	Mercer		1	20396	SIGNET SY State Superfund	Active			-84.85111	37.78000	551 Tapp Rd		Harrodsburg	KY	40330	37.778056	-84.851944	Mercer	551 TAPP RD		Harrodsburg	KY	403330
51747	Cruisemart I	Mercer		1	109379	CRUISEMA Petroleum Cleanup	Closed	Option C Re #####		-84.84412	37.76385	222 W Lexington St		Harrodsburg	KY	40330	37.763850	-84.844120	Mercer	222 West Lexington Stre		Harrodsburg	KY	40330
51891	Sunrise Shore Drum			1	12687	SUNRISE S State Superfund	Closed	Unfounded #####		-84.76667	37.75333	None		Burgin	KY	40310	37.753330	-84.766670	Mercer	NONE				
52448	Kentucky Ut	Mercer		1	53996	KENTUCKY Petroleum Cleanup	Closed	Option A No #####		-84.70917	37.79056	510 Dix Dam Rd		Burgin	KY	40310	37.790560	-84.709170	Mercer	510 DIX DAM RD		Burgin	KY	40310
52539	Salvisa Drur	Mercer		1	114245	SALVISA DI State Superfund	Closed	Option C Re #####		-84.83486	37.91441	Oregon Road		Salvisa	KY	40330	37.914410	-84.834860	Mercer	Oregon Road		Salvisa	KY	40330
52612	Harrodsburg National Gt			1	47813	HARRODSE Petroleum Cleanup	Closed	Option A No #####		-84.84333	37.76222	Tapp Rd		Harrodsburg	KY	40330			Mercer	NONE				
52839	White Motor	Mercer		1	1859	WHITE MOI Petroleum Cleanup	Closed	Option C Re #####		-84.76164	37.75218	108 Danville St		Burgin	KY	40310	37.752180	-84.761640	Mercer	Intersection of Rt. 152 &		Burgin	KY	40310
52955	Watts & Durr Bulk Plant			1	41754	WATTS & D Petroleum Cleanup	Closed	Option A No #####				NONE		NONE	KY	11111			Mercer	NONE				
53023	National By Products			1	47967	NATIONAL Petroleum Cleanup	Closed	Option C Re #####		-84.84333	37.76222	NONE		NONE	KY	11111			Mercer	NONE				
53058	Pandora Cave			1	51207	PANDORA I Petroleum Cleanup	Closed	Option A No #####		-84.84333	37.76222	NONE		NONE	KY	11111			Mercer	NONE				
53112	Powell Ashland Oil			1	30736	POWELL AS Petroleum Cleanup	Closed	Option A No #####		-84.84333	37.76222	UNKNOWN		UNKNOWN	KY	00000			Mercer	NONE				
53458	US 68 Tank			1	45640	HIGHWAY E State Superfund	Closed	Option C Re #####		-84.84333	37.76222	None		Harrodsburg	KY	40330	37.762220	-84.843330	Mercer	NONE				
53494	Harrodsburg Property			1	20494	HARRODSE State Superfund	Closed	Option C Re #####		-84.84333	37.76222	S Main St & E Lexington		Harrodsburg	KY	40330	37.762220	-84.843330	Mercer	NONE				
53554	US 127 S - Mullings Lan			1	46952	U.S. 127S/M State Superfund	Closed	Option C Re #####		-84.84333	37.76222	MM 9 US 127 S		Harrodsburg	KY	40330	37.762220	-84.843330	Mercer	NONE				
53623	Pittman Property			1	46727	PITTMAN P State Superfund	Closed	Option C Re #####		-84.84333	37.76222	195 Bradford Ln		Harrodsburg	KY	40330	37.762220	-84.843330	Mercer	NONE				
53634	Hughley Ln - Mercer Co			1	20583	HUGHLEY I State Superfund	Closed	Option C Re #####		-84.84333	37.76222	Hughley Ln		Harrodsburg	KY	40330	37.762220	-84.843330	Mercer	NONE				
82519	Sac's Wreck	Mercer		1		Wrecker yar Wrecker yar Petroleum Cleanup	Active			-84.80000	37.76000	3179 Cornishville Road		Harrodsburg	KY	40330	37.785889	-84.948083	Mercer	3179 Cornishville Road		Harrodsburg	KY	40330
Total Number		20																						



JAN 22 2008

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET**Steven L. Beshear**
Governor**Division of Conservation**
375 Versailles Road
Frankfort, Kentucky 40601
Phone: (502) 573-3080
Fax: (502) 573-1692
www.conservation.ky.gov**Robert D. Vance**
Secretary**Stephen A. Coleman**
Director

January 18, 2008

Mr. Daryl Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
5th Floor
Frankfort, KY 40622**Subject:** Planning Study for Harrodsburg Northwest Bypass

Dear Mr. Greer:

As requested, the Division of Conservation has reviewed the proposed study for a new bypass in Mercer County from KY 152 to US 127 north of Harrodsburg. We would like to provide the following comments and express concerns that may be helpful in this initial data-gathering stage.

There are no agricultural districts established within the study area, however, there is one agricultural district, 084-07, (see enclosed map) located adjacent to the study area along KY 390. This district was certified by the Kentucky Soil and Water Conservation Commission on May 21, 2003 in order to conserve, protect, develop, and improve agricultural land for production of food, fiber, and other agricultural products. Under KRS 262.850(12) state agencies must mitigate any impact their programs may have on land in agricultural districts.

Also within the adjacent agricultural district are four agricultural easements (see enclosed map) indicated by blue shaded areas. These easements were acquired by the Purchase of Agricultural Conservation Easement Corporation to ensure that land currently in agricultural use will continue to remain available for agricultural use and not be converted to other uses. Again the agricultural district and the four PACE easements are outside of the immediate study area but close enough that we wanted your agency to be aware of their location.

We would like to see the issue of the loss of farmland addressed. Every year pressure imposed by utility right-of-ways, urban expansion, and new roads reduce the land available for agricultural use in the Commonwealth. There are two documents that could be utilized to identify prime farmland and farmland of statewide importance: the *Soil Survey Boyle and Mercer County* (NRCS 1983), and *Important Farmland Soils of Kentucky* (NRCS 1981). Both documents are available through this office. The soil survey information can also be downloaded at the following web sites: <http://soildatamart.nrcs.usda.gov/> or <http://websoilsurvey.nrcs.usda.gov>.

Mr. Daryl Greer
January 18, 2008
Page Two

One other concern we would like to comment on is the control of erosion and sedimentation during and after earth-disturbing activities once this project begins. We recommend best management practices (BMPs) be utilized to prevent nonpoint source water pollution. This would protect the water quality and aquatic habitat of the perennial and intermittent streams that this project could impact.

The manual, *Best Management Practices for Construction Activities*, contains information on the kinds of BMPs most appropriate for this project and is available through the Mercer County Conservation District, the Kentucky Division of Water, or this office. Also an electronic version of the *Kentucky Erosion Prevention and Sediment Control Field Guide* is available online at <http://www.water.ky.gov/sw/nps/Publications.htm>

We appreciate the opportunity to comment on this project. If you have any questions, please contact this office any time.

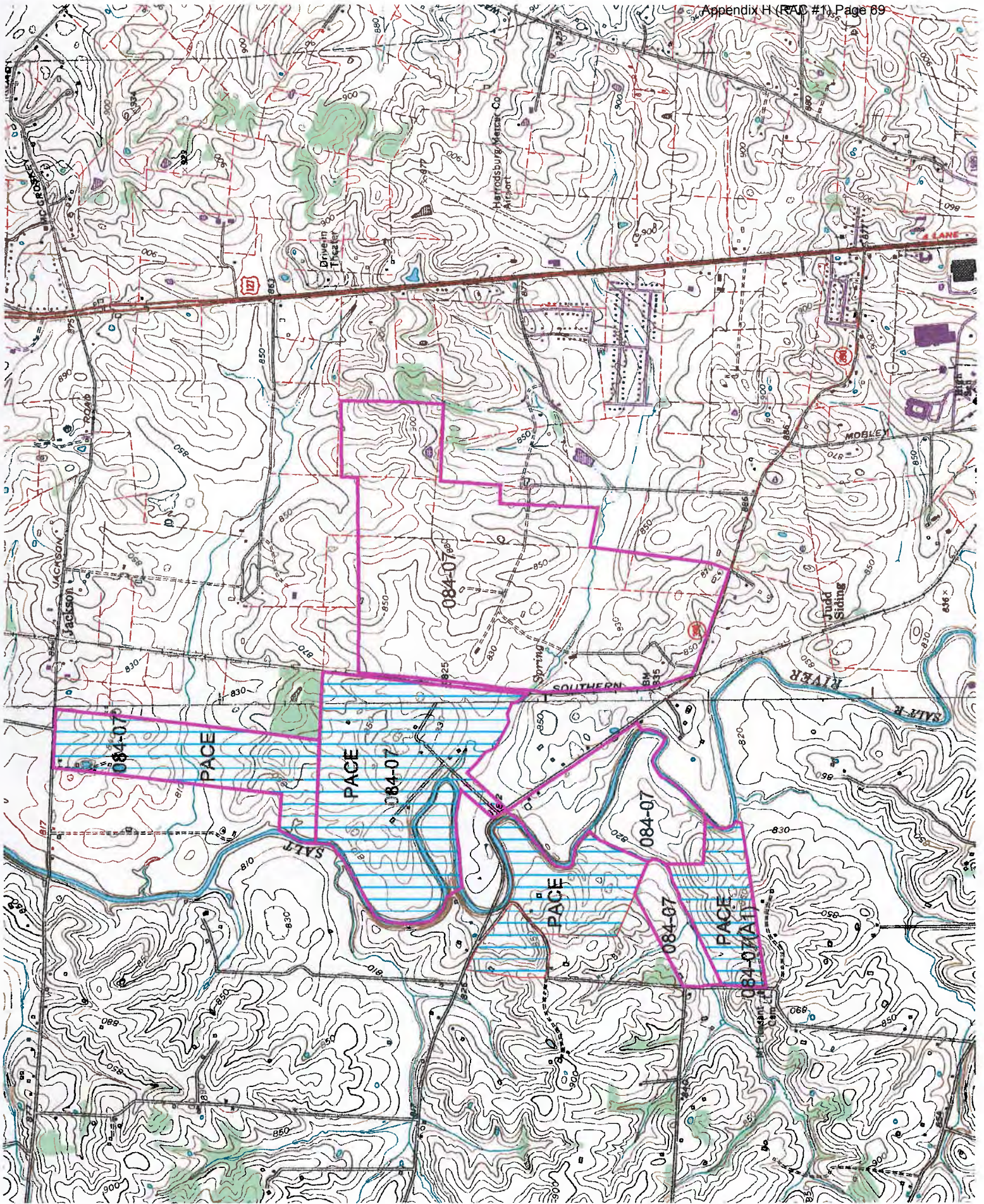
Sincerely,



Stephen A. Coleman, Director
Kentucky Division of Conservation

SAC/MD/aeH

Enclosure





DEC 14 2007

ENVIRONMENTAL AND PUBLIC PROTECTION CABINET

Ernie Fletcher
Governor

Department for Natural Resources
2 Hudson Hollow
Frankfort, Kentucky 40601
Phone: (502) 564-6940
Fax: (502) 564-5698
www.eppc.ky.gov
www.dnr.ky.gov

Teresa J. Hill
Secretary

Susan C. Bush
Commissioner

December 10, 2007

Daryl J. Greer, P. E., Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street 5th Floor
Frankfort, KY 40622

Subject: **Planning Study – KY 152 to US 127**
Harrodsburg Northwest Bypass in Mercer County
Item No. 07-8344.00

Dear Mr. Greer:

Thank you for the opportunity to comment on the planning study project located in Mercer County referenced in your communication of November 30, 2007.

Review of the project location does not indicate the presence of any proposed, active or abandoned mining activities in the vicinity of the study area.

I appreciate the notification and the opportunity to comment on the proposal. If you have any questions regarding this correspondence, please contact Pam Carew at (502) 564-2340.

Sincerely,

Paul Rothman, Director
Division of Mine Reclamation and Enforcement

PR/pbc



RECEIVED

FEB 04 2008

JUSTICE AND PUBLIC SAFETY CABINET

Steven L. Beshear
Governor

Kentucky Vehicle Enforcement
Frankfort, Kentucky 40601

J. Michael Brown
Secretary

Gregory G. Howard
Commissioner

January 31, 2008

Mr. Daryl J. Greer, P.E.
Division of Planning
Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

Dear Mr. Greer:

We are in receipt of your letter requesting any input that Kentucky Vehicle Enforcement might have in regards to a planning study in Mercer County, item no. 07-8344.00, on KY 152 to US 127, Harrodsburg Northwest Bypass.

After having my staff research the matter, we recommend that the proposed roadway be deemed a designated route considering it will take away much of the commercial traffic from the roadways inside the city.

If you need any further information, please do not hesitate to let us know.

Sincerely,

A handwritten signature in blue ink, appearing to read "G. Howard".

Gregory G. Howard
Commissioner
Department of Kentucky Vehicle Enforcement

JAN 15 2008



KENTUCKY STATE POLICE

Steve Beshear
Governor

919 Versailles Road
Frankfort, Kentucky 40601
www.kentucky.gov

Rodney Brewer
Commissioner

**Kentucky State Police
Post 7
699 Eastern By-Pass
Richmond, Kentucky 40475
Phone 859-623-2404**

January 11, 2008

Mr. Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Metro Street, 5th Floor
Frankfort, Kentucky 40601

Mr. Greer:

We have surveyed the area encompassing the proposed Northern bypass in Harrodsburg, Kentucky. We have identified no concerns or issues with this project.

Feel free to contact our agency if we can be of further assistance to you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Capt. Jeff Mayberry".

Captain Jeff Mayberry, Unit 21
Commander, Post 7

JAN 15 2008



KENTUCKY STATE POLICE

Steve Beshear
Governor

919 Versailles Road
Frankfort, Kentucky 40601
www.kentucky.gov

Rodney Brewer
Commissioner

**Kentucky State Police
Post 7
699 Eastern By-Pass
Richmond, Kentucky 40475
Phone 859-623-2404**

January 11, 2008

Mr. Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Metro Street, 5th Floor
Frankfort, Kentucky 40601

Mr. Greer:

We have surveyed the area encompassing the proposed Northern bypass in Harrodsburg, Kentucky. We have identified no concerns or issues with this project.

Feel free to contact our agency if we can be of further assistance to you.

Sincerely,

A handwritten signature in blue ink, appearing to read "Capt. Jeff Mayberry".

Captain Jeff Mayberry, Unit 21
Commander, Post 7



U.S. Department
of Transportation
**Federal Aviation
Administration**

Memphis Airports District Office
2862 Business Park Dr, Bldg G
Memphis, TN 38118-1555
Phone: 901-322-8180

January 10, 2008

RECEIVED

Daryl J. Greer, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Frankfort, KY 40622

JAN 14 2008

Dear Mr. Greer:

This is in response to your letter to Mr. Phillip Braden dated November 30, 2007 requesting information on any impacts to airports as a result of a proposed new northwest bypass of Harrodsburg, KY from KY 152 to US 127.

The Danville – Boyle County airport Danville, KY is in the vicinity but does not appear to be affected by the proposed project. As long as construction activities do not exceed 200 feet in height above ground level, there do not appear to be any impacts on Federal Aviation Administration facilities and no Notice of Proposed Construction will be required.

Thank you for the opportunity to review the proposal.

Sincerely,


Michael L. Thompson
Program Manager



Mercer Co. Emergency Management

Mercer Co. Courthouse
P.O. Box 760
Harrodsburg, Kentucky 40330
Phone (859) 734-6333
Fax 859-734-0237



January 10, 2008

RECEIVED

JAN 11 2008

Mr. Daryl J. Greer, P.E.
Director
Division of Planning
Transportation Cabinet
Frankfort, KY 40622

Dear Mr. Greer:

Subject: Planning Study
Mercer County
Harrodsburg Northwest Passage
KY 152 to US 127
Item No. 07-8344.00

Responding to your letter of November 30, 2007, subject as above, we are herein providing the following comments and concerns:

The purpose and goals of this project are definitely needed and will greatly benefit the problems associated with traffic flow through Harrodsburg.

Our concerns are with non-local drivers attempting to bypass Harrodsburg coming from the north on US 127. These drivers will be funneled into town on KY 152, which will take them to the "Y" intersection of KY 152 and US 68. This intersection is already difficult to navigate, even for local drivers, becoming a bottleneck during peak traffic hours. Adding non-local traffic, especially long-haul trucks would pose an even more significant traffic problem at this intersection.

Additionally, south bound long-haul truck traffic that manages to get to the following intersection of US 68 and College Street (US 127) will find it impossible to make the right turn required to continue south toward Danville.

A handwritten signature in black ink, appearing to read "Jon F. Jones".

Jon F. Jones
Director
Mercer County Emergency Management Agency



JAN 07 2008

**COMMERCE CABINET
KENTUCKY HERITAGE COUNCIL**

Steve Beshear

~~XXXXXXXXXX~~
~~Ernie Fletcher~~
Governor

The State Historic Preservation Office
300 Washington Street
Frankfort, Kentucky 40601
Phone (502) 564-7005
Fax (502) 564-5820
www.kentucky.gov

Marcheta Sparrow

~~XXXXXXXXXX~~
~~George Ward~~
Secretary

Donna M. Neary

Executive Director and
State Historic Preservation Officer

January 3, 2008

Mr. Daryl J. Greer
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

Re: Planning Study, Harrodsburg Northwest Bypass, KY 152 to US 127, Mercer County (Item No. 7-8344.00)

Dear Mr. Greer:

The State Historic Preservation Office has received a request for comments regarding the above-referenced planning study. There are many significant cultural resources within the project area, including the National Register of Historic Places (NRHP) listed sites, as well as many inventoried sites that have yet to be evaluated by professional architectural historians. Additionally, there are a number of previously recorded archeological sites within the project corridor, and most of this area has never been surveyed by professional archaeologists.

Dependent up on the funding source, whether federally-funded or subject to Corps of Engineers permits, the Section 106 Review Process must be completed. A full survey of both archaeological and cultural resources should be conducted and submitted to this office for review, via the KYTC Central Office Division of Environmental Analysis.

We look forward to reviewing the archaeological and cultural resource reports. If you have questions regarding these comments, please contact Janie-Rice Brother of my staff at (502) 564-7005, extension 121.

Sincerely,

Donna M. Neary, Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer

Cc: Amanda Abner, KYTC-DEA
JRB: jrb



RECEIVED

KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES JAN 10 2008
COMMERCE CABINET

Steven L. Beshear
Governor

#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov

Marcheta Sparrow
Secretary

Dr. Jonathan W. Gassett
Commissioner

January 7, 2008

Daryl J. Greer, P. E.
Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
5th Floor
Frankfort, KY 40622

RE: Planning Study
Mercer County
Harrodsburg, Northwest Bypass
KY 152 to US 127
Item No. 7-8344.00

Dear Mr. Greer:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) have received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that no federal/state threatened and/or endangered fish and wildlife species are known to occur within close proximity to the project area. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions. We recommend that you contact the U. S. Fish & Wildlife Service Kentucky Field Office at 502-695-0468 for consultation under the Endangered Species Act.

It appears that the proposed project has the potential to impact wetland habitats. KDFWR recommends that you look at the appropriate US Department of Interior National Wetland Inventory Map (NWI) and the appropriate county soil surveys to determine where the proposed project may impact wetlands. Additionally, field verification may be needed to determine the extent and quality of wetland habitats within the project area. Any planning should include measures designed to eliminate and/or reduce impacts to wetland habitats. If impacts cannot be avoided, mitigation should be properly designed and proposed to offset the losses. KDFWR will recommend, at a minimum, a 2:1 mitigation ratio for any permanent loss or degradation of wetland habitats.

KDFWR recommends that you contact the appropriate US Army Corps of Engineers office and the Kentucky Division of Water prior to any work within the waterways or wetland habitats of Kentucky. Additionally, KDFWR recommends the following for the portions of the project that impact streams:

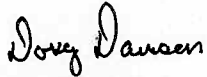
- Channel changes located within the project area should incorporate natural stream channel design.
- If culverts are used, the culvert should be designed to allow the passage of aquatic organisms.



- Culverts should be designed so that degradation upstream and downstream of the culvert does not occur.
- To compensate for unavoidable impacts to streams, we recommend that possible stream mitigation sites be identified on-site or within the Upper Salt River drainage. Restoration of those sites should incorporate natural stream channel design along with the restoration of its associated riparian areas.
- Development/excavation during low flow period to minimize disturbances.
- Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt into area streams.
- Replanting of disturbed areas after construction, including stream banks, with native vegetation for soil stabilization and enhancement of fish and wildlife populations. We recommend a 100 foot forested buffer along each stream bank.
- Return all disturbed instream habitat to a stable condition upon completion of construction in the area.
- Preservation of any tree canopy overhanging any streams within the project area.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (800) 852-0942 Extension 366.

Sincerely,



Doug Dawson
Wildlife Biologist III

Cc: Environmental Section File



RECEIVED

DEC 28 2007

**CABINET FOR HEALTH AND FAMILY SERVICES
FACILITIES MANAGEMENT DIVISION****Steven L. Beshear**
Governor275 E. Main Street, 4E-C
Frankfort, KY 40621
(502) 564-6631
Fax: (502) 564-2608
www.chfs.ky.gov**Ellen M. Hesen**
Secretary

December 26, 2007

Kentucky Transportation Cabinet
Dept. of Highways
Mr. Daryl J. Greer, P.E., Director Division of Planning
200 Mero Street 5th Floor
Frankfort, Ky. 40622

Subject: Harrodsburg Northwest Bypass Planning Study
KY 152 to US 127

Mr. Greer;

The Kentucky Transportation Cabinet has asked that we identify specific issues or concerns which may affect the development of a road improvement project in Mercer County; the project would involve improvements in the Harrodsburg Northwest Bypass. We have reviewed the project location map, the existing area highway management system data, geometric and traffic characteristics of the existing highways, and crash analysis provided by your office.

The Cabinet for Health and Family Services does not lease or own property located within the Harrodsburg Northwest Bypass; therefore, we do not anticipate or have any specific issues or concerns with regards to this proposed project.

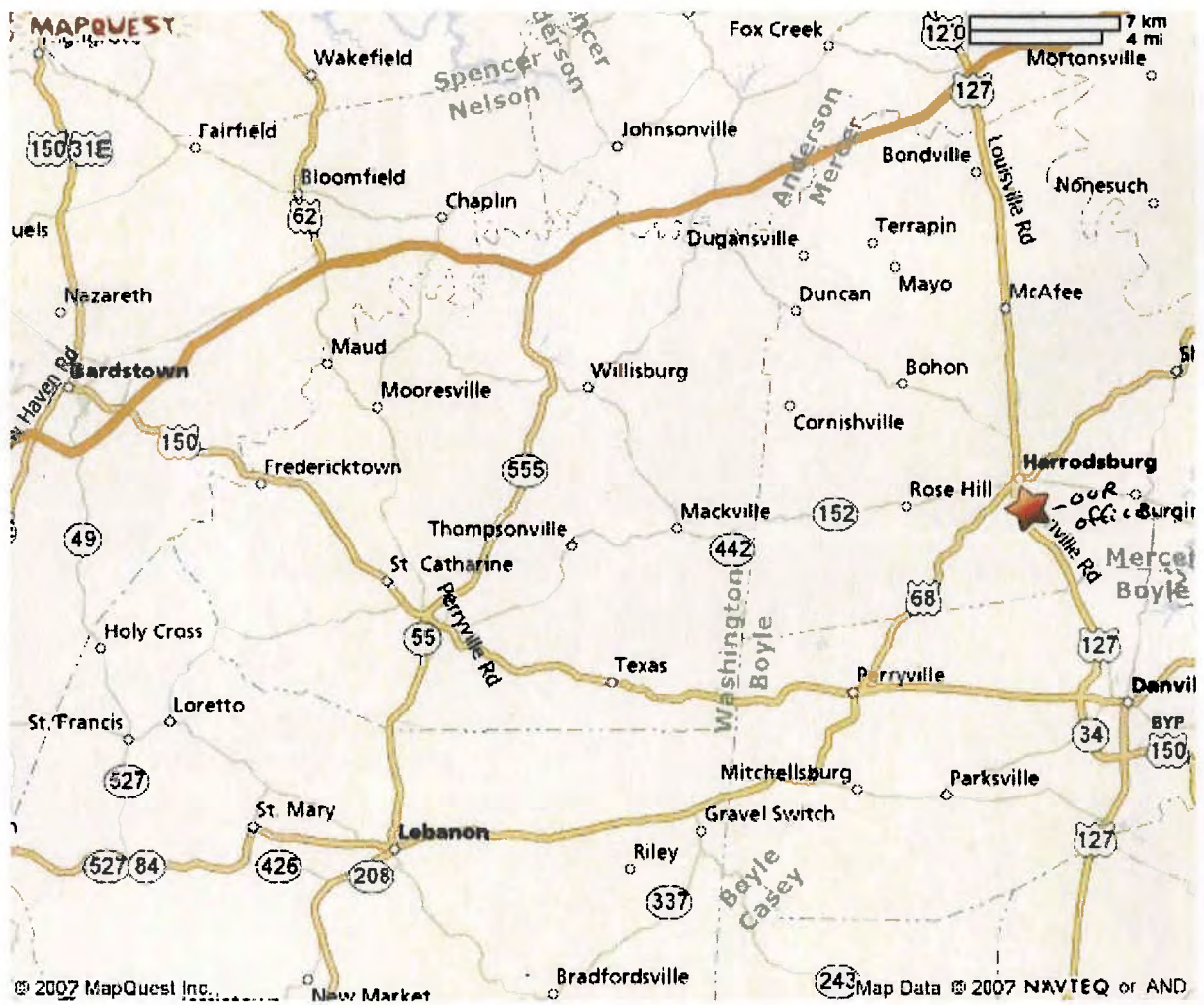
Thank you for giving consideration to our facilities, staff, and clients.

Sincerely,



Robert W. Wright
Leased Properties Branch

Cc: file



667 Beaumont Plz
Harrodsburg KY
40330-2139 US



RECEIVED

JAN 04 2008

**CABINET FOR HEALTH AND FAMILY SERVICES
OFFICE OF THE SECRETARY**

Steven L. Beshear
Governor

275 E. Main Street, 5W-A
Frankfort, KY 40621
(502) 564-7042
Fax: (502) 564-7091
www.chfs.ky.gov

Ellen M. Hesen
Acting Secretary

December 27, 2007

Mr. Daryl J. Greer, P.E., Director
Division of Planning
KY Transportation Cabinet
200 Mero Street, 5th Floor
Frankfort, Kentucky 40622

Dear Mr. Greer:

Thank you for the opportunity to provide input on the planning studies to determine the need and potential impacts for proposed highway projects in Mercer County (07-8344.00) and Boyd County (9-129.0).

The Cabinet's Department of Public Health recommends that the local health departments in each county be contacted to determine the impact on septic systems located within the areas impacted by the projects. The local health departments should also be able to advise on the impact of any water run off from the expansion of roadways.

Please contact me or Deputy Secretary Nunn at 564-7042 if you have any questions or require additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Ellen M. Hesen".

Ellen M. Hesen
Acting Secretary

Copy to: Steve Nunn



UNIVERSITY OF KENTUCKY

DEC 28 2007

Kentucky Geological Survey
Research
228 Mining & Mineral Resources Bldg.
Lexington, KY 40506-0107
Phone: (859) 257-5500
Fax: (859) 257-1147
www.uky.edu/kgs

December 18, 2007

Daryl J. Greer, P.E.
Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Frankfort, KY 40622

Dear Mr. Greer:

This letter is to summarize any geologic concerns for the planning study:

Mercer County
Harrodsburg Northwest Bypass
Item No. 07-83444.00

Physiographic Region

This planning area is in the Bluegrass physiographic region, which is underlain by limestone, shale, silt, clay, sand, and gravel.

Land-Use Planning Map

For a good geologic (with physical parameters) overview of the area, refer to the county land-use planning map at www.uky.edu/KGS.

On the home page, click on GIS and Maps.

On this page, click on County Land-Use Planning Maps.

On this page, click on the county of interest on the index map. A viewable and downloadable PDF of the land-use county map will be displayed.

Karst Potential

This planning area would encounter karst features such as sinkholes and caves.

Landslide Potential

This planning area would encounter shales that are highly susceptible to slumping when they become wet. This condition is particularly prevalent on steep slopes.

Unconsolidated Sediments

This planning area would encounter unconsolidated sediments in drainage areas.



Resource Conflicts

This planning area should not encounter any resource conflicts such as prior ownership of property for quarrying or mining.

Materials Suitability

This planning area would not encounter any rock units that would be suitable as construction stone.

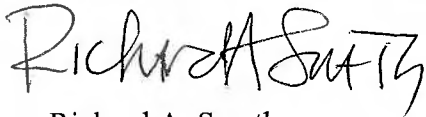
Fault Potential

This planning area would encounter faulted areas in the northern part.

Earthquake Ground Motions

This planning area has probable peak ground acceleration (PGA) due to earthquake ground motion of 0.09g. There would be a low potential for liquefaction or slope failure in the unconsolidated sediments at or near streams caused by earthquake bedrock ground motion.

Sincerely,

A handwritten signature in black ink that reads "Richard A. Smath". The signature is written in a cursive, flowing style.

Richard A. Smath
Geologist



Steven L. Beshear
Governor

TRANSPORTATION CABINET
Frankfort, Kentucky 40622
www.kentucky.gov

Joseph W. Prather
Secretary

May 29, 2008

«Mailing_Title» «First_Name» «Last_Name»«Suffix»
«Title»
«Organization»
«Address1»
«Address2»
«City» «State» «Zip»

Dear «Letter_Title» «Last_Name»:

Subject: Planning Study
Mercer County
Harrodsburg Northwest Bypass
KY 152 to US 127
Item No. 07-8344.00

We are requesting your agency's input and comments on a planning study to determine the need and potential impacts for a proposed highway project. The Kentucky Transportation Cabinet has assembled a study team to evaluate a proposed northwest bypass of Harrodsburg in Mercer County, Kentucky. Several schools and industries are located in the northwest quadrant of Harrodsburg. This concentration of trip origins and destinations at similar times of the day contributes to traffic congestion in the vicinity. The Norfolk Southern Railroad also runs through Harrodsburg carrying more than 20 trains per day. The unique "diagonal" routing of this rail line results in multi-directional street blockages during passage of these trains. The primary goals of this project are to improve transportation system connectivity, provide grade separated railroad crossings, and reduce congestion on area roadways. Several bypass alternatives, as well as other short-term non-bypass projects have been developed for this study.

We recently asked that you identify specific issues or concerns of your agency that could affect the development of the project as bulleted below:

- Comments on the project goals or purpose and need for the project.
- Significant issues or concerns in the project area that may need to be addressed so that the project can be adequately scoped.



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Page 2

May 29, 2008

- Any conservation or development plans your agency or organization has ongoing or is aware of in the project area.
- Locations of any known areas, issues, or resources within the project area that should be considered when developing alternatives so that impacts can be avoided, minimized, or mitigated early in the process.
- Any mitigation strategies that should be considered in the development of the project.

This planning study included a scoping process for the early identification of potential alternatives, environmental issues, and impacts related to the proposed project. Early identification of these issues or concerns helped us develop preliminary highway project alternatives. Using those responses and other data and information, several improvement alternatives were developed, as shown in the enclosed documents. **Now to continue the scoping process, we are requesting that you provide comments on the proposed improvement alternatives and/or specific comments concerning the bulleted items above as they relate to the proposed improvement alternatives.**

We respectfully ask that you provide us with your comments by June 30, 2008, to ensure timely progress in this planning effort.

During the development of this planning study, comments will be solicited from federal, state, and local agencies, as well as other interested persons and the general public, in accordance with principles set forth in the National Environmental Policy Act (NEPA) of 1969. The Federal Highway Administration is partnering with us in these efforts.

Other Transportation Cabinet offices or consultants working on behalf of the Transportation Cabinet may also contact you seeking more detailed data or information to assist them in completing their environmental studies for this phase of the project.

We have enclosed the following project information for your review and comment:

- Study Purpose, Issues, and Draft Project Goals
- Project Location Map
- Bypass Alternatives E, F, H, and J
- List of Short - Term, Non-Bypass Projects
- Map of Short - Term, Non-Bypass Projects

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Page 3

May 29, 2008

We appreciate any input you can provide concerning this project. Please direct any comments, questions, or requests for additional information to Thomas Witt of the Division of Planning at (502) 564-7183 or at Thomas.Witt@ky.gov. Please address all written correspondence to Daryl J. Greer, P.E., Director, Division of Planning, Kentucky Transportation Cabinet, 200 Mero Street 5th Floor, Frankfort, KY 40622.

Sincerely,



Daryl J. Greer, P.E.
Director
Division of Planning

DJG/JCW/NH

Enclosures

c: Jose Sepulveda, FHWA (w/e)
Mary Murray, FHWA (w/e)
Bruce Duncan, BGADD (w/e)
Tom Springer, Qk4 (w/e)
Bob Lewis
Stuart Goodpaster
Phil Logsdon
David Waldner
Ananias Calvin

Mailing Title	Letter Title	First Name	Last Name	Suffix	Title	Organization	Address1	Address2	City	State	Zip
Mr	Mr	Philip	Braden		District Office Manager	Memphis Airports District Office Federal Aviation Administration	2862 Business Park Drive Bldg G		Memphis	TN	38118-1555
Mr	Sir and/or Madam	Edward W.	Link		Brigadier General	American Association of Truckers	Boone Nat'l Guard Ctr., 100 Minuteman Pky.	P.O. Box 487	Benton	KY	42025
Mr	Mr	Jamie	Link		Acting Commissioner	Department of Military Affairs	10th Floor, Capital Plaza Tower		Frankfort	KY	40601
Mr	Mr	George	Crothers		Director, Office of State Archaeology	Department of Parks	211 Lafferty Hall	500 Mero Street	Frankfort	KY	40601
Mr	Mr	William	Straw	Ph.D.	Regional Environmental Officer	Federal Emergency Management Agency, Region IV	3003 Chambers-Tucker Road		Lexington	KY	40506-0024
Mr	Mr	Jack	Fish		President	Kentuckians for Better Transportation	10332 Bluegrass Parkway		Lexington	KY	40506-0024
Ms	Sir and/or Madam	Jamie	Miller		Secretary	Kentuckians for The Commonwealth	105 Reams Street		Atlanta	GA	30341-4130
Mr	Mr	Randall	Royer		Interim Chairman	Cabinet for Health and Family Services	275 East Main	P.O. Box 1450	Louisville	KY	40269
Mr	Mr	Bob	Arnold		Executive Director	Kentucky Airport Zoning Commission	Capital City Airport		London	KY	40743
Mr	Mr	Dave	Adisson		President	Kentucky Association of Counties	360 King's Daughters Drive		Frankfort	KY	40601
Mr	Mr	Richie	Farmer		Commissioner	Kentucky Chamber of Commerce Executives, Inc.	464 Cherault Road		Frankfort	KY	40601
Mr	Mr	Bruce	Scott		Commissioner	Kentucky Department of Agriculture	32 Fountain Place		Frankfort	KY	40601
Dr	Dr	Jonathan	Gassett		Commissioner	Kentucky Department for Environmental Protection	300 Fair Oaks Lane		Frankfort	KY	40601
Ms	Ms	Susan	Bush		Commissioner	Kentucky Department of Fish and Wildlife Resources	1 Sportsmans Lane		Frankfort	KY	40601
Mr	Mr	Stephen A.	Coleman		Director	Kentucky Department of Nat'l Resources	#2 Hudson Hollow		Frankfort	KY	40601
Mr	Mr	Rodney	Brewer		Commissioner	Kentucky Department of Nat'l Resources, Division of Conservation	#2 Hudson Hollow		Frankfort	KY	40601
Mr	Mr	Paul	Rothman		Director	Kentucky Department of State Police	919 Versailles Road		Frankfort	KY	40601
Mr	Mr	Chase	Foster		President	Division of Mine Reclamation and Enforcement	# 2 Hudson Hollow	P.O. Box 1589	Frankfort	KY	40601
Mr	Mr	John	Lyons		Director	Kentucky Disabilities Coalition			Frankfort	KY	40602-1589
Ms	Ms	Leah W	MacSwords		Director	Kentucky Division of Air Quality	803 Schenkel Lane		Frankfort	KY	40601
Mr	Mr	Greg	Howard		Commissioner	Kentucky Division of Forestry	627 Comanche Trail		Frankfort	KY	40601
Mr	Mr	Tony	Hutton		Acting Director	Kentucky Department of Vehicle Enforcement	125 Holmes Street, 3rd Floor		Frankfort	KY	40622
Ms	Ms	Sandy	Guzesky		Acting Director	Kentucky Department of Waste Management	14 Reilly Road		Frankfort	KY	40601
Mr	Mr	John	Hirshman		Secretary	Kentucky Division of Water	Old Capitol Annex	300 West Broadway	Frankfort	KY	40601
Mr	Mr	Jim	Cobb		State Geologist & Director	Kentucky Geological Survey, University of Kentucky	228 Mining and Mineral Resources Bldg		Frankfort	KY	40509
Ms	Ms	Donna M.	Cobb		Executive Director & State Historic Preservation Officer	Kentucky Heritage Council	300 Washington Street		Frankfort	KY	40601
Mr	Mr	Kort	Whithorn		Executive Director	Kentucky Historical Society	100 W. Broadway		Frankfort	KY	40601
Mr	Mr	Mike	Margeot		President/CEO	Kentucky Association of Economic Development	2225 Lawrenceburg Road Bldg. B, Suite 4		Frankfort	KY	40601-8489
Ms	Ms	Sylvia L	Lovely		Executive Director	Kentucky League of Cities, Inc.	101 East Vine Street, Ste. 800		Frankfort	KY	40507
Ms	Ms	Jamie	Fipke		President/CEO	Kentucky Motor Transport Association	617 Shelby Street		Frankfort	KY	40601
Mr	Mr	Robert D.	Vance		Secretary	Kentucky Environmental and Public Protection Cabinet	Capital Plaza Tower, 5th Floor		Frankfort	KY	40601
Mr	Mr	Donald S.	Dott	Jr.	Executive Director	Kentucky Nature Preserves	801 Schenkel Lane		Frankfort	KY	40601
Ms	Ms	Vickie	Bourne		Executive Director	Kentucky Office of Transportation Delivery	Transportation Office Building, 3rd Floor	200 Mero Street	Frankfort	KY	40622
Mr	Mr	Beecher	Hudson		Executive Director	Kentucky Public Transit Association	c/o Louisville Red Cross	P.O. Box 1675	Frankfort	KY	40622
Ms	Sir and/or Madam	Marchela	Sparrow		President	Kentucky Tourism Council	612B Shelby Street		Louisville	KY	40201
Ms	Ms	Alan	Frank		Secretary	Kentucky Commerce Cabinet	Capital Plaza Tower, 24th Floor		Frankfort	KY	40601
Ms	Ms	Greta	Smith		Director	KYTC, Division of Structural Design	Transportation Office Building, 3rd Floor	500 Mero Street	Frankfort	KY	40601
Mr	Mr	David	Wadner		Director	KYTC, Division of Construction	Transportation Office Building, 3rd Floor	200 Mero Street	Frankfort	KY	40622
Mr	Mr	Bill	Broyles		Branch Manager	KYTC, Division of Environmental Analysis	Transportation Office Building, 5th Floor	300 Mero Street	Frankfort	KY	40622
Mr	Mr	Diane	Thomas		Director	KYTC, Geotechnical Branch	1236 Wilkeson Boulevard		Frankfort	KY	40601-1200
Mr	Mr	Nancy	Albright		Director	KYTC, Division of Traffic Operations	Transportation Office Building, 3rd Floor	200 Mero Street	Frankfort	KY	40622
Ms	Ms	Tiffany	Jackson		Director	KYTC, Division of Maintenance	Transportation Office Building, 3rd Floor	200 Mero Street	Frankfort	KY	40622
Ms	Ms	Heleen	Mourby		Secretary	KYTC, Office of Special Programs	Transportation Office Building, 6th Floor	200 Mero Street	Frankfort	KY	40622
Mr	Mr	James	Adridge		Director	Education Cabinet	Capital Plaza Tower, 2nd Floor		Frankfort	KY	40601
Ms	Mr	Keith P	Eiken		Executive Director	Nature Conservancy - Kentucky Chapter	642 West Main Street	P.O. Box 2646	Lexington	KY	40508
Mr	Mr	William	Aguto		NEPA Team Leader	Scenic Kentucky		1650 Arch Street	Louisville	KY	40201
Mr	Sir and/or Madam	Kenneth A.	Westlake		Chief	Environmental Programs Branch	U.S. EPA Region 3		Philadelphia	PA	19103
Mr	Mr	Heinz	Mueller		Attorney	Sierra Club	259 West Short Street		Lexington	KY	40507
Mr	Mr	Michael D	Hubs		State Conservationist	National Environmental Policy Act Implementation Section	Office of Enforcement and Compliance Assistance, U.S. EPA Region 5	77 W. Jackson Boulevard	Chicago	IL	60604
Mr	Mr	Kenneth W	Holt			U.S. Environmental Protection Agency, Region 4 Office	Sam Nunn Atlanta Federal Center	61 Forsyth St. SW	Atlanta	GA	30303
Mr	Mr	Lee	Andrews		Field Supervisor	U.S. Dept. of Agriculture, Natural Resources Conservation Service	711 Corporate Drive, Suite 110		Lexington	KY	40503
Mr	Mr	Roger	Wibusch		Bridge Administrator	U.S. Dept. of Health & Human Serv., Center for Disease Control, Emergency and Environmental Health Services Division	Mail Stop F-16	4770 Buford Highway, N.E.	Atlanta	GA	30341-3724
The Honorable	Senator	Jim	Bunning		United States Senator	U.S. Dept. of the Interior, Fish and Wildlife Service	330 W. Broadway, Suite 264		Frankfort	KY	40601
The Honorable	Senator	Mitch	McConnell		United States Senator	United States Coast Guard, Bridge Branch	1222 Spruce Street		St. Louis	MO	63101
Colonel	Colonel	Raymond E	McKiff		District Engineer	United States Senate	316 Hart Senate Office Building		Washington	DC	20518
The Honorable	Congressman	Ben	Chandler		Field Office Director	United States Senate	361-A Russell Senate Office Building	P.O. Box 59	Washington	DC	20518
Ms	Ms	Krista	Mills		Field Office Director	U. S. Army Corps of Engineers, Louisville District			Louisville	KY	40204
Ms	Ms	Pamela	Rice		Executive Director	U. S. House of Representatives	1117 Longworth House Office Building		Washington	DC	20515
Mr	Mr	Bill	Laly		Executive Director	U.S. Department of Housing & Urban Development, Ky. Louisville Field Office	601 West Broadway		Louisville	KY	40203
Mr	Mr	Tony	Reck		President & CEO, P&L Railway, Inc.	Federal Motor Carrier Safety Administration	300 West Broadway, Suite 264		Frankfort	KY	40601
Ms	Ms	Linda Stille	Murnane		Executive Director	Kentucky Household Goods Carrier Association Inc	P.O. Box 22204		Louisville	KY	40252-0204
Mr	Mr	Sue	Suder		Planning Team Leader	Kentucky State Rail Association	1500 Kentucky Avenue		Paducah	KY	42004
Mr	Mr	John D	Trisler		Mayor	Kentucky Commission on Human Rights	332 West Broadway, Suite 700		Louisville	KY	40203
The Honorable	Mayor	Lonnie	Campbell		Mayor	FHWA - Eastern Federal Lands Highway Division	21400 Ridgeway Circle		Sterling	VA	20156
The Honorable	Representative	Mikward	Dedman		Kentucky State Representative, District 55	City of Harrodsburg	134 South Main Street		Harrodsburg	KY	40330
The Honorable	Senator	Dan	Kelly		Kentucky State Senator, District 14	Kentucky State Legislature	208 South Main Street		Harrodsburg	KY	40330
Mr	Mr	J. B.	Clunich		Magistrate	Kentucky State Legislature	309 South Chiles Street		Harrodsburg	KY	40330
Ms	Mr	Ronnie	Sims		Executive Director	Mercer County Fiscal Court	324 West Main Street		Springfield	KY	40069
Ms	Ms	Brenda	Sexton		Commissioner	Mercer County Fiscal Court	2750 Tanager-Mayo Road		Salvisa	KY	40372
Mr	Mr	Kevin	Perkins		Commissioner	Mercer County Fiscal Court	346 Rose Hill Lane		Harrodsburg	KY	40330
Mr	Mr	Eddie	Long		Commissioner	Mercer County Chamber of Commerce	488 Price Avenue		Harrodsburg	KY	40330
						City of Harrodsburg	551 Chesapeake Drive		Harrodsburg	KY	40330
						City of Harrodsburg	810 East Lexington Street		Harrodsburg	KY	40330

Mr.	Mr.	Bruce	Johnson		Superintendent		Harrodsburg Schools	371 East Lexington Street		Harrodsburg	KY	40330
Mr.	Mr.	Mike	Preston		Transportation Director		Harrodsburg Schools	371 East Lexington Street		Harrodsburg	KY	40330
Mr.	Mr.	Dave	Weber		Acting EMA Director		Harrodsburg Schools	PO Box 760		Harrodsburg	KY	40330
Mr.	Mr.	Glen	Philips		Fire Chief		Harrodsburg EMA	200 Norris Drive		Harrodsburg	KY	40330
Mr.	Mr.	Billy	Humphrey		Supervisor		Harrodsburg Fire Protection District	894 Moberly Road		Harrodsburg	KY	40330
Dr.	Dr.	Earl	Motzer		CEO		James B. Haggin Memorial Hospital	464 Linden Avenue		Harrodsburg	KY	40330
Mr.	Mr.	Roy	Short		Chair		North Mercer Water District	P.O. Box 79		Salvisa	KY	40372
Ms.	Ms.	Linda	McClanahan		Extension Agent for Agriculture & Natural Resources		Harrodsburg Extension Service	P.O. Box 324		Harrodsburg	KY	40330
Mr.	Mr.	Terry	Sampson		President		Harrodsburg Historical Society	P.O. Box 316		Harrodsburg	KY	40330
Ms.	Ms.	Lora	Gilkinson		City of Harrodsburg Engineer (GRW, Inc.)			801 Corporate Drive		Lexington	KY	40503
Mr.	Mr.	Bill	Durham		E-911 Coordinator			208 South Main Street		Harrodsburg	KY	40330
Mr.	Mr.	Ernie	Kelly		Police Chief			411 North Greenville Street		Harrodsburg	KY	40330
Ms.	Ms.	Elizabeth	Volaw		Plant Manager		Harrodsburg Police Department	965 Cornishville Road		Harrodsburg	KY	40330
Ms.	Ms.	Karen	Hackett		Executive Director		Harrodsburg/Water Treatment Plant	P.O. Box 283		Harrodsburg	KY	40330
Mr.	Mr.	Del	White		Executive Director		Harrodsburg/Mercer County Industrial Development Authority	488 Price Avenue, Suite 4		Harrodsburg	KY	40330
Mr.	Mr.	Shawn	Moore		Executive Director		Greater Harrodsburg/Mercer County Planning & Zoning Commission	109 Short Street		Harrodsburg	KY	40330
Mr.	Mr.	Jim	Kazmierczak		Engineer, Public Improvements		Northfolk Southern Railroad	1200 Peachtree, NE		Atlanta	GA	30309
Mr.	Mr.	David	Wyatt		Systems Engineer		Northfolk Southern Railroad	1200 Peachtree, NE		Atlanta	GA	30309
Mr.	Mr.	Chris	Brewer		Vice President of Engineering		Bluegrass Energy Coop	P.O. Box 990		Nicholsville	KY	40340
Mr.	Mr.	Danny	Collier		Engineer		Inter County Energy	1009 Hustonville Road		Danville	KY	40423
Mr.	Mr.	David	Phelps		System Engineer		Inter County Energy	1009 Hustonville Road		Danville	KY	40423

STUDY PURPOSE, ISSUES, AND DRAFT PROJECT GOALS

HARRODSBURG NORTHWEST BYPASS MERCER COUNTY

STUDY PURPOSE

The purpose of the Harrodsburg Northwest Bypass Scoping Study is to identify and evaluate potential corridors for a new or improved route in the northwest quadrant of Harrodsburg between US 127 and KY 152. The "Enacted Kentucky Six-Year Highway Plan FY 2007 – 2012" includes no further project development activity other than the Scoping Study. The study is further intended to help define the purpose of the project and better meet Federal requirements regarding consideration of environmental issues, as defined in the National Environmental Policy Act (NEPA). Tasks included in this study include:

- Discuss project needs and issues with the Project Team and a Steering Committee of local officials and other interested stakeholders,
- Define project goals,
- Identify any known environmental concerns,
- Identify and evaluate potential alternative locations for a northwest bypass, and
- Recommend a preferred location (or alternative locations) to be further examined in any subsequent project development phases.

ISSUES

Major issues and concerns have been identified within the study area that will be addressed in the Scoping Study. These include:

- Several schools and industries are located in the northwest quadrant of Harrodsburg. A new Mercer County High School is being constructed near the corner of KY 390 (Industry Road) and Moberly Road. This concentration of trip origins and destinations at similar times of the day contributes to traffic congestion in the vicinity.
- Emergency response travel times to the James B. Haggin Memorial Hospital and to other locations are lengthened by congestion along and west of US 127.
- At-grade railroad crossings of the Norfolk Southern Railroad, which runs through Harrodsburg from northwest to southeast, carry more than twenty trains daily. The unique "diagonal" routing of this rail line results in multi-directional street blockages during passage of these trains.
- Location of any northwest bypass in Harrodsburg should be compatible with possible future expansion south of KY 152 and connecting with US 127 south.

DRAFT PROJECT GOALS

For the Harrodsburg Northwest Bypass project, several draft project goals have been identified. These include:

- Improve Transportation System Connectivity,
- Provide Grade Separated Railroad Crossings,
- Reduce Congestion on Area Roadways, and
- Facilitate Future Expansion to the South.

CONTACTS

Address written comments to:

Daryl Greer, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
Station W5-05-01
200 Mero Street
Frankfort, KY 40622

Or, you may contact by phone or e-mail:

Jim Wilson, P.E.
Project Engineer
Division of Planning
Kentucky Transportation Cabinet
(502) 564-7183
jimmy.wilson@ky.gov

Visit our web page at: <http://transportation.ky.gov/planning>

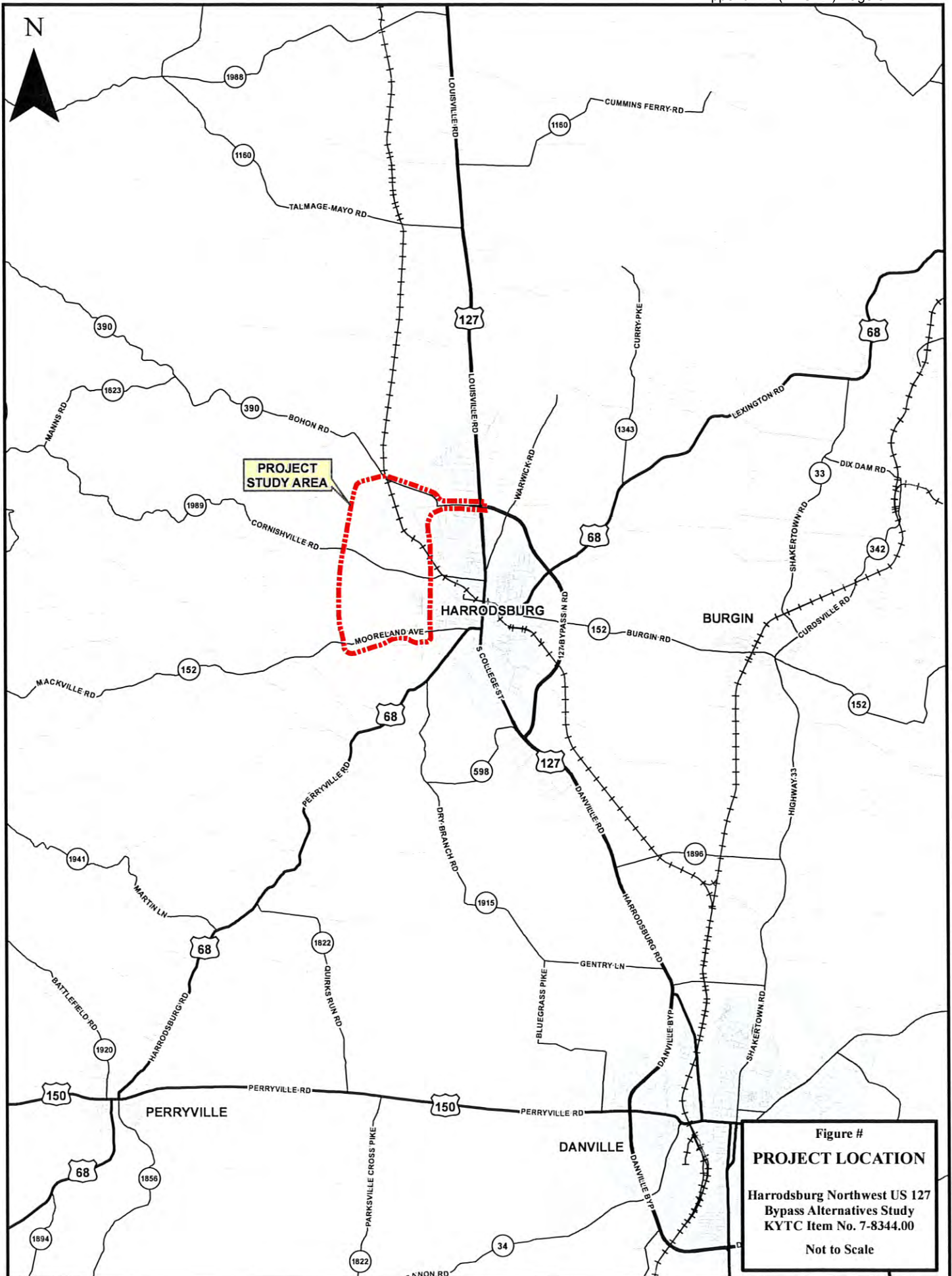
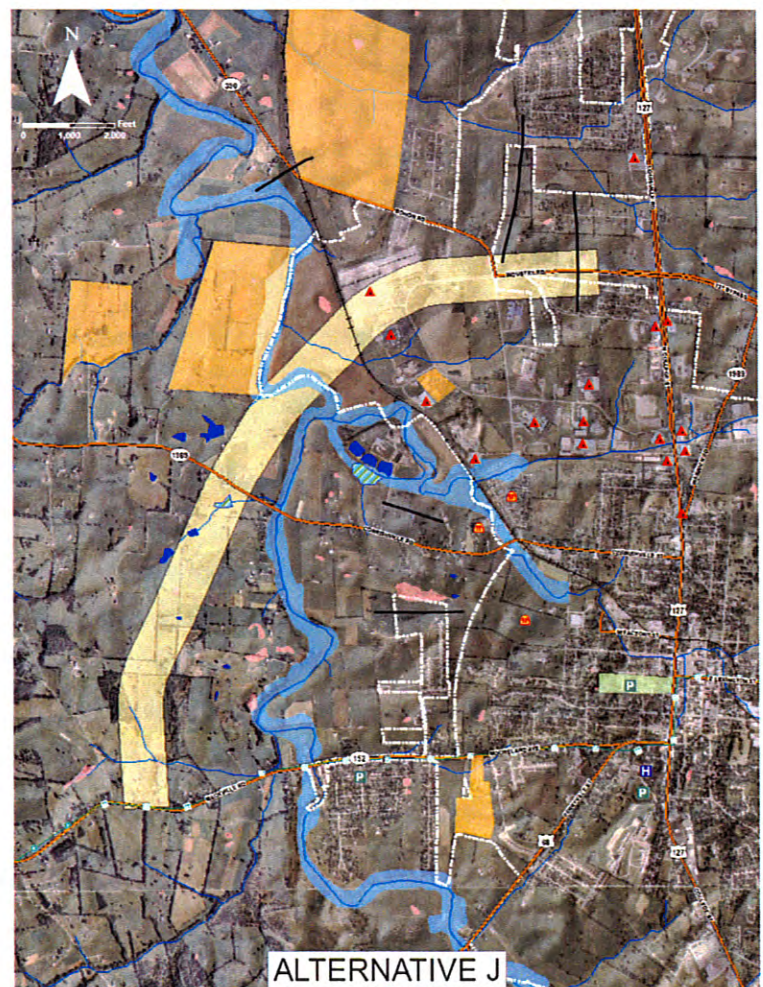
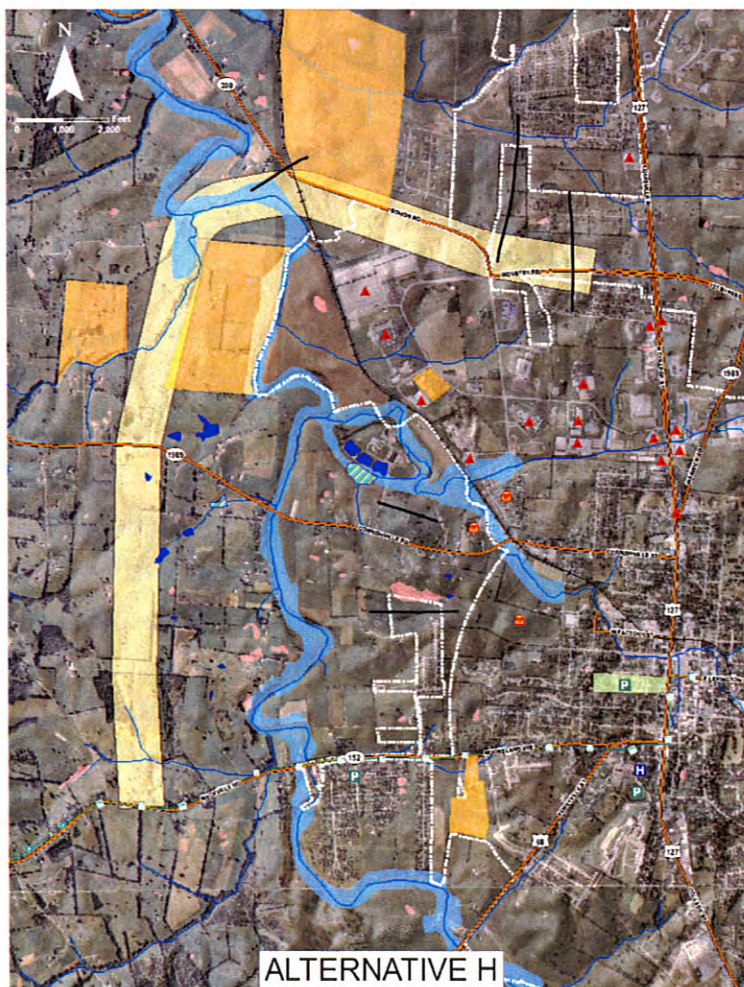
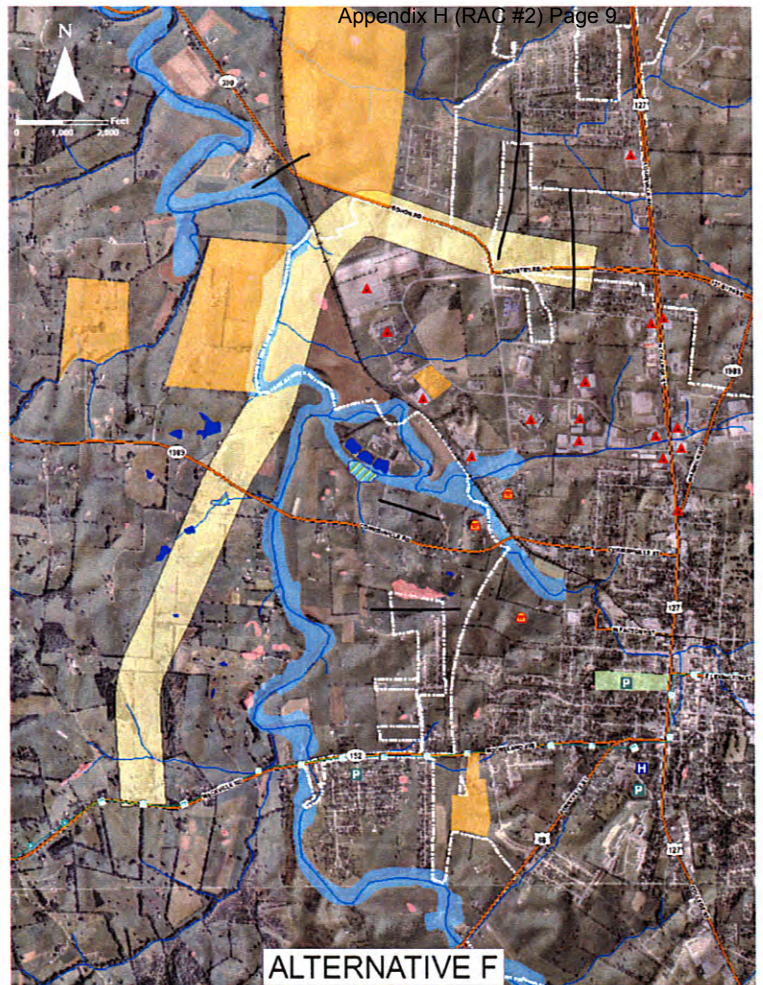
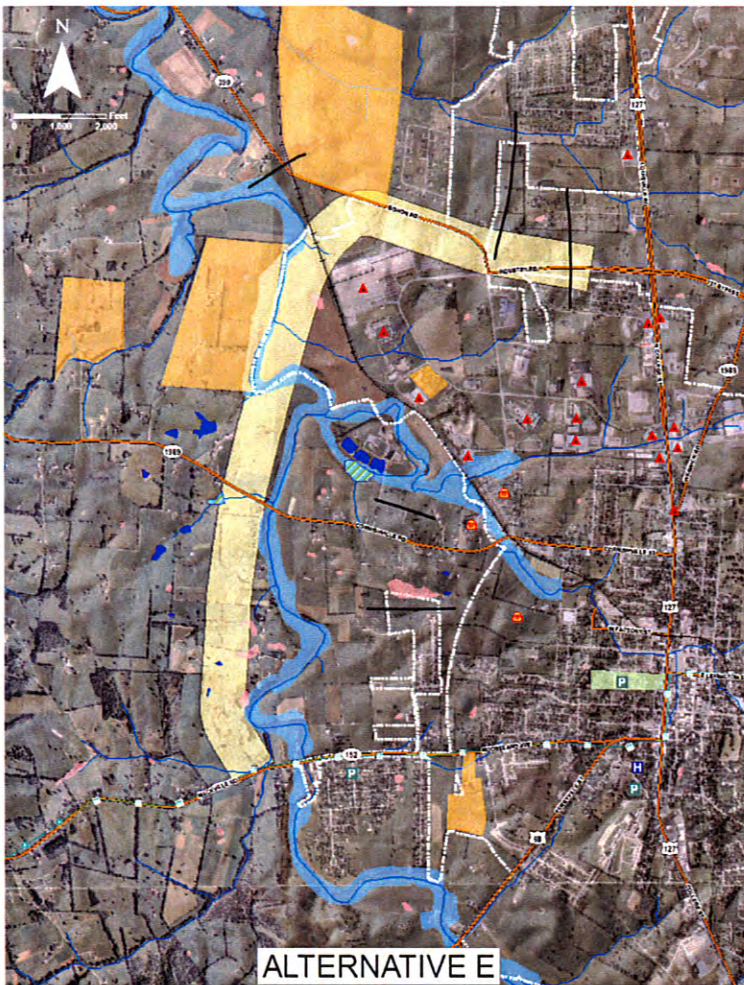


Figure #
PROJECT LOCATION
 Harrodsburg Northwest US 127
 Bypass Alternatives Study
 KYTC Item No. 7-8344.00
 Not to Scale

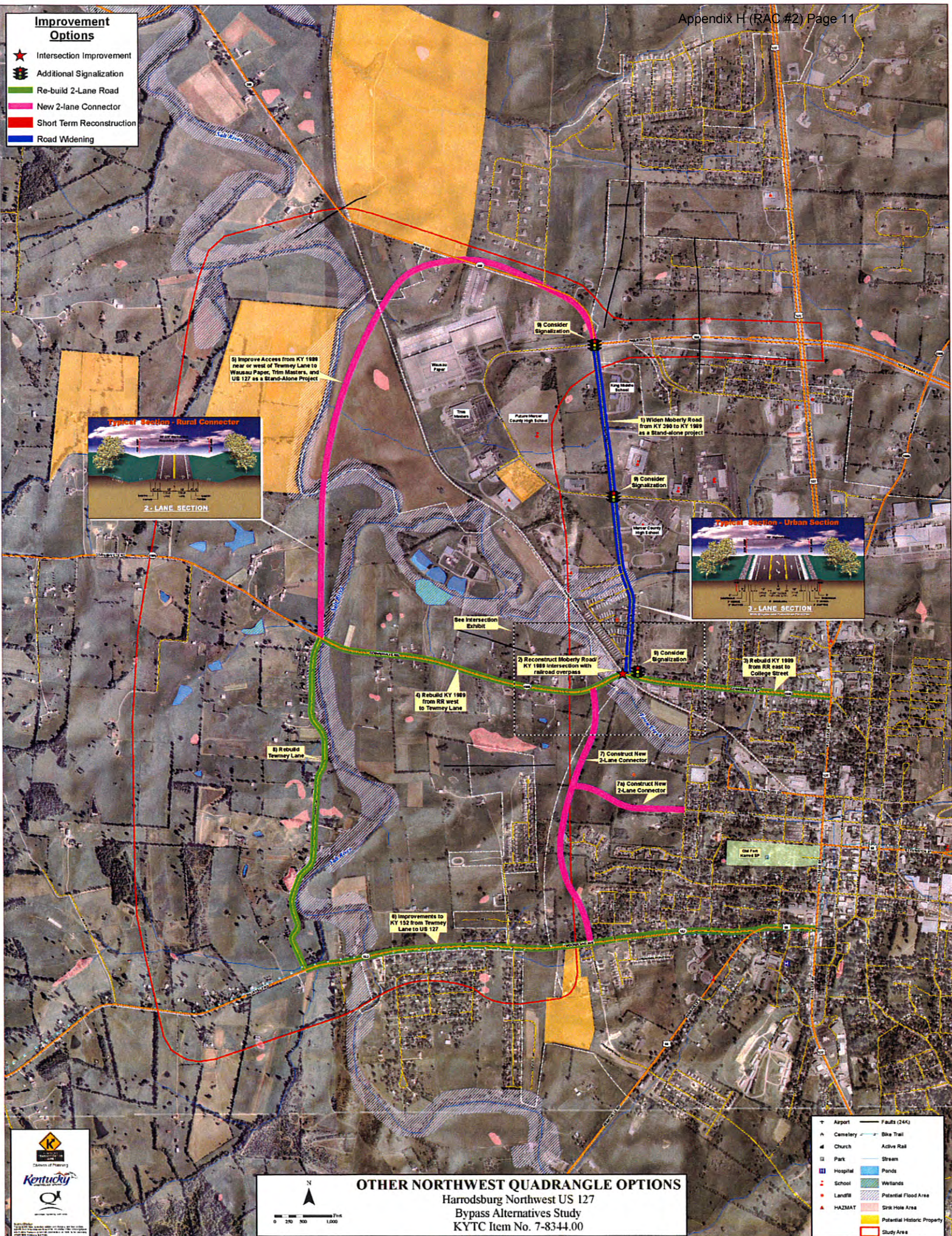


List of short-term projects (in lieu of a bypass) in the study area:

1. Widen Moberly Road from KY 390 to KY 1989 as a stand-alone project
2. Reconstruct Moberly Road/KY 1989 intersection
 - a. with railroad overpass
 - b. without railroad overpass
3. Improvements to KY 1989 from RR east to College Street
4. Improvements to KY 1989 from RR west to Tewmeyer Lane
5. Improve Access from KY 1989 near or west of Tewmeyer Lane to Wausau Paper, Trim Masters, and US 127 North as a Stand-Alone project
6. Improvements to KY 152 from Tewmeyer Lane to US 127
7. Construct new 2-lane connector from KY 1989 near Moberly Road to KY 152 near Parkway Avenue
 - a. Extend Broadway west to new route
8. Rebuild Tewmeyer Lane as an improved 2-lane road
9. Consider additional signalization
 - a. KY 390 and Moberly Road
 - b. Moberly Road and Tapp Road (city project)
 - c. KY 1989 and Moberly Road

Improvement Options

- ★ Intersection Improvement
- Additional Signalization
- Re-build 2-Lane Road
- New 2-lane Connector
- Short Term Reconstruction
- Road Widening



OTHER NORTHWEST QUADRANGLE OPTIONS

Harrodsburg Northwest US 127
Bypass Alternatives Study
KYTC Item No. 7-8344.00



- ✈ Airport
- ⛔ Faults (24%)
- ⛔ Cemetery
- ⛔ Church
- ⛔ Park
- ⛔ Hospital
- ⛔ School
- ⛔ Landfill
- ⛔ HAZMAT
- ⛔ Faults (24%)
- ⛔ Bike Trail
- ⛔ Active Rail
- ⛔ Stream
- ⛔ Ponds
- ⛔ Wetlands
- ⛔ Potential Flood Area
- ⛔ Sink Hole Area
- ⛔ Potential Historic Property
- ⛔ Study Area

**Environmental Review Process
Resource Agencies Responding (2nd Mailing)**

	Agency	Date	Response
1	Federal Aviation Administration	7/1/2008	No Impact anticipated to the nearest airport which is Danville-Boyle County Airport
2	US Natural Resources Conservation Service	6/13/2008	Recommend contact local NRCS representative and provided Mercer County soils data
3	US Coast Guard	7/1/2008	No Impact
4	Kentucky Division of Forestry	6/25/2008	No Impact
5	Kentucky Department of Fish and Wildlife Resources	6/12/2008	Recommended to contact USDFW, USACOE, and suggested recommendations for mitigating stream impacts
6	Kentucky Department of Agriculture	6/23/2008	Recognized the information, but provided no comment
7	Kentucky Department of Military Affairs	6/5/2008	No Impact
8	KY EPPC DEP DWM (UST) Branch	6/6/2008	Identified one (1) facility with one (1) removed underground storage tank in the area
9	KY EPPC DEP Division of Waste Management	6/9/2008	Provided a map of landfills in the vicinity of the study area; any waste generated must be properly disposed of
10	KY EEC DEP Division of Air Quality	6/17/2008	Fugitive Emissions Regulation and open burning is prohibited except under certain circumstances; must meet Clean Air Act
11	KY EPPC Division of Water	7/1/2008	Recommend that groundwater not be adversely affected
12	KY EEC DEP Division of Air Quality	7/11/2008	Fugitive Emissions Regulation and open burning is prohibited except under certain circumstances; must meet Clean Air Act
13	Kentucky Heritage Council SHPO	7/2/2008	Recommend that the area be surveyed by an archaeologist and a historian and two copies of the report be submitted to SHPO
14	Kentucky Airport Zoning Commission	6/2/2008	No negative effect on air navigation; however if equipment usage exceeds 200' AGL, a permit must be obtained
15	KYTC Geotechnical	6/24/2008	No issues with any improvement options
16	Kentucky Geological Survey	6/27/2008	Summarization of any geologic concerns for the study area
17	Kentucky Education Cabinet	7/10/2008	No Input
18	Kentucky TAHC Dept of Parks	6/18/2008	No Impact
19	Kentucky Justice and Public Safety Cabinet (KVE)	6/24/2008	Recommend roadway be named a designated route
20	Kentucky State Police	7/2/2008	Provided several comments: Most significant concern is public safety



U.S. Department
of Transportation
**Federal Aviation
Administration**

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JUL 08 2008

Appendix H (RAC #2) Page 15

Memphis Airports District Office
2862 Business Park Dr, Bldg G
Memphis, TN 38118-1555
Phone: 901-322-8180

July 1, 2008

Mr. Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Department of Transportation
200 Mero Street
Frankfort, KY 40622

Re: Planning Study, Mercer County, Harrodsburg Northwest Bypass
KY 152 to US 127 Item No. 07-8344.00

Dear Mr. Greer:

We have reviewed the proposed study and found no issue or concerns that could affect the nearest airport (Danville-Boyle County Airport) in that area. We feel, from your proposal, that this project will have no environmental impact for future airport development. We would like to be notified if any changes should occur from the original studies.

Thank you for considering our opinion in your study and if you have any question feel free to call our office.

Sincerely,

James H. Williams
Program Manager



Natural Resources Conservation Service
771 Corporate Drive, Suite 210
Lexington, KY 40503

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JUN 20 2008

June 13, 2008

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Frankfort, KY 40622

RE: Planning Study, Mercer County, Harrodsburg, Northwest Bypass

Dear Mr. Greer:

In regards to the above study, the USDA-Natural Resources Conservation Service (NRCS) is concerned with potential impacts that the proposed project might have upon prime farmland soils and additional farmlands of statewide importance. If federal dollars are to be used to convert important farmlands from agricultural uses to non-agricultural uses a Form AD-1006 (or Form NRCS-CPA-106 if the project is a corridor type project) must be submitted to the local NRCS office. These forms may be obtained from the local NRCS office and are also available as electronic forms on the web at http://www.nrcs.usda.gov/programs/fppa/pdf_files/AD1006.PDF and http://www.nrcs.usda.gov/programs/fppa/pdf_files/CPA106.pdf.

Enclosed is a CD containing ArcView GIS shapefiles of soils information for Mercer County. The GIS shapefiles are in UTM projection, nad83, zone 16. The soil database table includes a column for "farmland classification-all components" (farmclac) that identifies prime farmlands and soils of statewide importance. A legend file has been provided (farmland_classif.avl), which may be used with GIS software to more clearly display the soils that are considered prime farmlands and soils of statewide importance.

The NRCS contact person for Mercer County is Robert Campbell, district conservationist, 859-734-6889. Mr. Campbell can assist in identifying important farmlands in the proposed project area.

Sincerely,

A handwritten signature in blue ink that reads "Donald J. Pettit".

DONALD J. PETTIT
Acting State Conservationist

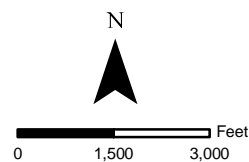
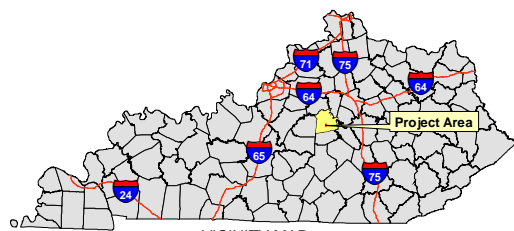
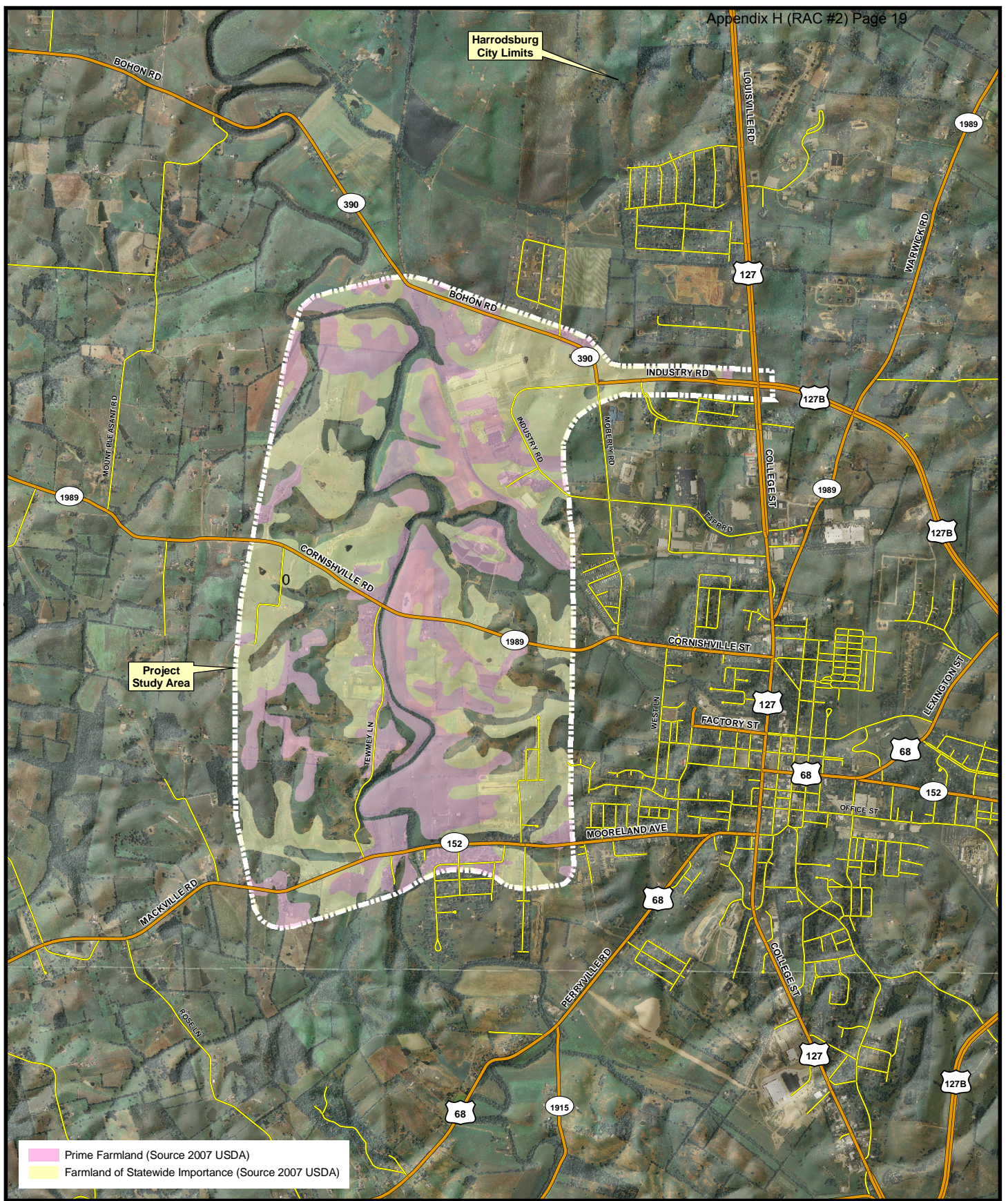
Enclosure: CD (1)

cc: Jacob Kuhn, Assistant State Conservationist, Lexington, KY
J. David Stipes, Area Conservationist, Lexington, KY
Robert Campbell, District Conservationist, Harrodsburg, KY

Helping People Help the Land

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STUDY AREA
USDA FARMLAND
 Harrodsburg Northwest US 127
 Bypass Alternatives Study
 Mercer County, Kentucky
 KYTC Item No. 7-8344.00

U.S. Department of
Homeland Security

United States
Coast Guard



Commander
Eighth Coast Guard District

Appendix H (RAC #2) Page 21
1222 Spruce Street
St. Louis, MO 63103-2832
Staff Symbol: dwb
Phone: (314)269-2378
Fax: (314)269-2737
Email:

16591.1/Salt River
July 1, 2008

Mr. Daryl Greer
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Frankfort, KY 40622

Subj: HARRODSBURG ROADWAY IMPROVEMENT PROJECT, SALT RIVER

Dear Mr. Greer:

Please refer to your correspondence of May 29, 2008. We have determined that pursuant to the Coast Guard Authorization Act of 1982, the subject project does not involve bridges over navigable waters of the United States. Therefore, a Coast Guard bridge permit is not required for this project.

We appreciate the opportunity to comment on the project.

Sincerely,

A handwritten signature in blue ink, appearing to read "DKL Wiebusch".

ROGER K. WIEBUSCH

Bridge Administrator

By direction of the District Commander

Heberle, Doug

From: Witt, Thomas (KYTC) [Thomas.Witt@ky.gov]
Sent: Wednesday, June 25, 2008 3:12 PM
To: Heberle, Doug; Goodpaster, Stuart (KYTC-D07); Martin, David (KYTC); Springer, Tom; Turner, Randy (KYTC-D07); Zimmerman, Albert
Subject: FW: Mercer County Planning Study; Harrodsburg Northwest Bypass - Response from KY Division of Forestry

From: MacSwords, Leah (EEC)
Sent: Wednesday, June 25, 2008 2:41 PM
To: Witt, Thomas (KYTC)
Subject: Mercer County Planning Study; Harrodsburg Northwest Bypass

No significant forest resources affected by this bypass.

Leah W. MacSwords
Director/State Forester
Kentucky Division of Forestry
627 Comanche Trail
Frankfort, KY 40601
ph: 502-564-4496, 800-866-0555
fax: 502-564-6553



JUN 17 2008

**KENTUCKY DEPARTMENT OF FISH & WILDLIFE RESOURCES
COMMERCE CABINET****Steven L. Beshear**
Governor#1 Sportsman's Lane
Frankfort, Kentucky 40601
Phone (502) 564-3400
1-800-858-1549
Fax (502) 564-0506
fw.ky.gov**Marcheta Sparrow**
Secretary**Dr. Jonathan W. Gassett**
Commissioner

June 12, 2008

Daryl J. Greer, P. E.
Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
5th Floor
Frankfort, KY 40622RE: Planning Study
Mercer County
Harrodsburg, Northwest Bypass
KY 152 to US 127
Item No. 7-8344.00

Dear Mr. Greer:

The Kentucky Department of Fish and Wildlife Resources (KDFWR) have received your request for the above-referenced information. The Kentucky Fish and Wildlife Information System indicates that no federal/state threatened and/or endangered fish and wildlife species are known to occur within close proximity to the project area. Please be aware that our database system is a dynamic one that only represents our current knowledge of the various species distributions. We recommend that you contact the U. S. Fish & Wildlife Service Kentucky Field Office at 502-695-0468 for consultation under the Endangered Species Act.

It appears that the proposed project has the potential to impact wetland habitats. According to the National Wetland Inventory Map it appears that *Alternate H* would impact a forested wetland at the Salt River crossing. KDFWR recommends that you look at the appropriate US Department of Interior National Wetland Inventory Map (NWI) and the appropriate county soil surveys to determine where the proposed project may impact other wetlands. Additionally, field verification may be needed to determine the extent and quality of wetland habitats within the project area. Any planning should include measures designed to eliminate and/or reduce impacts to wetland habitats. If impacts cannot be avoided, mitigation should be properly designed and proposed to offset the losses. KDFWR will recommend, at a minimum, a 2:1 mitigation ratio for any permanent loss or degradation of wetland habitats.

KDFWR recommends that you contact the appropriate US Army Corps of Engineers office and the Kentucky Division of Water prior to any work within the waterways or wetland habitats of Kentucky. Additionally, KDFWR recommends the following for the portions of the project that impact streams:



- All alternates will cross the Salt River. KDFWR recommends utilizing a bridge design that spans the Salt River and eliminates the need to place bridge piers within the river channel.
- Channel changes located within the project area should incorporate natural stream channel design.
- If culverts are used, the culvert should be designed to allow the passage of aquatic organisms.
- Culverts should be designed so that degradation upstream and downstream of the culvert does not occur.
- To compensate for unavoidable impacts to streams, we recommend that possible stream mitigation sites be identified on-site or within the Upper Salt River drainage. Restoration of those sites should incorporate natural stream channel design along with the restoration of its associated riparian areas.
- Development/excavation during low flow period to minimize disturbances.
- Proper placement of erosion control structures below highly disturbed areas to minimize entry of silt into area streams.
- Replanting of disturbed areas after construction, including stream banks, with native vegetation for soil stabilization and enhancement of fish and wildlife populations. We recommend a 100 foot forested buffer along each stream bank.
- Return all disturbed instream habitat to a stable condition upon completion of construction in the area.
- Preservation of any tree canopy overhanging any streams within the project area.

I hope this information proves helpful to you. If you have any questions or require additional information, please call me at (800) 852-0942 Extension 366.

Sincerely,



Doug Dawson
Wildlife Biologist III

Cc: Environmental Section File



Richie Farmer, Commissioner
32 Fountain Place
Frankfort, KY 40601



RECEIVED

Appendix H (RAC #2) Page 27

JUN 25 2008

Phone: (502) 564-5126

Fax: (502) 564-5016

E-mail: richie.farmer@ky.gov

**Kentucky
Department of
Agriculture**

A Consumer Protection And Service Agency

June 23, 2008

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Frankfort, Kentucky 40622

RE: Mercer County Item No. 07-8344.00

Dear Mr. Greer:

The Kentucky Department of Agriculture recognizes receipt of information relating to the above noted Item No. At this time, the Department has no comment on the proposed project.

We appreciate the opportunity to provide input.

Yours truly,

A handwritten signature in blue ink that reads "Richie Farmer".

Richie Farmer, Commissioner



Heberle, Doug

From: Witt, Thomas (KYTC) [Thomas.Witt@ky.gov]
Sent: Tuesday, June 10, 2008 10:30 AM
To: Heberle, Doug; Goodpaster, Stuart (KYTC-D07); Martin, David (KYTC); Springer, Tom; Turner, Randy (KYTC-D07); Zimmerman, Albert
Subject: FW: Item No. 07-8344.00; Second Agency Coordination Responses

From: Ross, Steve (KYTC)
Sent: Friday, June 06, 2008 8:11 AM
To: Witt, Thomas (KYTC); Martin, David (KYTC)
Subject: FW: Planning Study, Mercer County, Harrodsburg Northwest Bypass, KY 152 to US 127, Item No. 07-8344.00

From: Greer, Daryl (KYTC)
Sent: Thursday, June 05, 2008 2:59 PM
To: Ross, Steve (KYTC)
Subject: FW: Planning Study, Mercer County, Harrodsburg Northwest Bypass, KY 152 to US 127, Item No. 07-8344.00

From: Wilkins, Joe N MR NGKY [mailto:joe.wilkins@us.army.mil]
Sent: Thu 6/5/2008 2:25 PM
To: Greer, Daryl (KYTC)
Subject: Planning Study, Mercer County, Harrodsburg Northwest Bypass, KY 152 to US 127, Item No. 07-8344.00

Mr. Greer,

The Department of Military Affairs can not identify any issues or concerns that affect the development of subject project. We have an Armory located East of the proposed construction site at 500 Tapp Rd.

Joe N. Wilkins
Director, Facilities Division
Boone National Guard Center
Frankfort, KY 40601-6168
502-607-6535
DSN 667-6535
502-382-7270 (Cell)
502-607-1270 (Fax)
Joe.Wilkins@ky.ngb.army.mil

6/10/2008

Heberle, Doug

From: Witt, Thomas (KYTC) [Thomas.Witt@ky.gov]
Sent: Tuesday, June 10, 2008 9:41 AM
To: Springer, Tom; Zimmerman, Albert; Heberle, Doug
Subject: FW: Item No. 7-8344.00; Second Agency Coordination Responses

From: Burton, Dale (EPPC DEP DWM)
Sent: Monday, June 02, 2008 2:00 PM
To: Webb, April (EPPC DEP DWM); Gilbert, George (EPPC DEP DWM)
Cc: Jump, John (EPPC DEP DWM)
Subject: RE: Planning Study Harrodsburg

The proposed route will apparently not affect the hazardous waste facilities in the area. Those facilities include Hallmack and Corning.

Therefore, I have no comments.

From: Webb, April (EPPC DEP DWM)
Sent: Monday, June 02, 2008 1:14 PM
To: Burton, Dale (EPPC DEP DWM); Jump, John (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

April J. Webb PE, Manager

Hazardous Waste Branch
14 Reilly Road
Bldg 6
Frankfort, KY 40601
(502)564-6716 ext 676

From: Gilbert, George (EPPC DEP DWM)
Sent: Monday, June 02, 2008 12:41 PM
To: Daniell, Robert (EPPC DEP DWM); Gruzsky, Ron (EPPC DEP DWM); Maybriar, Jon (EPPC DEP DWM); Sherkat, Fazi (EPPC DEP DWM); Webb, April (EPPC DEP DWM)
Cc: Cooley, Tony (EPPC DEP DWM); Gritton, Sharon (EPPC DEP DWM); Funkhouser, Lloyd (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

Here is another Transportation study on Mercer County. Pls. forward comments by COB Friday, June 13. Thx.

From: Perry, Jennie (EPPC DEP DWM)
Sent: Friday, May 30, 2008 4:03 PM
To: Gilbert, George (EPPC DEP DWM)

Heberle, Doug

From: Witt, Thomas (KYTC) [Thomas.Witt@ky.gov]
Sent: Tuesday, June 10, 2008 9:30 AM
To: Siria, Bruce; Springer, Tom; Zimmerman, Albert
Subject: FW: Item No. 7-8344.00; Second Agency Coordination Responses

From: Burton, Dale (EPPC DEP DWM)
Sent: Thursday, June 05, 2008 1:19 PM
To: Gilbert, George (EPPC DEP DWM)
Cc: Webb, April (EPPC DEP DWM); Hall, Clifford (EPPC DEP DWM); Logsdon, Kenneth (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

George,

The widening of Moberly Road will cross a low-level groundwater contaminant plume which runs from the former Hallmack facility (as well as the former Signet facility) (east of Moberly Road) to Humane Spring (west of Moberly Road). We do not anticipate that the road construction would encounter this TCE-contaminated groundwater, but we wanted to pass this information along.

From: Hall, Clifford (EPPC DEP DWM)
Sent: Thursday, June 05, 2008 8:35 AM
To: Burton, Dale (EPPC DEP DWM); Logsdon, Kenneth (EPPC DEP DWM)
Subject: RE: Planning Study Harrodsburg

I agree, this road will likely cross contaminated groundwater, but it really isn't an HW issue.

From: Burton, Dale (EPPC DEP DWM)
Sent: Thursday, June 05, 2008 7:59 AM
To: Logsdon, Kenneth (EPPC DEP DWM)
Cc: Hall, Clifford (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

FYI – please review and comment. It looks to me like the widening of Moberly will cross the area between Hallmack and Humane Spring, but otherwise, I don't see any HW issues – do you concur?

From: Webb, April (EPPC DEP DWM)
Sent: Wednesday, June 04, 2008 3:51 PM
To: Burton, Dale (EPPC DEP DWM); Jump, John (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

April J. Webb PE, Manager
Hazardous Waste Branch

Heberle, Doug

From: Witt, Thomas (KYTC) [Thomas.Witt@ky.gov]
Sent: Tuesday, June 10, 2008 9:28 AM
To: Siria, Bruce; Springer, Tom; Zimmerman, Albert
Subject: FW: Item No. 7-8344.00; Second Agency Coordination Responses

From: Daniell, Robert (EPPC DEP DWM)
Sent: Friday, June 06, 2008 9:19 AM
To: Gilbert, George (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

Rob Daniell, Manager
Underground Storage Tank Branch
81 C. Michael Davenport Blvd.
Frankfort, KY 40601
(502) 564-5981

From: Baase, Dawn (EPPC DEP DWM)
Sent: Friday, June 06, 2008 9:10 AM
To: Daniell, Robert (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

UST Branch sends the following comments regarding Item No. 7-8344.00

The USTB identified one (1) facility (AI# 59095) with one (1) registered tank that was removed in 1996 and NFA'd in 2005. The facility is located at the following coordinates along the eastern edge of the project area (37.775833 / -84.860278). It appears there are no facilities undergoing corrective actions within the project area.

Please notify the UST Branch if additional information is required.

Dawn Langford Baase
AEI Section, USTB
Division of Waste Management
81 C. Michael Davenport Blvd
Frankfort, KY 40601
phone: 502-564-5981 ext. 250
fax: 502-564-5047

From: Daniell, Robert (EPPC DEP DWM)
Sent: Monday, June 02, 2008 3:05 PM

6/10/2008

Heberle, Doug

From: Cooley, Tony (EPPC DEP DWM) [Tony.Cooley@ky.gov]
Sent: Monday, June 09, 2008 10:55 AM
To: Gilbert, George (EPPC DEP DWM)
Cc: Anderson, Danny (EPPC DEP DWM)
Subject: RE: Planning Study Harrodsburg

The attached image shows the waste boundaries of the landfills in the vicinity of the proposed work. The Corning Glass landfill is outside the likely area affected by the proposed work and is an inert landfill.

The Harrodsburg City Dump is probably outside the affected area. Area 1 is the most likely location for this dump based on an old aerial photo and one identification of the site. An alternate location for the dump, Area 2, lies adjacent to the work on the existing road. Work would probably encroach on Area 2 property while widening this road. This area was identified as the waste area by TetraTech during a Stage 1 study for DWM, though I am skeptical because there is little change to this property between an aerial photo in 1963 and one in 1974, while disturbance compatible with a city dump is visible in Area 1. However, I can't rule out the possibility of waste on this property.

Should construction encounter waste, this would have to be removed to at least the edge of the road right of way and transported to a permitted contained landfill for disposal. My preference would be to remove it at least 5 or 10 feet back from the right of way fence so we could have access for waste consolidation if needed. In addition, on the property beyond the right of way, the cap at the cut edge of the waste should be restored to at least as good as the existing condition of the cap and appropriate drainage control should be provided such that no new surface or groundwater flow will affect the remaining waste on the site beyond the road right of way.

Danny, do you have anything to add?

From: Gilbert, George (EPPC DEP DWM)
Sent: Monday, June 02, 2008 12:41 PM
To: Daniell, Robert (EPPC DEP DWM); Gruzesky, Ron (EPPC DEP DWM); Maybriar, Jon (EPPC DEP DWM); Sherkat, Fazi (EPPC DEP DWM); Webb, April (EPPC DEP DWM)
Cc: Cooley, Tony (EPPC DEP DWM); Gritton, Sharon (EPPC DEP DWM); Funkhouser, Lloyd (EPPC DEP DWM)
Subject: FW: Planning Study Harrodsburg

Here is another Transportation study on Mercer County. Pls. forward comments by COB Friday, June 13. Thx.

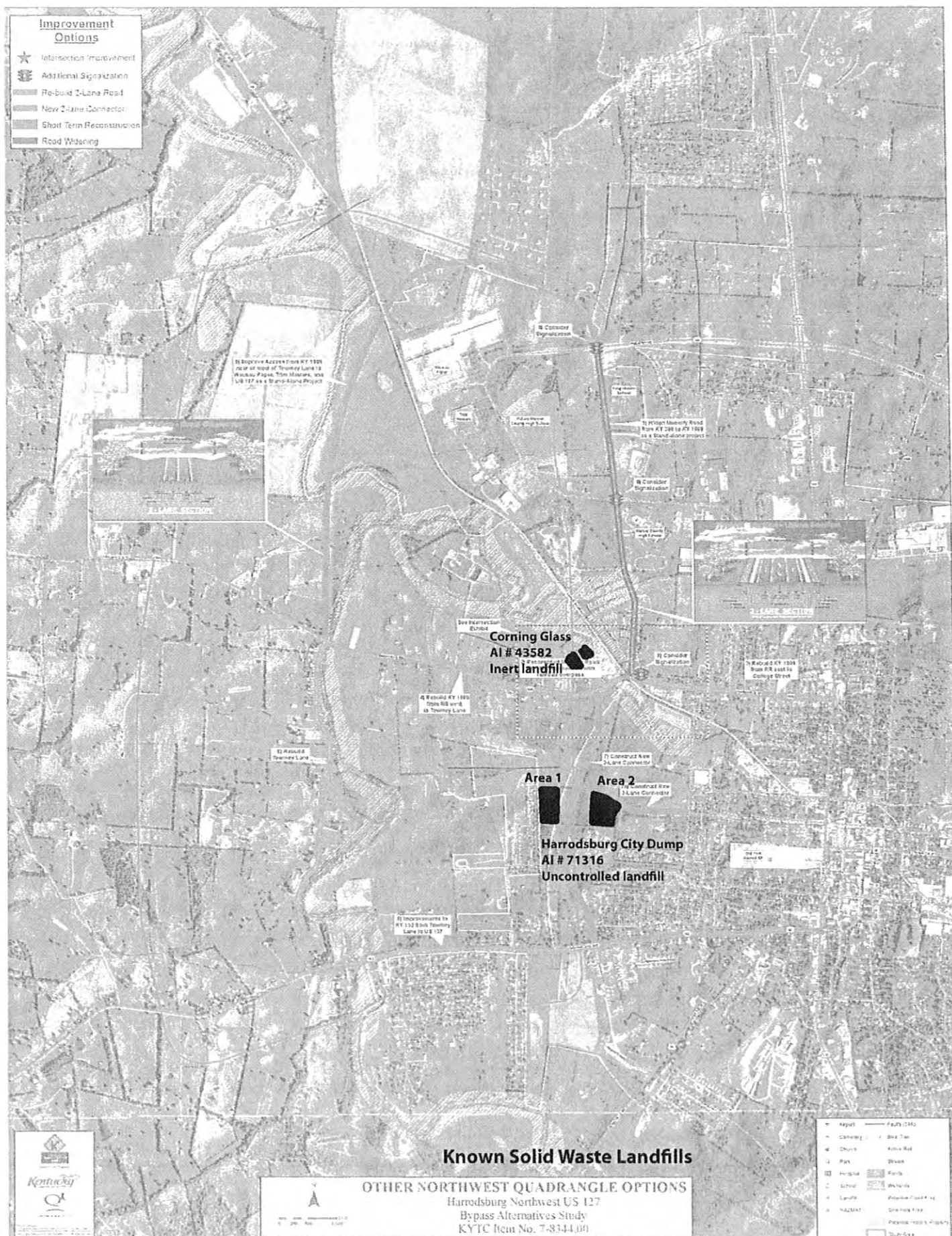
From: Perry, Jennie (EPPC DEP DWM)
Sent: Friday, May 30, 2008 4:03 PM
To: Gilbert, George (EPPC DEP DWM)
Subject: Planning Study Harrodsburg

Hard copy on your desk.

Jennie Perry

Department for Environmental Protection
Division of Waste Management
Director's Office
Frankfort Office Park
14 Reilly Road
Phone (502) 564-6716, x215
jennie.perry@ky.gov

6/10/2008



RECEIVED**JUN 18 2008**Leonard K. Peters
SecretarySteven L. Beshear
Governor

Commonwealth of Kentucky
Energy and Environment Cabinet
Department for Environmental Protection
 Division for Air Quality
 803 Schenkel Lane
 Frankfort, Kentucky 40601-1403
www.air.ky.gov
 June 17, 2008

Mr. Daryl Greer, P.E., Director
 Division of Planning
 Kentucky Transportation Cabinet
 200 Mero St.
 Frankfort, Ky 40622

Re: Planning Study for Harrodsburg Northwest Bypass, Item No. 07-8344.00

Dear Mr. Greer:

Upon review of the above referenced planning study, it has been found that the following Kentucky Administrative Regulations apply to this proposed project:

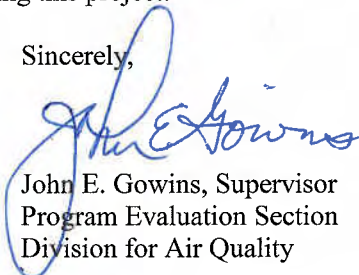
Kentucky Division for Air Quality Regulation **401 KAR 63:010** Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm.

Kentucky Division for Air Quality Regulation **401 KAR 63:005** states that open burning is prohibited. Open Burning is defined as the burning of any matter in such a manner that the products of combustion resulting from the burning are emitted directly into the outdoor atmosphere without passing through a stack or chimney. However, open burning may be utilized for the expressed purposes listed on the Open Burning Fact Sheet located at http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm.

Finally, the project listed in this document must meet the conformity requirements of the Clean Air Act as amended and the transportation planning provisions of Title 23 and Title 49 of United States Code. The Division also suggests an investigation into compliance with applicable local government regulations.

We appreciate the opportunity to provide input concerning this project.

Sincerely,


 John E. Gowins, Supervisor
 Program Evaluation Section
 Division for Air Quality

Printed on Recycled Paper



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JUL 15 2008

ENERGY AND ENVIRONMENT CABINET

Steven L. Beshear
Governor

DEPARTMENT FOR ENVIRONMENTAL PROTECTION
300 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
PHONE (502) 564-2150
FAX (502) 564-4245
www.dep.ky.gov

Leonard K. Peters
Secretary

R. Bruce Scott
Commissioner

July 11, 2008

Mr. Daryl J. Greer, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

Re: Planning Study, Mercer County, Harrodsburg Northwest Bypass. Item No. 07-8344.00
(SERO 2008-16)

Dear Mr. Greer,

The Energy and Environment Cabinet serves as the state clearinghouse for review of environmental documents generated pursuant to the National Environmental Policy Act (NEPA). Within the Cabinet, the Commissioner's Office in the Department for Environmental Protection coordinates the review for Kentucky state agencies.

The Kentucky agencies listed on the attached sheet have been provided an opportunity to review the above referenced report. Responses were received from 3 of the reviewing agencies. Comments were received from the Kentucky Divisions of Water and Air Quality, and the Kentucky Heritage Council.

If you should have any questions, please contact me at (502) 564-2150, ext. 112.

Sincerely,

Larry C. Taylor
State Environmental Review Officer

Enclosures

COMMONWEALTH OF KENTUCKY STATE ENVIRONMENTAL REVIEW PROCESS

Project Number: SERO 2008 - 16

Scoping Document

Project Title:

Planning Study, Mercer County, Harrodsburg Northwest Bypass. Item No. 07-8344.00

The following Commonwealth of Kentucky agencies make up the State Environmental Review Process. Their response is listed below. Agencies that did not receive the document for review or did not respond are also noted.

REVIEWING AGENCIES:	RESPONSE:
Division of Water.....	COMMENTS ATTACHED
Division of Waste Management.....	NO COMMENT
Division for Air Quality.....	COMMENTS ATTACHED
Department for Public Health.....	Not Sent for Review
Cabinet for Economic Development.....	Not Sent for Review
Division of Forestry.....	Not Sent for Review
Department of Parks.....	Not Sent for Review
Department of Agriculture.....	Not Sent for Review
Nature Preserves Commission.....	No Response Received
Kentucky Heritage Council.....	COMMENTS ATTACHED
Division of Conservation.....	Not Sent for Review
Department for Natural Resources.....	Not Sent for Review
Department of Fish and Wildlife Resources....	Not Sent for Review
Transportation Cabinet.....	Not Sent for Review
Department for Military Affairs.....	Not Sent for Review

Division of Water Comments

Planning Study for the Harrodsburg Northwest Bypass from KY 152 to US 127

Endorsement:

A request for review of the Planning Study for the Harrodsburg Northwest Bypass from KY 152 to US 127 in Mercer County, Kentucky was received on May 29, 2008. The Division of Water (DOW) completed this review and has provided the following comments.

Water Quality Branch:

No comments.

Groundwater Branch:

Did not comment.

Field Operations Branch:

A review of the geology of the area indicates that the proposed site is located in a karst region. Thin soil mantles, sinks and sinkholes, sinking streams, and fractured and solutioned limestone characterize karst topography. As a consequence, karst regions can have extreme groundwater transmissivity. "Percolation" can be swift. Groundwater flows are usually measured in feet per day instead of the normal rate of inches per year (Groundwater flows in Kentucky have been recorded as high as 1,300 feet per hour). The Division of Water recommends that a registered karst hydrogeologist be utilized to ensure that groundwater in the area will not be adversely affected by this project.

Any water or monitoring wells that may be destroyed by the project will need to be abandoned properly. All water well and monitoring well construction, alteration, repair or plugging must be performed by a Kentucky certified driller in accordance with KRS 223.400 460 and 401 KAR 6:310 and 320.

Water Resources Branch:

Any excess material generated from the project activity, if disposed outside the Right of Way of the Department of Highways and in the regulatory floodplain will require a permit from DOW per KRS 151.250.

Enforcement Branch:

Did not comment.

Division for Air Quality Comments

DAQ Comments on Harrodsburg NW Bypass Planning Study (SERO 2008-16)

Kentucky Division for Air Quality Regulation 401 KAR 63:010 Fugitive Emissions states that no person shall cause, suffer, or allow any material to be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne. Additional requirements include the covering of open bodied trucks, operating outside the work area transporting materials likely to become airborne, and that no one shall allow earth or other material being transported by truck or earth moving equipment to be deposited onto a paved street or roadway. Please note the Fugitive Emissions Fact Sheet located at http://www.air.ky.gov/homepage_repository/e-Clearinghouse.htm

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Finally, the projects listed in this document must meet the conformity requirements of the Clean Air Act as amended and the transportation planning provisions of Title 23 and Title 49 of United States Code.

The Division also suggests an investigation into compliance with applicable local government regulations.

Kentucky Heritage Council Comments



**COMMERCE CABINET
KENTUCKY HERITAGE COUNCIL**

Steven L. Beshear
Governor

The State Historic Preservation Office
300 Washington Street
Frankfort, Kentucky 40601
Phone (502) 564-7005
Fax (502) 564-5820
www.kentucky.gov

Marcheta Sparrow
Secretary

Donna M. Neary
Executive Director and
State Historic Preservation Officer

July 2, 2008

Mr. Larry Taylor
Department for Environmental Protection
14 Reilly Road
Frankfort, Kentucky 40601

Re: Planning Study, Harrodsburg Northwest Bypass, Mercer County, Kentucky

Dear Mr. Taylor:

Thank you for your letter concerning the above referenced project. Our review indicates that this project has the potential to impact both archaeological and historic sites eligible for listing in the National Register of Historic Places. Therefore, I recommend that the entire project area be surveyed by a professional archaeologist and architectural historian. Two separate reports documenting the results of these investigations should be submitted to the State Historic Preservation Officer for review, comment, and approval.

Should you have any questions, feel free to contact Lori Stahlgren of my staff at (502) 564-7005, extension 118.

Sincerely,


Donna M. Neary, Director
Kentucky Heritage Council and
State Historic Preservation Officer

LCS:lcs

Heberle, Doug

From: Springer, Tom
Sent: Wednesday, June 04, 2008 4:09 PM
To: Heberle, Doug
Subject: FW: KY 152 to US 127 Item No. 07-8344.00

Tom H. Springer, AICP, CEP

Director

Planning Department

Qk4

815 West Market Street, Suite 300, Louisville, KY 40202

502.992.2891 - Fx. 502.992.3110

tspringer@qk4.com

From: Witt, Thomas (KYTC) [<mailto:Thomas.Witt@ky.gov>]
Sent: Wednesday, June 04, 2008 3:45 PM
To: Springer, Tom; Siria, Bruce; Zimmerman, Albert
Cc: Goodpaster, Stephen; Turner, Randy (KYTC-D07); Martin, David (KYTC)
Subject: FW: KY 152 to US 127 Item No. 07-8344.00

This is from the Kentucky Airport Zoning Commission in response to the agency coordination letter.

From: Ross, Steve (KYTC)
Sent: Tuesday, June 03, 2008 12:25 PM
To: Witt, Thomas (KYTC); Martin, David (KYTC)
Subject: FW: KY 152 to US 127 Item No. 07-8344.00

From: Greer, Daryl (KYTC)
Sent: Monday, June 02, 2008 5:23 PM
To: Ross, Steve (KYTC)
Subject: FW: KY 152 to US 127 Item No. 07-8344.00

From: Houlihan, John (KYTC)
Sent: Mon 6/2/2008 2:35 PM
To: Greer, Daryl (KYTC)
Subject: KY 152 to US 127 Item No. 07-8344.00

Mr. Greer,

I have review the proposed project and found that it will have no negative impact to air navigation. However if any of the construction equipment (example cranes) exceed 200 feet above ground level, this equipment will require a permit from this office. If you have any questions, let me know.

6/4/2008

Thank you.

Kentucky Airport Zoning Commission
John Houlihan, Administrator
90 Airport Road, Building 400
Frankfort, KY 40601
Desk 502.564.0310
Cell 502.330.3955

<http://transportation.ky.gov/aviation/kyzoning.htm>

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MEMORANDUM**PA-001-2008 for P-019-2007**

TO: Thomas Witt,
Division of Planning

FROM: William Broyles, PE
Geotechnical Engineering
Branch Manager
Division of Structural Design

BY: Michael Blevins, PG *MB*
Geotechnical Branch

DATE: June 24, 2008

SUBJECT: Mercer County
Planning Study
Harrodsburg Northwest Bypass
KY 152 to US127

The Branch has completed a review of the proposed alternates and offers the following comments.

ALTERNTE E:

Alternate E offers the most suitable location from a Geotechnical perspective. The bedrock that the roadway would be founded on is of better quality than the majority of the material encountered in alternates F, H and J. The majority of the bedrock to be encountered in alternate E would be Members of the Lexington Limestone and should be suitable for most roadway applications. Some cut slopes may be in the Clays Ferry Formation which is composed of interbedded limestone and shale and will likely require flatter than normal cut slopes and additional Right of Way due to the poor engineering properties of the shale. The Geologic Quadrangle Map indicates an abandon quarry that should be avoided and is shown on the attached Geologic Quadrangle Map.

ALTERNATES F, H and J

These alternates, as stated in the above paragraph, will encounter the Clays Ferry Formation at various locations and lengths. The Formation is comprised of interbedded limestone and shale and will likely require flatter than normal cut slopes and additional Right of Way due to the poor engineering properties of the shale. Fill slopes constructed from this Formation may require flatter than normal slopes as well.

Alternate H may encounter a Fault along KY 390 and should be avoided if possible to due to constructability issues associated with cut slopes.

Memorandum
Thomas Witt
June 24, 2008
Page-2-

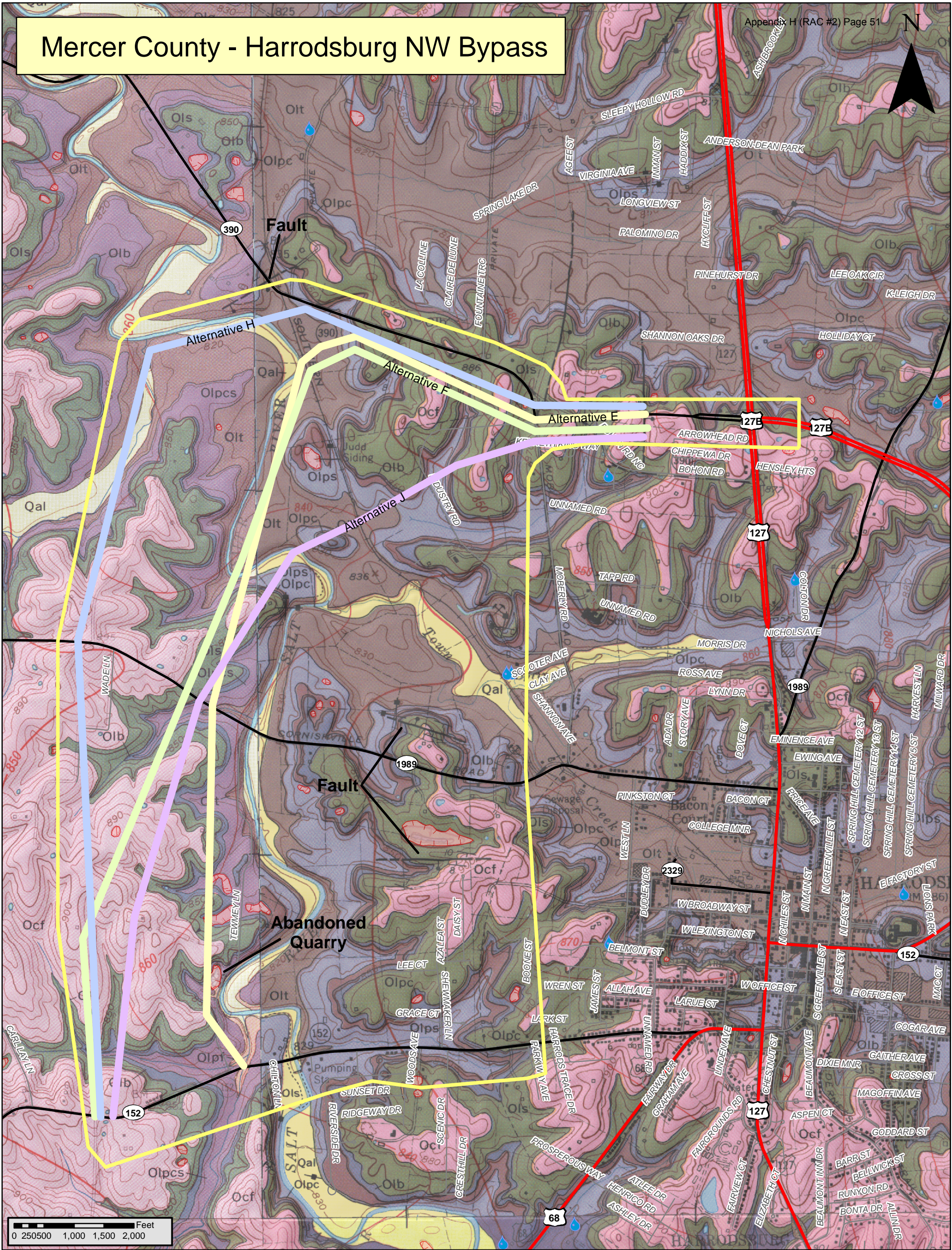
IMPROVEMENT OPTIONS

No issues are anticipated at this time for any alternates associated with Improvement Options.

If there are any questions, please advise.

Mercer County - Harrodsburg NW Bypass

N



Legend

Lexington Limestone Members

- Ols** Sulphur Well Member
- Olb** Brannon Member
- Olt** Tanglewood Member
- Olpc** Cornishville Bed of the Perryville Limestone Member

- Study Area**
- Fault Line**
- Ocf** Clays Ferry Formation
- Qal** Alluvium
- QTf** High-level fluvial deposits

- Springs**
- US Highways**
- State Roads**
- Local Roads**
- Sinkholes**



UNIVERSITY OF KENTUCKY

Appendix H (RAC #2) Page 53

JUN 30 2008

Kentucky Geological Survey

Research

228 Mining & Mineral Resources Bldg.

Lexington, KY 40506-0107

Phone: (859) 257-5500

Fax: (859) 257-1147

www.uky.edu/kgs

June 27, 2008

Daryl J. Greer, P.E.
Director, Division of Planning
Kentucky Transportation Cabinet
200 Mero Street
5th Floor
Frankfort, KY 40622

Dear Mr. Greer:

This letter is to summarize any geologic concerns for the planning study:

Mercer County
Harrodsburg Northwest Bypass
Item No. 07-8344.00

The following comments reflect the review of maps, online searches, and documents available in the files and on the Web site of the Kentucky Geological Survey. No on-site investigation (except for the section on fracture orientations) of the planning study area was conducted.

Physiographic Region

This planning study area is in the Inner Bluegrass physiographic region, which is underlain by bedrock consisting of limestone, interbedded limestone and shale, and unconsolidated material consisting of silt, clay, sand, and gravel.

7.5-Minute U.S. Geological Survey Topographic and Geologic Quadrangle Maps

The planning study area is located in the Harrodsburg and Cornishville quadrangles.

Land-Use Planning Map

For a good geologic (with physical parameters) overview of the area, refer to the county land-use planning map at www.uky.edu/KGS.

On the home page, click on GIS and Maps.

On this page, click on County Land-Use Planning Maps.

On this page, click on the county of interest on the index map or select the desired county from the pull-down menu. A viewable and downloadable PDF of the land-use county map will be displayed.



Karst Potential

The planning study area would encounter karst features such as sinkholes and caves. Sinkholes are more pronounced in the Cornishville and Salvisa Beds of the Perryville Limestone Member. They are as identified on the maps you provided.

Landslide Potential

The planning study area would encounter shaly units in the Clays Ferry Formation that are highly susceptible to slumping when they become wet.

Unconsolidated Sediments

The planning study area would encounter unconsolidated sediments in drainage areas.

Monitoring and Water Wells and Springs

The planning study area should not encounter any monitoring or water wells or springs.

Oil and Gas Wells

The planning study area should not encounter any oil and gas wells.

Resource Conflicts

The planning study area should not encounter any resource conflicts such as prior ownership of property for quarrying or mining.

Materials Suitability

The planning study area would encounter rock units that would be suitable for use as construction stone.

Fault Potential

The planning study area would encounter faulted areas. They are as identified on the maps you provided.

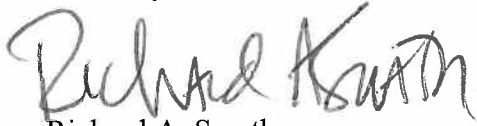
Fracture Orientations

Field reconnaissance of the proposal area was conducted on June 19, 2008, by Steve Martin. The joint orientations are plotted as Rose diagrams and are included on the attached map. There are three dominant joint sets in this area that trend northeast, east-west, and northwest. Bedding and joint orientations from the original geologic mapping of the area are also included on the attached geologic map. For more information, contact Steve Martin, 859.257.5500 ext. 179 or smartin401@uky.edu.

Earthquake Ground Motions

This planning area has probable peak ground acceleration (PGA) due to earthquake ground motion of 0.09g. There would be a low potential for liquefaction or slope failure in the unconsolidated sediments at or near streams caused by earthquake bedrock ground motion.

Sincerely,

A handwritten signature in dark ink, appearing to read "Richard A. Smath". The signature is fluid and cursive, with the first name "Richard" being more prominent than the last name "Smath".

Richard A. Smath
Geologist



Geologic map of study area showing fracture orientations. Rose diagrams show the location, frequency, and orientation of joint measurements from field reconnaissance. The orientations of bedding and joints from the published geologic map of the area are symbolized in red. Fault locations are symbolized with a black line with "U" and "D" denoting the up thrown and down thrown sides of the fault. The location of quarries is denoted with black, crossed hammers. Map unit abbreviations include Ocf (Clays Ferry Formation), Olb (Brannon Member of the Lexington Limestone), Olu (upper members of the Lexington Limestone), Olt1 (Tanglewood Member of the Lexington Limestone), and Qal (alluvium).



RECEIVED

JUL 14 2008

**EDUCATION CABINET
DEPARTMENT OF EDUCATION**

Steven L. Beshear
Governor

Capital Plaza Tower
500 Mero Street
Frankfort, Kentucky 40601
Phone (502) 564-4770
www.education.ky.gov

Jon E. Draud, Ed.D.
Commissioner of Education

July 10, 2008

Mr. Daryl J. Greer, P.E., Director
Division of Planning
Kentucky Transportation Cabinet
200 Mero Street, 5th Floor
Frankfort, KY 40601

RE: Mercer County Harrodsburg Northwest Bypass Planning Study

Dear Mr. Greer:

I am in receipt of your May 29, 2008 letter regarding the Harrodsburg Northwest Bypass, Item No. 07-8344.00 and advise you that this project will not affect the Kentucky Department of Education's responsibilities and programs. The Division of Facilities Management office contacted the Mercer County School District's office and in their opinion, there are no negative environmental impacts from this project.

Sincerely,

Mark W. Ryles, Director
Division of Facilities Management

MWR/efh

c: Bruce Johnson, Superintendent, Mercer County Schools
Secretary Helen Mountjoy, Education Cabinet
Mark W. Ryles

Hardy, Eileen - Facilities Management

From: Sims, Jessica - Mercer
Sent: Wednesday, July 09, 2008 10:28 AM
To: Hardy, Eileen - Facilities Management
Subject: Harrodsburg NW Bypass

Eileen,

I'm very sorry for the late response. Things have been very busy. I'm sure it has been the same in your office. This is in response to the planning study mailed to our district on May 29th. We are in agreement with the plans and do not see anything that will have a negative impact on our schools.

Please let me know if there is anything else you need.

Jessica Sims

Personnel Director
Superintendent's Secretary
Mercer County Board of Education
371 East Lexington Street
Harrodsburg, KY 40330
Phone: 859-734-8400, ext. 2037



Appendix H (RAC #2) Page 61
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JUN 19 2008

STEVEN L. BESHEAR
GOVERNOR

**TOURISM, ARTS AND HERITAGE CABINET
DEPARTMENT OF PARKS**

11th Floor, Capital Plaza Tower
500 Mero Street
Frankfort, Kentucky 40601-1974
Phone 502-564-2172
Fax 502-564-9015
www.parks.ky.gov

MARCHETA SPARROW
SECRETARY

GERRY VAN DER MEER
COMMISSIONER

June 18, 2008

Daryl J. Greer, P.E.
Director, Division of Planning
KY Transportation Cabinet
200 Mero Street 5th Floor
Frankfort, KY 40622

Dear Mr. Greer:

In reviewing the Planning Study for the Mercer County Harrodsburg Northwest Bypass, our staff have determined that the proposed highway project will not adversely impact any of the Parks under our administration. We thank you for the opportunity to express our thoughts regarding this matter.

Sincerely,

Gerry van der Meer
Commissioner
Kentucky Department of Parks



RECEIVED

JUN 25 2008

JUSTICE AND PUBLIC SAFETY CABINET

Steven L. Beshear
Governor

Kentucky Vehicle Enforcement
Frankfort, Kentucky 40601



J. Michael Brown
Secretary

David G. Leddy
Deputy Commissioner

June 24, 2008

Mr. Daryl J. Greer, P.E.
Division of Planning
Transportation Cabinet
200 Mero Street
Frankfort, KY 40622

Dear Mr. Greer:

We are in receipt of your letter requesting any input that Kentucky Vehicle Enforcement might have in regards to a planning study in Mercer County, item no. 07-8344.00, on KY 152 to US 127, Harrodsburg Northwest Bypass.

As per our letter dated January 31, 2008, to you, we do not have any changes to our findings. We recommend that the proposed roadway be deemed a designated route considering it will take away much of the commercial traffic from the roadways inside the city.

If you need any further information, please do not hesitate to let us know.

Sincerely,

A handwritten signature in cursive script that reads "David G. Leddy".

David G. Leddy
Deputy Commissioner
Department of Kentucky Vehicle Enforcement

RECEIVED

JUL 03 2008



STEVE BESHEAR
GOVERNOR

COMMONWEALTH OF KENTUCKY
KENTUCKY STATE POLICE
919 VERSAILLES ROAD
FRANKFORT, KY 40601

RODNEY BREWER
COMMISSIONER

**Kentucky State Police
Post 7
699 Eastern By-Pass
Richmond, Kentucky 40475
Phone 859-623-2404**

July 2, 2008

Mr. Daryl J. Greer, P.E.
Director
Division of Planning
Kentucky Transportation Cabinet
200 Metro Street 5th Floor
Frankfort, KY 40622

Dear Mr. Greer:

Subject: Planning Study
Mercer County
Harrodsburg Northwest Bypass
KY 152 to US 127
Item No. 07-8344.00

I am responding to your letter requesting comments regarding the proposed improvement alternatives. After reviewing the information I decided to address each bullet point individually.

- **Project goals or purpose and need for the project**

It seems that the project would provide enhanced emergency response times due to system connectivity and reduced congestion. However, consider the road will be heavily congested during early morning and afternoon times in correspondence with the school times as it is currently congested through the 127 corridor, Moberly Road and Industry Road.

- **Significant issues or concerns in the project that may need to be addressed so that the project can be adequately scoped**

The significant concern for the Kentucky State Police with this project is highway safety. The need for proper signage, signals and lighting should be stressed from the beginning stages. Please keep in mind that the schools will have a large amount of inexperienced drivers, the factories will attract a large amount of commercial vehicles, as well as a large amount of people unfamiliar with the area bypassing Harrodsburg. To illustrate the significance of the above, the current bypass has insufficient lighting leading to consistent complaints of vehicles driving in the wrong direction of a four lane highway. In addition to this, the Kentucky State Police experience a large amount of vehicle collisions on the south end of the bypass. A large amount of drivers in these wrecks fall into the categories of inexperienced drivers, out-of-town drivers and commercial vehicles. It is the opinion of the Kentucky State Police that highway safety can never be stressed enough.

- **Any conservation or development plans your agency or organization has ongoing or is aware of in the project area.**

I am not aware of any at this time.

- **Locations of any known areas, issues or resources within the project area that should be considered when developing alternatives so that impacts can be avoided, minimized or mitigated early in the process.**

As you are already aware, a new high school is under construction on Moberly Road that will significantly increase the traffic population on a road that is currently inadequate to handle the volume of peak traffic.

- **Any mitigation strategies that should be considered in the development of the project.**

I am not aware of any involving the Kentucky State Police at this time.

I hope this has benefited you and will help move the scoping process forward.

Thank you for considering the Kentucky State Police in the process.

Sincerely,


Captain Eddie Johnson

APPENDIX I

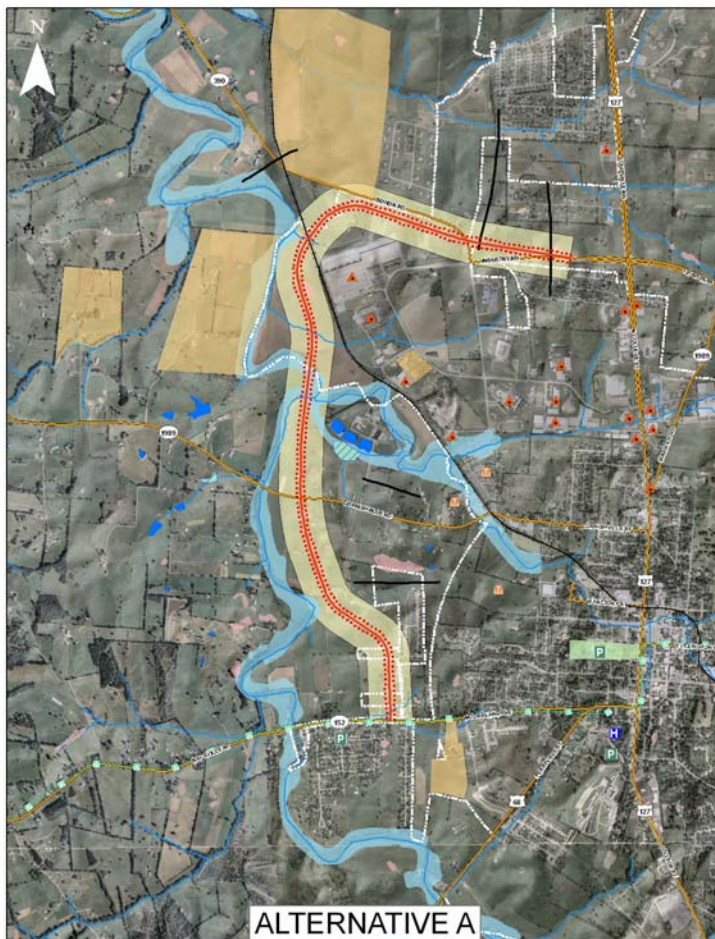
INITIAL NORTHWEST BYPASS ALTERNATIVES

Alternative A

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0
Prime Farmland Acres Potentially Impacted:	25
State Importance Farmland Acres Potentially Impacted:	35
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	3.5
Number of Streams Potentially Crossed:	6
Potential Length of Stream Crossings (Approximate):	1,300 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	3
Estimated Cost:	\$37.6 million

Satisfaction of Project Goals:

- Separate School and Industry Traffic: Good
- Emergency Response Time to Haggin Hospital: Good
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Poor
- Compatible with Future Possible Southwest Extension: Fair

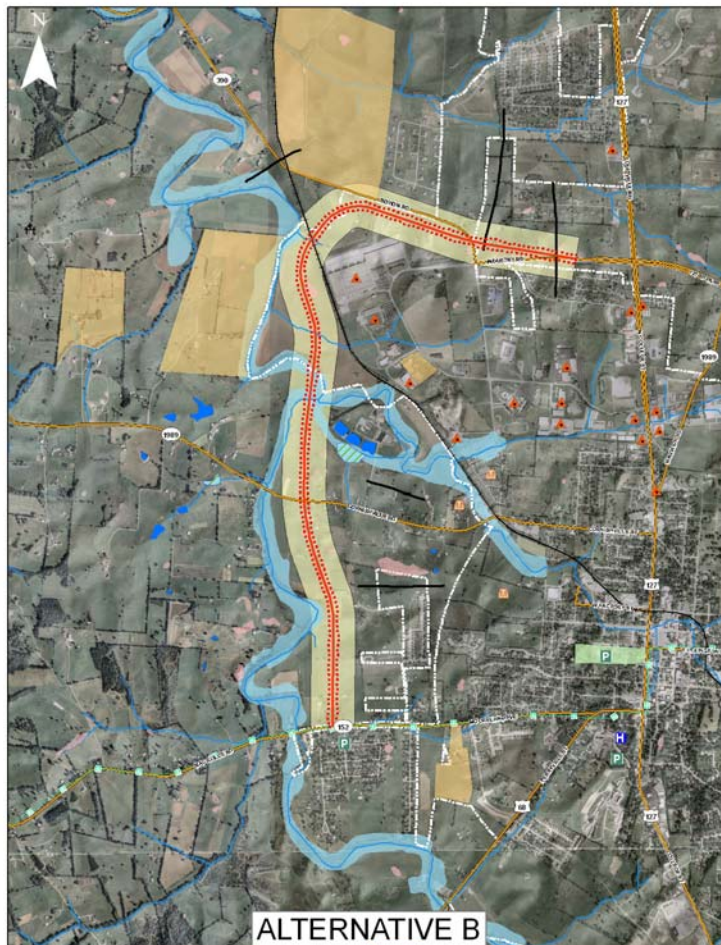


Alternative B

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0.0
Prime Farmland Acres Potentially Impacted:	43
State Importance Farmland Acres Potentially Impacted:	42
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	3.5
Number of Streams Potentially Crossed:	5
Potential Length of Stream Crossings (Approximate):	1,100 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	2
Estimated Cost:	\$36.5 million

Satisfaction of Project Goals:

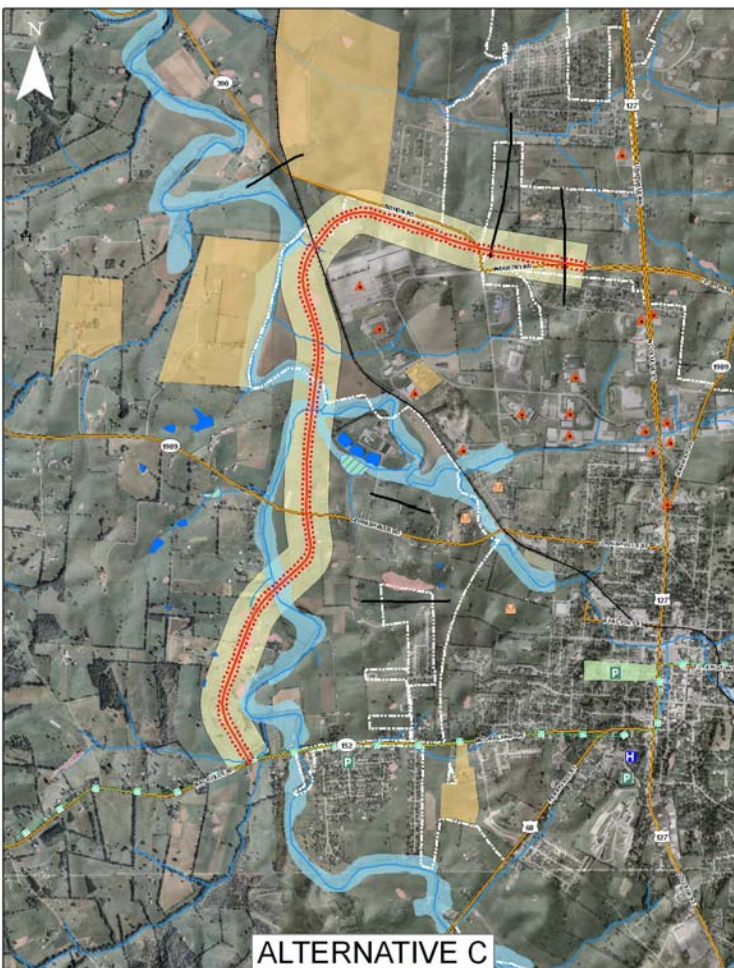
- Separate School and Industry Traffic: Good
- Emergency Response Time to Haggin Hospital: Fair
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Poor
- Compatible with Future Possible Southwest Extension: Poor



Alternative C

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0
Prime Farmland Acres Potentially Impacted:	37
State Importance Farmland Acres Potentially Impacted:	42
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	5.7
Number of Streams Potentially Crossed:	6
Potential Length of Stream Crossings (Approximate):	1,300 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	4
Estimated Cost:	\$40.8 million

Satisfaction of Project Goals:	
• Separate School and Industry Traffic:	Good
• Emergency Response Time to Haggin Hospital:	Poor
• Grade Separated RR Crossing:	Excellent
• Reduce Congestion on Existing Area Roadways:	Fair to Poor
• Compatible with Future Possible Southwest Extension:	Excellent

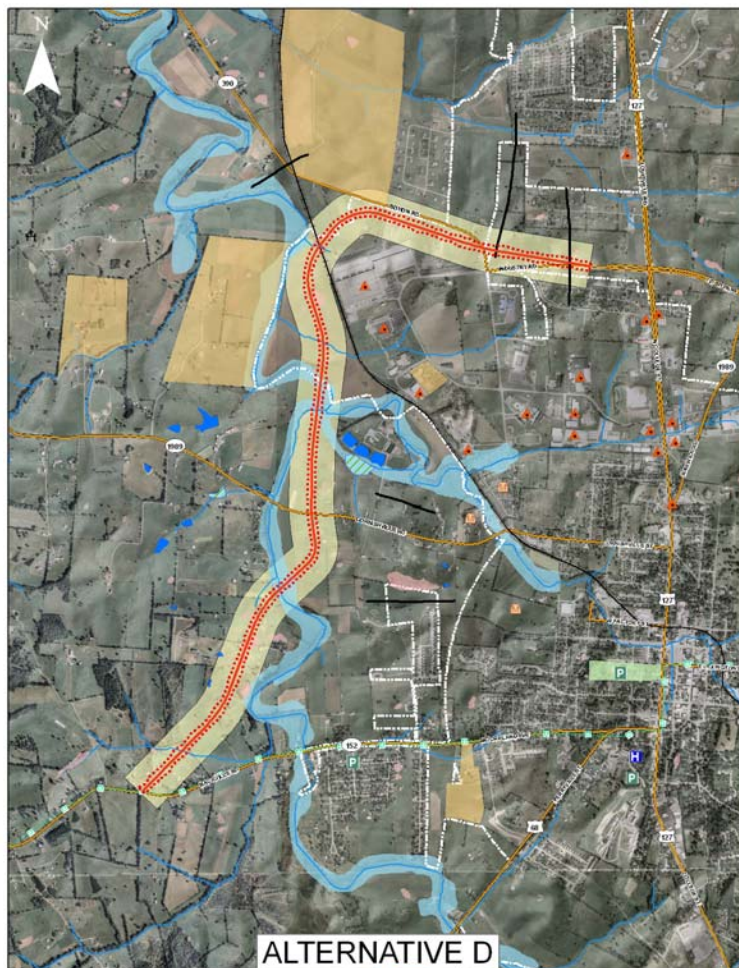


Alternative D

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0
Prime Farmland Acres Potentially Impacted:	37
State Importance Farmland Acres Potentially Impacted:	45
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	5.7
Number of Streams Potentially Crossed:	6
Potential Length of Stream Crossings (Approximate):	1,400 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	4
Estimated Cost:	\$46.0 million

Satisfaction of Project Goals:

- Separate School and Industry Traffic: Good
- Emergency Response Time to Haggin Hospital: Poor
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Poor
- Compatible with Future Possible Southwest Extension: Excellent

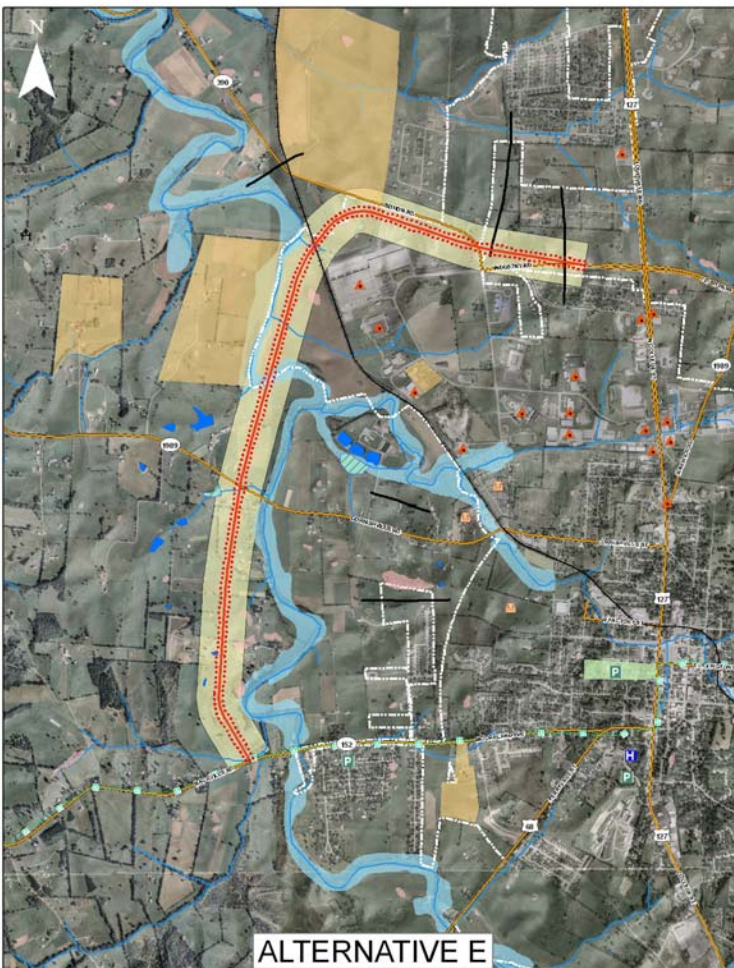


Alternative E

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0
Prime Farmland Acres Potentially Impacted:	16
State Importance Farmland Acres Potentially Impacted:	36
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0.02
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	1.8
Number of Streams Potentially Crossed:	5
Potential Length of Stream Crossings (Approximate):	1,900 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	0
Estimated Cost:	\$30.0 million

Satisfaction of Project Goals:

- Separate School and Industry Traffic: Good
- Emergency Response Time to Haggin Hospital: Poor
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Poor
- Compatible with Future Possible Southwest Extension: Excellent

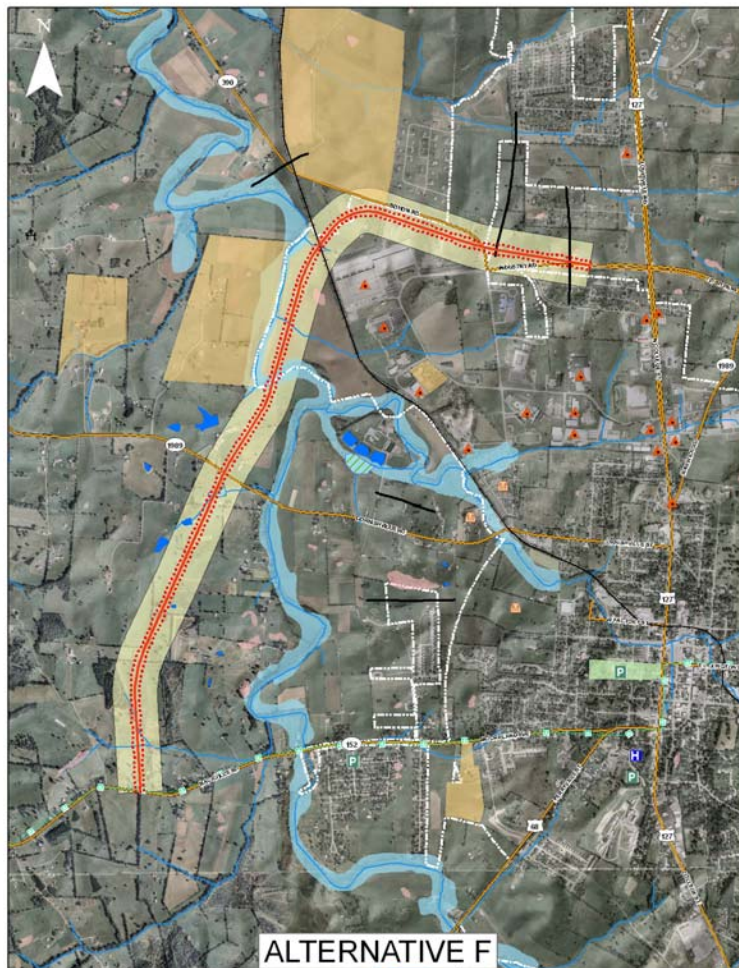


Alternative F

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0
Prime Farmland Acres Potentially Impacted:	23
State Importance Farmland Acres Potentially Impacted:	35
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0.4
Acres of Floodplains Potentially Impacted:	1.7
Number of Streams Potentially Crossed:	6
Potential Length of Stream Crossings (Approximate):	2,200 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	1
Estimated Cost:	\$30.9 million

Satisfaction of Project Goals:

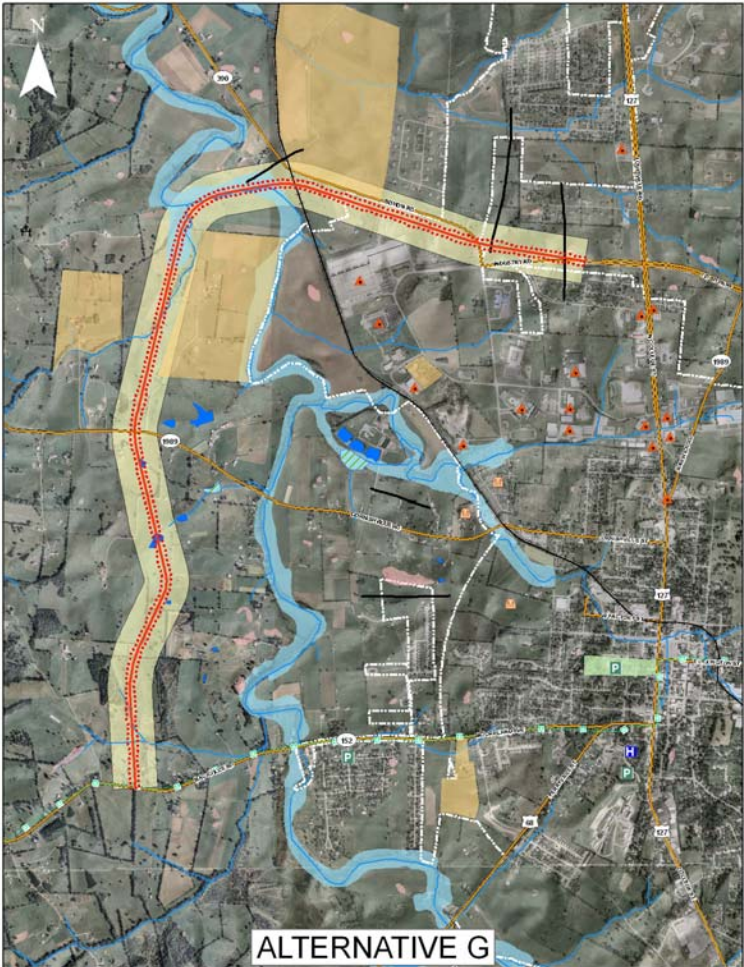
- Separate School and Industry Traffic: Good
- Emergency Response Time to Haggin Hospital: Poor
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Poor
- Compatible with Future Possible Southwest Extension: Excellent



Alternative G

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0
Prime Farmland Acres Potentially Impacted:	22
State Importance Farmland Acres Potentially Impacted:	40
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	1.1
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	11.5
Number of Streams Potentially Crossed:	6
Potential Length of Stream Crossings (Approximate):	1,800 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	1
Estimated Cost:	\$37.3 million

- Satisfaction of Project Goals:
- Separate School and Industry Traffic: Excellent
 - Emergency Response Time to Haggin Hospital: Poor
 - Grade Separated RR Crossing: Excellent
 - Reduce Congestion on Existing Area Roadways: Poor
 - Compatible with Future Possible Southwest Extension: Excellent

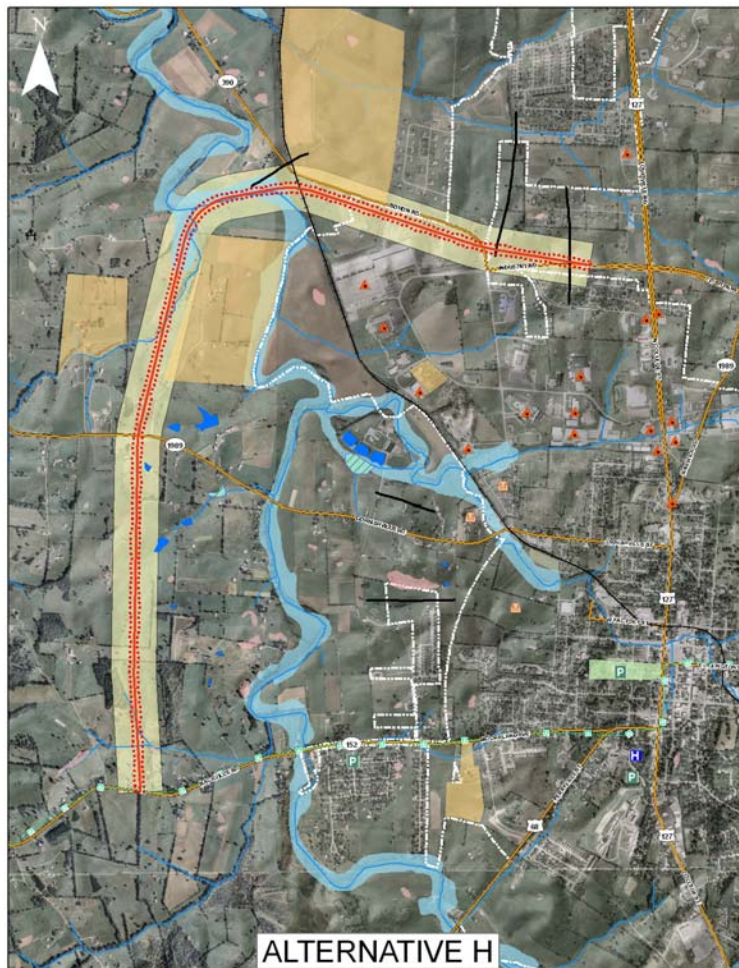


Alternative H

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0
Prime Farmland Acres Potentially Impacted:	30
State Importance Farmland Acres Potentially Impacted:	60
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	12.4
Number of Streams Potentially Crossed:	6
Potential Length of Stream Crossings (Approximate):	3,900 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	0
Estimated Cost:	\$37.0 million

Satisfaction of Project Goals:

- Separate School and Industry Traffic: Excellent
- Emergency Response Time to Haggin Hospital: Poor
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Poor
- Compatible with Future Possible Southwest Extension: Excellent

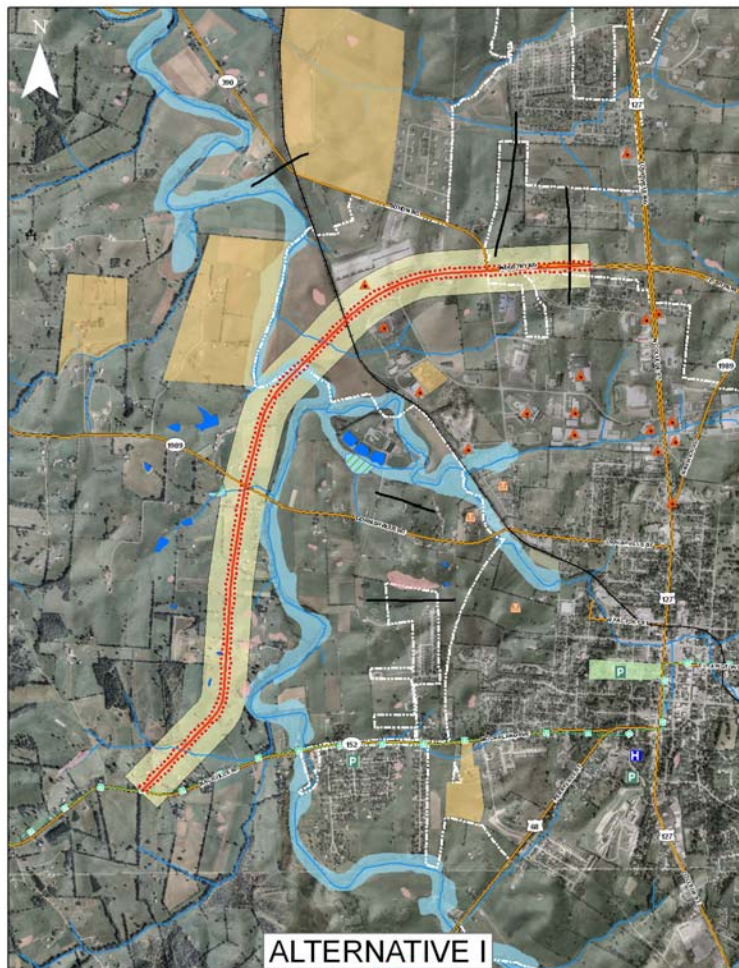


Alternative I

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	1.3
Prime Farmland Acres Potentially Impacted:	9
State Importance Farmland Acres Potentially Impacted:	35
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0.1
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	2.8
Number of Streams Potentially Crossed:	4
Potential Length of Stream Crossings (Approximate):	1,000 feet
Number of Geologic Faults Potentially Crossed:	1
Number of Sinkholes Potentially Impacted:	0
Estimated Cost:	\$29.1 million

Satisfaction of Project Goals:

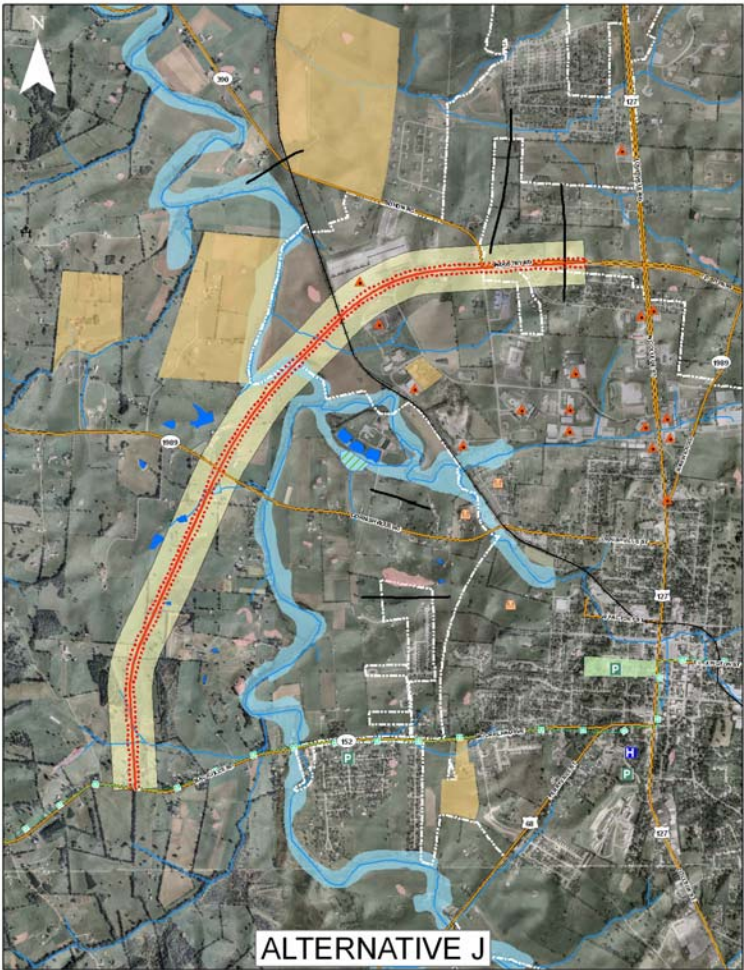
- Separate School and Industry Traffic: Good
- Emergency Response Time to Haggin Hospital: Poor
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Poor
- Compatible with Future Possible Southwest Extension: Excellent



Alternative J

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	1.3
Prime Farmland Acres Potentially Impacted:	17
State Importance Farmland Acres Potentially Impacted:	32
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0.4
Acres of Floodplains Potentially Impacted:	2.7
Number of Streams Potentially Crossed:	5
Potential Length of Stream Crossings (Approximate):	1,800 feet
Number of Geologic Faults Potentially Crossed:	1
Number of Sinkholes Potentially Impacted:	1
Estimated Cost:	\$29.3 million

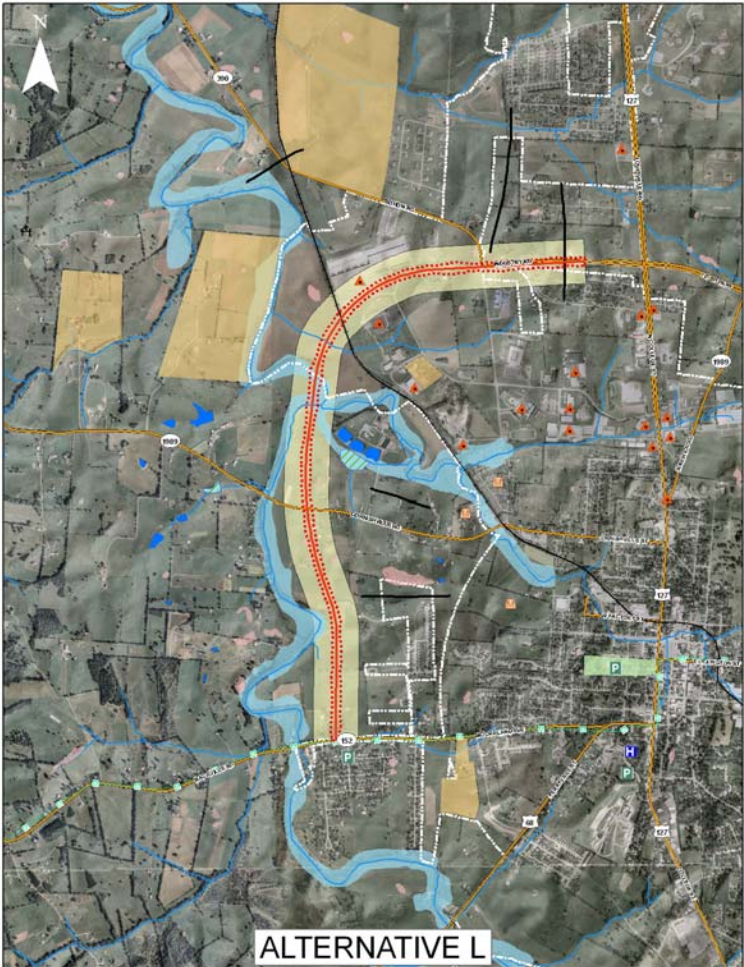
- Satisfaction of Project Goals:
- Separate School and Industry Traffic: Good
 - Emergency Response Time to Haggin Hospital: Poor
 - Grade Separated RR Crossing: Excellent
 - Reduce Congestion on Existing Area Roadways: Fair to Poor
 - Compatible with Future Possible Southwest Extension: Excellent



Alternative L

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0.9
Prime Farmland Acres Potentially Impacted:	37
State Importance Farmland Acres Potentially Impacted:	37
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	3.8
Number of Streams Potentially Crossed:	4
Potential Length of Stream Crossings (Approximate):	1,000 feet
Number of Geologic Faults Potentially Crossed:	1
Number of Sinkholes Potentially Impacted:	1
Estimated Cost:	\$37.4 million

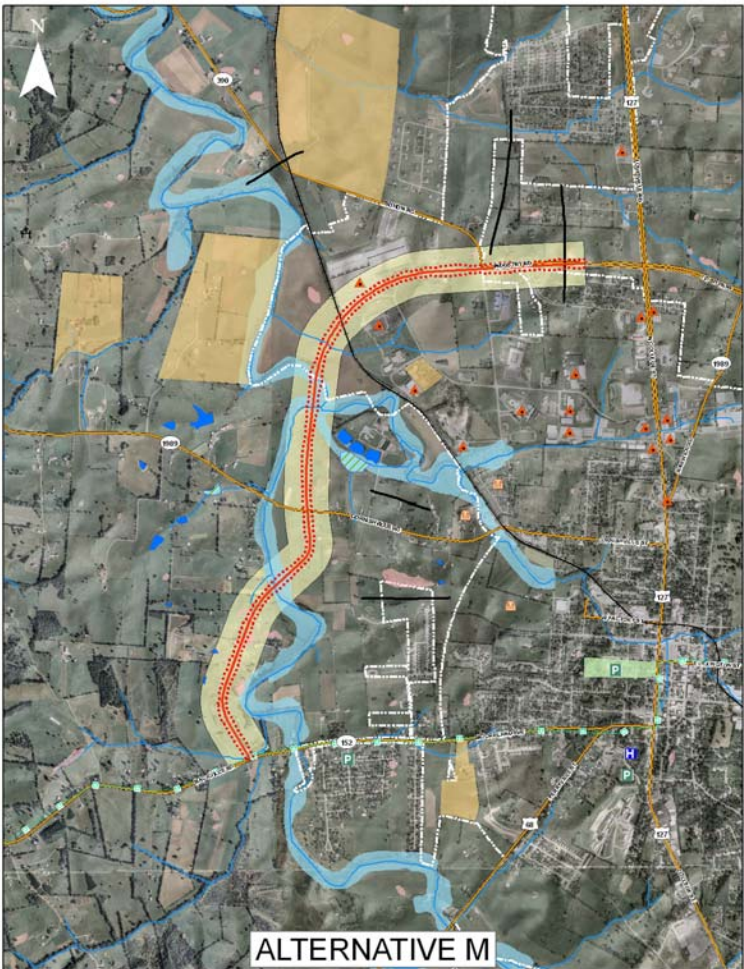
- Satisfaction of Project Goals:
- Separate School and Industry Traffic: Good
 - Emergency Response Time to Haggin Hospital: Fair
 - Grade Separated RR Crossing: Excellent
 - Reduce Congestion on Existing Area Roadways: Fair to Poor
 - Compatible with Future Possible Southwest Extension: Poor



Alternative M

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0.9
Prime Farmland Acres Potentially Impacted:	31
State Importance Farmland Acres Potentially Impacted:	37
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	6.8
Number of Streams Potentially Crossed:	5
Potential Length of Stream Crossings (Approximate):	1300 feet
Number of Geologic Faults Potentially Crossed:	1
Number of Sinkholes Potentially Impacted:	3
Estimated Cost:	\$40.1 million

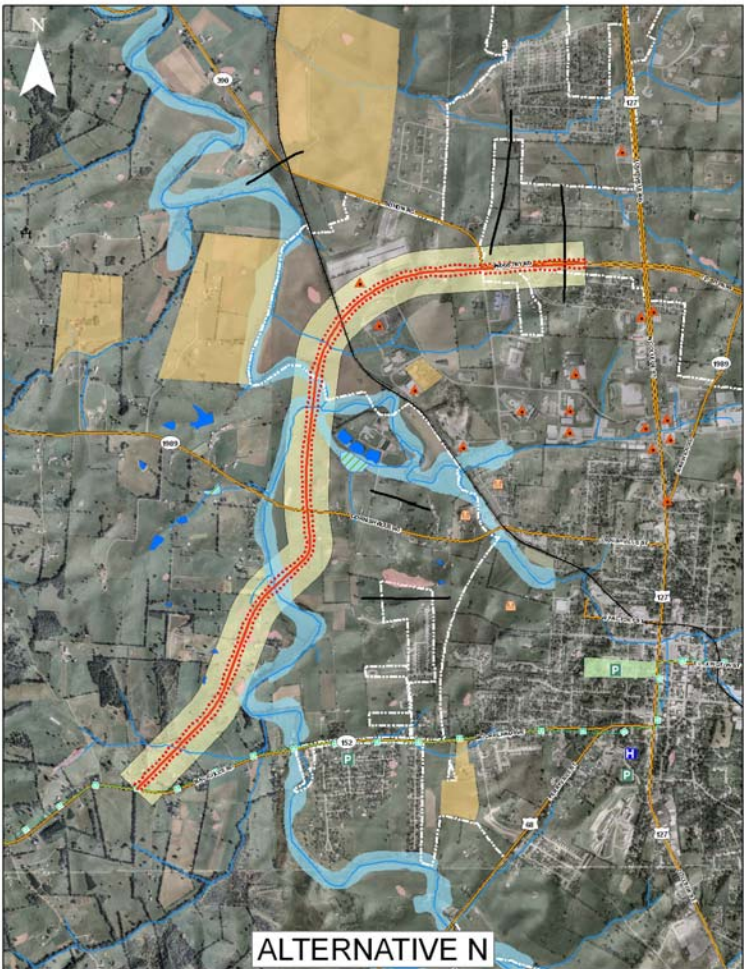
- Satisfaction of Project Goals:
- Separate School and Industry Traffic: Good
 - Emergency Response Time to Haggin Hospital: Poor
 - Grade Separated RR Crossing: Excellent
 - Reduce Congestion on Existing Area Roadways: Fair to Poor
 - Compatible with Future Possible Southwest Extension: Excellent



Alternative N

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	0.9
Prime Farmland Acres Potentially Impacted:	31
State Importance Farmland Acres Potentially Impacted:	40
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	6.8
Number of Streams Potentially Crossed:	5
Potential Length of Stream Crossings (Approximate):	1,400 feet
Number of Geologic Faults Potentially Crossed:	1
Number of Sinkholes Potentially Impacted:	3
Estimated Cost:	\$42.4 million

- Satisfaction of Project Goals:
- Separate School and Industry Traffic: Good
 - Emergency Response Time to Haggin Hospital: Poor
 - Grade Separated RR Crossing: Excellent
 - Reduce Congestion on Existing Area Roadways: Fair to Poor
 - Compatible with Future Possible Southwest Extension: Excellent

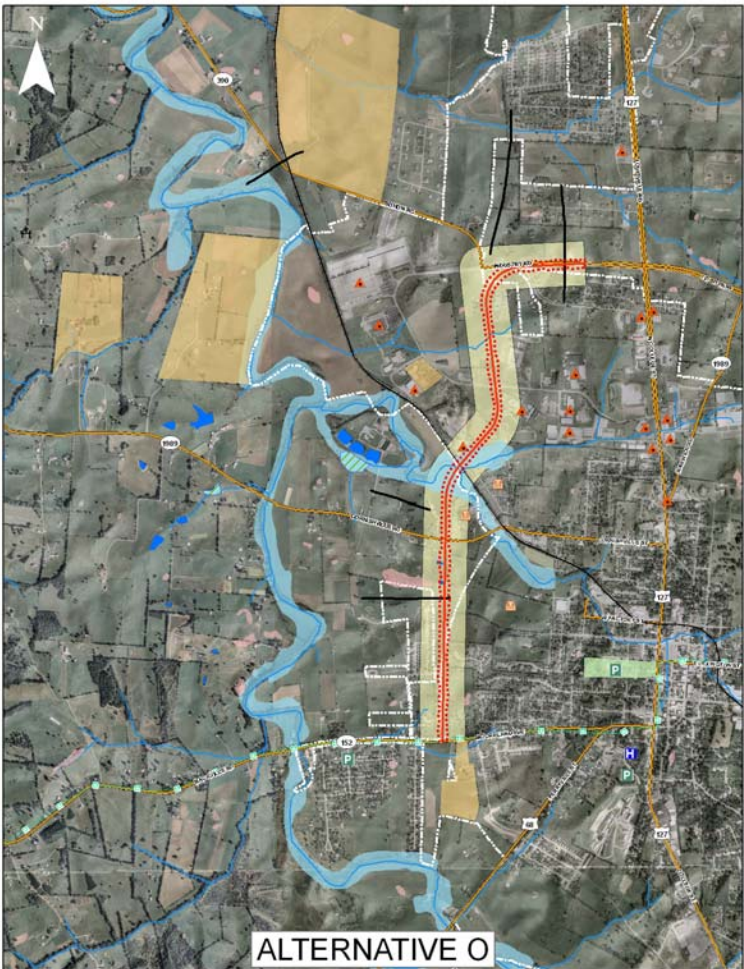


Alternative O

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	6.0
Prime Farmland Acres Potentially Impacted:	6
State Importance Farmland Acres Potentially Impacted:	30
Potential HAZMAT Impact:	Groundwater contamination (trichloroethylene-TCE)
Acres of Ponds Potentially Impacted:	0.3
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	5.9
Number of Streams Potentially Crossed:	3
Potential Length of Stream Crossings (Approximate):	500 feet
Number of Geologic Faults Potentially Crossed:	2
Number of Sinkholes Potentially Impacted:	0
Estimated Cost:	\$21.9 million

Satisfaction of Project Goals:

- Separate School and Industry Traffic: Poor
- Emergency Response Time to Haggin Hospital: Excellent
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Good
- Compatible with Future Possible Southwest Extension: Fair

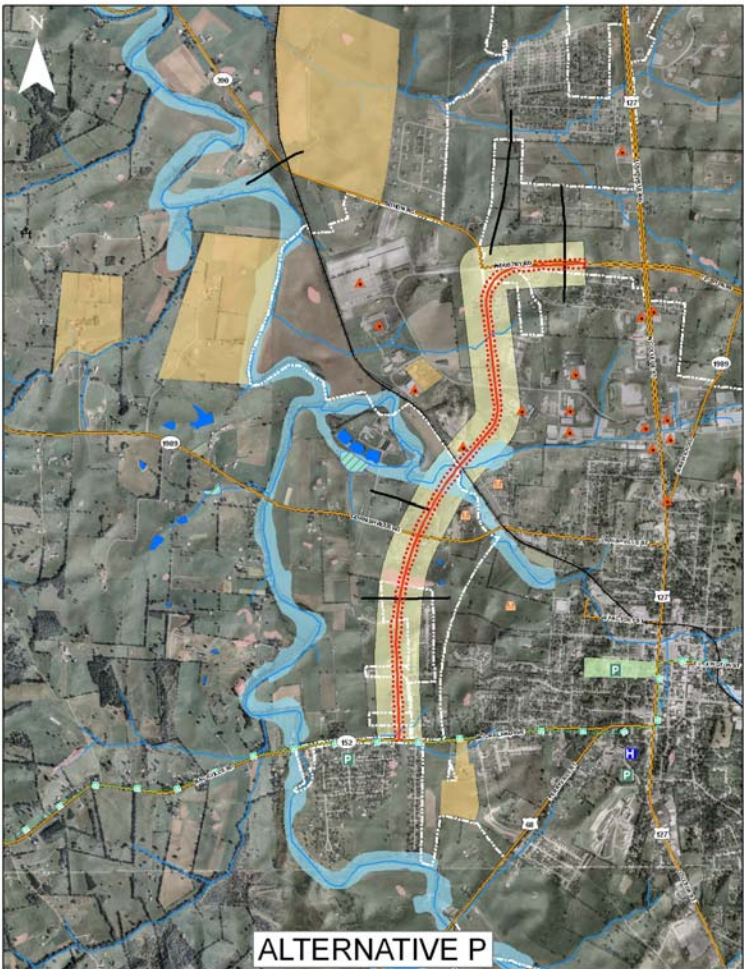


Alternative P

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	6.0
Prime Farmland Acres Potentially Impacted:	6
State Importance Farmland Acres Potentially Impacted:	31
Potential HAZMAT Impact:	Groundwater contamination (trichloroethylene-TCE)
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	6.1
Number of Streams Potentially Crossed:	5
Potential Length of Stream Crossings (Approximate):	900 feet
Number of Geologic Faults Potentially Crossed:	3
Number of Sinkholes Potentially Impacted:	2
Estimated Cost:	\$21.7 million

Satisfaction of Project Goals:

- Separate School and Industry Traffic: Poor
- Emergency Response Time to Haggin Hospital: Good
- Grade Separated RR Crossing: Excellent
- Reduce Congestion on Existing Area Roadways: Fair to Good
- Compatible with Future Possible Southwest Extension: Poor



Alternative Q

Parks Potentially Impacted:	0
Historic Sites Potentially Impacted:	0
Acres of School Property Potentially Disturbed:	7.8
Prime Farmland Acres Potentially Impacted:	12
State Importance Farmland Acres Potentially Impacted:	31
Potential HAZMAT Impact:	None
Acres of Ponds Potentially Impacted:	0
Acres of Wetlands Potentially Impacted:	0
Acres of Floodplains Potentially Impacted:	2.6
Number of Streams Potentially Crossed:	3
Potential Length of Stream Crossings (Approximate):	700 feet
Number of Geologic Faults Potentially Crossed:	1
Number of Sinkholes Potentially Impacted:	0
Estimated Cost:	\$22.8 million

- Satisfaction of Project Goals:
- Separate School and Industry Traffic: Poor
 - Emergency Response Time to Haggin Hospital: Excellent
 - Grade Separated RR Crossing: Excellent
 - Reduce Congestion on Existing Area Roadways: Fair to Good
 - Compatible with Future Possible Southwest Extension: Fair

