2011

Pre-Design Scoping Study

Data

Needs

Analysis

KY 841/Stonestreet Road Interchange

Mile Points:

BMP 2.7 to EMP 3.5

Item Number:

05-284.00

Prepared By:

Kentucky Transportation Cabinet

Department of Highways District 5

Division of Planning

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I. INTRODUCTION

A. Study Purpose

The purpose of the Data Needs Analysis (DNA) is to address the nine elements of Purpose and Need as defined by the National Environmental Policy Act (NEPA) in order to develop a draft Purpose and Need Statement for the project. This study will also provide a more defined project scope, possible alternatives, planning-level cost estimates for the alternatives, an identification of possible environmental impacts, and other information that will be beneficial in the Project Development phase of this project.

B. Location

The project is located within the area between beginning mile point (BMP) 2.7 and ending mile point (EMP) 3.5 on KY 841 in southwestern Jefferson County. Stonestreet Road is located underneath KY 841 and runs to the north and south of KY 841. The interchange is located approximately between BMP 2.2 and EMP 2.7 on Stonestreet Road. There are ramps located to the north and south of KY 841 that connect KY 841 and Stone Street Road. A map detailing the project area can be seen below in Figure 1. Maps of the project area, including topographic and orthographic can be found in Appendix A.

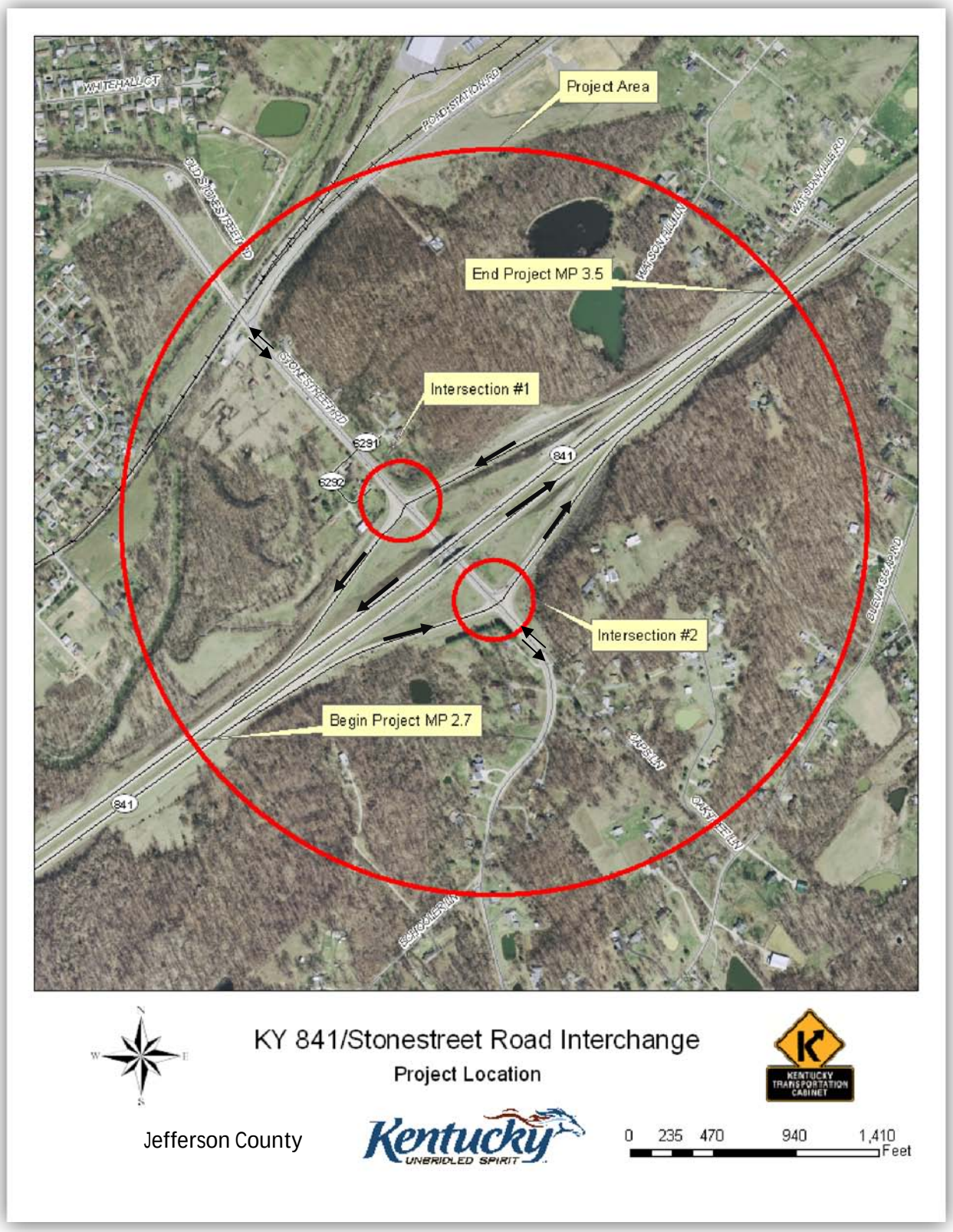


Figure 1: Project Area

II. PROJECT PURPOSE AND NEED

A. Legislation

The following is a description of the project as it is listed in the Six Year Highway Plan:

- Item #05-284.00

Phase	Fund	Year	Estimate
C:	STP	2010	360,000
		Total:	360,000

IMPROVE KY 841/STONESTREET ROAD INTERCHANGE AS RECOMMENDED BY KIPDA'S INTERCHANGE STUDY

Refer to Appendix B for the complete listing of the project in the Six Year Highway Plan. In addition, the project is listed in Kentuckiana Regional Planning and Development Agency's (KIPDA) Transportation Improvement Program (TIP). KIPDA is the local Metropolitan Planning Organization (MPO) for the area. The listing of the project in the TIP is contained in Appendix C.

B. Project Status

In 2005 the KIPDA Interchanges Study recommended that improvements be made to the KY 841/Stonestreet Road interchange. Furthermore, the project was added to the current long-range transportation plan in 2006 with an estimated completion date of 2012. This project is currently listed in 2010 Recommended Highway Plan and is listed as active on the Unscheduled Projects List (UPL). The Project Identification Form (PIF) for this project is located in Appendix D.

Other projects in the area that are currently on the Unscheduled Projects List (UPL) include:

- Widen KY 907 (Valley Station Road/3rd Street Road) from 2 to 5 lanes (5th lane will be a center turn lane) from US 31W (Dixie Highway) to KY 1865 (New Cut Road). To include accommodations for bicycle and pedestrian modes

C. System Linkage

The KY 841/Dixie Highway interchange is located approximately 3 miles to the west, and the KY 841/New Cut Road interchange is approximately 3 miles to the east of the KY 841/Stonestreet Road interchange (see Figure 2). The Stonestreet Road interchange provides an access point to the interstate system between the two other interchanges that are located in the area. The area to the north of KY 841 near the interchange contains Jewish Hospital Medical Center Southwest, Jefferson Community and Technical College

Southwest Campus, three schools, commercial businesses, and numerous residential areas. South of KY 841 is less developed and includes Jefferson Memorial Forestand some residences.

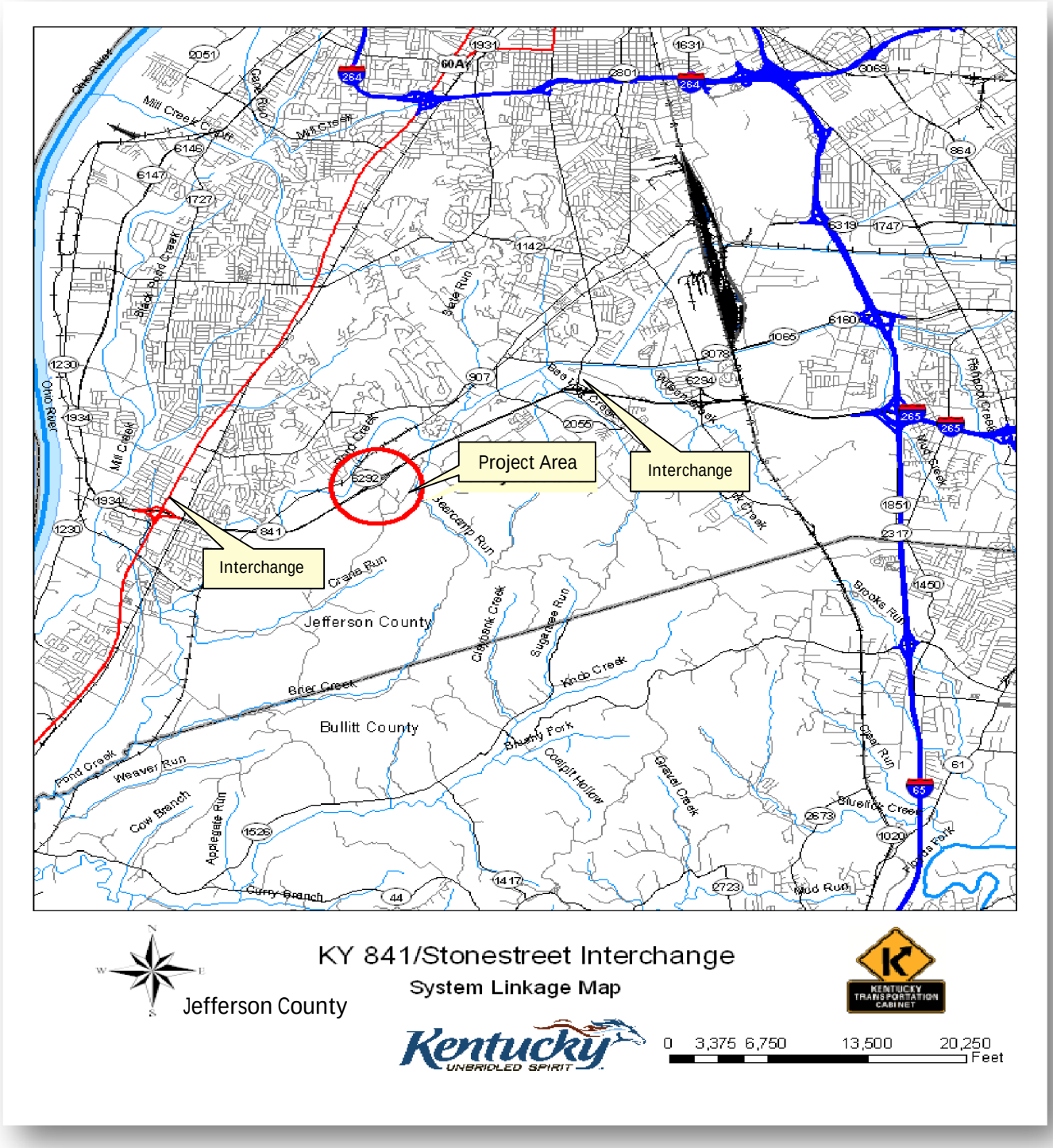


Figure 2: System Linkage

KY 841 in this section can be summarized by the following roadway classifications:

- Functional Classification – Urban Freeways and Expressways
- State System – State Primary
- Truck Weight Classification – AAA
- Is on the National Highway System
- Is on the National Truck Network
- Not a designated Bike Route

Stonestreet Road in this section can be summarized by the following roadway classifications:

- Functional Classification – Urban Minor Arterial Street

D. Modal Interrelationships

To the west of the interchange on KY 841 the traffic is composed of 0.6% single trucks and 5.5% combination trucks (tractor trailers). To the east of the interchange on KY 841 the traffic is composed of 0.6% single trucks and 5.2% combination trucks (tractor trailers). Truck percentage data is not available for Stonestreet Road since it is a county road. However, judging by the truck percentage on KY 841, the amount of trucks on Stonestreet Road is likely minimal. In addition, there is a railroad located approximately 0.3 miles north of the interchange. This railroad has an at-grade crossing on Stonestreet Road. Traffic can back up to the interchange and ramps when the railroad crossing is being used by a train. This appears to be an issue to the operation of the interchange since the railroad crossing is sometimes used by trains during peak vehicular travel times.

Furthermore, there is a sidewalk located directly to the north of the interchange. Due to the lack of development to the south of the interchange it is unlikely that any pedestrian facilities would need to run south past the interchange. Bicycle facilities could potentially be placed to the north or south of the interchange. However, currently no bicycle facilities exist. Furthermore, the closest public transportation runs on KY 907 (3rd Street Road) which is approximately a mile north of the interchange.

E. Social Demands and Economic Development

The majority of the land near the interchange that is flat has already been developed. The topography to the south of the interchange and in the vicinity of the interchange is hilly and should limit future development. In addition, Jefferson Memorial Forest is located to the south of the interchange. The majority of the traffic at the interchange is generated from the north where numerous residential areas, commercial businesses, three schools, a community and technical college, and a hospital medical center are located. This area is already developed, but future developments could occur in the vicinity.

F. Transportation Demand

Traffic count data is contained in Appendix E. The last actual traffic count for KY 841 to the west of the project was 32,000 vehicles in 2007. For east of the project the last actual traffic count was 47,100 vehicles also in 2007. Figure 3 contains traffic count data for KY 841 to the west and east of the project. As can be seen from the figure below traffic has continued to increase on KY 841 on both sections. The trend line suggests that traffic will continue to increase on this stretch of KY 841. In addition, it appears that there are more vehicles on KY 841 to the east of the project. This indicates that more vehicles are taking the Stonestreet Road exit from the east on KY 841 (westbound exit), and more vehicles are heading eastbound on KY 841 from Stonestreet Road.

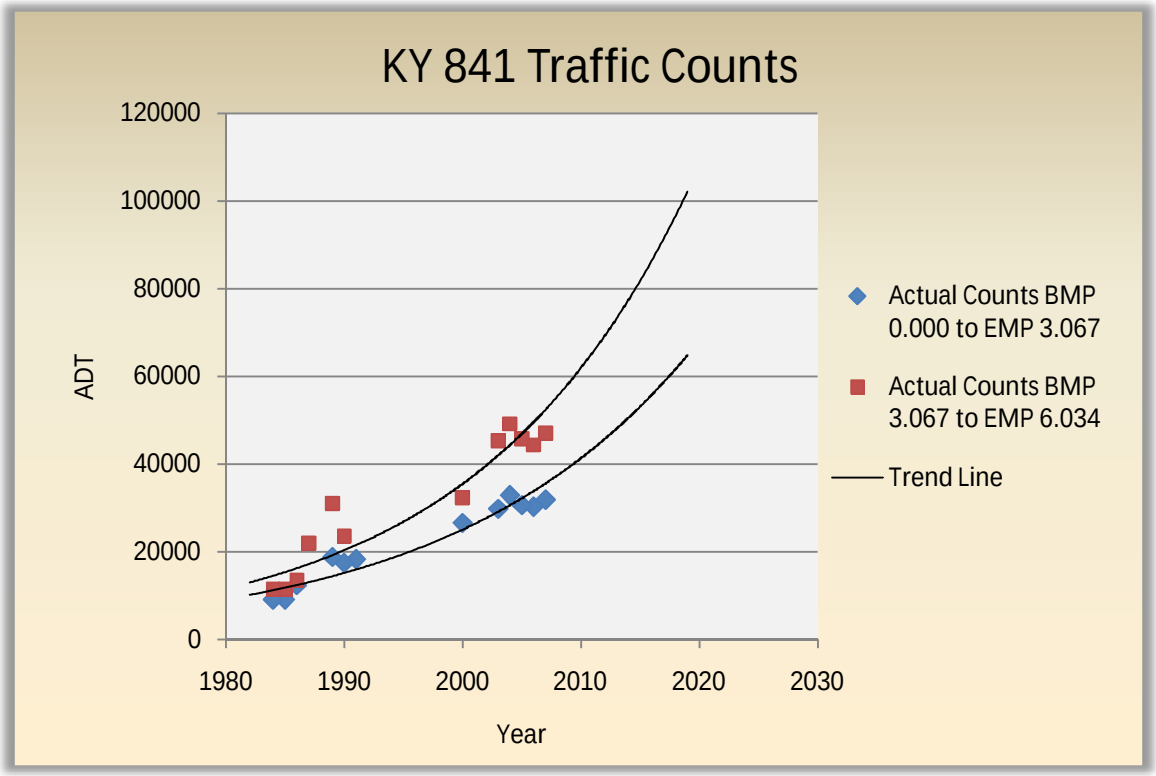


Figure 3: Traffic Count Data for KY 841

The last actual count for Stonestreet Road to the north of the project was 17,800 vehicles in 2009. For south of the project the last actual traffic count was 2,100 vehicles in 2008. Figure 4 contains traffic count data for Stonestreet Road to the north and south of the project. There is limited data available for Stonestreet Road, but it appears that traffic has increased drastically to the north of the KY 841 interchange. Traffic has stayed fairly consistent with a small increase to the south of the KY 841 interchange. The trend line suggests that this trend will continue in

the future. It is clear that the majority of the traffic traveling to and from KY 841 originates and ends to the north of the interchange.

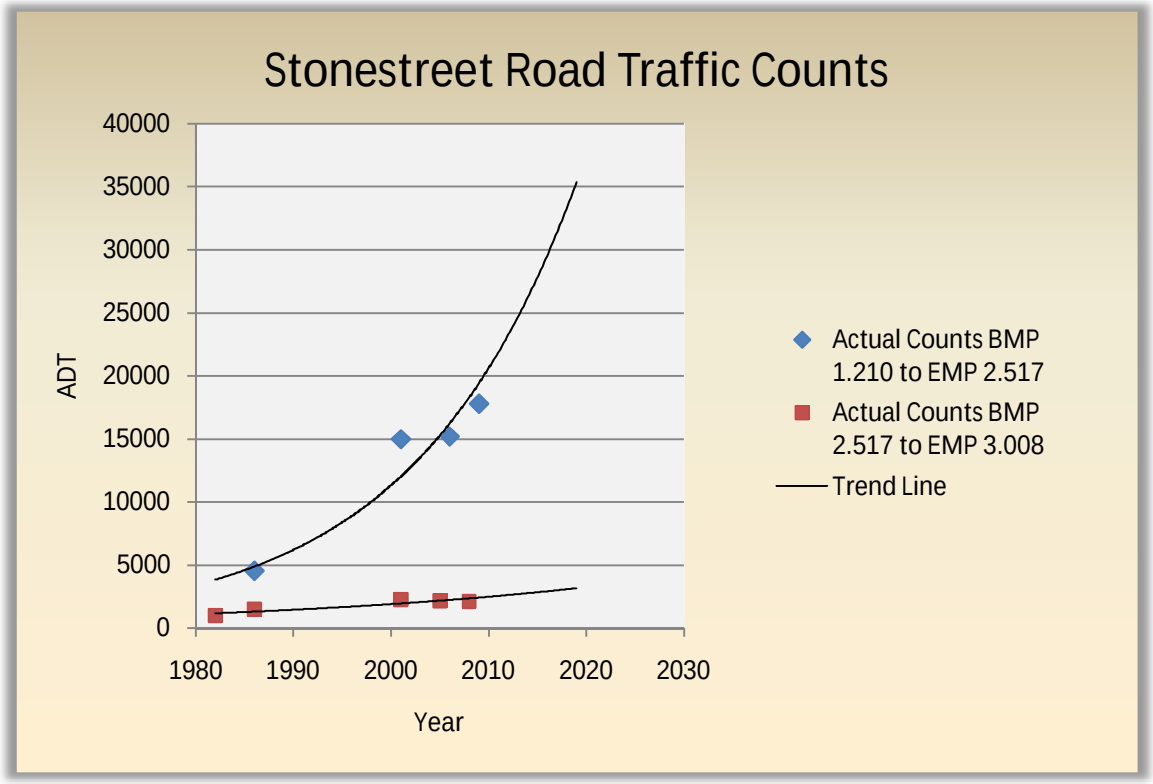


Figure 4: Traffic Count Data for Stonestreet Road

G. Capacity

The Volume/Service Flow ratio (V/SF) for KY 841 from BMP 0.000 to EMP 3.067 is 0.52. This portion of KY 841 is slightly worse than the average V/SF for the state but falls in the average for Jefferson County. The V/SF for KY 841 from BMP 3.067 to EMP 6.034 is 0.76. This portion of KY 841 is worse than the average for the state of Kentucky and slightly worse than the average for Jefferson County. Both sections of KY 841 could need additional lanes in the future if traffic continues to increase. This data was not available for Stonestreet Road since it is a county road.

H. Safety

Collision data was obtained from the KY State Police database of collisions from a time period of June 1, 2010 to June 1, 2011 for KY 841. In total there were 25 collisions that occurred on KY 841 between BMP 2.0 and EMP 4.5. These 25 collisions resulted in 1 fatality and 3 injuries. The critical rate factor for KY 841 from BMP 0.000 to EMP 3.067 is 0.385. The critical rate factor for KY 841 from BMP 3.067 to EMP 6.034 is 0.247. Both of these critical rate factors are on the low end. However, there does appear to be a higher frequency of collisions on KY 841 near the interchange ramps. This is due to traffic that is merging out onto KY 841 from the interchange and also traffic that is entering the interchange. There doesn't appear to be any safety improvements that can be made to the KY 841 part of the interchange. The suggested alternatives brought up by the KIPDA Interchanges Study and this study will have a greater impact on the safety of Stonestreet Road rather than KY 841.

On Stonestreet Road 35 collisions occurred within the three year time period of June 1, 2008 to June 1, 2011 between BMP 1.5 and EMP 3.0. A longer time period was analyzed for Stonestreet Road due to the smaller amount of vehicles that use the road as opposed to KY 841. These 35 collisions resulted in no fatalities and 20 injuries. The critical rate factor is not known for Stonestreet Road since it is a county road. Based on the data the highest frequency of collisions in the interchange area occurs near the KY 841 westbound ramps. This is likely due to the large number of vehicles that turn right onto Stonestreet Road from the KY 841 westbound to Stonestreet Road ramp. Figure 5 and Table 1 contains spot analysis data for this location. Detailed collision data for KY 841 and Stonestreet Road can be found in Appendix F.

Figure 5: Spot Analysis on Stonestreet Road for the KY 841 Westbound to Stonestreet Road Ramp

Table 1: Spot Analysis on Stonestreet Road for the KY 841 Westbound to Stonestreet Road Ramp

MILEPOINT DERIVED	MOTOR VEHICLES INVOLVED	INJURED	WEATHER	ROADWAY CONDITION	DIRECTIONAL ANALYSIS	MANNER OF COLLISION	ROADWAY CHARACTER	LIGHT CONDITION
2.289	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.309	2	0	CLOUDY	DRY	OTHER ROADWAY OR MID-BLOCK COLLISION	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.328	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.341	2	0	CLEAR	DRY	REAR END - ONE VEHICLE TURNING RIGHT	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.366	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	REAR END	STRAIGHT & GRADE	DAYLIGHT
2.372	2	0	CLEAR	DRY	REAR END - OTHER	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.372	2	0	CLEAR	DRY	REAR END - OTHER	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.377	2	0	RAINING	WET	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	REAR END	STRAIGHT & GRADE	DAYLIGHT
2.398	2	0	CLEAR	DRY	REAR END IN TRAFFIC LANES BOTH VEHICLES MOVING	REAR END	STRAIGHT & LEVEL	DAYLIGHT

I. Roadway/Interchange Deficiencies

The KY 841/Stonestreet Road interchange is a simple diamond without traffic signals. There are four ramps:

- KY 841 westbound to Stonestreet Road (Intersection 1)
- Stonestreet Road to KY 841 westbound (Intersection 1)
- KY 841 eastbound to Stonestreet Road (Intersection 2)
- Stonestreet Road to KY 841 eastbound (Intersection 2)

The KY 841 westbound to Stonestreet Road ramp has a total length of approximately 2000 feet or 0.4 miles and is 15 feet wide. The ramp is one lane until approximately the last 600 feet which splits into a right and left turn lane for traveling northbound or southbound on Stonestreet Road. 300 feet of this length is used a transition from a width of 15 feet to 24 feet. The last 300 feet contains 2 lanes and is 24 feet wide. The ramp flares at Stonestreet Road. Also this ramp contains a downgrade of 3.785%. Based on AASHTO guidelines and using a 65 mile per hour speed with a 3-4% downgrade the required deceleration lane length is approximately 700 feet. The ramp length meets the requirement and allows for some storage of vehicles on the ramp if needed (this is needed at times). Furthermore, the intersection is unsignalized. Both the right and left turns have a stop sign. Vehicles are

restricted from entering the Stonestreet Road to KY 841 westbound ramp. The majority of the traffic turns right at this intersection based on data from the 2005 KIPDA Interchanges Study (Appendix G). It is important to note that this study was done in 2005 and will need to be verified with current data before the project moves along. According to the study in the peak PM period the ramp exceeded the available storage due to the right turn movement and had a level of service (LOS) of F. The majority of the development in this area exists to the north of the interchange, so it makes sense that the right turn lane exceeds the available storage. The left turn movement had a minimal traffic volume, but a delay does exist due to waiting for a gap in the Stonestreet Road through traffic. This is due to the large volume of vehicles traveling past this intersection to make the left turn onto the KY 841 eastbound ramp.

Directly across from the KY 841 westbound to Stonestreet Road ramp is the Stonestreet Road to KY 841 westbound ramp. The total length of this ramp is approximately 1300 feet or 0.25 miles and is 15 feet wide. The beginning of the ramp is flared at Stonestreet Road. The first 600 feet of the ramp tapers down from a lane of 17 feet carrying the right turn movement and a lane of 18 feet carrying the left turn movement down to a single lane that is 15 feet wide. In addition, there is approximately 800 feet of taper length on KY 841 past the ramp. Also this ramp contains an upgrade of 3.8157%. Based on AASHTO guidelines and using a 65 mile per hour speed with a 3-4% upgrade the required acceleration lane length is approximately 2000 feet. The ramp length plus the taper length on KY 841 meets this requirement. Furthermore, there is a left turn lane on Stonestreet Road for traffic coming from the south to enter the ramp. This lane is approximately 175 feet long but a flush median occurs on this section of roadway allowing a longer queue length if needed. According to data from the2005 KIPDA Interchanges Study the traffic volume turning both right and left on this ramp is minimal. There does not appear to be any problems with the operation of this ramp. See Figure 6 below for a detailed view of the 1st intersection.

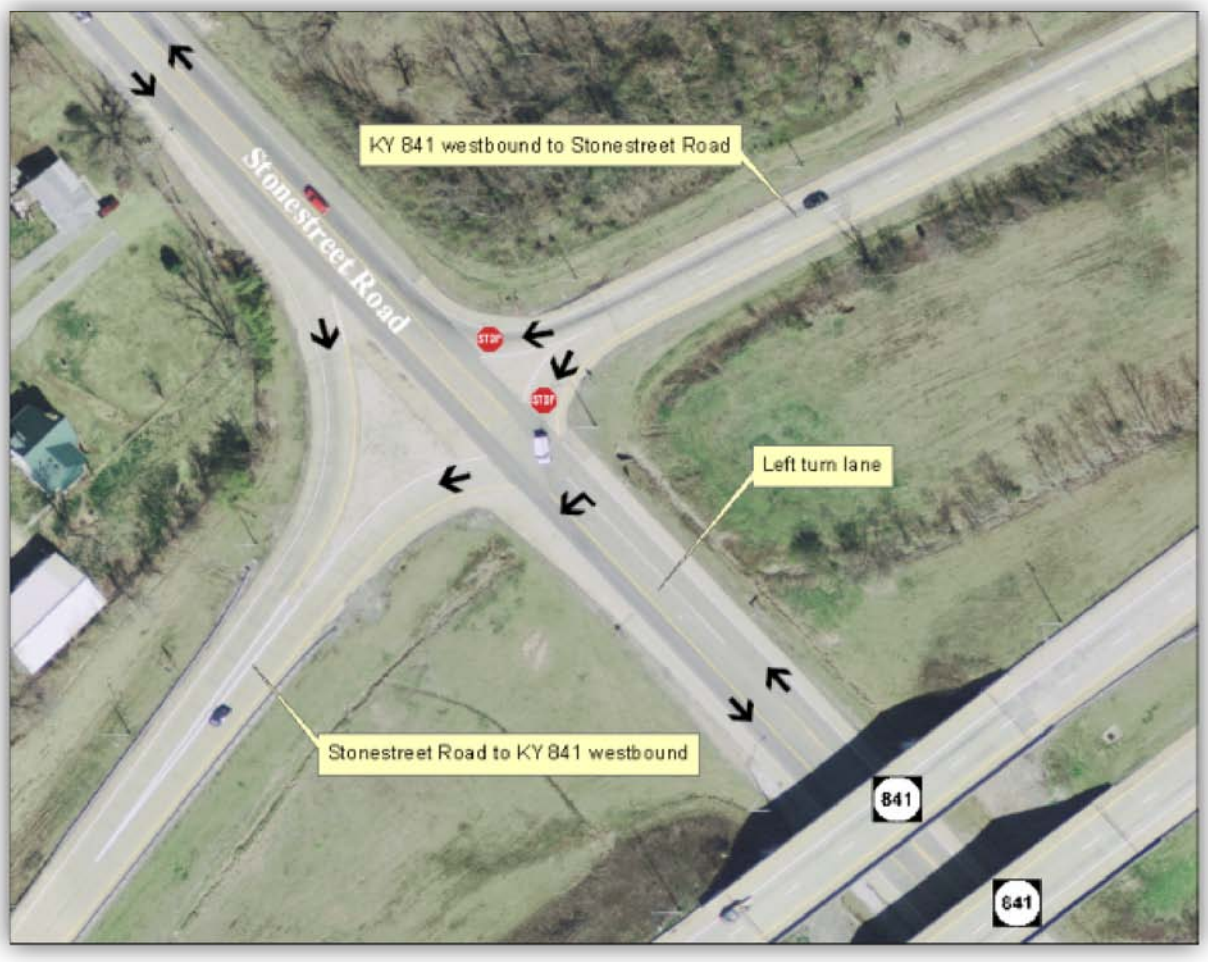


Figure 6: KY 841 Westbound Ramps (1st Intersection)

The KY 841 eastbound to Stonestreet Road ramp has a total length of approximately1500 feet or 0.3 miles and is 15 feet wide. The ramp is one lane until approximately the last 300 feet which transitions from a width of 15 feet to 24 feet. The end of the ramp is flared at Stonestreet Road and contains room for a left and right turning vehicle. Also this ramp contains a grade of less than 2%. Based on AASHTO guidelines and using a 65 mile per hour speed with a grade of less than 2% the required deceleration lane length is approximately 600 feet. The 1500 feet is more than adequate and allows for some storage of vehicles on the ramp if needed. Furthermore, the intersection is unsignalized. Both the right and left turns have a stop sign. Vehicles are restricted from entering the Stonestreet Road to KY 841 eastbound ramp. According to data from the 2005 KIPDA Interchanges Study this ramp has the lowest traffic volumes out of the four ramps in this interchange. However, the level of service (LOS) was F for the left turn movement. This does not appear to be a major problem since no significant queues were noticed at the intersection during the study. This is likely

due to the low amount of vehicles using the ramp. There does not appear to be any other problems with the operation of this ramp.

Directly across from the KY 841 eastbound to Stonestreet Road ramp is the Stonestreet Road to KY 841 eastbound ramp. The total length of this ramp is approximately 1300 feet or 0.25 miles and is 15 feet wide. The beginning of the ramp is flared at Stonestreet Road. The first 600 feet of the ramp tapers down from a lane of 17 feet carrying the right turn movement and a lane of 18 feet carrying the left turn movement down to a single lane that is 15 feet wide. In addition, there is approximately 800 feet of taper length on KY 841 past the ramp. Also this ramp contains a grade of less than 2%. Based on AASHTO guidelines and using a 65 mile per hour speed with a grade less than 2% the required acceleration lane length is approximately 1400 feet. The ramp length plus the taper length on KY 841 meets this requirement. Furthermore, there is a left turn lane on Stonestreet Road for traffic coming from the north to enter the ramp. This lane is approximately 175 feet long but a flush median occurs on this section of roadway allowing a longer queue length if needed. According to data from the2005 KIPDA Interchanges Study a large number of vehicles turn left onto the ramp and a small number turns right. Since there are few vehicles traveling through on Stonestreet Road to the south of the interchange, the vehicles turning left at the intersection do not appear to experience long delays or queues. There does not appear to be any problems with the operation of this ramp. See Figure 7 below for a detailed view of the 2nd intersection.

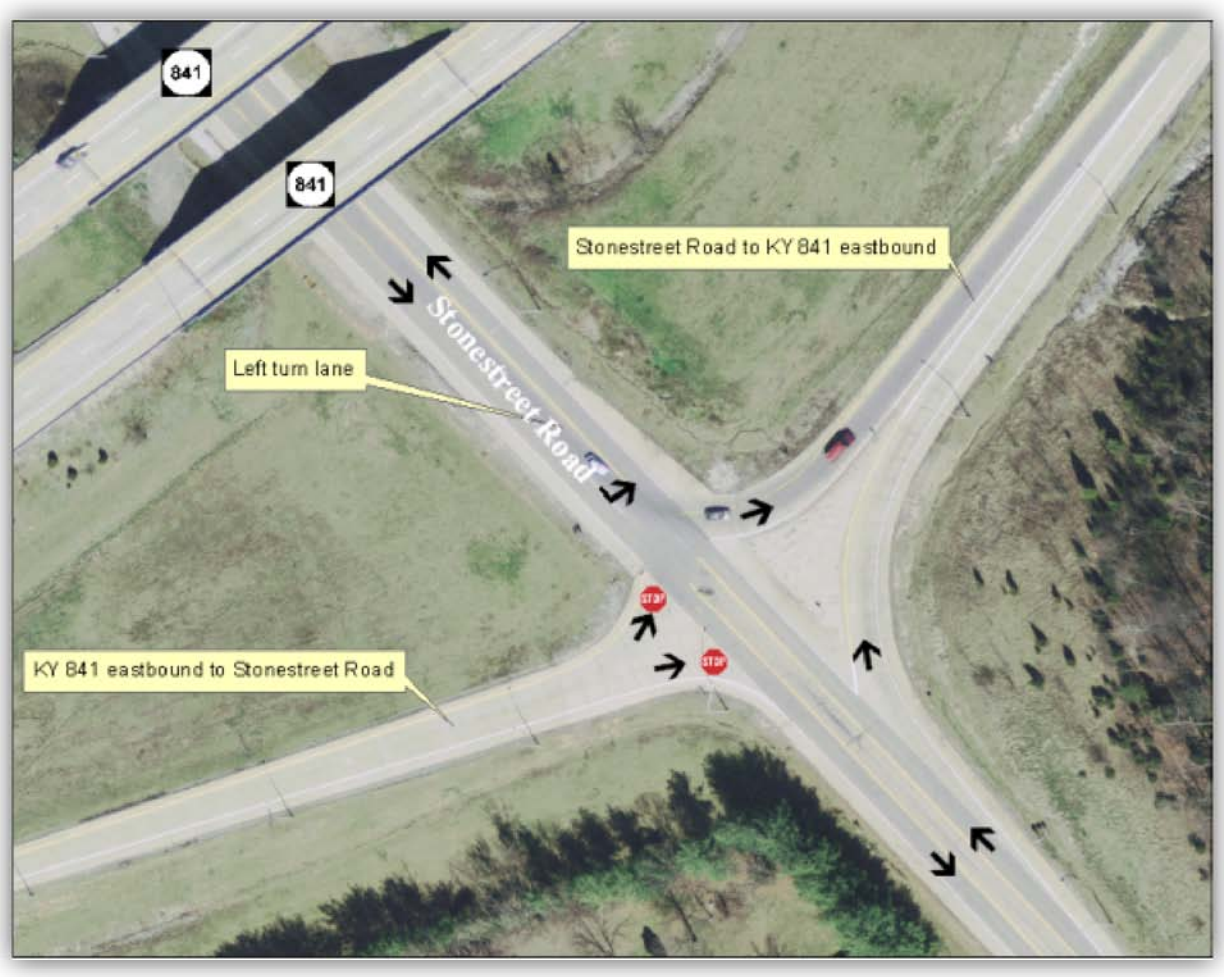


Figure 7: KY 841 Eastbound Ramps (2nd Intersection)

Within the project area KY 841 has 12 ft lanes, 7 ft (inner) and 10 ft (outer) shoulders, a 0.5-2.4 % grade, a posted speed limit of 65 MPH, and an Adequacy Rating of 80th – 90th percentile. AASHTO's minimum guidelines for freeways (see Appendix H) recommends 12 ft lanes, 4 ft (inner) and 10 ft (outer) shoulders, and a 50 MPH design speed. KY 841 meets these requirements.

Within the project area Stonestreet Road has 12 ft lanes, 8-9 ft shoulders in most areas (2 ft curb and gutter to the north of the interchange), a flush median (14 ft), and a posted speed limit of 35 MPH.

Both of the bridges that carry KY 841 traffic over Stonestreet Road are adequate. Bridge #056B00354R has a sufficiency rating of 98.4 and Bridge #056B00354L also has a sufficiency rating of 98.4. There does not appear to be any problems with the bridges.

A Flood Insurance Rate Map (FIRM) of the project area can be found in Appendix I. Flooding does not appear to be a problem in the interchange area.

III. DRAFT PROJECT PURPOSE AND NEED STATEMENT

Based upon the information presented in Section II of this report and discussion of the project team, the following Purpose and Need Statement was drafted for this project:

The purpose of this project is to improve traffic flow on the KY 841/Stonestreet Road interchange during peak travel times. This interchange provides an important link to the interstate system for residents of southwest Jefferson County.

IV. PRELIMINARY ENVIRONMENTAL OVERVIEW

A. Air Quality

Jefferson County is currently designated as a Nonattainment Area for the fine particulate ($PM_{2.5}$) standard and a Maintenance Area for the 8 hour-ozone standard. Improving this interchange should not further deteriorate the air quality in the area. In fact improving the interchange should help to maintain or improve the air quality in the area.

B. Archaeology

There are no known archaeological sites that would be affected by this project. An archaeology Phase I survey will need to be completed in order to rule out any impacts to archaeological sites.

C. Threatened and Endangered Species

The United States Fish and Wildlife Service (USFWS) has identified the known and potential presence of threatened and endangered species in Jefferson County, which can be viewed below in Table 2. In addition, Threatened and Endangered Species reports from the Kentucky Department of Fish and Wildlife Resources (KDFWR) and the Kentucky State Nature Preserves Commission (KSNPC) can be found in Appendix J.

Table 2: USFWS Threatened and Endangered Species in Jefferson County

Group	Species	Common name	Legal* Status	Known** Potential
Mammals	*Myotis grisescens*	gray bat	E	K
	Myotis sodalis	Indiana bat	E	K
Mussels	*Pleurobema clava*	clubshell	E	K
	Cyprogenia stegaria	fanshell	E	K
	Potamilus capax	fat pocketbook	E	K
	Plethobasus cooperianus	orangefoot pimpleback	E	K
	Obovaria retusa	ring pink	E	K
	Lampsilis abrupta	pink mucket	E	K
	Plethobasus cyphyus	sheepnose	C	P
	Pleurobema plenum	rough pigtoe	E	P
Plants	*Trifolium stoloniferum*	running buffalo clover	E	K
Birds	*Sterna antillarum*	interior least tern	E	K
Insects	*Nicrophorus americanus*	American burying beetle	E	historic
	Pseudanopthalmus troglodytes	Louisville cave beetle	C	K

* 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.

D. Hazardous Materials

No properties appear to have a high probability for hazardous materials.

E. Historic Resources

A map detailing the historic resources in the area along with other environmental sites is included below in Figure 8. There does not appear to be any historic resources that would be affected by this project.

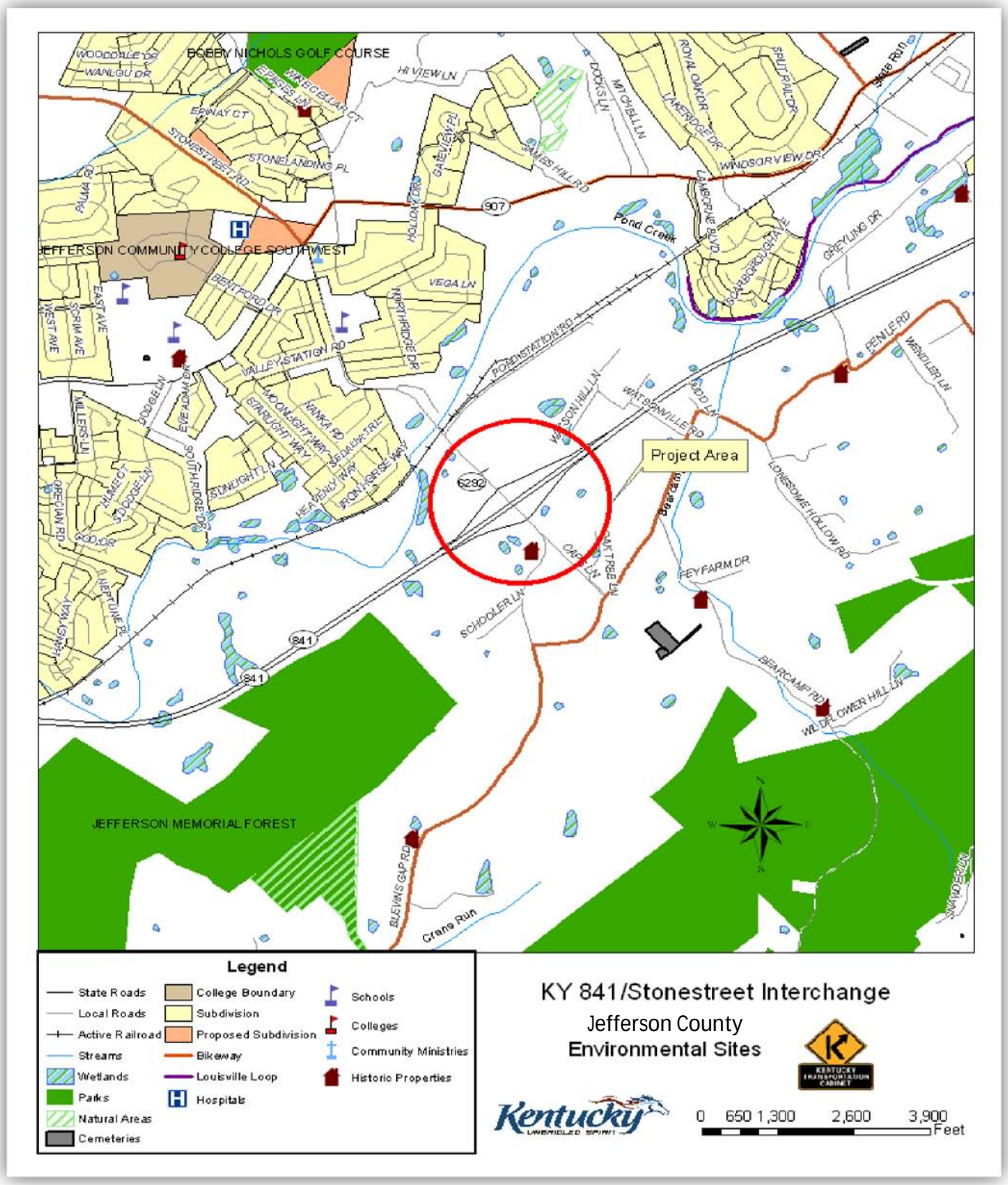


Figure 8: Environmental Sites

F. Permitting

While there are streams in the area, no streams should be affected by this project. If any impact below the ordinary high water mark does occur than a USACE 404 permit and potentially a Water Quality Certification from the Division of Water will be needed. Any permits will need to meet the general requirements since none of the streams in the area are considered special use.

G. Noise

The scope of the project should not require additional noise analysis. However, if additional lanes are added to the ramps or Stonestreet Road further noise analysis may need to be done. Noise due to construction and demolition will be temporary.

H. Socioeconomic

There should be no socioeconomic impacts associated with this project since any interchange improvements will improve access for all individuals equally. According to Census Data from 2000 three census tracts (120.03, 121.06, and 122.03) make up the project area. Figures 9 and 10 contain detailed information of the census tracts including minority population, population below the poverty line, and population over 65 years old. Based on the data for the three census tracts the minority population and population living below the poverty line are below the state and national averages. Census tract 122.03 has a slightly higher than average population over 65 years old compared to the state and national averages. The other two tracts are below the state and national averages for population over 65 years old.

Subject	Census Tract 120.03, Jefferson County, Kentucky		Census Tract 121.06, Jefferson County, Kentucky		Census Tract 122.03, Jefferson County, Kentucky	
	Number	Percent	Number	Percent	Number	Percent
Total population	4,190	100.0	6,526	100.0	5,748	100.0
SEX AND AGE						
Median age (years)	34.8	(X)	35.6	(X)	40.5	(X)
18 years and over	3,042	72.6	4,846	74.3	4,429	77.1
62 years and over	491	11.7	942	14.4	982	17.1
65 years and over	392	9.4	800	12.3	825	14.4
RACE						
One race	4,151	99.1	6,460	99.0	5,705	99.3
White	4,058	96.8	6,250	95.8	5,436	94.6
Black or African American	45	1.1	132	2.0	189	3.3
American Indian and Alaska Native	15	0.4	20	0.3	12	0.2
Asian	20	0.5	33	0.5	28	0.5
Native Hawaiian and Other Pacific Islander	0	0.0	2	0.0	10	0.2
Some other race	13	0.3	23	0.4	30	0.5
Two or more races	39	0.9	66	1.0	43	0.7
HISPANIC OR LATINO AND RACE						
Total population	4,190	100.0	6,526	100.0	5,748	100.0
Hispanic or Latino (of any race)	24	0.6	54	0.8	52	0.9

Figure 9: Census Information - Age and Race

Subject	Census Tract 120.03, Jefferson County, Kentucky		Census Tract 121.06, Jefferson County, Kentucky		Census Tract 122.03, Jefferson County, Kentucky	
	Number	Percent	Number	Percent	Number	Percent
POVERTY STATUS IN 1999 (below poverty level)						
Families	99	(X)	71	(X)	47	(X)
Percent below poverty level	(X)	8.4	(X)	3.8	(X)	2.8
Individuals	564	(X)	391	(X)	212	(X)
Percent below poverty level	(X)	13.6	(X)	6.0	(X)	3.8

Figure 10: Census Information - Poverty Level

I. Section 4(f) Resources

If residences or structures located nearby are ruled as eligible for the National Register of Historic Places they could also be afforded protection under Section 4(f). The Kentucky Transportation Cabinet (KYTC) has options to mitigate and avoid impacts to section 4(f) resources including a programmatic agreement for mitigating historic structures, or using 'de minimus' guidance for minor strip takings.

J. Section 6(f) Resources

Jefferson Memorial Forest is located near the project area and is likely protected under Section 6(f) of the Land Water Conservation Fund. However, none of these lands should be affected by any of the alternatives that are suggested in this study.

V. PRELIMINARY PROJECT INFORMATION

A. Existing Conditions/Roadway Data

Table 3: Existing Conditions and Data Summary			
County:	Jefferson	Route Number:	KY 841
Road Name:	Gene Snyder Freeway	Item No.:	05-284.00
BMP:	2.7	EMP:	3.5
Project Length:	0.8 miles	State Class:	Primary
Functional Class:	Urban Freeways and Expressways	Access Control:	Full
Truck Class:	AAA	Median Type:	Depressed
ADT(current):	32,000-47,100	Posted Speed:	65 MPH
Terrain:	Rolling	Funding Type:	STP
Roadway Data			
	Existing Conditions	Design Criteria	
No. of Lanes:	4	4	
Lane Width:	12 ft	12 ft	
Shoulder Width:	7 ft (inner) and 10 ft (outer)	4 ft (inner) and 10 ft (outer)	
Minimum Radius:	-	750 ft	
Maximum Grade:	-	5 %	
Adequacy Rating:	80^{th} – 90^{th}	-	
Bridge Data			
	056B00354R	056B00354L	
Type:	Stringer/Girder	Stringer/Girder	
Year Built:	1984	1984	
Skew:	4 degrees	4 degrees	
Max. Span Length:	101 ft (Stonestreet Road Under)	101 ft (Stonestreet Road Under)	
Length:	187 ft	187 ft	
Width, out to out:	43 ft	43 ft	
Width, curb to curb:	40 ft	40 ft	
Sufficiency Rating:	98.4	98.4	

Table 4: Existing Conditions – Stonestreet Road	
Route Number:	CR-1003L
Road Name:	Stonestreet Road
Functional Class:	Urban Minor Arterial Street
Median Type:	Left Turn Lane (14 ft)
ADT(current):	2,100-17,800
Posted Speed:	35 MPH
Terrain:	Rolling
No. of Lanes:	2
Lane Width:	12 ft
Shoulder Width:	8-9 ft (2 ft curb and gutter to the north of the interchange)

B. Right of Way

Figure 11 shows the 100 properties that are located closest to the interchange according to the Jefferson County Property Value Administrator (PVA). Plans for KY 841 and Stonestreet Road that contain right of way lines can be found in Appendix K. A limited amount of right of way if any should be purchased for this project to remain within budget.

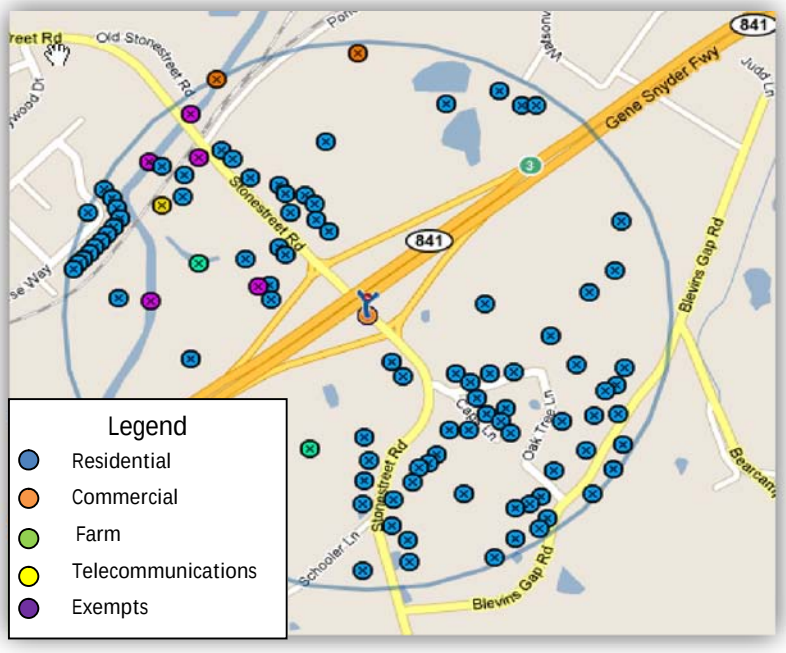


Figure 11: Jefferson County PVA Map

C. Utilities

A request has been sent out to the utility companies in the area to determine what utilities are located within the project area. A list of the contacts for the utility companies in Jefferson County can be found in Appendix L. A more in depth assessment of utilities in the area will need to be done as the project moves further along.

D. Agency Coordination

At this time the project team has not held an official meeting to discuss this project.

VI. POSSIBLE ALTERNATIVES

The following is a description of several of the alternatives (see Figures 12 and 13) analyzed and discussed during the development of this study and the 2005 KIPDA Interchanges Study. Table 5 contains preliminary cost estimates.

A. Alternative #1 – No Build

Before considering this option the design team will need to reevaluate the traffic data. The last data provided for the interchange was from the 2005 KIPDA Interchanges Study. That study will need to be verified and brought up to date with the current traffic levels at the interchange. If it is determined that the interchange is sufficient than the no build alternative is a feasible option.

B. Alternative #2 – Install a Traffic Signal at the KY 841 Westbound Intersection (1st Intersection)

The major issue at this intersection is the right turn movement (northbound on Stonestreet Road) from the KY 841 westbound to Stonestreet Road ramp. There is also a large amount of vehicles traveling through the intersection to reach the KY 841 eastbound ramp. Installing a traffic signal at this intersection would help alleviate some of the delays that occur and increase the level of service for those vehicles turning onto Stonestreet Road. However, it is more than likely that long queue lengths would still exist at this ramp. According to the signal warrant analysis from the2005 KIPDA Interchanges Study a signal at this intersection would be warranted. Furthermore, installing the traffic signal will cause minimal impact to the surrounding area.

C. Alternative #3 – Install a Traffic Signal at the KY 841 Eastbound Intersection (2nd Intersection)

The majority of traffic at this intersection makes a left turn from Stonestreet Road to the KY 841 eastbound ramp. The traffic volume using the other ramps or traveling through the intersection is minor. However, vehicles turning left onto Stonestreet Road from the KY 841 eastbound ramp experiences delays. Installing a traffic signal at this intersection would help alleviate some of the delay that occurs and increase the level of service for those vehicles turning left onto Stonestreet Road. However, it is more than likely that the signal would increase the overall intersection delay. According to the signal warrant analysis from the 2005 KIPDA Interchanges Study a signal at this intersection would not be warranted. Furthermore, installing the traffic signal will cause minimal impact to the surrounding area.

D. Alternative #4 – Extend the Turn Lanes on the KY 841 Westbound to Stonestreet Road Ramp

This alternative directly addresses the issue with the KY 841 westbound to Stonestreet Road congestion. While this option would add additional queue length to the ramp it is unlikely to address the delay associated with this intersection. However, for those vehicles turning left it could decrease the delay since the queue for the right turn movement currently surpasses the available length. The additional length of the lanes could address this problem. For those vehicles turning right the delay would likely remain the same. There should not be any right of way required for this alternative.

E. Alternative #5 – Extend the Turn Lanes on the KY 841 Eastbound to Stonestreet Road Ramp

This alternative would add separate right and left turn lanes to allow for a longer queue for those vehicles turning left onto Stonestreet Road from this ramp. According to the 2005 KIPDA Interchanges Study the level of service for the left turn movement was F. While this could potentially help the vehicles turning right, few queues were observed and this would not address the delay associated with the left turn movement. There should not be any right of way required for this alternative.

F. Alternative #6 – Add an Auxiliary Lane for Vehicles Turning Right onto Stonestreet Road from the KY 841 Westbound to Stonestreet Road Ramp

This alternative directly addresses the issue with the KY 841 westbound to Stonestreet Road congestion. The right turn movement at this ramp carries a large amount of the traffic volume. Adding an auxiliary lane for vehicles headed northbound on Stonestreet Road shortens the delay associated with the right turn movement from the KY 841 westbound to

Stonestreet Road ramp. In addition, due to this the queue lengths should shorten allowing for the vehicles turning left at the intersection to do so without being held up by the vehicles turning right. The approximate length of the auxiliary lane is 600 ft. Existing right of way is limited along Stonestreet Road, but the majority of the auxiliary lane will need to be fit into the existing right of way to limit the amount of right of way needed for purchase.

G. Alternative #7 – Install a Warning Signal on KY 841 to Inform Traffic When the Railroad Crossing is Being Used by a Train

One of the issues with the operation of the interchange is the at-grade railroad crossing that is located approximately 0.3 miles to the north of interchange. It appears that this railroad crossing is sometimes used by trains during peak vehicular travel times. This results in traffic backing up to the interchange and ramps. Installing a warning device for traffic on KY 841 would deter vehicles from using this interchange if a train is using the railroad crossing. Traffic could instead use the KY 841/Dixie Highway Interchange, which is approximately 3 miles to the west. While this is still an inconvenience to vehicles needing to access the KY 841/Stonestreet Road Interchange, this alternative would likely reduce the travel time of many vehicles that could use alternate routes when the railroad crossing is being used by a train. The impact of this railroad on the interchange will need to be studied more in depth in the future to determine how much of an issue the railroad is to the operation of the interchange.

Table 5: Preliminary Cost Estimates

Alternative	Design	Right of Way	Utilities	Construction	Total
2	$10,000	-	-	$50,000	$60,000
3	$10,000	-	-	$50,000	$60,000
4	$50,000	-	$50,000	$200,000	$300,000
5	$50,000	-	$50,000	$200,000	$300,000
6	$75,000	$50,000	$50,000	$300,000	$475,000
7	$25,000	-	-	$125,000	$150,000

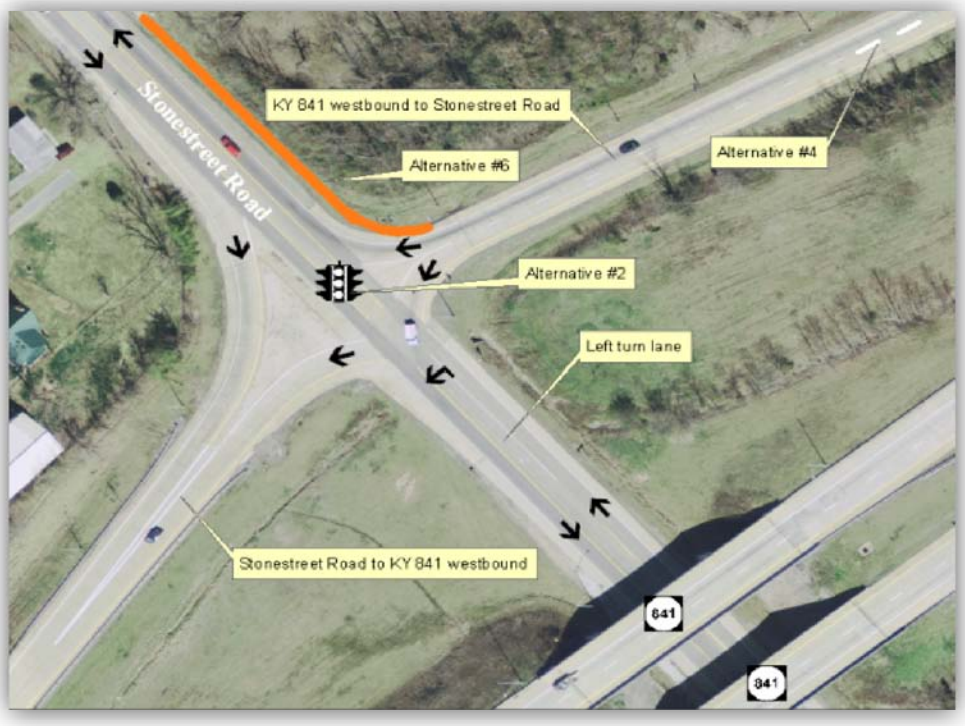


Figure 12: Alternatives on KY 841 Westbound Ramps (1st Intersection)

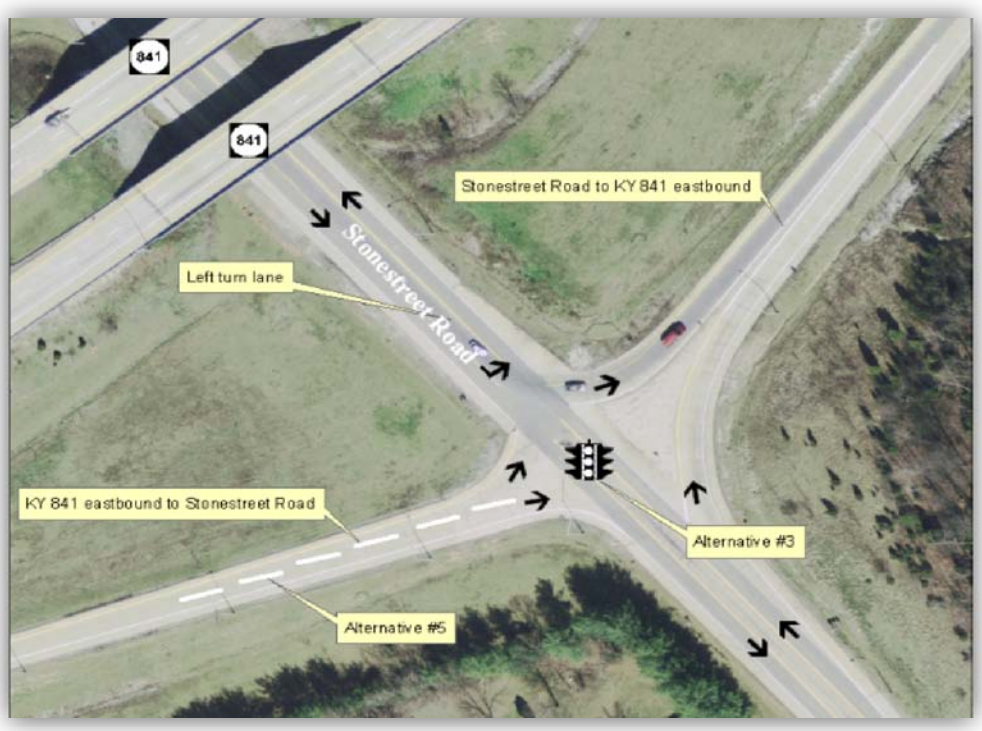


Figure 13: Alternatives on KY 841 Eastbound Ramps (2nd Intersection)

VII. SUMMARY

This study is a Data Needs Analysis (DNA) of the KY 841/Stonestreet Road interchange. The project area is located between BMP 2.7 and EMP 3.5 on KY 841 in southwestern Jefferson County. Through analysis of existing roadway geometrics, previous studies, crash data, site visits, and discussion with the project team the following needs were identified:

- Improvement of the KY 841/Stonestreet Road interchange

The purpose of this project is to improve traffic flow on the KY 841/Stonestreet Road interchange during peak travel times.

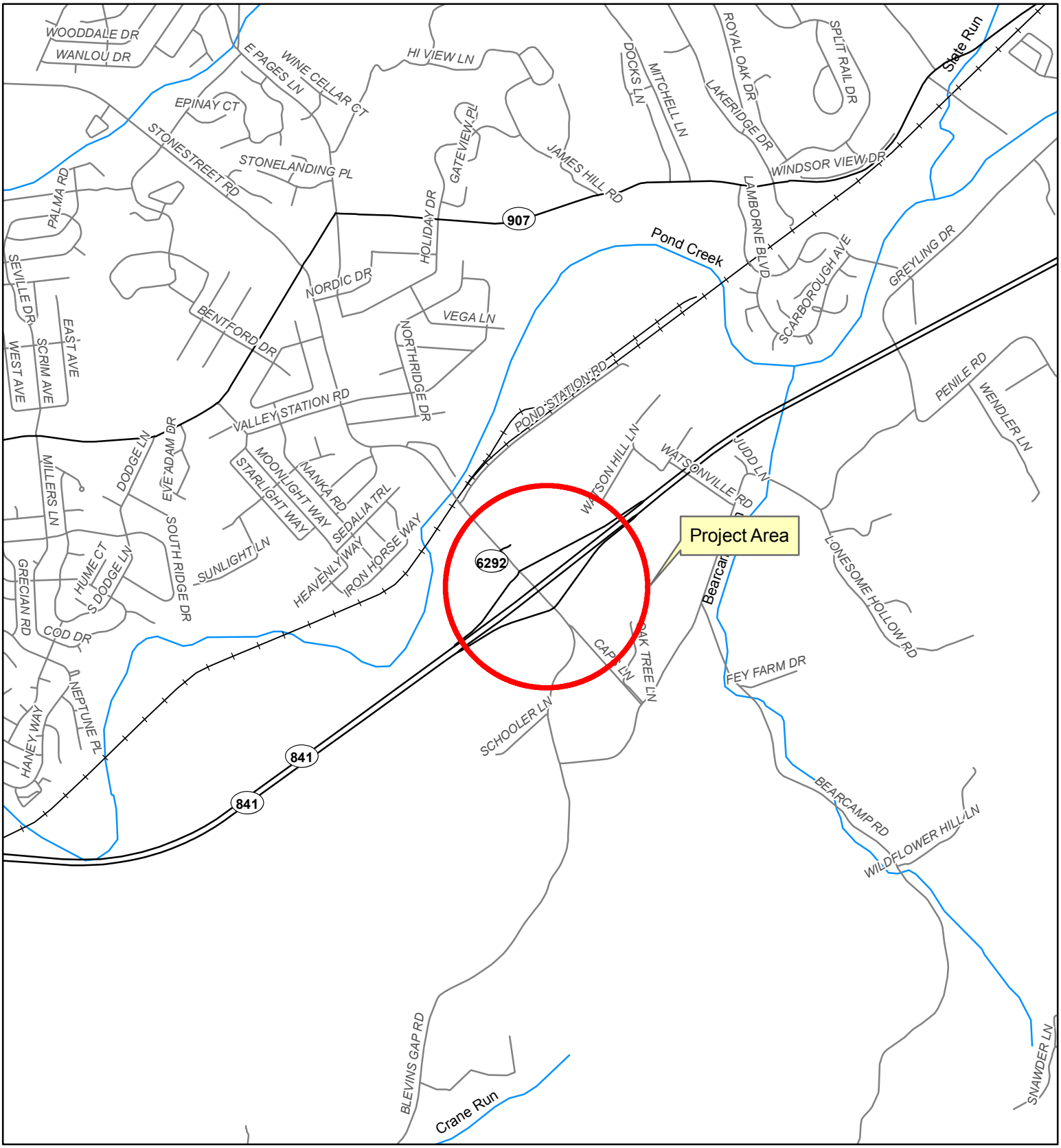
The 2005 KIPDA Interchanges Study recommended that an auxiliary lane be added for vehicles turning right onto Stonestreet Road from the KY 841 westbound ramp. Adding an auxiliary lane would be a feasible alternative to consider if it can be fit within a majority of the existing right of way. This is unless it is determined that the railroad crossing is the cause of the majority of the backups or if updated data does not determine a problem. In addition, installing a traffic signal is warranted for this interection. However, the KIPDA study did not recommend doing this. This is likely due to the overall small amount of vehicles that use the intersection during the majority of the day. Furthermore, adding additional length to the right and left turn lanes for the KY 841 westbound to Stonestreet Road ramp could help the left turn movement by creating more storage for the right turn movement. However, this would do little to solve the delays associated with the right turn movement. This alternative is not recommended at this time. Installing a traffic signal at the other intersection (KY 841 eastbound to Stonestreet Road) is not warranted; therefore, is not recommended at this time due to the low traffic volumes. In addition, adding separate lanes for vehicles turning right or left unto Stonestreet Road is also not recommended because of the low traffic volumes.

It is recommended that an auxiliary lane for vehicles turning right unto Stonestreet Road from the KY 841 westbound ramp be built if it is verified that the interchange needs improved and that the railroad is not causing the majority of the problems. The next step that should be taken before design is to verify the data that was collected in the 2005 KIPDA Interchanges Study. Once this data is collected then it can be decided if the no build alternative, adding an auxiliary lane, or adding a warning device on KY 841 when the railroad crossing is being used by a train is the most feasible option. In addition, installing traffic signals should be revaluated with the new data.

For more information regarding this study please contact:

Kentucky Transportation Cabinet
Division of Planning, 5th Floor West
200 Mero St.
Frankfort, KY 40622
Phone: (502) 564-7183

Appendix A – Maps of the Project Area



N
W E
S

KY 841/Stonestreet Road Interchange

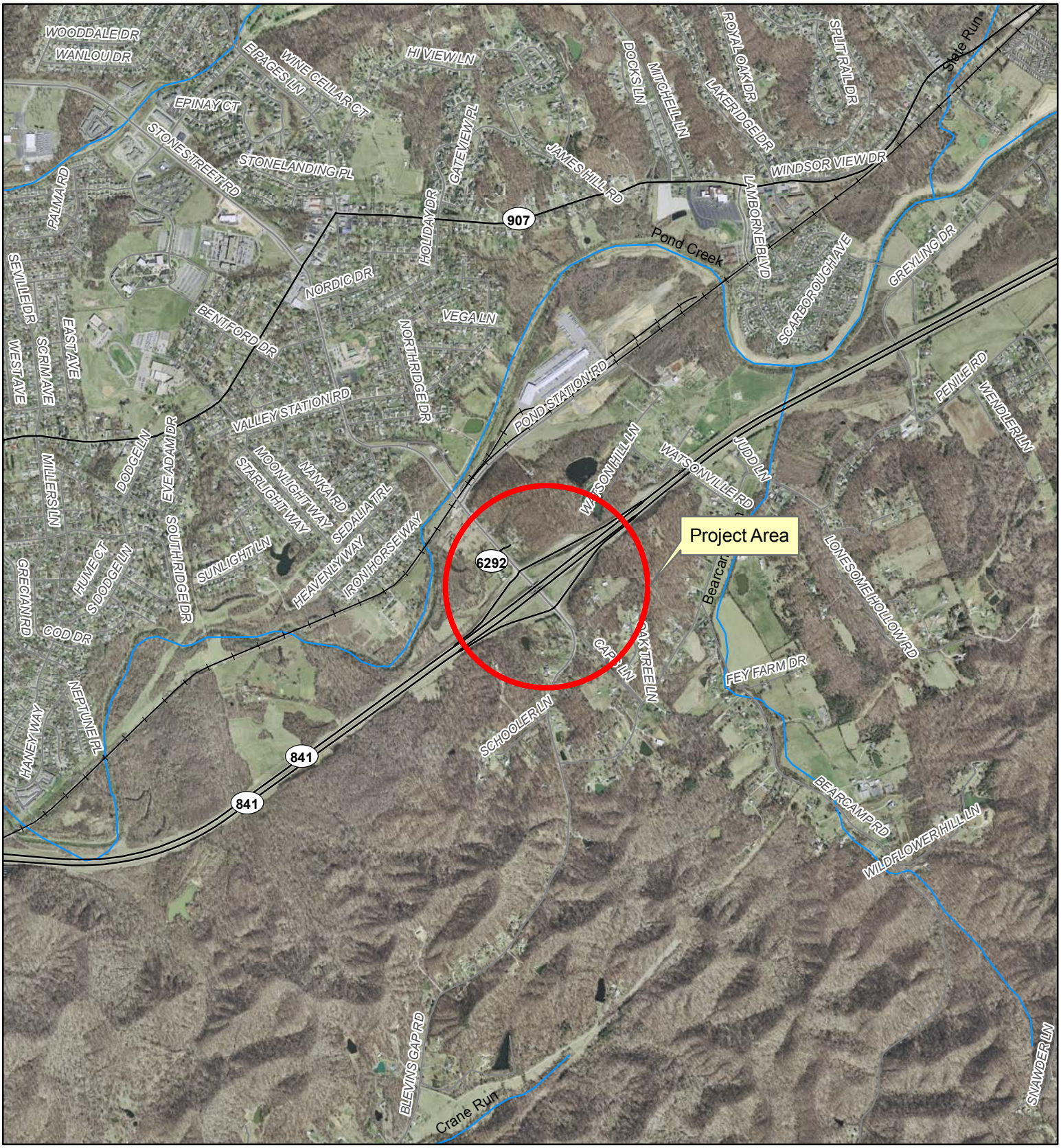
Project Location

KENTUCKY TRANSPORTATION CABINET

Jefferson County

Kentucky UNBRIDLED SPIRIT

0 700 1,400 2,800 4,200 Feet



N
W E
S

KY 841/Stonestreet Road Interchange

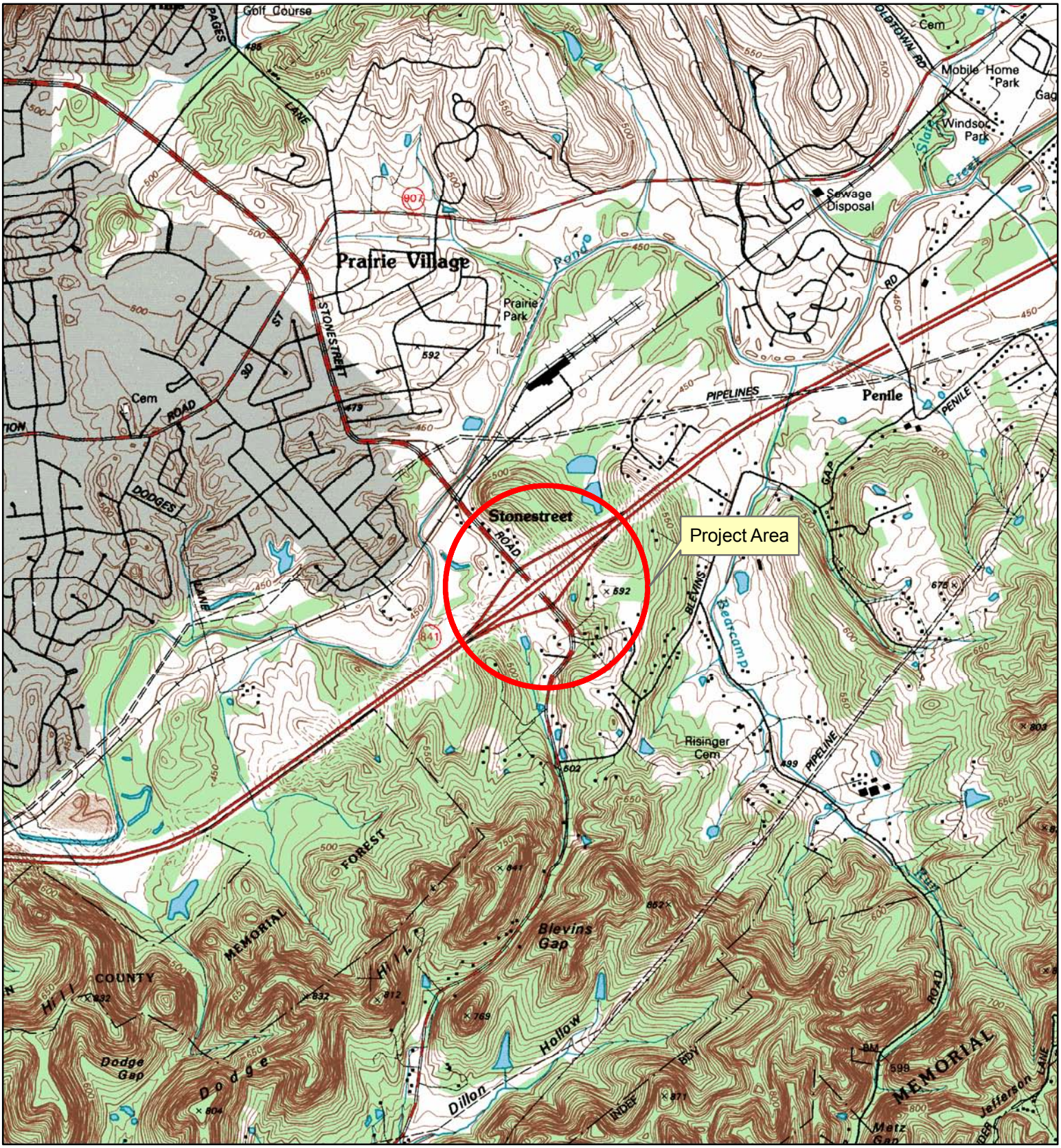
Orthographic Map

KENTUCKY TRANSPORTATION CABINET

Jefferson County

Kentucky UNBRIDLED SPIRIT

0 700 1,400 2,800 4,200 Feet



N
W E
S

KY 841/Stonestreet Road Interchange

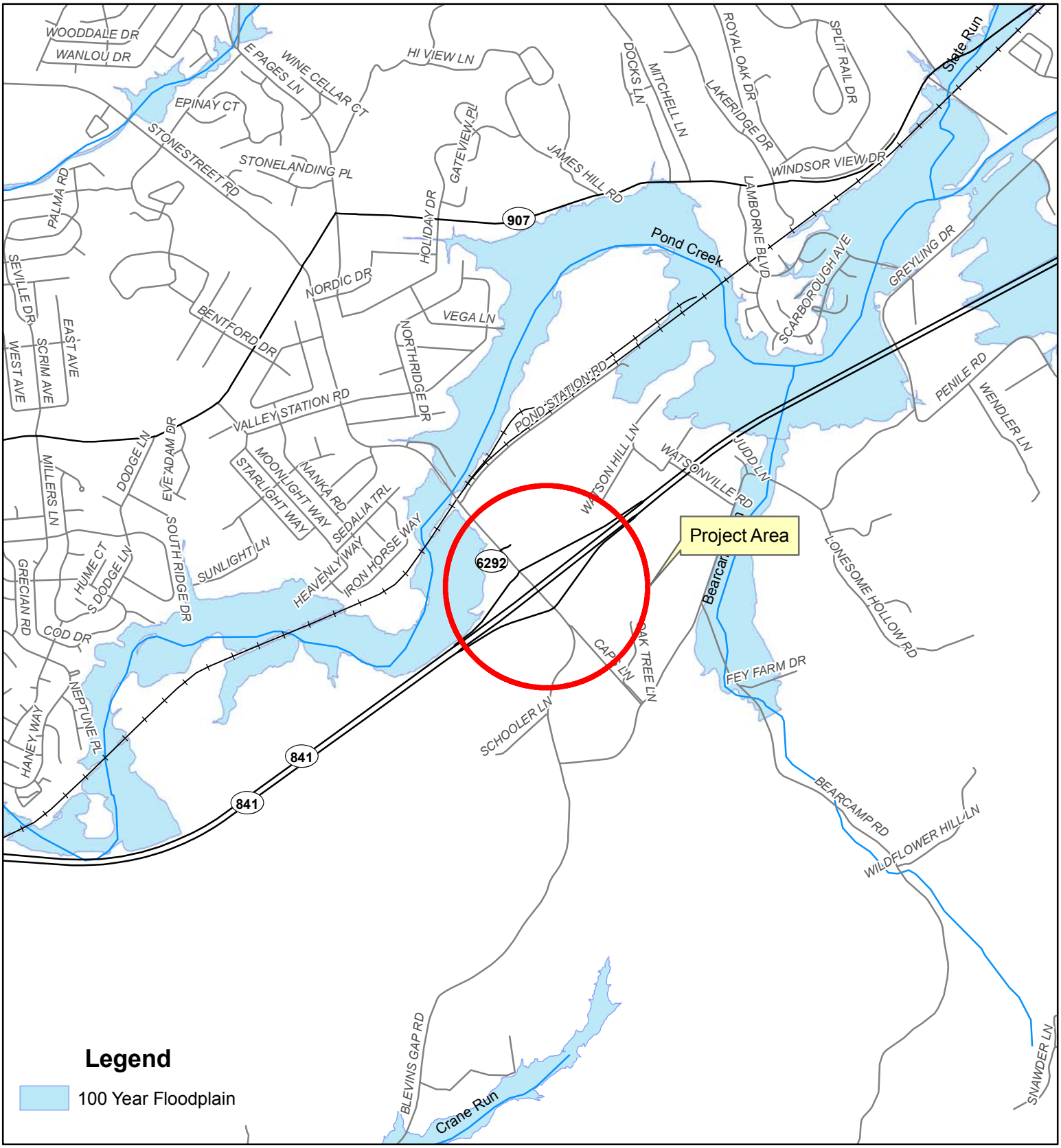
Topographic Map

KENTUCKY TRANSPORTATION CABINET

Jefferson County

Kentucky UNBRIDLED SPIRIT

0 700 1,400 2,800 4,200 Feet



N
W
E
S

KY 841/Stonestreet Road Interchange

100 Year Floodplain

KENTUCKY TRANSPORTATION CABINET

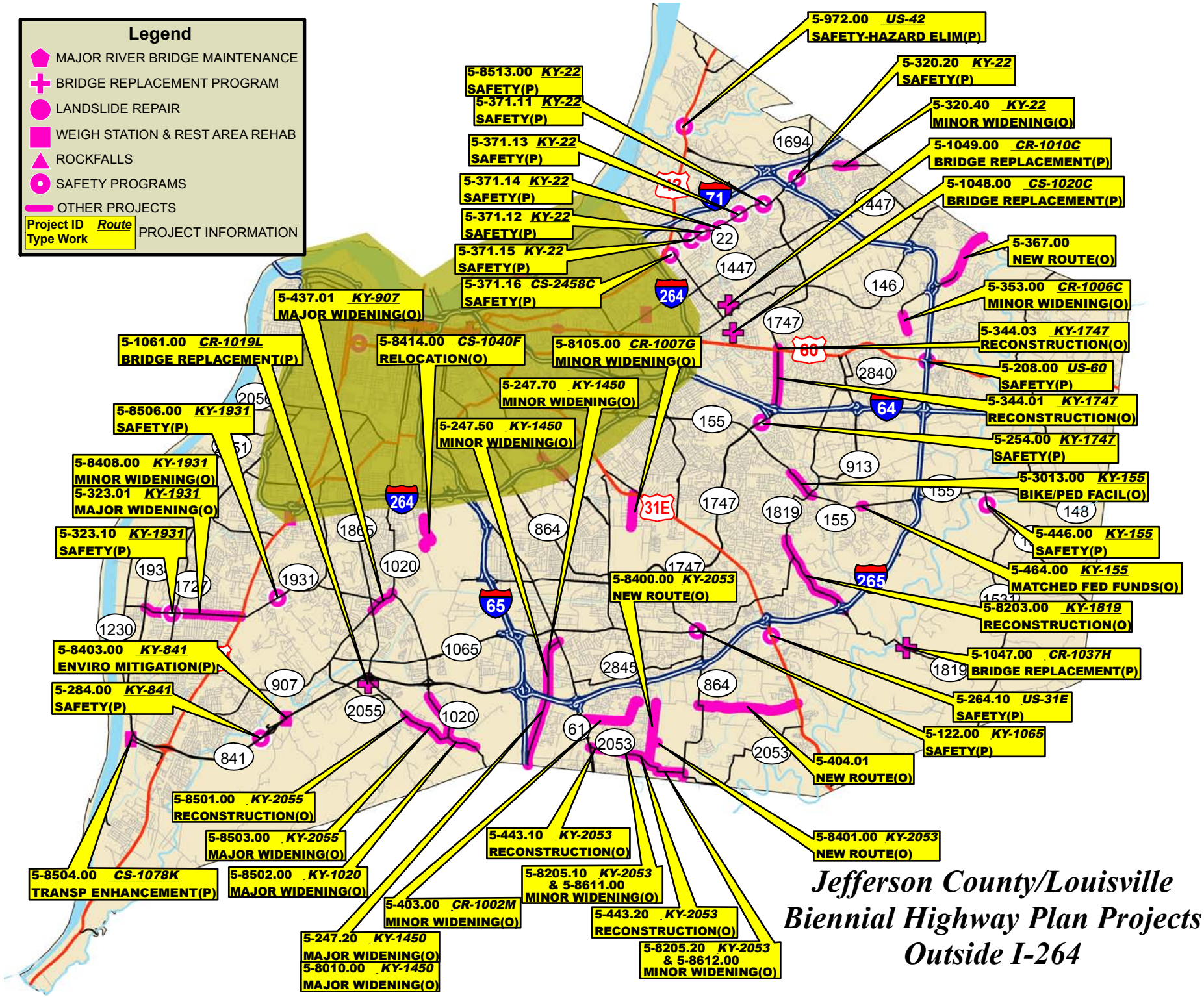
Jefferson County

Kentucky UNBRIDLED SPIRIT

0 700 1,400 2,800 4,200 Feet

Appendix B – Six Year Highway Plan Listing

COUNTY	ITEM NO. & PARENT NO.	ROUTE	LENGTH	DESCRIPTION	FUND-SCHEDULING INFORMATION
JEFFERSON	2006 05 - 254.00 Parent No.: 2006 05 - 254.00	KY-1747	.100	EXTEND DUAL LEFT TURN LANES ON KY-1747 (HURSTBOURNE LN) AT BUNSEN PKWY. Milepoints: From:11.409 To: 11.509 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT SP C 2010 $210,000 Total $210,000
JEFFERSON	2006 05 - 263.00 Parent No.: 2006 05 - 263.00	I-265	.700	IMPROVE I-265/KY-61 (PRESTON HWY) INTERCHANGE AS RECOMMENDED BY KIPDA'S INTERCHANGE STUDY. Milepoints: From:11.3 To: 12 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT IM C 2010 $2,640,000 Total $2,640,000
JEFFERSON	2006 05 - 264.00 Parent No.: 2006 05 - 264.00	I-265	.800	IMPROVE I-265/US-31E (BARDSTOWN RD) INTERCHANGE AS RECOMMENDED BY KIPDA'S INTERCHANGE STUDY. Milepoints: From:16.9 To: 17.7 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT IM C 2010 $1,560,000 Total $1,560,000
JEFFERSON	2010 05 - 264.10 Parent No.: 2010 05 - 264.10	US-31E		IMPROVE US 31-E SOUTH OF I-265 (BARDSTOWN ROAD)INTERCHANGE TO PROVIDE TURN LANES AND NEW ACCESS. Milepoints: From:4.5 To: 4.926 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT NH R 2011 $25,000 NH U 2011 $100,000 NH C 2012 $2,400,000 Total $2,525,000
JEFFERSON	2006 05 - 271.00 Parent No.: 2006 05 - 271.00	I-265	.500	IMPROVE I-265/KY-146 (LAGRANGE RD) INTERCHANGE AS RECOMMENDED BY KIPDA'S INTERCHANGE STUDY. Milepoints: From:30 To: 30.5 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT IM C 2010 $1,500,000 Total $1,500,000
JEFFERSON	2006 05 - 284.00 Parent No.: 2006 05 - 284.00	KY-841	.800	IMPROVE KY-841/STONESTREET ROAD INTERCHANGE AS RECOMMENDED BY KIPDA'S INTERCHANGE STUDY. Milepoints: From:2.7 To: 3.5 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT STP C 2010 $360,000 Total $360,000
JEFFERSON	2006 05 - 286.00 Parent No.: 2006 05 - 286.00	I-64	.700	IMPROVE I-64/KY-913 (BLANKENBAKER RD) INTERCHANGE AS RECOMMENDED BY KIPDA'S INTERCHANGE STUDY. Milepoints: From:16.8 To: 17.55 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT IM C 2010 $1,920,000 Total $1,920,000
JEFFERSON	2002 05 - 320.20 Parent No.: 2000 05 - 320.00	KY-22	.520	IMPLEMENT TRAFFIC FLOW IMPROVEMENT FROM CHAMBERLAIN LANE TO KY-1694. (LOCAL PARTICIPATION)(2002BOPC)(TO BE LET WITH 5-320.30 AND 5-320.40)(TO BE LET BY KYTC). Milepoints: From:4.03 To: 4.42 Purpose and Need: SAFETY / SAFETY(P)	FUNDING PHASE YEAR AMOUNT SP C 2010 $6,500,000 Total $6,500,000
JEFFERSON	2004 05 - 320.40 Parent No.: 2000 05 - 320.00	KY-22	.200	RECONSTRUCT KY-22 FROM HITT ROAD TO MURPHY LANE. (DESIGN AND ROW BY AGREEMENT WITH METRO LOUISVILLE; UTILITIES AND CONSTRUCTION BY KYTC) (TO BE LET WITH 5-320.20 AND 5-320.30)(06CCN) (2004BOPC)(08CCR) Milepoints: From:5.185 To: 5.639 Purpose and Need: RELIABILITY / MINOR WIDENING(O)	FUNDING PHASE YEAR AMOUNT SPB C 2010 $1,460,000 Total $1,460,000


Legend
MAJOR RIVER BRIDGE MAINTENANCE
BRIDGE REPLACEMENT PROGRAM
LANDSLIDE REPAIR
WEIGH STATION & REST AREA REHAB
ROCKFALLS
SAFETY PROGRAMS
OTHER PROJECTS
Project ID Route
Type Work
PROJECT INFORMATION
5-972.00 US-42
SAFETY-HAZARD ELIM(P)
5-320.20 KY-22
SAFETY(P)
5-320.40 KY-22
MINOR WIDENING(O)
5-1049.00 CR-1010C
BRIDGE REPLACEMENT(P)
5-1048.00 CS-1020C
BRIDGE REPLACEMENT(P)
5-367.00
NEW ROUTE(O)
5-353.00 CR-1006C
MINOR WIDENING(O)
5-344.03 KY-1747
RECONSTRUCTION(O)
5-208.00 US-60
SAFETY(P)
5-344.01 KY-1747
RECONSTRUCTION(O)
5-254.00 KY-1747
SAFETY(P)
5-3013.00 KY-155
BIKE/PED FACIL(O)
5-446.00 KY-155
SAFETY(P)
5-464.00 KY-155
MATCHED FED FUNDS(O)
5-8203.00 KY-1819
RECONSTRUCTION(O)
5-1047.00 CR-1037H
BRIDGE REPLACEMENT(P)
5-264.10 US-31E
SAFETY(P)
5-122.00 KY-1065
SAFETY(P)
5-404.01
NEW ROUTE(O)
5-8401.00 KY-2053
NEW ROUTE(O)
5-8513.00 KY-22
SAFETY(P)
5-371.11 KY-22
SAFETY(P)
5-371.13 KY-22
SAFETY(P)
5-371.14 KY-22
SAFETY(P)
5-371.12 KY-22
SAFETY(P)
5-371.15 KY-22
SAFETY(P)
5-371.16 CS-2458C
SAFETY(P)
5-437.01 KY-907
MAJOR WIDENING(O)
5-1061.00 CR-1019L
BRIDGE REPLACEMENT(P)
5-8414.00 CS-1040F
RELOCATION(O)
5-8105.00 CR-1007G
MINOR WIDENING(O)
5-247.70 KY-1450
MINOR WIDENING(O)
5-247.50 KY-1450
MINOR WIDENING(O)
5-8506.00 KY-1931
SAFETY(P)
5-8408.00 KY-1931
MINOR WIDENING(O)
5-323.01 KY-1931
MAJOR WIDENING(O)
5-323.10 KY-1931
SAFETY(P)
5-8400.00 KY-2053
NEW ROUTE(O)
5-8403.00 KY-841
ENVIRO MITIGATION(P)
5-284.00 KY-841
SAFETY(P)
5-8501.00 KY-2055
RECONSTRUCTION(O)
5-8503.00 KY-2055
MAJOR WIDENING(O)
5-8504.00 CS-1078K
TRANSP ENHANCEMENT(P)
5-8502.00 KY-1020
MAJOR WIDENING(O)
5-443.10 KY-2053
RECONSTRUCTION(O)
5-8205.10 KY-2053
& 5-8611.00
MINOR WIDENING(O)
5-403.00 CR-1002M
MINOR WIDENING(O)
5-443.20 KY-2053
RECONSTRUCTION(O)
5-247.20 KY-1450
MAJOR WIDENING(O)
5-8010.00 KY-1450
MAJOR WIDENING(O)
5-8205.20 KY-2053
& 5-8612.00
MINOR WIDENING(O)
Jefferson County/Louisville
Biennial Highway Plan Projects
Outside I-264

Appendix C – Transportation Improvement Program (TIP) Listing

Kentucky Comprehensive TIP List

Project Name	2nd Name	Description	State ID	KIPDA ID	County	Contact	Year	Phase	Federal	Other	Total	Funding
KY 393		Relocate and widen KY 393 from 2 to 3 lanes (3rd lane will be a center turn lane) from I-71 to north of KY 146 (LaGrange Road). KY 393 reconstruct from northern ramp of I-71 to north of KY 146 (stations 10+100 to 12+100). Project length is 0.9 miles.	00234.00	147	Oldham	KYTC						
							2005	ROW	$4,500,000	$0	$4,500,000	STP-ST
							2006	U	$0	$2,100,000	$2,100,000	State
							2011	C	$0	$9,310,000	$9,310,000	State
							Total		$4,500,000	$11,410,000	$15,910,000	
KY 480		Widen KY 480 from 3 to 5 lanes (3rd lane is presently a center turn lane—project adds a travel lane in each direction) from I-65 to the Industrial Park (Omega Parkway in Cedar Grove Business Center), from 3 to 4 lanes from the Industrial Park (Omega Parkway in Cedar Grove Business Center) to Cedar Grove Elementary School, and from 2 to 3 lanes (3rd lane will be a center turn lane) from Cedar Grove Elementary School to Valley View Drive.	00391.00	1490	Bullitt	KYTC						
							2007	D	$0	$400,000	$400,000	State
							2007	C	$0	$4,400,000	$4,400,000	State
							Total		$0	$4,800,000	$4,800,000	
KY 480		Widen KY 480 (Cedar Grove Road) from the northbound I-65 ramps to Cedar Grove Elementary School.		1627	Bullitt	KYTC						
							2009	C	$4,720,000	$0	$4,720,000	State
							Total		$4,720,000	$0	$4,720,000	
KY 480		Widen from 2 to 3 lanes (3rd lane is center turn lane) from Cedar Grove Elementary to Valley View Drive. Project length is 0.6 mi.	00391.20	1816	Bullitt	KYTC						
							2010	C	$0	$2,500,000	$2,500,000	State
							Total		$0	$2,500,000	$2,500,000	
KY 524		Landslide repair on KY 524 (Westport Road) from Junction US 42 northwest, 1.0 mile.	05013.00	1726	Oldham	KYTC						
							2009	ROW	$0	$110,000	$110,000	State
							2010	U	$0	$80,000	$80,000	State
							2011	C	$0	$1,000,000	$1,000,000	State
							Total		$0	$1,190,000	$1,190,000	
KY 841		Improve KY 841/Stonestreet Road interchange as recommended by KIPDA's interchange study.	00284.00	1467	Jefferson	KYTC						
							2010	C	$360,000	$0	$360,000	STP-ST
							Total		$360,000	$0	$360,000	

PE - Preliminary Engineering, D - Design, ROW - Right-of-Way Acquisition, U - Utility Relocation, C - Construction, Oper - Operating

Appendix D – Project Identification Form

PIF Revised: Aug. 2004

KYTC Project Identification Form

Cycle Year: ____
Priority: L : ___ R: ___ D: ___
Tier: ____
Tier Rank: R: ___ D: ___
Overall Top Ten: R: ___ D: ___

Section I – General Information

Requested by:
Title/Organization: **KYTC D-5**
Date:

Form Completed by: **Stacey Burton**
Title/Organization: **KIPDA**
Date: **09/19/2008**

Revision 1 by:
Title/Organization:
Date:

Revision 2 by:
Title/Organization:
Date:

UPL Control #: **05 056 D0841 1.00** Co. #: **056**
Parent Control #: **05 056 D0841 1.00**
RSE Unique Number: **056 KY-841**

District: **5** County: Jefferson Route: **KY 841**
ADD: **KIPDA** MPO: **KIPDA-MPO** SUA: ____

Mode: **Highway** State System: **State Primary**
Type: **Spot Imprvmt** Funct'l Class:
Urb Other Frwy/Expwy

Project Length: 0.800 **Total Cost Estimate: $ ____**
(P: D: R: U: C:)

Possible Funding Sources (Check all that apply):
☒IM ☒NH ☒HES ☐BR ☒STP ☒SP ☐TE ☐CMAQ
☐PLH ☐Other: ____

Highway Networks (Check all that apply):
☐Non NHS ☒NHS
☒NN ☐Scenic Byway ☐Coal Haul ☐Bike ☐Forest
☐Defense ☐Strahnet ☐Ext. Wt. ☐ADHS ( )

Section II – Problem Statement

Route Number: **KY 841**
Beginning MP: **2.700**
Ending MP: **3.500**
Total Length: **0.800**

Primary Purpose: **Improve Existing System(Minor)**

(Use Report Year)	Original	Rev. 1	Rev. 2
AdequacyRating:	**76.00**: (**07**)	: ( )	: ( )
• CRF: (Year)	**0.09**: (**07**)	: ( )	: ( )
• IRI: (Year)	**151**: (**07**)	: ( )	: ( )
• V/SF: (Year)	**0.69**: (**07**)	: ( )	: ( )
Current ADT: (Year):	**33300**: (**07**)	: ( )	: ( )
Percent Trucks: (Year):	: ( )	: ( )	: ( )
Projected ADT (HDO): Year:	%Growth:	ADT:	

Please provide a clear problem statement for this project:

KY 841 from MP 2.700 to MP 3.500 is located in southwestern Jefferson County. This segment has a composite adequacy rating of 76.00; a CRF of 0.09; and IRI of 151; and, a V/SF of 0.69. A study was commissioned of select interchanges and was administered by the Kentucky Transportation Cabinet in 2005. In the study, it was noted that the ramps at this interchange have a LOS F at peak hour, and in the evening peak hour, congestion can back up onto KY 841 from the ramp.

Section III – Project Description

Project Description Narrative:

Improve KY 841/Stonestreet Road interchange as recommended by KIPDA's interchange study.

Regional Goals/Objectives Addressed: **1. Improve traffic flow on roadways during peak travel hours. 2. Improve air quality. 3. Improve mobility within designated freight corridors. 4. Improve safety on roadways.**

Section IV – Project Area Information:

1. Miscellaneous Roadway Conditions

Access Control:	Existing: **Full** Proposed: **Full**	Median Type:	Existing: **Depressed** Proposed: **Depressed**	Width: **46** Width: **46**
Lane No./Width:	Existing: **4/12** Proposed: **4/12**	Shoulders:	Existing: **Concrete** Proposed: **Concrete**	Width: **10** Width: **10**
No. of Bridges:	Existing: ____ Proposed: ____	Other Improvement Projects in Area:	☐None ☐SYP ☐Resurface ☒Other **KIPDA ID# 1467**	

Comments: **Project has been identified in the current long-range transportation plan: ID# 1467**

2. Right of Way

Avg. Width: Existing: ____ Source: ☐ HIS ☐Plans ☐Microfilm ☐Other ____

Current Primary Use: ☐Industrial ☐Commercial ☒Residential ☒Farmland ☐Other: ____

☐ No ☐ Yes Project may require additional R/W. | Possible Relocations : Homes: ____ Businesses: ____

Comments:

3. Utilities

Existing Utilities: ☐Power ☐Gas ☐Telephone ☐Cable ☐Sewer ☐ Water ☐ ITS ☐None ☐ Other: ____

☐ No ☐ Yes Project may require Utility Relocations. | Comments:

4. Environmental Impacts

(Check all that apply):

☐Blueline Streams ☐Wetlands ☐Floodplain ☐Wildlife Managed Areas ☐Historic Properties
☐Cemeteries ☐Schools ☐Churches ☐Endangered Species ☐Public Land/Park
☐Noise Impact ☐Arch. Sites ☐NR Properties ☐Potential NR Properties ☐Other:

☐ Potential Contaminated sites: ☐ Gas Stations ☐ Landfills ☐ Auto Repair ☐ Junkyards ☐Other

Comments:

5. Air Quality

☐No ☒Yes Project is located in a Maintenance or Nonattainment Area ☒ Ozone ☒ PM 2.5

☒No ☐Yes Project adds through lane capacity

☒No ☐Yes Project results from a Congestion Management Plan

☒No ☐Yes Project is included in TIP/STIP TIP Page # STIP Page #

Comments:

6. Economic Impacts

☐No ☒Yes Planning/Zoning Regulations exist in Community | ☐No ☐Yes Project may affect established Business, Commercial or Industrial Districts.

☒ No ☐ Yes This project has economic impacts on regional/local economy:
☐ Development ☐Tax Revenues ☐Employment Opportunity ☐Retail Sales ☐ Other
Please Describe:

☒ No ☐ Yes This project provides direct access to major points of interest:
☐ Nat'l/State Parks ☐Monuments ☐Historic Sites ☐Amusement Parks ☐US Public Land ☐ Other
Please Describe:

☒ No ☐ Yes This project provides direct access to major traffic generators:
☐ Shopping Centers ☐Schools ☐Industries ☐Military Installations ☐ Other
Please Describe:

7. Multimodal Opportunities	This project is a candidate for: (check all that apply)	☐ Bicycle Paths ☐ Sidewalks ☐ Shared-Use Paths ☐ Park/Ride Lots ☒ N/A
	This project improves direct access to: (check all that apply)	☐ Airports ☐ Railways ☐ Riverports ☒ Trucking Routes ☐ N/A
	Type of Public Transportation available:	☐ Fixed Route ☐ Demand Response
	Comments:	
8. Social Impacts	This project may affect: (Check all that apply)	☐ Neighborhood or Community Cohesion ☐ Travel Patterns (Vehicular, commuter, bicycle, pedestrian) ☐ Household Relocations ☐ Elderly, disabled, nondrivers, minorities, low-income persons ☒ No adverse effects to neighborhoods apparent.
	Comments/Impact Descriptions:	

Section V – Cost Estimate Information (to be completed by Hwy District Office):

Cost Estimate by Phase:

Phase	Original Estimate	By:	Revision 1	Date	By:	Revision 2	Date	By:
Planning								
Design								
ROW								
Utilities								
Construction								
Total Cost								

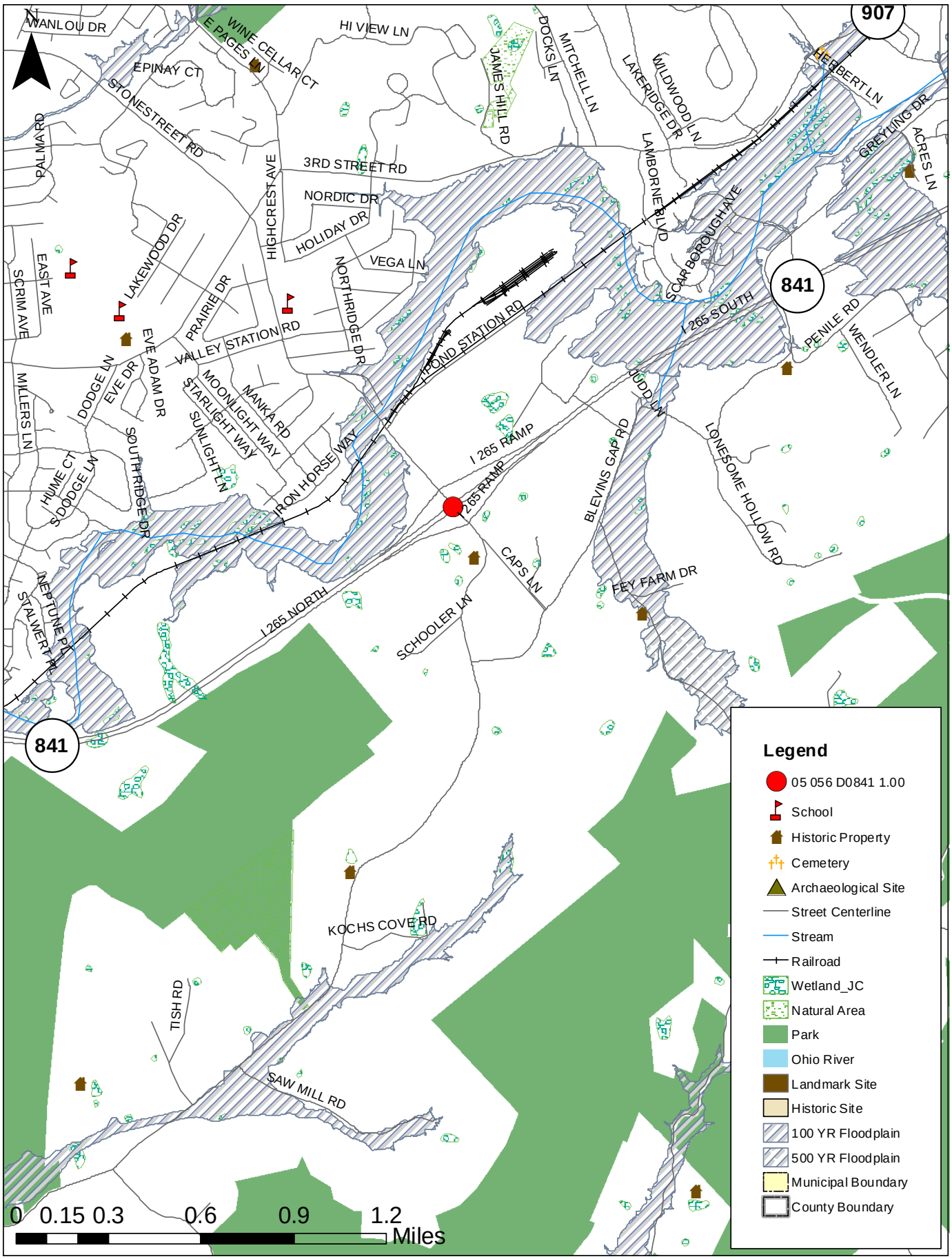
Estimate Procedure Used:

Original Estimate:	Revision 1:	Revision 2:
☐ Per Mile@ $ _____ Terrain: _____	☐ Per Mile@ $ _____ Terrain: _____	☐ Per Mile@ $ _____ Terrain: _____
☐ Detailed Estimate with Calculations Attached	☐ Detailed Estimate with Calculations Attached	☐ Detailed Estimate with Calculations Attached
Estimate Assumptions:	Estimate Assumptions:	Estimate Assumptions:
Estimate Class: _____	Estimate Class: _____	Estimate Class: _____

Section VI – Attachments:

The following items are attached to this document: ☒ Location Map ☒ Photograph(s) ☐ Other:

Comments:



Filename: 05 056 D0841 1^00

Figure 1: From Stonestreet Road to KY 841

Figure 2: From KY 841 to Stonestreet Road

Figure 3: Looking north at the KY 841/Stonestreet Road interchange

Figure 4: Looking north at Stonestreet Road with the KY 841 overpass

Figure 5: Vehicles accessing KY 841 from Stonestreet Road

Figure 6: Vehicles accessing Stonestreet Road from KY 841

Figure 7: Ramp from Stonestreet Road to KY 841

Figure 8: Pavement condition on Stonestreet Road

Figure 9: Looking south at Stonestreet Road and the KY 841 overpass

Figure 10: Looking south at Stonestreet Road and the KY 841 overpass

Appendix E – Traffic Count Data

Kentucky Traffic Counts

Route: KY 841 **Street:** GENE SNYDER FREEWAY

From MP: 0.000 **At:** US 31W (DIXIE HIGHWAY)

To MP: 3.067 **At:** STONE STREET ROAD OVERPASS

District: 5
County: JEFFERSON
City: LOUISVILLE

Last Actual Count:
31,964 **in** 2007

Station ID: G80 **Station Cnty:** JEFFERSON

Station Type: Rest Areas(RtSuffix=RA) & Ramps(RtSuffix=RP)

Functional Class: URBAN - Other Freeways & Expressways

New Road Year:
Impact Year:

Year	Count	Type
2011	36,500	Computer Estimate
2010	35,500	Computer Estimate
2009		
2008		
2007	32,000	Actual Count
2006	30,400	Actual Count
2005	30,700	Actual Count
2004	33,000	Actual Count
2003	29,900	Actual Count
2002		
2001		
2000	26,700	Actual Count
1999		
1998		
1997		
1996		
1995		
1994		
1993		
1992		
1991	18,400	Actual Count
1990	17,600	Actual Count
1989	18,900	Actual Count
1988		
1987		
1986	12,500	Actual Count
1985	9,240	Actual Count
1984	9,240	Actual Count
1983		
1982		
1981		
1980		
1979		
1978		
1977		
1976		
1975		
1974		
1973		
1972		
1971		
1970		

Kentucky Traffic Counts

1969
1968
1967
1966
1965

Kentucky Traffic Counts

Route: KY 841 **Street:** GENE SNYDER FREEWAY

From MP: 3.067 **At:** STONE STREET ROAD OVERPASS

To MP: 6.034 **At:** KY 1865 (NEW CUT RD) OVERPASS

District: 5
County: JEFFERSON
City: LOUISVILLE

Last Actual Count:
47,058 **in** 2007

Station ID: G79 **Station Cnty:** JEFFERSON

Station Type: Rest Areas(RtSuffix=RA) & Ramps(RtSuffix=RP)

Functional Class: URBAN - Other Freeways & Expressways

New Road Year:
Impact Year:

Year	Count	Type
2011	54,100	Computer Estimate
2010	52,600	Computer Estimate
2009		
2008		
2007	47,100	Actual Count
2006	44,400	Actual Count
2005	45,800	Actual Count
2004	49,200	Actual Count
2003	45,400	Actual Count
2002		
2001		
2000	32,400	Actual Count
1999		
1998		
1997		
1996		
1995		
1994		
1993		
1992		
1991		
1990	23,600	Actual Count
1989	31,000	Actual Count
1988		
1987	22,000	Actual Count
1986	13,600	Actual Count
1985	11,500	Actual Count
1984	11,500	Actual Count
1983		
1982		
1981		
1980		
1979		
1978		
1977		
1976		
1975		
1974		
1973		
1972		
1971		
1970		

Kentucky Traffic Counts

1969
1968
1967
1966
1965

Kentucky Traffic Counts

Route: CR 1003 L **Street:** STONESTREET ROAD

From MP: 1.210 **At:** KY 907 (THIRD STREET ROAD)

To MP: 2.517 **At:** KY 841 SOUTH RAMP

Station ID: 701 **Station Cnty:** JEFFERSON

Station Type: Full Coverage

Functional Class: URBAN - Minor Arterial

District: 5

County: JEFFERSON

City: LOUISVILLE

Last Actual Count:
17,766 **in** 2009

New Road Year:

Impact Year:

Year	Count	Type
2011	18,800	Computer Estimate
2010	18,300	Computer Estimate
2009	17,800	Actual Count
2008		
2007		
2006	15,200	Actual Count
2005		
2004		
2003		
2002		
2001	15,000	Actual Count
2000		
1999		
1998		
1997		
1996		
1995		
1994		
1993		
1992		
1991		
1990		
1989		
1988		
1987		
1986	4,570	Actual Count
1985		
1984		
1983		
1982		
1981		
1980		
1979		
1978		
1977		
1976		
1975		
1974		
1973		
1972		
1971		
1970		

Kentucky Traffic Counts

1969
1968
1967
1966
1965

Kentucky Traffic Counts

Route: CR 1003 L **Street:** STONESTREET ROAD

From MP: 2.517 **At:** KY 841 SOUTH RAMP

To MP: 3.008 **At:** BLEVINS GAP ROAD

Station ID: 538 **Station Cnty:** JEFFERSON

Station Type: Full Coverage

Functional Class: URBAN - Collector

District: 5

County: JEFFERSON

City: LOUISVILLE

Last Actual Count:
2,096 **in** 2008

New Road Year:

Impact Year:

Year	Count	Type
2011	2,300	Computer Estimate
2010	2,240	Computer Estimate
2009		
2008	2,100	Actual Count
2007		
2006		
2005	2,170	Actual Count
2004		
2003		
2002		
2001	2,280	Actual Count
2000		
1999		
1998		
1997		
1996		
1995		
1994		
1993		
1992		
1991		
1990		
1989		
1988		
1987		
1986	1,530	Actual Count
1985		
1984		
1983		
1982	1,010	Actual Count
1981		
1980		
1979		
1978		
1977		
1976		
1975		
1974		
1973		
1972		
1971		
1970		

Kentucky Traffic Counts

1969
1968
1967
1966
1965

Appendix F – Collision Data

KY 841 COLLISION DATA (BMP 2.0 to EMP 4.5)											
MILEPOINT DERIVED	COLLISION DATE	COLLISION TIME	MOTOR VEHICLES INVOLVED	UNITS INVOLVED	KILLED	INJURED	WEATHER	ROADWAY CONDITION	MANNER OF COLLISION	ROADWAY CHARACTER	LIGHT CONDITION
2.255	10/23/2010	1609	2	2	1	0	CLEAR	DRY	SIDESWIPE-SAME DIRECTION	STRAIGHT & HILLCREST	DAYLIGHT
2.321	3/22/2011	638	1	1	0	0	CLOUDY	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DARK-HWY LIGHTED/ON
2.409	3/10/2011	1100	2	2	0	1	RAINING	WET	ANGLE	STRAIGHT & LEVEL	DAYLIGHT
2.487	12/4/2010	845	1	1	0	0	SNOWING	SNOW/SLUSH	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
2.964	4/30/2011	930	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & GRADE	DAYLIGHT
2.977	8/10/2010	1018	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
3.052	1/20/2011	1720	1	1	0	0	SNOWING	SNOW/SLUSH	SINGLE VEHICLE	STRAIGHT & GRADE	DAYLIGHT
3.098	8/19/2010	1713	2	2	0	2	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
3.167	10/22/2010	331	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DARK-HWY LIGHTED/ON
3.401	3/29/2011	1716	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
3.438	9/14/2010	940	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & HILLCREST	DAYLIGHT
3.478	1/20/2011	1715	2	2	0	0	SNOWING	SNOW/SLUSH	ANGLE	STRAIGHT & LEVEL	DARK-HWY NOT LIGHTED
3.544	11/13/2010	429	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	CURVE & HILLCREST	DARK-HWY LIGHTED/ON
3.573	1/21/2011	1531	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & GRADE	DAYLIGHT
3.598	3/22/2011	1051	2	2	0	0	CLOUDY	DRY	ANGLE	STRAIGHT & HILLCREST	DAYLIGHT
3.681	1/20/2011	1745	1	1	0	0	SNOWING	SNOW/SLUSH	SINGLE VEHICLE	STRAIGHT & GRADE	DARK-HWY NOT LIGHTED
3.692	1/20/2011	1730	1	1	0	0	SNOWING	SNOW/SLUSH	SINGLE VEHICLE	STRAIGHT & GRADE	DARK-HWY NOT LIGHTED
3.712	2/13/2011	405	2	2	0	0	CLEAR	DRY	SIDESWIPE-OPPOSITE DIRECTION	STRAIGHT & HILLCREST	DARK-HWY LIGHTED/OFF
3.727	9/3/2010	1411	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
4.016	6/20/2010	209	2	2	0	0	CLEAR	DRY	SIDESWIPE-SAME DIRECTION	STRAIGHT & LEVEL	DARK-HWY NOT LIGHTED
4.149	11/24/2010	1734	2	2	0	0	CLOUDY	WET	SIDESWIPE-SAME DIRECTION	STRAIGHT & LEVEL	DARK-HWY LIGHTED/OFF
4.178	5/20/2011	1520	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
4.22	1/10/2011	1615	1	1	0	0	CLOUDY	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
4.232	3/15/2011	754	1	1	0	0	RAINING	WET	SINGLE VEHICLE	STRAIGHT & LEVEL	DAWN
4.452	12/28/2010	1204	2	2	0	0	CLEAR	DRY	SIDESWIPE-SAME DIRECTION	STRAIGHT & LEVEL	DAYLIGHT

Stonestreet Road Collision Data (BMP 1.5 to EMP 3.0)											
MILEPOINT DERIVED	COLLISION DATE	COLLISION TIME	MOTOR VEHICLES INVOLVED	UNITS INVOLVED	KILLED	INJURED	WEATHER	ROADWAY CONDITION	MANNER OF COLLISION	ROADWAY CHARACTER	LIGHT CONDITION
1.503	6/7/2008	1645	1	1	0	0	CLOUDY	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
1.534	4/15/2010	1740	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
1.559	5/6/2010	1537	2	2	0	0	CLEAR	DRY	SIDESWIPE-OPPOSITE DIRECTION	STRAIGHT & LEVEL	DAYLIGHT
1.601	10/14/2009	2030	2	2	0	2	CLOUDY	DRY	ANGLE	STRAIGHT & LEVEL	DARK-HWY LIGHTED/OFF
1.622	6/1/2011	1300	2	2	0	1	CLEAR	DRY	REAR END	STRAIGHT & GRADE	DAYLIGHT
1.623	10/23/2008	2100	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DARK-HWY NOT LIGHTED
1.623	5/15/2010	1240	2	2	0	0	CLOUDY	DRY	ANGLE	STRAIGHT & GRADE	DAYLIGHT
1.625	8/27/2010	955	2	2	0	2	CLEAR	DRY	ANGLE	STRAIGHT & LEVEL	DAYLIGHT
1.627	3/30/2009	1139	2	2	0	0	CLEAR	DRY	ANGLE	STRAIGHT & LEVEL	DAYLIGHT
1.635	12/21/2010	2221	2	2	0	0	CLOUDY	WET	REAR END	STRAIGHT & LEVEL	DARK-HWY LIGHTED/ON
1.759	8/27/2009	548	2	2	0	1	CLEAR	DRY	ANGLE	CURVE & LEVEL	DARK-HWY NOT LIGHTED
1.768	1/8/2009	1025	2	2	0	1	CLEAR	DRY	ANGLE	CURVE & GRADE	DAYLIGHT
1.768	5/26/2009	1350	2	2	0	0	CLEAR	DRY	ANGLE	CURVE & GRADE	DAYLIGHT
1.793	4/5/2010	1925	2	2	0	2	CLEAR	DRY	HEAD ON	CURVE & GRADE	DAYLIGHT
1.795	4/14/2011	1047	2	2	0	0	CLEAR	DRY	REAR END	CURVE & LEVEL	DAYLIGHT
1.799	6/14/2010	1830	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
1.825	6/7/2009	1630	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & GRADE	DAYLIGHT
1.929	3/4/2010	750	2	2	0	2	CLEAR	DRY	HEAD ON	CURVE & LEVEL	DAYLIGHT
2.024	8/25/2009	1608	1	1	0	1	CLEAR	DRY	SINGLE VEHICLE	CURVE & LEVEL	DAYLIGHT
2.04	5/2/2011	1709	2	2	0	0	RAINING	WET	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.091	2/8/2010	905	2	2	0	0	CLOUDY	ICE	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.289	9/13/2010	1447	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.309	12/8/2009	840	2	2	0	0	CLOUDY	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.328	5/19/2010	745	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.341	6/19/2010	1315	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT

2.366	5/12/2009	1730	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & GRADE	DAYLIGHT
2.372	1/21/2009	1538	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.372	11/16/2009	927	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.377	9/25/2009	1003	2	2	0	0	RAINING	WET	REAR END	STRAIGHT & GRADE	DAYLIGHT
2.398	7/24/2009	1507	2	2	0	0	CLEAR	DRY	REAR END	STRAIGHT & LEVEL	DAYLIGHT
2.436	12/19/2009	1049	2	2	0	0	CLOUDY	WET	OPPOSING LEFT TURN	STRAIGHT & LEVEL	DAYLIGHT
2.517	8/26/2008	1001	2	2	0	3	CLEAR	DRY	ANGLE	STRAIGHT & GRADE	DAYLIGHT
2.521	11/10/2008	1627	2	2	0	2	CLOUDY	DRY	ANGLE	STRAIGHT & LEVEL	DAYLIGHT
2.548	9/13/2010	1740	1	1	0	0	CLEAR	DRY	SINGLE VEHICLE	STRAIGHT & LEVEL	DAYLIGHT
2.652	1/19/2009	230	1	1	0	1	CLEAR	ICE	SINGLE VEHICLE	CURVE & HILLCREST	DARK-HWY LIGHTED/OFF

Appendix G – 2005 KIPDA Interchanges Study

9.0 KY 841 / STONE STREET ROAD INTERCHANGE

9.1 INTRODUCTION AND STUDY AREA

The study area for the KY 841 / Stone Street Road interchange consists of the intersections listed below. Refer to Figure 9-1 for the limits of the study area.

1. Stone Street Road / KY 841 Eastbound Ramps
2. Stone Street Road / KY 841 Westbound Ramps

9.2 EXISTING CONDITIONS

Current Traffic Volumes and Traffic Patterns

The majority of traffic flow for this interchange is between the north and east directions. Traffic volumes are relatively low throughout the interchange, particularly the Stone Street Road / KY 841 Eastbound Ramps intersection which has low traffic volumes except for the southbound left-turn movement onto KY 841 eastbound.

Geometrics / Right-of-way

An evaluation of the existing interchange features revealed the following:

- The interchange is a simple diamond without traffic signals.
- There is a railroad line that crosses Stone Street north of the interchange, but it appears to have minimal affect on the interchange operations.
- The exit ramps are single lane ramps, but the westbound ramp widens to two lanes 450 feet before the intersection (the eastbound exit ramp flares at the intersection).

Land Use, Future Development, and Historic Traffic Growth

In the immediate vicinity of the interchange, there is limited development. The topography around the interchange includes some steep slope areas which may be a limiting factor for development in the area. An analysis of historic traffic volumes for KY 841 showed annual increases of approximately 6-7% between 1984 and 2004. Stone Street Road is not a state highway; therefore historic volume data was not available.

Traffic Operations / Level of Service Analysis

Peak period turning movement counts were conducted in October 2004. Follow-up field observations were conducted in February and April 2005. For the two key intersections, AM and PM peak hour volumes are shown on Figure 9-1. Existing levels of service and delay using the highway capacity manual method are shown on Table 9-1.

Table 9-1: 2004 Intersection Levels of Service for KY 841 / Stone Street Road

			AM		PM	
Intersection	**Type**	**Approach**	**Avg. Delay**	**LOS**	**Avg. Delay**	**LOS**
Stone Street Rd / KY 841 EB Ramps	Unsignalized	Eastbound Left	**372.2**	**F**	**145.0**	**F**
Stone Street Rd / KY 841 WB Ramps	Unsignalized	Westbound Left	23.3	C	18.3	C
		Westbound Right	12.2	B	**62.9**	**F**

FIGURE 9-1: KY 841 & STONE STREET ROAD INTERCHANGE

KEY ISSUES / DEFICIENCIES

- Poor levels of service on ramps from KY 841 to Stone Street Road.
- Field observations showed that the right turn movement on the WB Exit Ramp backs up frequently in the PM peak period with queue lengths averaging 10 vehicles. Vehicles turning left from the WB Exit Ramp experienced some delay while waiting for an adequate clearance gap, however, no queue lengths longer than 3 or 4 vehicles were observed.

LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF TRAVEL WAY
- EXISTING RIGHT OF WAY
- SIGNALIZED INTERSECTION
- STOP-CONTROLLED INTERSECTION
- 67,800 2004 AVERAGE DAILY TRAFFIC
- 980 (1080) 2004 AM (PM) PEAK HOUR VOLUMES
- 3% T PERCENT TRUCKS
- B/E 2004 LEVEL OF SERVICE (AM/PM)

200 0 200 400 600

GRAPHIC SCALE IN FEET

While the HCM method shows the left turn from the eastbound off-ramp operates at LOS F, no significant queues or delays were observed at this intersection during the count and subsequent follow-up observation periods. Therefore, the traffic conditions at the eastbound ramp intersection do not appear to be as poor as indicated in Table 9-1. Furthermore, it is important to note that the volume of traffic turning left from the eastbound exit ramp is relatively modest at 20 vehicles in the AM peak hour and 59 vehicles in the PM peak hour.

The westbound ramp intersection also shows a poor level of service in the PM peak period for the right-turn movement. This poor operating condition was observed on more than one occasion, with average delays even longer than that shown on at least one occasion. Queue lengths for this movement were also evaluated using the HCM method to determine if the current storage is exceeded during peak periods. The current storage length for left and right turning vehicles is approximately 450 feet for each lane. The 95th percentile queue is shown on Table 9-2. The calculated queue length exceeds the storage for the WB right turn in the PM peak. Field observations performed on February 16 and 17 confirmed that vehicles back up to near the KY 841 mainline for the right turn onto Stone Street (but were never observed backing onto the mainline). This occurrence was not observed on every weekday that field staff was present, but was observed on more than one occasion. The delay during these times was greater than that indicated by the highway capacity software in Table 9-1. There was little delay or queuing observed for westbound left turning vehicles.

Table 9-2: Queue Length Evaluation for Stone Street Road / KY 841 WB Ramps Intersection

Approach / Movement	Design Hour	95th Percentile Queue	Queue Length (ft)	Available Storage Length (ft)	Notes
WB Right	AM	2.8	70	450	Does **NOT** exceed available storage
	PM	22.5	563	450	**EXCEEDS** available storage

Safety / Crash Analysis

The crash analysis for KY 841 did not show a crash rate problem for that highway. Detailed crash information was not available for Stone Street Road since it is a local road. Lines-of-sight at the two intersections appear to be adequate.

Key Issues / Deficiencies

Based on the existing conditions analysis, the key issues / deficiencies are:

- Poor operating conditions and long delays at the study intersections, especially on the westbound exit ramp from KY 841 to Stone Street Road.
- Field observations showed that the right turn movement on the westbound exit ramp backs up frequently in the PM peak period.
- Vehicles turning left from the eastbound exit ramp experienced some delay while waiting for an adequate clearance gap; however, queue lengths were very short if present at all.

9.3 RANGE OF ALTERNATIVES

A number of potential improvement alternatives were developed to address the identified deficiencies. They include:

- **Alternative 1A** – Install traffic signal at the Stone Street Road / KY 841 eastbound off-ramp intersection
- **Alternative 1B** – Install traffic signal at the Stone Street Road / KY 841 westbound off-ramp intersection
- **Alternative 2** – Add a northbound auxiliary lane on Stone Street Road to better accommodate right turning traffic from the westbound KY 841 exit ramp. The right-turn would be converted from a STOP control to a free-flow movement with appropriate channelization and signage.
- **Alternative 4** – Extend the turn lanes on the KY 841 eastbound exit ramp to increase vehicle storage.

Figure 9-2 shows these alternatives on an aerial photo.

9.4 ANALYSIS AND EVALUATION OF ALTERNATIVES

Alternative 1A – Install Traffic Signal at Stone Street Road / KY 841 Eastbound Ramps

Traffic and Safety –

Level of Service Analysis – According to the HCS method, the eastbound left movement for the intersection experiences significant delay and poor level of service during the AM and PM peak periods. The addition of a signal would improve the levels of service to LOS C or better for all movements (LOS B overall).

Queue Length Analysis – There do not appear to be major queuing issues at this intersection today, though the HCM method does show 95th percentile queues extending back about 100 to 120 feet for the eastbound left. With the installation of a signal the maximum queue drops to 75 feet.

Signal Warrant Analysis – A traffic signal warrant evaluation was also performed to determine if the intersection meets or exceeds any of the MUTCD signal warrants. According to the MUTCD, there are eight warrants used to justify the installation of a traffic signal, four of which are relevant to this intersection. These four warrants are listed below along with a brief definition and a discussion of how they compare to the given conditions.

- Warrant 1: Eight-Hour Vehicular Volume – To satisfy this warrant, a minimum hourly volume must be exceeded for eight hours during an average day. Only four hours of data was collected during the original traffic count, therefore there is insufficient data to determine if the 8-hour warrant is met. If signalization of this

FIGURE 9-2: KY 841 & STONE STREET ROAD INTERCHANGE

ALTERNATIVES

- Alt. 1A - Install Traffic Signal at KY 841 EB Off-Ramp / Stone Street Road (Int. 1)
- Alt. 1B - Install Traffic Signal at KY 841 WB Off-Ramp / Stone Street Road (Int. 2)
- Alt. 2 - Construct NB Auxiliary Lane for Traffic Turning Right onto Stone Street Road from the WB KY 841 Off-Ramp
- Alt. 3 - Add Turn Lanes to KY 841 EB Off-Ramp

LEGEND

- EXISTING EDGE OF PAVEMENT
- EXISTING EDGE OF TRAVEL WAY
- EXISTING RIGHT OF WAY
- SIGNALIZED INTERSECTION
- STOP-CONTROLLED INTERSECTION

200 0 200 400 600

GRAPHIC SCALE IN FEET

intersection is selected as a recommended alternative, additional fill-in counts should be collected to provide justification for intersection signalization.

- Warrant 2: Four-Hour Vehicular Volume – For this analysis, the eastbound off-ramp approach was the minor street and Stone Street is the major street. The four hours of data obtained during the AM and PM traffic counts were used as the basis for this warrant analysis. Figure 4C-2 in the MUTCD was used as the threshold curve. The traffic volumes for all four hours did not plot above the threshold curve shown for an intersection with two lanes on the major approach and one lane on the minor approach. **Based on these traffic volumes, this warrant is not met.**
- Warrant 3: Peak Hour – For this warrant, traffic volumes during one hour must be such that they exceed the given threshold curve as shown on Figure 4C-4 in the MUTCD. From the traffic count data, the highest peak hour is from 7-8 AM. The traffic volumes during this hour plot below the threshold curve. **Therefore, this warrant is not satisfied.**
- Warrant 7: Crash Experience – This warrant is used when the primary reason for installing a signal is due to a history of severe and frequent crashes in the vicinity of the intersection. Because Stone Street Road is a local road, crash information was not available. As a result, there is insufficient data to determine if this warrant is met.

Impacts – There are no known adverse impacts associated with this alternative.

Costs – The estimated order of magnitude cost for this alternative is $125,000 in year 2005 dollars.

Overall, the benefit of this signal installation is small and it would likely increase overall intersection delay. Furthermore, it does not meet the two traffic volume warrants for which data is available. Therefore, this signal installation is not recommended.

Alternative 1B – Install Traffic Signal at Stone Street Road / KY 841 WB Ramps

Traffic and Safety –

Level of Service Analysis – The existing level of service analysis showed that the westbound right-turn movement experiences significant delay and a poor level of service in the PM peak period. Signalizing the intersection (using the same traffic volumes and intersection configuration) results in LOS C or better for all movements. Refer to Table 9-3 for more details.

Table 9-3: Alternative 1B Level of Service and Delay Comparison for Stone Street Road / KY 841 WB Ramps

Intersection	Scenario	Approach	AM Avg. Delay	AM LOS	PM Avg. Delay	PM LOS
Stone Street Rd / KY 841 WB Ramps	Existing Unsignalized	Westbound Left	23.3	C	18.3	C
		Westbound Right	12.2	B	**62.9**	**F**
	Signalized	Westbound	3.1	A	24.1	C
		Northbound	14.1	B	30.0	C
		Southbound	9.1	A	3.6	A
		Whole Int.	**7.5**	**A**	**17.1**	**B**

Queue Length Analysis – Based on the level of service analysis, the average delay is fairly low. However, given the single lane and the high right-turn volume the 95th percentile queue can still be expected to extend up the ramp past the end of the current left turn lane. Essentially, the signal will address the delay issue, but long queues may still build.

Signal Warrant Analysis – A traffic signal warrant evaluation was performed to determine if the intersection meets or exceeds any of the signal warrants as outlined in the Manual of Uniform Traffic Control Devices (MUTCD). The three warrants which are most relevant to this intersection are discussed below.

- Warrant 1: Eight-Hour Vehicular Volume – To satisfy this warrant, a minimum hourly volume must be exceeded for eight hours during an average day. Initially, only four hours of data was collected during the original traffic count. To determine if this warrant is met, a fill-in traffic count was conducted on March 22, 2005 from 9:00 AM to 4:00 PM. Assuming speeds in excess of 40 mph on Stone Street, the volumes exceed the reduced threshold values on Table 4C-1 for Condition A. **Therefore, this warrant is met** (assuming the high speed reduction).
- Warrant 2: Four-Hour Vehicular Volume – The westbound off-ramp is the minor street and Stone Street is the major street. The traffic volumes for the four highest hours plotted above the threshold curve (Figure 4C-2) for an intersection with one lane on the major approach and two lanes on the minor approach. **Based on these traffic volumes, this warrant is currently met.**
- Warrant 3: Peak Hour – For this warrant, traffic volumes during one hour must be such that they exceed the given threshold curve as shown on Figure 4C-4 in the MUTCD. From the traffic count data, the highest peak hour is from 4-5 PM. The traffic volumes during this hour plotted above the threshold curve. **Therefore, this warrant is satisfied.**

Community / Environmental Impacts – There are no known adverse impacts associated with this alternative.

Costs – The estimated order of magnitude cost for this alternative is $125,000 in year 2005 dollars.

Alternative 2 – Construct Northbound Through Lane for Traffic Turning Right onto Stone Street Road from the Westbound KY 841 Off-Ramp

Traffic and Safety – For this interchange, the westbound right turn movement carries the highest volume of traffic (in the PM peak period). This results in a poor level of service for this movement as well as long delays, and a queue length that exceeds the available storage for that lane. In an attempt to reduce delay and the queue lengths, the construction of a northbound auxiliary lane for westbound right turning traffic was proposed. This alternative would allow the right-turn movement to operate as a free-flow lane. Drivers would not have to wait for an acceptable gap in traffic to complete the turn. A drawback of this alternative is that pedestrians on that side of the roadway would have to cross a free-flow ramp, however few if any pedestrians were observed during the count periods. Overall, this option would improve the delay and level of service for the right-turn movement. Given the relatively modest cost, this alternative is recommended for additional more detailed examination and potential implementation.

Community / Environmental Impacts – Right-of-way is somewhat limited along Stone Street in this area, however the addition of a single auxiliary lane may be possible without further right-of-way acquisition. The existing residential driveways would be tied back into the widened roadway. There are no known environmental issues associated with the proposed project.

Costs – The estimated order of magnitude cost for this alternative is approximately $200,000 in year 2005 dollars.

Alternative 3 – Extend Turn Lanes on KY 841 Eastbound Off-Ramp

Traffic and Safety – According to the existing conditions level of service analysis, the eastbound left turn off of the ramp experiences poor levels of service (LOS F) and long average delay in both the AM and PM peak periods. Currently, the eastbound Off-ramp is one lane that flares out at the intersection approach to provide room for two vehicles (right and left turning traffic). The ramp could be widened to two lanes to provide a separate lane for the left turn movement and the right turn movement. This would provide additional capacity for vehicles turning left. Evaluation of traffic volumes on this ramp revealed that they are very low (the highest volume is 59 vehicles during the PM peak period for the left turn movement). Widening the ramp to provide additional storage will not improve intersection LOS and few queues were actually observed.

Impacts – There are no known adverse impacts associated with this alternative.

Costs – The estimated order of magnitude cost for this alternative is $130,000 in year 2005 dollars.

Again, this alternative seems unwarranted given the low ramp traffic volumes and lack of observed queues. It is therefore not recommended at this time.

9.5 SUMMARY EVALUATION AND COMPARISON OF ALTERNATIVES

A graphical summary evaluation of the proposed KY 841 / Stone Street Road interchange alternatives is provided in Table 9-4.

Table 9-4: KY 841 / Stone Street Road Alternative Summary Evaluation and Comparison Matrix

Alt.	Description	Traffic				Community / Environmental Impacts	Cost	**Recommendation**
		Congestion	Operations	Use	Safety			
1A	Install Traffic Signal at KY 841 EB Off-Ramp / Stone Street Road	◗	◗	◗	◗	●	●	**NO**
1B	Install Traffic Signal at KY 841 WB Off-Ramp / Stone Street Road	◗	◗	◗	◗	●	●	**NO**
2	Construct NB Through Lane for Traffic Turning Right onto Stone Street Road from the WB KY 841 Off-Ramp	●	●	●	◗	○	◗	**YES**
3	Add Turn Lanes to KY 841 EB Off-Ramp	◗	◗	○	◗	●	●	**NO**

Ratings Guide: ○ = Poor ◗ = Fair ● = Good

9.6 RECOMMENDATION AND PHASING

For this interchange there is only one intersection that requires improvement: the Stone Street / KY 841 Westbound ramps intersection. To facilitate the right turn from the ramp onto Stone Street there are two possible options – install a signal or add the right turn into a northbound auxiliary lane. Of these the auxiliary lane appears to offer the best operating condition for this relatively undeveloped low traffic area, handling what is one of the two heaviest flows through the entire interchange. None of the other proposed projects are recommended at this time.

Appendix H – AASHTO's Minimum Guidelines for Freeways

Table 17 – AASHTO Minimum Guidelines

Area Type	Rural			Urban			Urban/Rural		
Design Element	Mainline	Ramps	Loops	Mainline	Ramps	Loops	Directional	Entrance	Exit
Design Speed (MPH) (507, 829, 830)	70	35	25	50	25	25	40		
Level of Service (508)	C			D					
Driving Lane Width (508, 842)	12'	15'	15'	12'	15'	15'			
Inside Shoulder Width (4-lane freeway & ramps) (509,514,517,842)	4'	2'-4'	2'-4'	4'	2'-4'	2'-4'	1'-6'		
Inside Shoulder Width (6-lane, Truck DDHV <=250) (509,514,517,842)				10'					
Inside Shoulder Width (6-lane, Truck DDHV > 250) (509,514,517,842)				12'					
Outside Shoulder Width (Truck DDHV <= 250) (509, 842)	10'	8'-10'	8'-10'	10'	8'-10'	8'-10'	8'-10'		
Outside Shoulder Width (Truck DDHV > 250) (509, 842)	12'			12'					
Depressed Median Width [1] (513)	36'			36'					
Over Freeway Vertical Bridge Clearance (510, 767)	16'-00"								
Bridge Width (Horizontal) ADT>2000 (390)	Traveled Lanes + shoulders (approach roadway width)								
Bridge Width (Horizontal) Length > 200' [2]	Traveled Lanes + 4' each side								
Design ADT (vehicles per day)	> 6,000	750-1,500		>6,000	750-1,500				
Clear Zone (Fill Slope 1V:4H or flatter) [3]	30'-46'	14'-18'		20'-28'	14'-18'				
Clear Zone (Cut Slope 1V:3H or flatter) [3]	22'-30'	14'-16'		14'-22'	14'-16'				
Superelevation (509)	+/- 8%								
Horizonal Curvature Minimum Radius (8% max SE) (161)	1820'	350'	170'	750'	170'	170'	465'		
Minimum Runoff (8% max SE) (174)	240'	155'	137'	192'	137'	137'	165'		
Minimum Runout (8% max SE) (174)	60'	39'	34'	48'	34'	34'	41'		
Maximum Grade (510, 833)	4%	5%-7%	5%-7%	5%	5%-7%	5%-7%	4%-6%		
Stopping Sight Distance (112)	730'	250'	155'	425'	155'	155'	305'		
Taper Ratio (849)								50:1	
Divergence Angle (853)									2%-5%

Note: Page number references from AASHTO's *A Policy on Geometric Design of Highways and Streets* are provided in parenthesis.

[1] AASHTO Draft *A Policy on Design Standards - Interstate System* calls for a minimum of 36' in rural areas, but page 513 of AAHSTO's *A Policy on Geometric Design of Highways and Streets* specifies 50'.

[2] This item is referenced in the AASHTO Draft *A Policy on Design Standards - Interstate System*

[3] Information on clear zones is provided in AASHTO's *Roadside Design Guide*.

Appendix I – Flood Insurance Rate Map

LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No base flood elevations determined.

ZONE AE Base flood elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); base flood elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Area of Special Flood Hazard formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Area to be protected from 1% annual chance flood by a Federal flood protection system under construction; no base flood elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no base flood elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); base flood elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

ZONE D Areas in which flood hazards are undetermined, but possible.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0015C

FIRM

FLOOD INSURANCE RATE MAP

FRANKLIN COUNTY, KENTUCKY AND INCORPORATED AREAS

PANEL 15 OF 205

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
FRANKLIN COUNTY	210280	0015	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 21073C0015C

EFFECTIVE DATE SEPTEMBER 28, 2007

Federal Emergency Management Agency

ZONE X	Areas determined to be outside the 0.2% annual chance floodplain.
ZONE D	Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

	1% annual chance floodplain boundary
	0.2% annual chance floodplain boundary
	Floodway boundary
	Zone D boundary
	CBRS and OPA boundary
	Boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths or flood velocities.
513	Base Flood Elevation line and value; elevation in feet*
(EL 987)	Base Flood Elevation value where uniform within zone; elevation in feet*

*Referenced to the North American Vertical Datum of 1988

A — A	Cross section line
23 — 23	Transect line
97°07′30", 32°22′30"	Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere
$^{42}76^{000m}$E	1000-meter Universal Transverse Mercator grid values, zone 16
600000 FT	5000-foot grid ticks: Kentucky State Plane coordinate system, Single zone (FIPSZONE 1600), Transverse Mercator
DX5510 ×	Bench mark (see explanation in Notes to Users section of this FIRM panel)
● M1.5	River Mile

MAP REPOSITORIES

Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
SEPTEMBER 28, 2007

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL

SEPTEMBER 28, 2007 – to update corporate limits, to change Base Flood Elevations, to add Base Flood Elevations, to change Special Flood Hazard Areas, to update map format, to update

...oral Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 1000'

500 0 1000 2000 FEET

METER

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0015C

FIRM

FLOOD INSURANCE RATE MAP

FRANKLIN COUNTY,
KENTUCKY
AND INCORPORATED AREAS

PANEL 15 OF 205

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

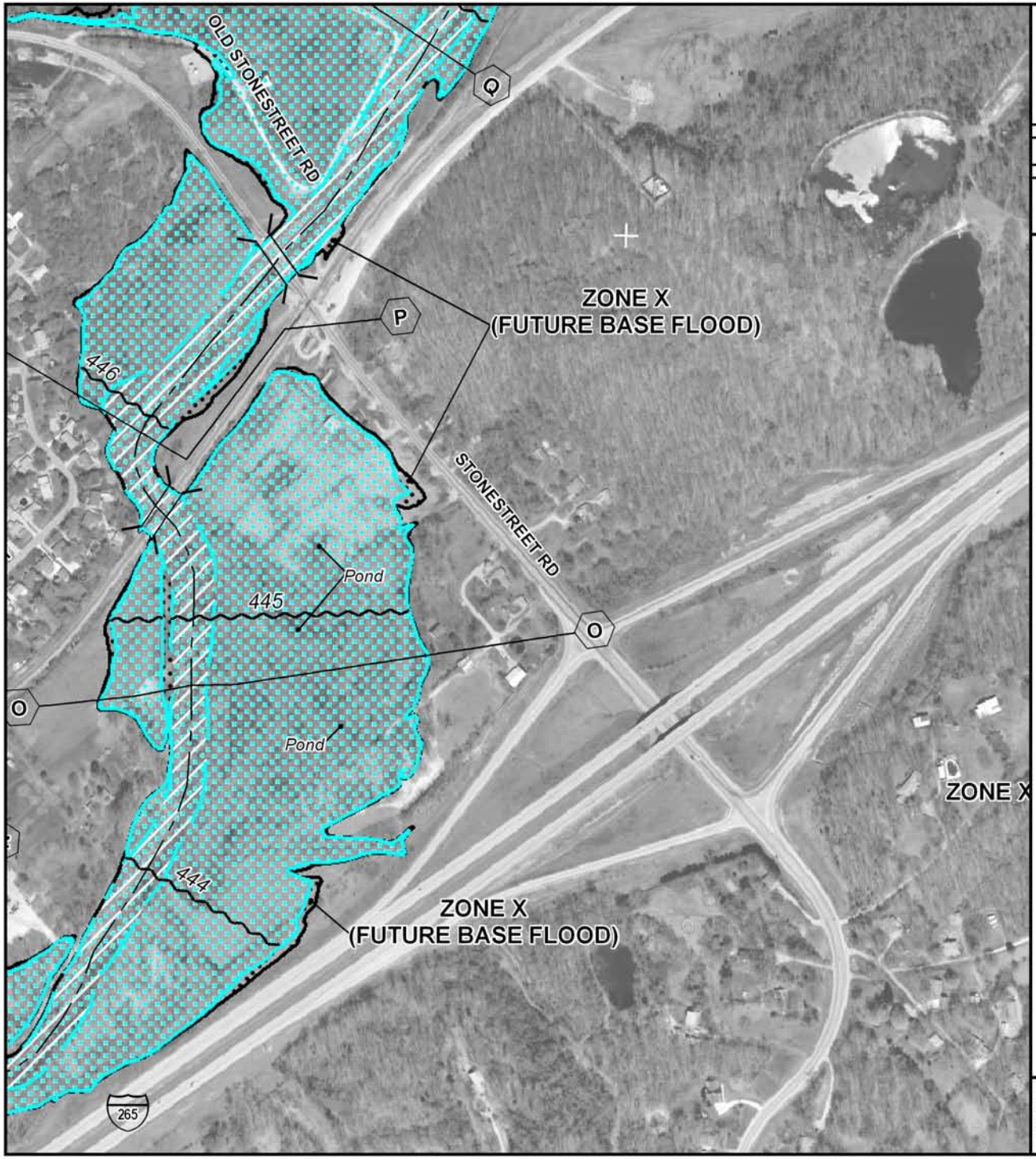
COMMUNITY	NUMBER	PANEL	SUFFIX
FRANKLIN COUNTY	210280	0015	C

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
21073C0015C

EFFECTIVE DATE
SEPTEMBER 28, 2007

Federal Emergency Management Agency



MAP SCALE 1" = 500'

0 500 1000 FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0106E

FIRM

FLOOD INSURANCE RATE MAP

METROPOLITAN GOVERNMENT OF

LOUISVILLE AND JEFFERSON COUNTY, KENTUCKY

AND INCORPORATED AREAS

PANEL 106 OF 144

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
LOUISVILLE-JEFFERSON COUNTY METRO GOVERNMENT	210120	0106	E

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
21111C0106E

MAP REVISED
DECEMBER 5, 2006

Federal Emergency Management Agency

Appendix J – Threatened and Endangered Species Reports

Species Information

Federal Threatened, Endangered, and Candidate Species observations for selected counties

Linked life history provided courtesy of NatureServe Explorer.
Records may include both recent and historical observations.
US Status Definitions Kentucky Status Definitions

List Federal Threatened, Endangered, and Candidate Species observations in 1 selected county.
Selected county is: Jefferson.

Scientific Name and Life History	Common Name and Pictures	Class	County	US Status	KY Status	WAP	Reference
Alosa alabamae	Alabama Shad	Actinopterygii	Jefferson	C	E	Yes	Reference
Cyprogenia stegaria	Fanshell	Bivalvia	Jefferson	LE	E	Yes	Reference
Falco peregrinus	Peregrine Falcon	Aves	Jefferson	PS:LE	E	Yes	Reference
Lampsilis abrupta	Pink Mucket	Bivalvia	Jefferson	LE	E	Yes	Reference
Myotis grisescens	Gray Myotis	Mammalia	Jefferson	LE	T	Yes	Reference
Myotis sodalis	Indiana Bat	Mammalia	Jefferson	LE	E	Yes	Reference
Nerodia erythrogaster neglecta	Copperbelly Water Snake	Reptilia	Jefferson	PS:LT	S	Yes	Reference
Obovaria retusa	Ring Pink	Bivalvia	Jefferson	LE	E	Yes	Reference
Oceanodroma castro	Band-rumped Storm-petrel	Aves	Jefferson	PS:C	N		Reference
Plethobasus cooperianus	Orangefoot Pimpleback	Bivalvia	Jefferson	LE	E	Yes	Reference
Pleurobema clava	Clubshell	Bivalvia	Jefferson	LE, XN	E	Yes	Reference
Potamilus capax	Fat Pocketbook	Bivalvia	Jefferson	LE	E	Yes	Reference
Pseudanophthalmus troglodytes	Louisville Cave Beetle	Insecta	Jefferson	C	T		Reference
Sternula antillarum athalassos	Interior Least Tern	Aves	Jefferson	LE	E	Yes	Reference

14 species are listed

Report of
Endangered, Threatened, and Special Concern Plants, Animals, and Natural Communities for Jefferson County, Kentucky

Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)

www.naturepreserves.ky.gov

Kentucky State Nature Preserves Commission
Key for County List Report

Within a county, elements are arranged first by taxonomic complexity (plants first, natural communities last), and second by scientific name. A key to status, ranks, and count data fields follows.

STATUS

KSNPC: Kentucky State Nature Preserves Commission status:

N or blank = none E = endangered T = threatened S = special concern H = historic X = extirpated

USESA: U.S. Fish and Wildlife Service status:

blank = none C = candidate LT = listed as threatened LE = listed as endangered
SOMC = Species of Management Concern

RANKS

GRANK: Estimate of element abundance on a global scale:

G1 = Critically imperiled
G2 = Imperiled
G3 = Vulnerable
G4 = Apparently secure
G5 = Secure
GH = Historic, possibly extinct
GX = Presumed extinct
GU = Unrankable
G#? = Inexact rank (e.g. G2?)
G#Q = Questionable taxonomy
G#T# = Infraspecific taxa (Subspecies and variety abundances are coded with a 'T' suffix; the 'G' portion of the rank then refers to the entire species)
GNR = Unranked
GNA = Not applicable

SRANK: Estimate of element abundance in Kentucky:

S1 = Critically imperiled
S2 = Imperiled
S3 = Vulnerable
S4 = Apparently secure
S5 = Secure
SH = Historic, possibly extirpated
SX = Presumed extirpated
SU = Unrankable
S#? = Inexact rank (e.g. G2?)
S#Q = Questionable taxonomy
S#T# = Infraspecific taxa
SNR = Unranked
SNA = Not applicable

Migratory species may have separate ranks for different population segments (e.g. S1B, S2N, S4M):
S#B = Rank of breeding population
S#N = Rank of non-breeding population
S#M = Rank of transient population

COUNT DATA FIELDS

OF OCCURRENCES: Number of occurrences of a particular element from a county. Column headings are as follows:

E - currently reported from the county
H - reported from the county but not seen for at least 20 years
F - reported from county & cannot be relocated but for which further inventory is needed
X - known to have extirpated from the county
U - reported from a county but cannot be mapped to a quadrangle or exact location.

The data from which the county report is generated is continually updated. The date on which the report was created is in the report footer. Contact KSNPC for a current copy of the report.

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 species of 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.

KSNPC appreciates the submission of any endangered species data for Kentucky from field observations. For information on data reporting or other data services provided by KSNPC, please contact the Data Manager at:

Kentucky State Nature Preserves Commission
801 Schenkel Lane
Frankfort, KY 40601
(502) 573-2886 (phone)
(502) 573-2355 (fax)
email: naturepreserves@ky.gov
internet: www.naturepreserves.ky.gov

						# of Occurrences				
County	**Taxonomic Group**	**Scientific name**	**Common name**	**Statuses**	**Ranks**	**E**	**H**	**F**	**X**	**U**
Jefferson	Vascular Plants	*Aristida ramosissima*	Branched Three-awn Grass	H /	G5 / SH	0	1	0	0	0
Jefferson	Vascular Plants	*Cabomba caroliniana*	Carolina Fanwort	T /	G3G5 / S2	0	1	0	1	0
Jefferson	Vascular Plants	*Castanea pumila*	Allegheny Chinkapin	T /	G5 / S2	0	1	0	0	0
Jefferson	Vascular Plants	*Dryopteris carthusiana*	Spinulose Wood Fern	S /	G5 / S3	0	0	1	0	0
Jefferson	Vascular Plants	*Heteranthera dubia*	Grassleaf Mud-plantain	S /	G5 / S3	0	1	0	0	0
Jefferson	Vascular Plants	*Leavenworthia exigua var. laciniata*	Kentucky Gladecress	E / C	G4T1T2 / S1S2	10	0	2	0	0
Jefferson	Vascular Plants	*Podostemum ceratophyllum*	Threadfoot	S /	G5 / S3	0	1	0	0	0
Jefferson	Vascular Plants	*Pontederia cordata*	Pickerel-weed	T /	G5 / S1S2	0	1	0	0	0
Jefferson	Vascular Plants	*Potamogeton illinoensis*	Illinois Pondweed	S /	G5 / S2	0	1	0	0	0
Jefferson	Vascular Plants	*Sagittaria graminea*	Grassleaf Arrowhead	T /	G5 / S1S2	0	2	0	0	0
Jefferson	Vascular Plants	*Solidago shortii*	Short's Goldenrod	E / LE	G1 / S1	0	0	0	1	0
Jefferson	Vascular Plants	*Stellaria longifolia*	Longleaf Stitchwort	S /	G5 / S2S3	1	0	0	0	0
Jefferson	Vascular Plants	*Trichostema setaceum*	Narrowleaved Bluecurls	E /	G5 / S1	1	0	0	0	0
Jefferson	Vascular Plants	*Trifolium stoloniferum*	Running Buffalo Clover	T / LE	G3 / S2S3	2	0	0	1	0
Jefferson	Vascular Plants	*Vallisneria americana*	Eelgrass	S /	G5 / S2S3	2	1	0	0	0
Jefferson	Vascular Plants	*Veratrum woodii*	Wood's Bunchflower	T /	G5 / S2	0	1	0	0	0
Jefferson	Vascular Plants	*Viola septemloba var. egglestonii*	Eggleston's Violet	S /	G4 / S3	5	0	0	0	0
Jefferson	Vascular Plants	*Vitis labrusca*	Northern Fox Grape	T /	G5 / S2S3	0	1	0	0	0
Jefferson	Aquatic Snails	*Leptoxis praerosa*	Onyx Rocksnail	S / SOMC	G5 / S3S4	0	1	0	0	0
Jefferson	Aquatic Snails	*Lithasia verrucosa*	Varicose Rocksnail	S / SOMC	G4Q / S3S4	1	0	0	0	0
Jefferson	Terrestrial Snails	*Webbhelix multilineata*	Striped Whitelip	T /	G5 / S1S2	1	0	0	0	0
Jefferson	Freshwater Mussels	*Alasmidonta marginata*	Elktoe	T / SOMC	G4 / S2	0	0	0	1	0
Jefferson	Freshwater Mussels	*Cumberlandia monodonta*	Spectaclecase	E / PE	G3 / S1	0	0	0	1	0
Jefferson	Freshwater Mussels	*Cyprogenia stegaria*	Fanshell	E / LE	G1Q / S1	0	0	0	1	0
Jefferson	Freshwater Mussels	*Epioblasma triquetra*	Snuffbox	E / PE	G3 / S1	0	0	0	1	0
Jefferson	Freshwater Mussels	*Hemistena lata*	Cracking Pearlymussel	X / LE	G1 / SX	0	0	0	1	0
Jefferson	Freshwater Mussels	*Lampsilis abrupta*	Pink Mucket	E / LE	G2 / S1	0	1	0	0	0
Jefferson	Freshwater Mussels	*Obovaria retusa*	Ring Pink	E / LE	G1 / S1	0	0	0	1	0

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences E	H	F	X	U
Jefferson	Freshwater Mussels	*Plethobasus cooperianus*	Orangefoot Pimpleback	E / LE	G1 / S1	0	0	0	1	0
Jefferson	Freshwater Mussels	*Plethobasus cyphyus*	Sheepnose	E / PE	G3 / S1	1	1	0	0	0
Jefferson	Freshwater Mussels	*Pleurobema clava*	Clubshell	E / LE	G2 / S1	0	2	0	0	0
Jefferson	Freshwater Mussels	*Pleurobema rubrum*	Pyramid Pigtoe	E / SOMC	G2G3 / S1	0	0	0	1	0
Jefferson	Freshwater Mussels	*Potamilus capax*	Fat Pocketbook	E / LE	G1G2 / S1	0	1	0	0	0
Jefferson	Freshwater Mussels	*Quadrula cylindrica cylindrica*	Rabbitsfoot	T / C	G3G4T3 / S2	0	0	0	1	0
Jefferson	Freshwater Mussels	*Simpsonaias ambigua*	Salamander Mussel	T / SOMC	G3 / S2S3	1	1	0	0	0
Jefferson	Freshwater Mussels	*Villosa lienosa*	Little Spectaclecase	S /	G5 / S3S4	0	1	0	0	0
Jefferson	Crustaceans	*Gammarus bousfieldi*	Bousfield's Amphipod	E / SOMC	G1 / S1	0	1	0	0	0
Jefferson	Crustaceans	*Orconectes jeffersoni*	Louisville Crayfish	E / SOMC	G1 / S1	12	9	0	0	0
Jefferson	Insects	*Calephelis borealis*	Northern Metalmark	T /	G3G4 / S2	0	2	0	0	0
Jefferson	Insects	*Nicrophorus americanus*	American Burying Beetle	X / LE	G2G3 / SX	0	0	0	1	0
Jefferson	Insects	*Pseudanophthalmus troglodytes*	Louisville Cave Beetle	T / C	G1 / S1	1	1	0	0	0
Jefferson	Insects	*Satyrium favonius ontario*	Northern Oak Hairstreak	S /	G4T4 / S2	0	0	1	0	0
Jefferson	Insects	*Speyeria idalia*	Regal Fritillary	H / SOMC	G3 / SH	0	0	0	1	0
Jefferson	Fishes	*Acipenser fulvescens*	Lake Sturgeon	E / SOMC	G3G4 / S1	0	1	0	0	0
Jefferson	Fishes	*Alosa alabamae*	Alabama Shad	E / SOMC	G3 / S1	0	1	0	0	0
Jefferson	Fishes	*Atractosteus spatula*	Alligator Gar	E / SOMC	G3G4 / S1	0	1	0	0	0
Jefferson	Fishes	*Ictiobus niger*	Black Buffalo	S /	G5 / S3	0	1	0	0	0
Jefferson	Fishes	*Lota lota*	Burbot	S /	G5 / S2	1	1	0	0	0
Jefferson	Fishes	*Noturus stigmosus*	Northern Madtom	S / SOMC	G3 / S2S3	1	0	0	0	0
Jefferson	Fishes	*Percopsis omiscomaycus*	Trout-perch	S / SOMC	G5 / S3	0	5	0	0	0
Jefferson	Reptiles	*Apalone mutica mutica*	Midland Smooth Softshell	S /	G5T5 / S3	1	0	0	0	0
Jefferson	Reptiles	*Clonophis kirtlandii*	Kirtland's Snake	T / SOMC	G2 / S2	19	5	0	0	1
Jefferson	Reptiles	*Nerodia erythrogaster neglecta*	Copperbelly Water Snake	S / SOMC	G5T3 / S3	0	1	0	0	0
Jefferson	Reptiles	*Ophisaurus attenuatus longicaudus*	Eastern Slender Glass Lizard	T /	G5T5 / S2	0	1	0	0	0

						# of Occurrences				
County	**Taxonomic Group**	**Scientific name**	**Common name**	**Statuses**	**Ranks**	**E**	**H**	**F**	**X**	**U**
Jefferson	Breeding Birds	*Accipiter striatus*	Sharp-shinned Hawk	S /	G5 / S3B,S4N	1	0	0	0	0
Jefferson	Breeding Birds	*Actitis macularius*	Spotted Sandpiper	E /	G5 / S1B	1	0	0	0	0
Jefferson	Breeding Birds	*Aimophila aestivalis*	Bachman's Sparrow	E / SOMC	G3 / S1B	0	0	0	3	0
Jefferson	Breeding Birds	*Ammodramus henslowii*	Henslow's Sparrow	S / SOMC	G4 / S3B	2	0	0	0	0
Jefferson	Breeding Birds	*Anas discors*	Blue-winged Teal	T /	G5 / S1S2B	0	1	0	1	0
Jefferson	Breeding Birds	*Ardea alba*	Great Egret	T /	G5 / S2B	1	0	0	0	0
Jefferson	Breeding Birds	*Botaurus lentiginosus*	American Bittern	H /	G4 / SHB	0	0	0	1	0
Jefferson	Breeding Birds	*Bubulcus ibis*	Cattle Egret	S /	G5 / S1S2B	0	0	0	1	0
Jefferson	Breeding Birds	*Chondestes grammacus*	Lark Sparrow	T /	G5 / S2S3B	0	1	0	0	0
Jefferson	Breeding Birds	*Cistothorus platensis*	Sedge Wren	S /	G5 / S3B	1	0	0	0	0
Jefferson	Breeding Birds	*Egretta caerulea*	Little Blue Heron	E /	G5 / S1B	0	0	0	1	0
Jefferson	Breeding Birds	*Falco peregrinus*	Peregrine Falcon	E / SOMC	G4 / S1B	3	0	0	0	0
Jefferson	Breeding Birds	*Haliaeetus leucocephalus*	Bald Eagle	T / Delisted	G5 / S2B,S2S3N	1	0	0	0	0
Jefferson	Breeding Birds	*Ixobrychus exilis*	Least Bittern	T /	G5 / S1S2B	0	0	0	1	0
Jefferson	Breeding Birds	*Lophodytes cucullatus*	Hooded Merganser	T /	G5 / S1S2B,S3S4N	1	0	0	0	0
Jefferson	Breeding Birds	*Nyctanassa violacea*	Yellow-crowned Night-heron	T /	G5 / S2B	2	0	0	3	0
Jefferson	Breeding Birds	*Nycticorax nycticorax*	Black-crowned Night-heron	T /	G5 / S1S2B	1	0	0	4	0
Jefferson	Breeding Birds	*Pandion haliaetus*	Osprey	S /	G5 / S2S3B	1	0	0	0	0
Jefferson	Breeding Birds	*Passerculus sandwichensis*	Savannah Sparrow	S /	G5 / S2S3B,S2S3N	1	1	0	0	0
Jefferson	Breeding Birds	*Phalacrocorax auritus*	Double-crested Cormorant	T /	G5 / S2B	1	0	0	0	0
Jefferson	Breeding Birds	*Podilymbus podiceps*	Pied-billed Grebe	E /	G5 / S1B,S4N	0	0	0	1	0
Jefferson	Breeding Birds	*Rallus elegans*	King Rail	E /	G4 / S1B	0	1	0	1	0
Jefferson	Breeding Birds	*Riparia riparia*	Bank Swallow	S /	G5 / S3B	0	0	0	1	0
Jefferson	Breeding Birds	*Sternula antillarum athalassos*	Interior Least Tern	T / LE	G4T2Q / S2B	0	1	0	0	0
Jefferson	Breeding Birds	*Thryomanes bewickii*	Bewick's Wren	S / SOMC	G5 / S3B	0	2	0	0	0

County	Taxonomic Group	Scientific name	Common name	Statuses	Ranks	# of Occurrences E	H	F	X	U
Jefferson	Breeding Birds	*Tyto alba*	Barn Owl	S /	G5 / S3	2	1	0	0	0
Jefferson	Mammals	*Myotis grisescens*	Gray Myotis	T / LE	G3 / S2	2	0	0	0	0
Jefferson	Mammals	*Myotis sodalis*	Indiana Bat	E / LE	G2 / S1S2	3	0	0	0	0
Jefferson	Mammals	*Nycticeius humeralis*	Evening Bat	S /	G5 / S3	1	0	0	0	0
Jefferson	Communities	*Deep soil mesophytic forest*		N /	GNR / S3S4	1	0	0	0	0
Jefferson County Total:						**86**	**58**	**4**	**32**	**1**

Appendix K – KY 841 and Stonestreet Road Plans

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
-	-	1	71

JEFFERSON CO. APC 841-1(32)

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

PLANS OF PROPOSED PROJECT

THESE PLANS ARE FOR SURFACING ONLY

APC 841-1(32)

JEFFERSON COUNTY

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
1	LAYOUT SHEET
2-2h	TYPICAL SECTIONS - SUMMARY OF QUANTITIES SHEETS
3-41	PLAN AND PROFILE SHEETS
	UTILITY PLAN SHEETS
	RIGHT OF WAY SUMMARY SHEETS
	RIGHT OF WAY STRIP MAP SHEETS
42-68e	DETAIL SHEETS
	REFERENCE SHEETS
	SOIL PROFILE SHEETS
69-71	PIPE DRAINAGE SHEETS
	CROSS SECTION SHEETS

SHEETS NOT INCLUDED IN TOTAL SHEETS 2a-2h, 68a-68e

TOTAL BRIDGE SHEETS 0

STANDARD DRAWINGS

NUMBER	DESCRIPTION	
RBB-002-04	RBR-026-01	RPM-120-03
RBC-001-04	RBA-030-01	RPN-001
RBI-001-03	RPX-001-01	RPN-010-01
RBI-002-01	RBR-045-01	RPN-015
RBI-003-01	RDB-280-02	RPS-010-04
RBI-005-01	RDB-281	RPS-030-01
RBI-006-01	RDB-282	RRE-002-02
RPS-020-06	RDB-283	RBB-003
RPS-031-01	PDX-160-02	TSC-260-05
RPS-036-01	RBB-002-02	TSC-261-02
RPS-037-01	RGX-001-02	RGS-001-02
RBR-015-01	RPM-100-03	RPM-110-01
RBR-016	RPX-010	TSC-200-03

TOTAL STANDARD DRAWINGS 39

	DATE
SENT FOR FEDERAL APPROVAL	10-17-84
RECORD PLANS	11-1-84
CONSTRUCTION PLANS	

REVIEWED BY _____ DIVISION OF CONSTRUCTION

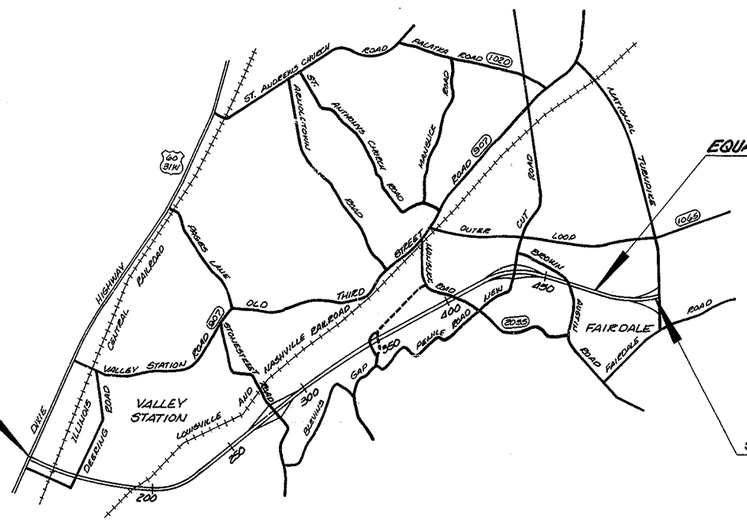
PLANS CHECKED BY FTW 8-29-84 MWG
FINAL CHECK BY _____

N

EQUATION STA. 478+00.00 Bk. = STA. 474+13.49 Ah.

STA. 119+52.25 JEFF. FRWY. BEGIN PROJECT

STA. 519+13.50 JEFF. FRWY. END PROJECT



THIS PROJECT IS A FULLY CONTROLLED ACCESS HIGHWAY

DESIGN CRITERIA

CLASS OF HIGHWAY 1
TYPE OF TERRAIN Rolling
DESIGN SPEED 70 mph
REQUIRED NPSD 600
REQUIRED PSD _____
LEVEL OF SERVICE C
ADT PRESENT ( ) _____
ADT FUTURE (1995) 40,000 - 49,000
DHV 4,000 - 4,900
D % 60/50
T % 5%

GEOGRAPHIC COORDINATES
38°06'40" NORTH
85°48'15" WEST

DESIGNED

% RESTRICTED SD 0
LEVEL OF SERVICE C
MAX. DISTANCE W/O PASSING _____

GRAPHIC SCALE IN MILES
0 1 2 3

LAYOUT MAP

GROSS LENGTH 40347.76 LIN. FT. 7.641 MILES	GROSS LENGTH _____ LIN. FT. _____ MILES	GROSS LENGTH _____ LIN. FT. _____ MILES	GROSS LENGTH _____ LIN. FT. _____ MILES
ADDED / DEDUCTED FOR EQUALITIES 326.21 LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES _____ LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES _____ LIN. FT.	ADDED / DEDUCTED FOR EQUALITIES _____ LIN. FT.
NET LENGTH 39202.76 LIN. FT. 7.424 MILES	NET LENGTH _____ LIN. FT. _____ MILES	NET LENGTH _____ LIN. FT. _____ MILES	NET LENGTH _____ LIN. FT. _____ MILES
NOT INCLUDED	NOT INCLUDED	NOT INCLUDED	NOT INCLUDED
RAILROAD CROSSINGS NO. _____ LIN. FT.	RAILROAD CROSSINGS NO. _____ LIN. FT.	RAILROAD CROSSINGS NO. _____ LIN. FT.	RAILROAD CROSSINGS NO. _____ LIN. FT.
BRIDGES 1145.0 LIN. FT.	BRIDGES _____ LIN. FT.	BRIDGES _____ LIN. FT.	BRIDGES _____ LIN. FT.

KENTUCKY
DEPARTMENT OF HIGHWAYS
JEFFERSON COUNTY

JEFFERSON FREEWAY (KY 841)

PROJECT NUMBERS: F3P 056 0841 000-016 S
APC 841-1(32)
LETTING DATE: 10-19-84

DESIGNED BY Aug. 30 1984 BY Charles R. Mayo (DESIGN ENGINEER)
APPROVED Aug 30 1984 BY H.C. Hinton Jr. (DIRECTOR OF TRAFFIC)
19 BY
PLAN CHECKED 8/30/1984 BY Glenn C. Dockery (CHIEF DRAFTSMAN)
PLAN APPROVED 8/30 1984 BY Dennis S. Raine (DIRECTOR OF DESIGN)
PLAN APPROVED 8/30 1984 BY R.K. Eyth (STATE HIGHWAY ENGINEER)

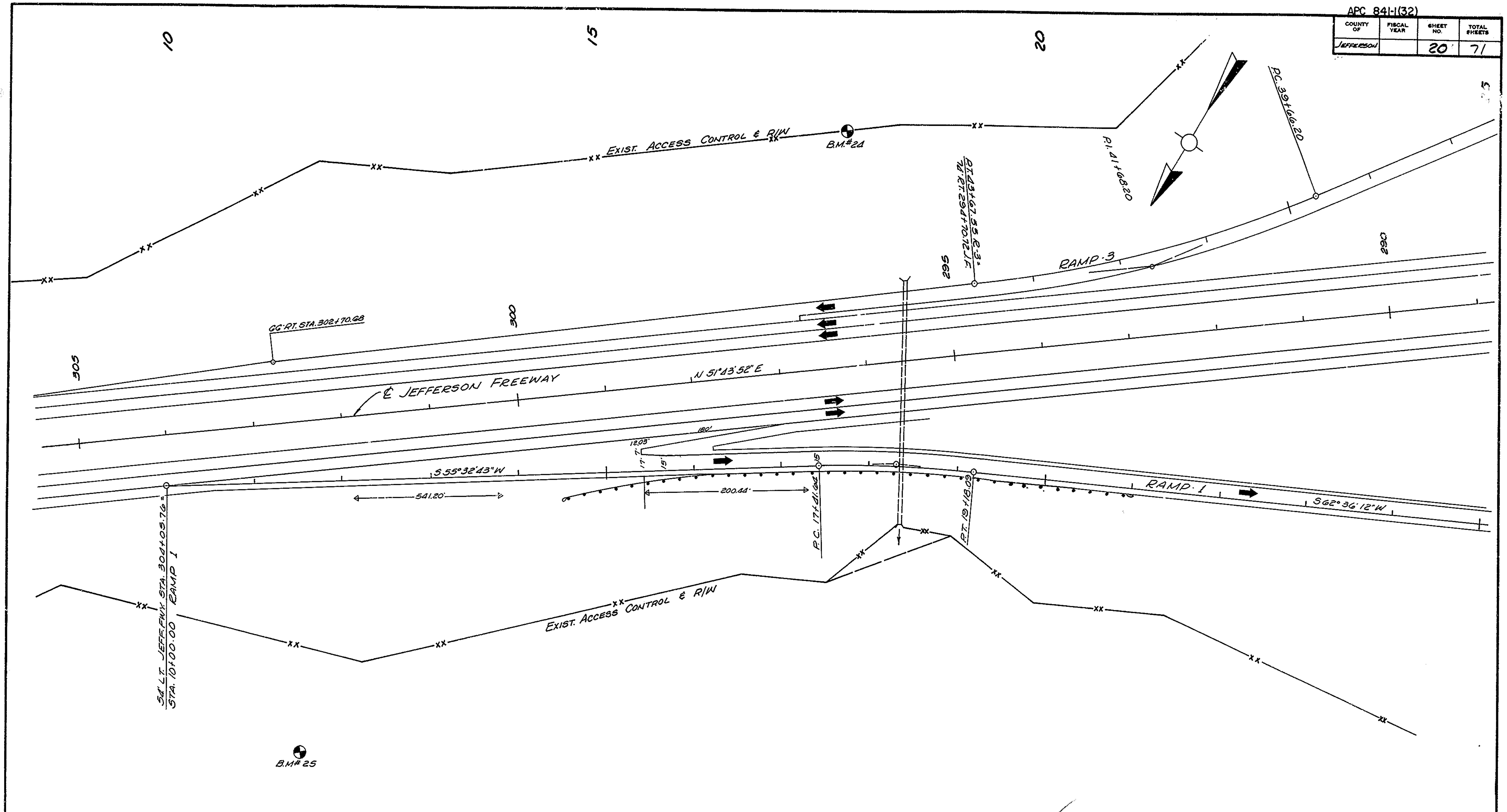
U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED _____ 19__

DIVISION ADMINISTRATOR

APC 841-1(32)

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
JEFFERSON		20	71



RAMP 1

P.I. STA. 18+29.98
Δ = 7° 03' 29" Rt.
C = 4° 00' 00"
T = 88.34'
L = 176.45'
R = 1432.39'
E = 2.72'
P.C. STA. = 17+41.66
P.T. STA. = 19+18.09

654.4'
Rt. Sta. 14+50 To Rt. Sta. 21+00
Const. ~~650~~ L.F. Steel "W" Beam Guardrail, & 1 - End Treatment Type 3 (W = 18'; Flare Length 212.5')
& 1 End Treatment Type 2-A

B.M.#25 R.R. Spike in side 18" twin Sassafras 350' Lt. Sta. 302+80 ~ Elev. 560.84

B.M.#24 R.R. Spike in base 36" Oak 250' Rt. Sta. 290+00 ~ Elev. 500.93

RAMP - 1

Scale: 1" = 50'

39

DIETZGEN 7-13-73 FORM NO. 2

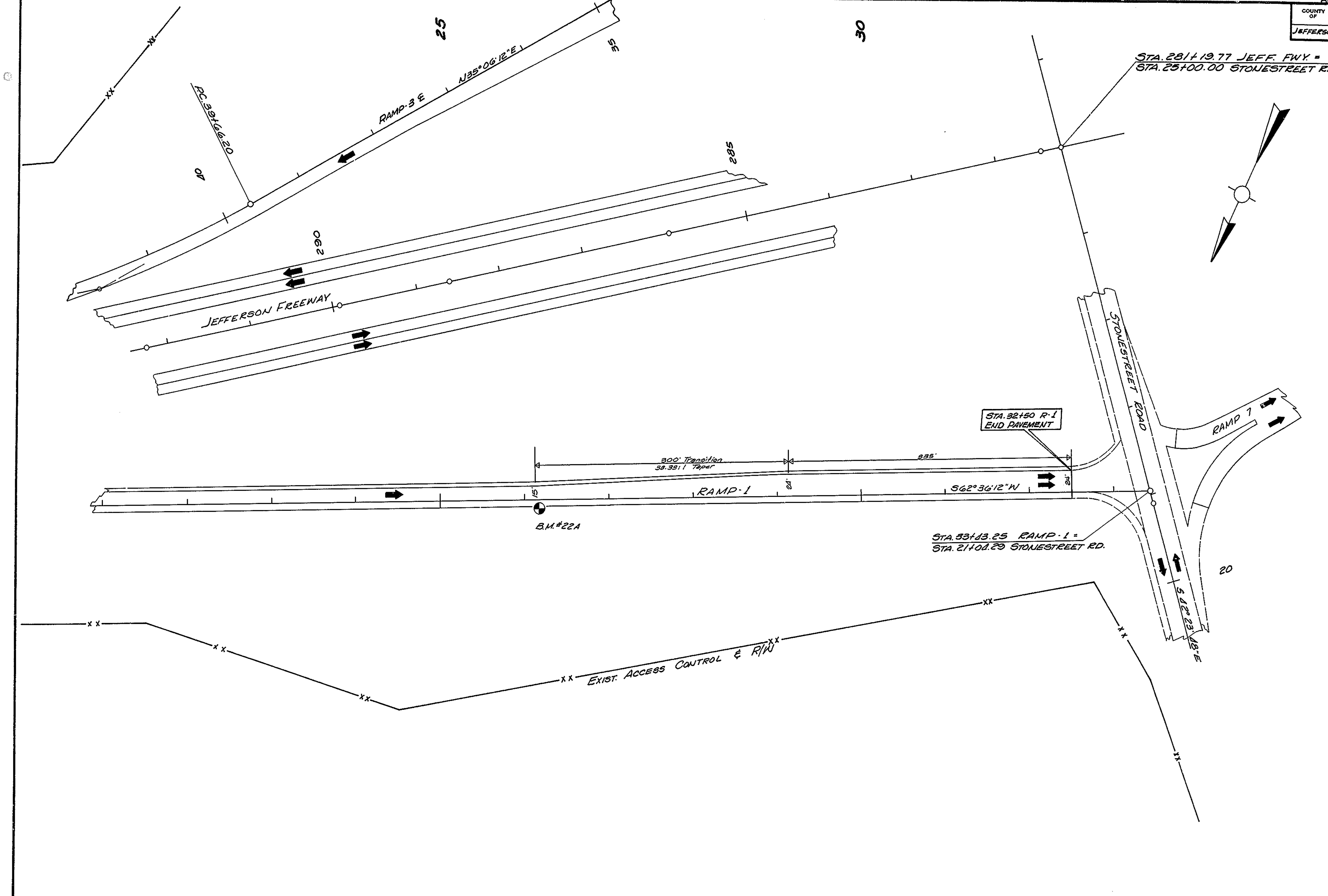
STONESTREET ROAD - RAMP 1

APC 841-1(32)

JEFFERSON		21	71

APC 841-1(32)

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
JEFFERSON		22	71



B.M.# 22A P.K. Nail in base 14" Sycamore
280' Lt. Sta. 288+00 ~ Elev. 539.40

RAMP - 1

Scale: 1" = 50'

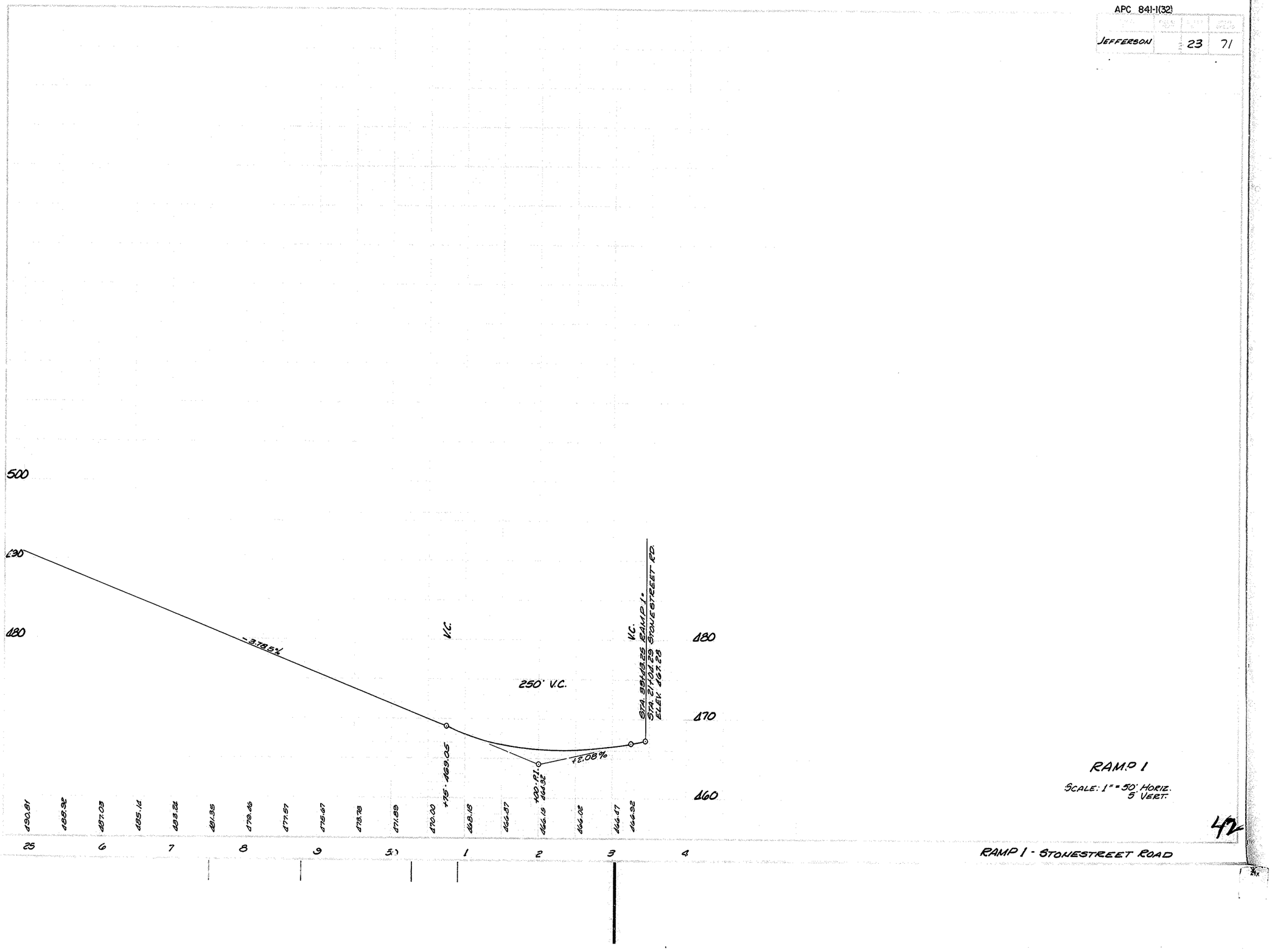
41

DIETZGEN 7-13-73 FORM NO. 2

RAMP 1 - STONESTREET RD.

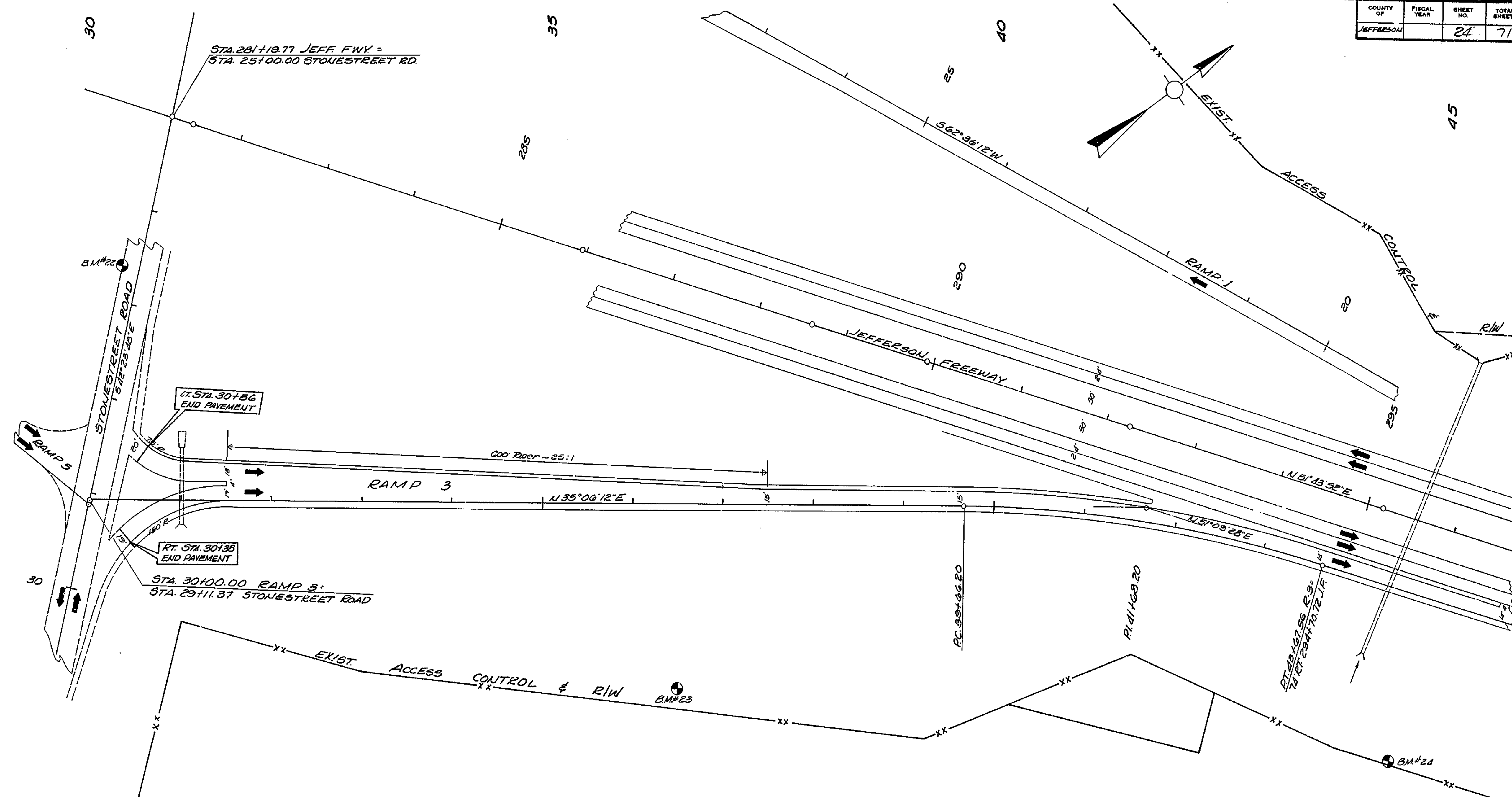
APC 841-1(32)

JEFFERSON	23	71



APC 841-1 (32)

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
JEFFERSON		24	71



RAMP 3
P.I. STA. 41+68.20
Δ = 16°03'16" RT.
C = 4° 00'00"
T = 202.00'
L = 401.36'
R = 1432.39'
E = 14.17'
P.C. STA. 39+66.20
P.T. STA. 43+67.56

B.M.#22 R.R. Spike in side P.P.# C15.17
160' Rt. Sta. 281+00 ~ Elev. 475.01

B.M.#23 R.R. Spike in side 24" Oak
190' Rt. Sta. 36+50 R-3 ~ Elev. 572.05

B.M.#24 R.R. Spike in base 36" Oak
250' Rt. Sta. 296+00 ~ Elev. 500.93

RAMP-3

Scale: 1" = 50'

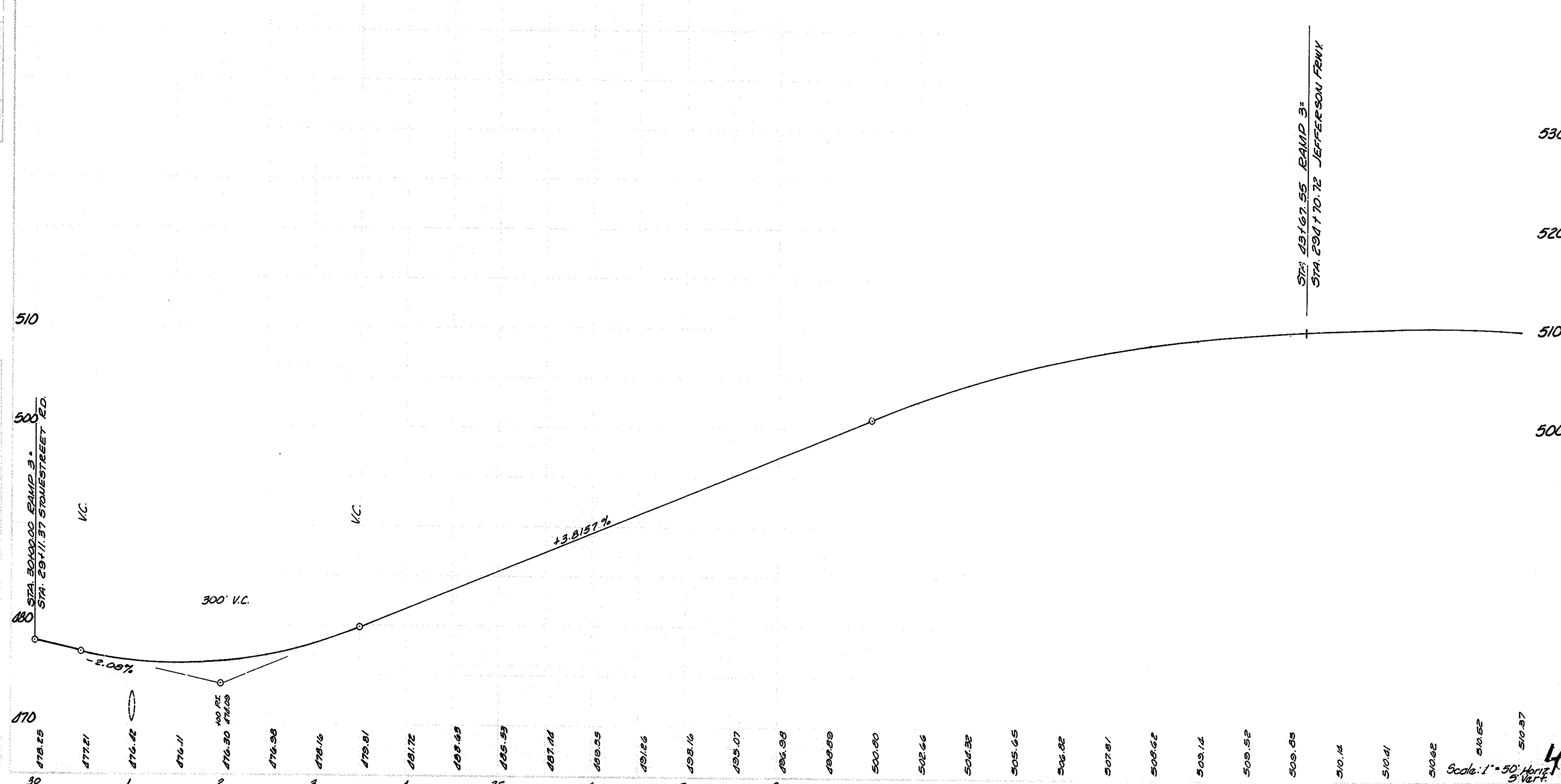
43

DIETZGEN 7-13-73 FORM NO. 2

RAMP 3 - STONESTREET ROAD

APC 341-1(32)

JEFFERSON	25	71



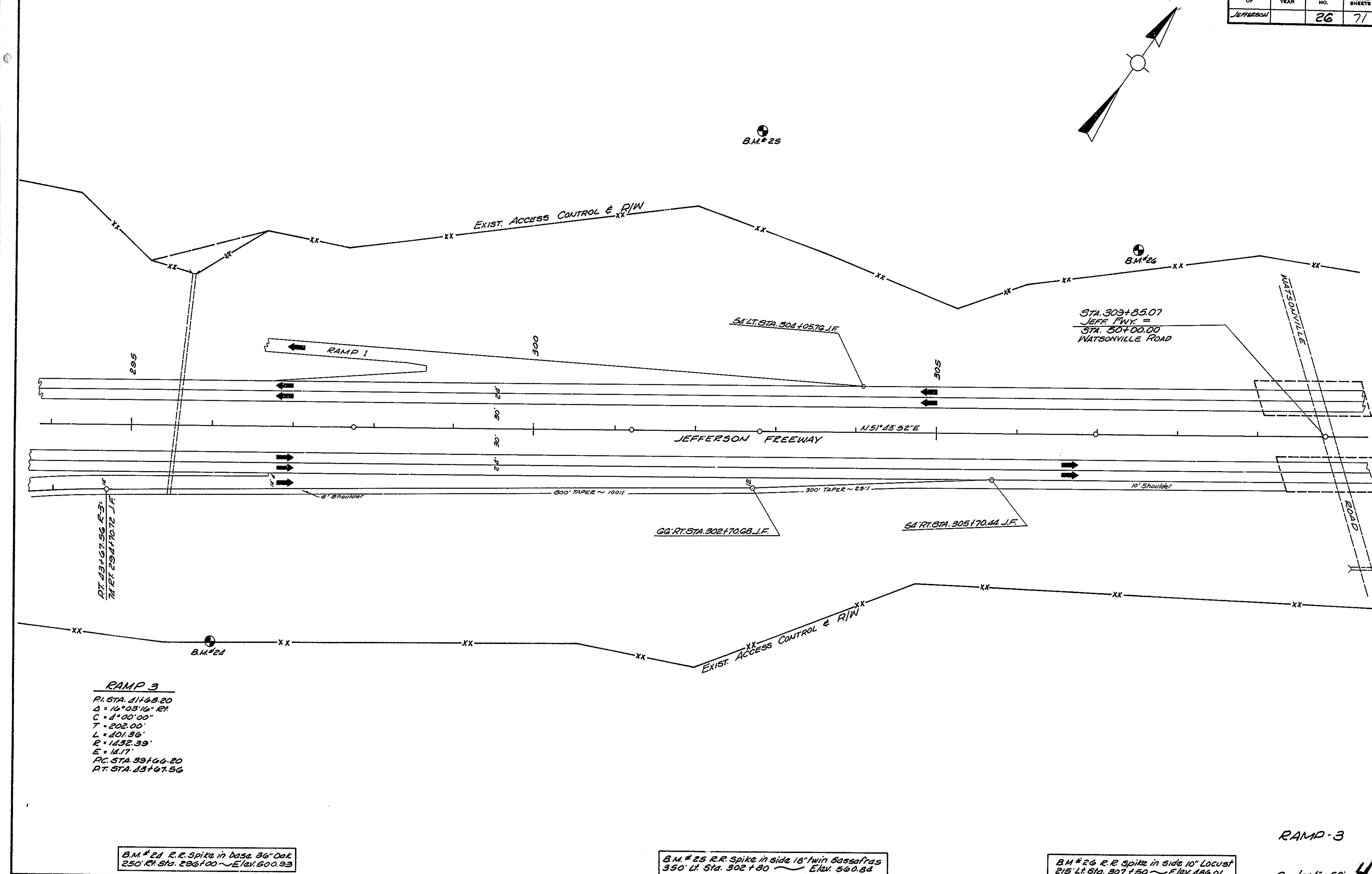
Scale: 1" = 50' Horiz. 5' Vert.

RAMP 3 - STONESTREET ROAD

44

APC 841-1(32)

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
Jefferson		26	71



45

DIETZGEN 7-13-73 FORM NO. 2

RAMP-3 · STONESTREET ROAD

APC 841-1(32)

COUNTY	SHEET NO.	TOTAL SHEETS
JEFFERSON	27	71

510

500

190

0.71%

300' V.C.

STA. 15120.00 EAST P 3
STA. 2951.90.00 JEFF FRWY.

V.C.

510

500

190

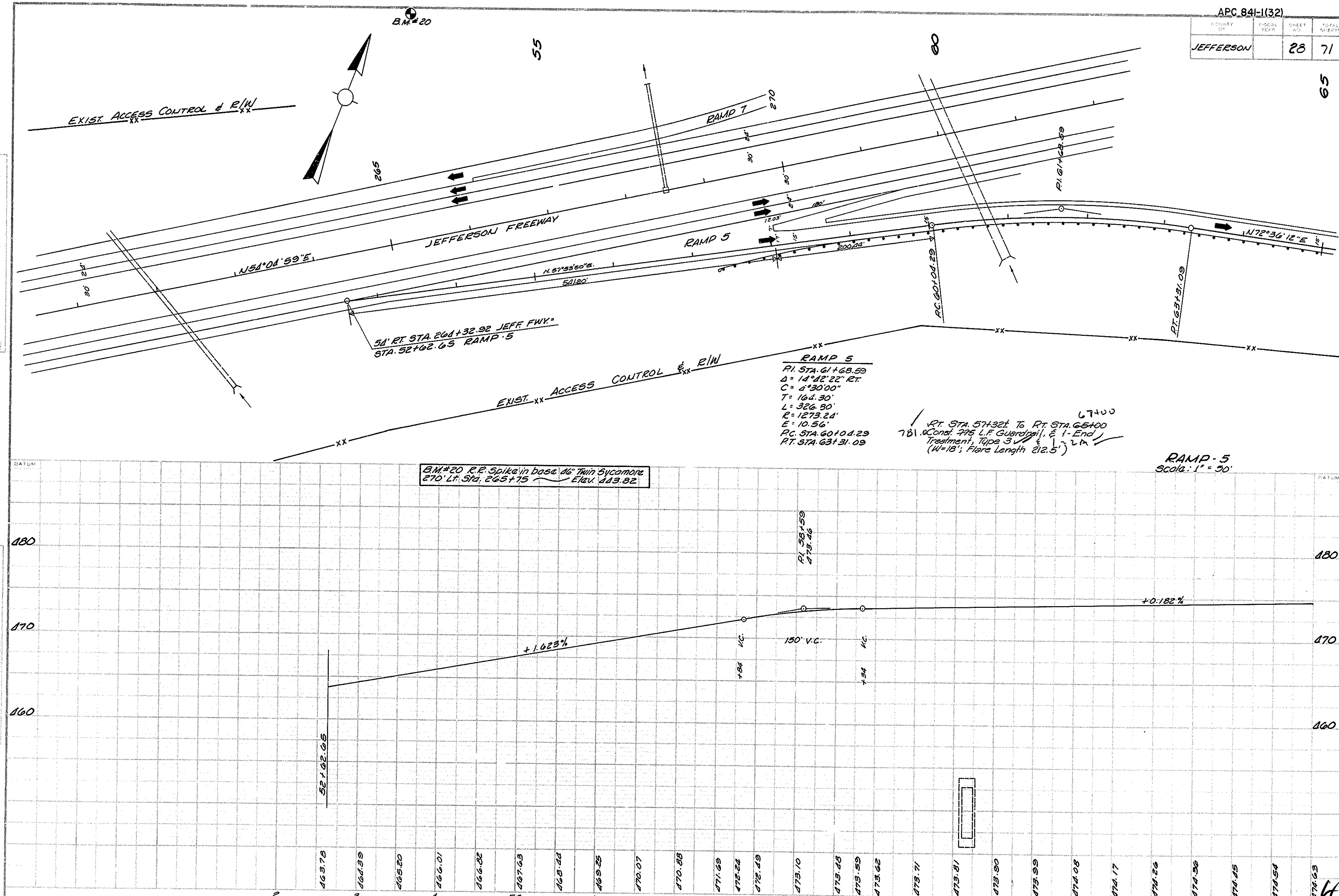
FOR ELEVATIONS SEE MAIN LINE CROSS SECTIONS

Scale: 1"=50' Horiz.
5' Vert.

46

11	15	309.30	309.10	308.89	297	298	299	300	1	2	3	4	305	6	7	8

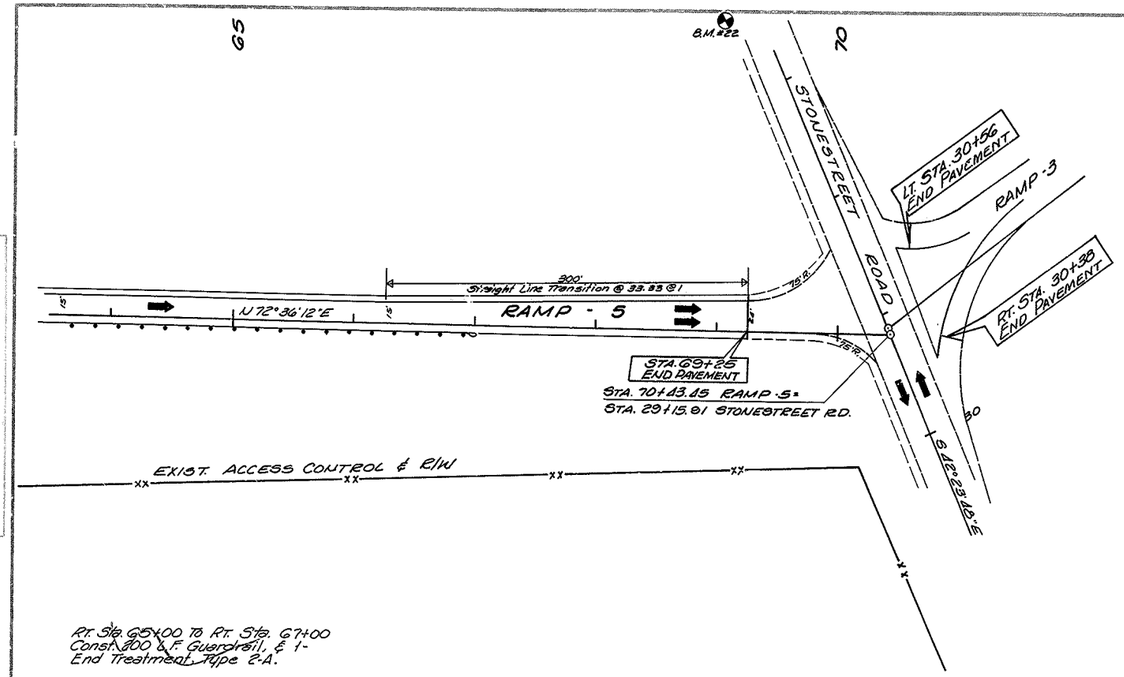
RAMP 3 - STONESTREET ROAD



RAMP 5 - STONESTREET ROAD

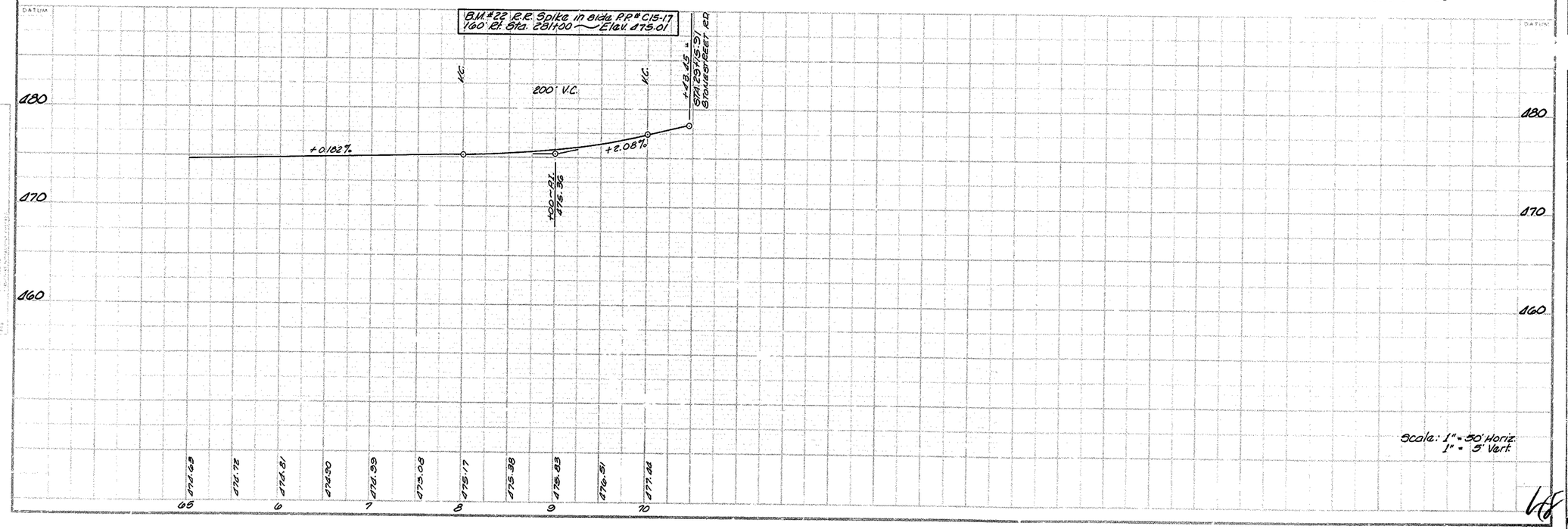
APC 841-1(32)

COUNTY OF	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
JEFFERSON		29	71



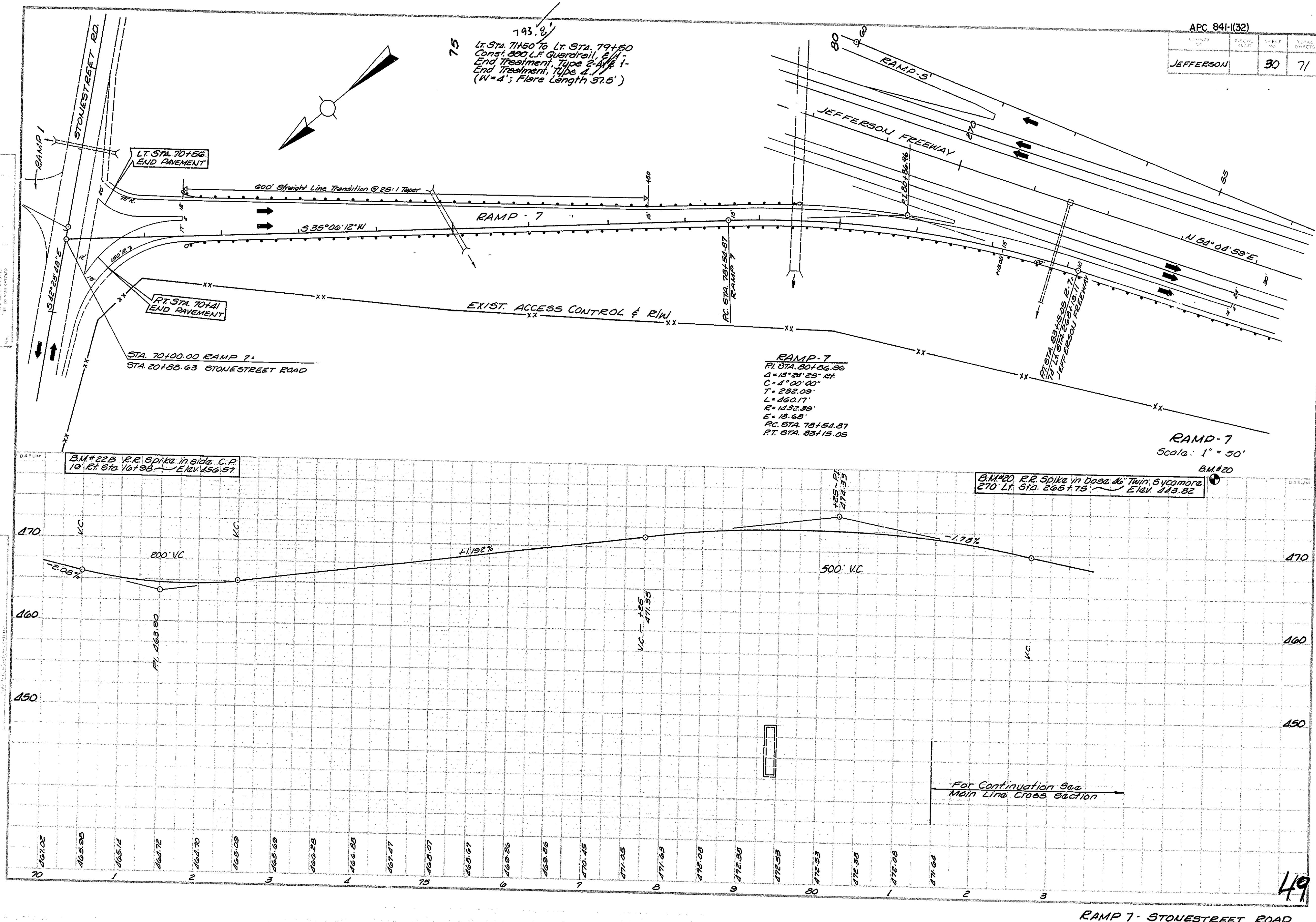
Rt. Sta. 65+00 To Rt. Sta. 67+00
Const. 200 L.F. Guardrail, & 1-
End Treatment Type 2-A.

RAMP-5
Scale: 1" = 50'

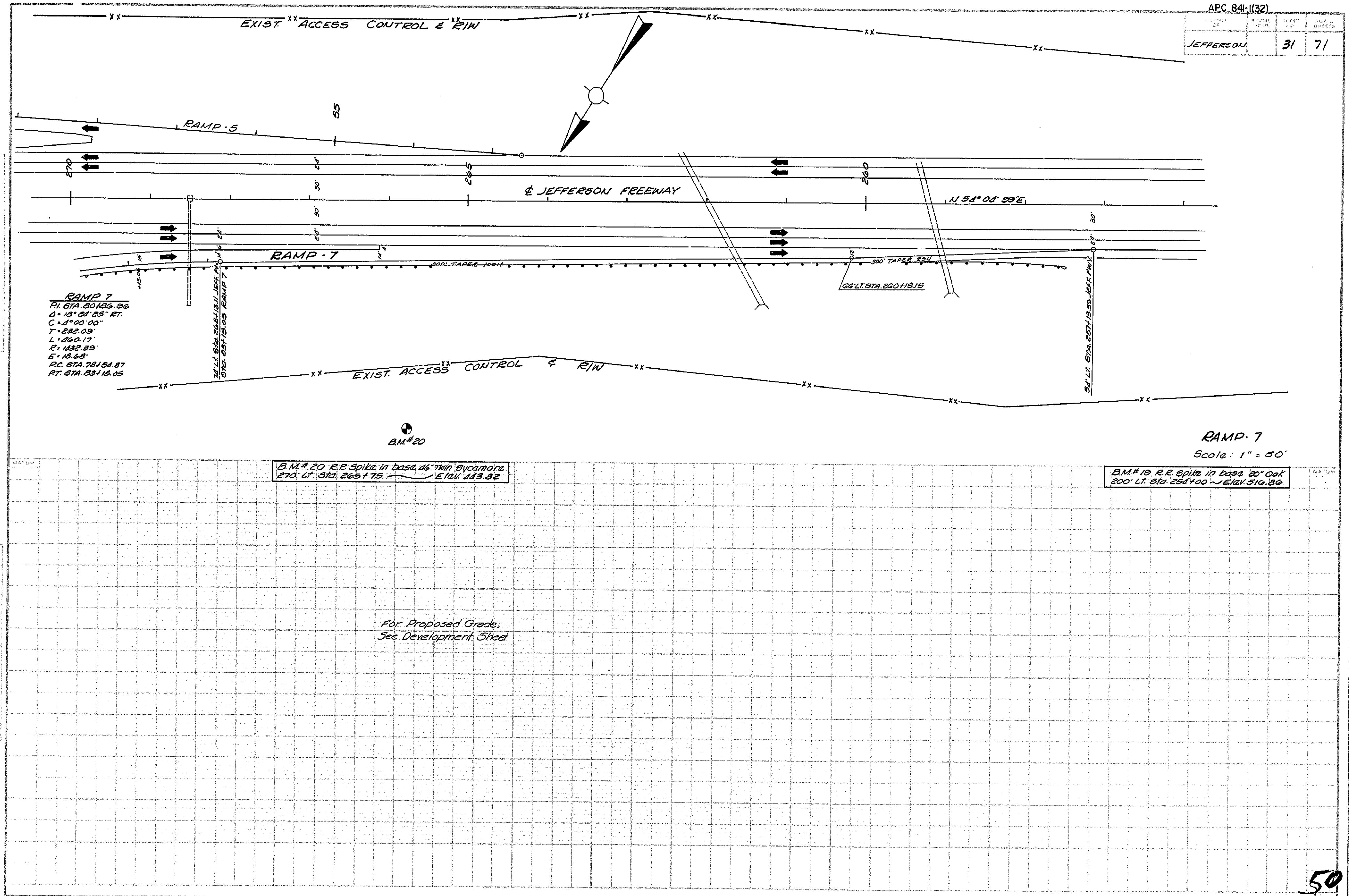


Scale: 1"=50' Horiz.
1" = 5' Vert.

RAMP 5 - STONESTREET ROAD



APC 841-1(32)
JEFFERSON 30 71
LT. STA. 71+50 To LT. STA. 79+50
Const. 800 L.F. Guardrail, & 4 - End Treatment, Type 2-A & 1 - End Treatment, Type 4.
(W=4'; Flare Length 37.5')
793.8'
STONESTREET RD.
RAMP 1
LT. STA. 70+56 END PAVEMENT
600' Straight Line Transition @ 25:1 Taper
RAMP · 7
S 35°06'12"W
S 42°28'48"E
RT. STA. 70+41 END PAVEMENT
STA. 70+00.00 RAMP 7 =
STA. 20+88.63 STONESTREET ROAD
EXIST. ACCESS CONTROL & R/W
P.C. STA. 78+54.87 RAMP 7
P.I. 80+86.96
RAMP-5
JEFFERSON FREEWAY
N 54°04'59"E
P.T. STA. 83+15.05 R-7 = 74' Lt. STA. 268+13.11 JEFFERSON FREEWAY
RAMP-7
P.I. STA. 80+86.96
Δ = 18°24'25" Rt.
C = 4°00'00"
T = 232.09'
L = 460.17'
R = 1432.39'
E = 18.68'
P.C. STA. 78+54.87
P.T. STA. 83+15.05
RAMP-7
Scale: 1" = 50'
B.M.#22B R.R. Spike in side C.P. 19' Rt. Sta. 16+98 ~ Elev. 456.57
B.M.#20 R.R. Spike in base 46" Twin Sycamore 270' Lt. Sta. 265+75 ~ Elev. 443.82
B.M.#20
200' VC
-2.08%
P.I. 463.80
+1.192%
V.C. ~ +25 471.35
+25 ~ P.I. 474.33
500' V.C.
-1.78%
For Continuation See Main Line Cross Section
467.02 465.98 465.14 464.72 464.70 465.09 465.69 466.28 466.88 467.47 468.07 468.67 469.26 469.86 470.45 471.05 471.63 472.08 472.38 472.53 472.53 472.38 472.08 471.64
70 1 2 3 4 75 6 7 8 9 80 1 2 3
470 460 450
49
RAMP 7 - STONESTREET ROAD



RAMP 7 · STONESTREET ROAD

COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-387.20	R1

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF HIGHWAYS

PLANS OF
PROPOSED PROJECT

JEFFERSON COUNTY

STONESTREET ROAD - SECTION II

STPM 08785 011

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
R1	LAYOUT SHEET
R2-R2f	TYPICAL SECTIONS - SUMMARY SHEETS
R3-R16	PLAN & PROFILE SHEETS
R17	RIGHT OF WAY SUMMARY SHEET
R18-20	RIGHT OF WAY STRIP MAP SHEETS
R21-R22	REFERENCE SHEETS
R23-R23d	DETAIL SHEETS
R24-R33	PIPE DRAINAGE SHEETS
UI-U4	**UTILITY SHEETS**
XI-X26	**CROSS SECTION SHEETS**

TOTAL SHEETS

(R) ROADWAY	33
(S) STRUCTURE	24
(T) TRAFFIC	0
(U) UTILITY	4
(X) CROSS SECTION	26

SHEETS NOT INCLUDED IN TOTAL SHEETS

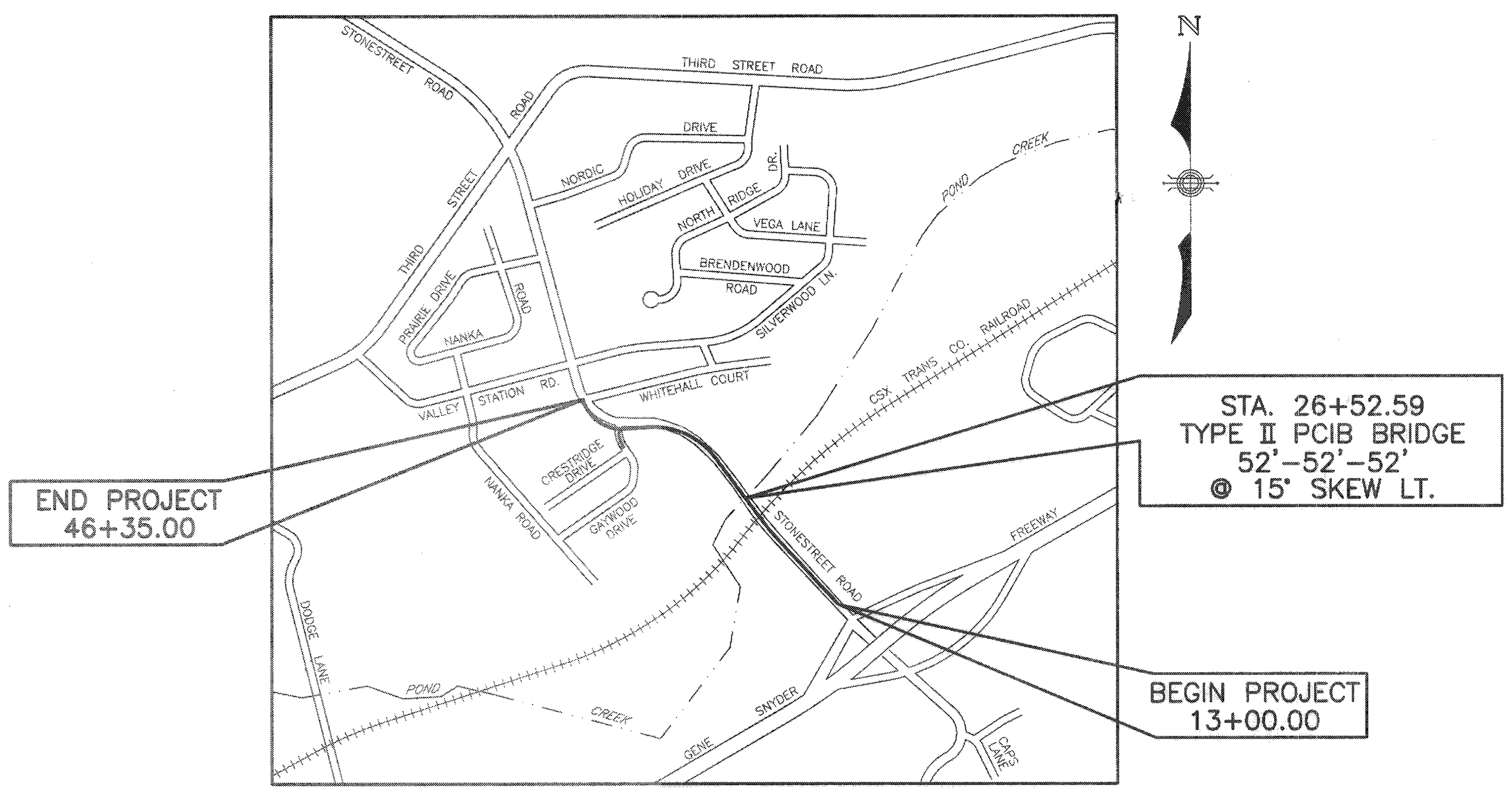
R2a - R2f, R23a - R23d

STANDARD DRAWINGS

NUMBER

RBB-001-07	RDB-272-06	RGX-001-04
RBC-001-08	RDB-273-05	RGX-002-08
RBC-002	RDB-400-04	RGX-005-04
RBC-003-06	RDB-410-05	RGX-010-03
RBI-001-09	RDB-420-04	RGX-030-06
RBI-002-06	RDB-430-04	RGX-100-04
RBI-004-02	RDD-040-04	RGX-105-05
RBR-001-11	RDH-020-03	RGX-200
RBR-005-10	RDI-001-07	RPM-100-09
RBR-010-05	RDI-011-01	RPM-110-04
RBR-015-04	RDI-016-01	RPM-150-05
RBR-016-04	RDI-020-08	RPM-152-05
RBR-020-02	RDI-025-04	RPM-160-02
RBR-035-07	RDI-035-01	RPM-170-05
RDB-011-07	RDM-100-02	RPM-172-05
RDB-020-04	RDX-001-05	TTC-100
RDB-150-01	RDX-002-03	TTC-105
RDB-160-01	RDX-205	TTD-100
RDB-270-07	RDX-210-02	TTD-105
RDB-271-04	RGS-001-06	TTD-110

TOTAL STANDARD DRAWINGS 60



1000 0 1000 2000 3000

GRAPHIC SCALE IN FEET

LAYOUT MAP

THESE PLANS ARE FOR GRADE, DRAIN & SURFACING

THE CONTROL OF ACCESS ON THIS PROJECT SHALL BE BY PERMIT

AS BUILT PLANS
Director - Division of Construction
Date 5/9/07

DESIGN CRITERIA

CLASS OF HIGHWAY	URBAN COLLECTOR
TYPE OF TERRAIN	ROLLING
DESIGN SPEED	35 Mph
REQUIRED NPSD	225 FT
REQUIRED PSD	N/A
LEVEL OF SERVICE	
ADT PRESENT (1996)	15,900
ADT FUTURE (2016)	23,000
DHV	2,300
D %	3%
T %	4%

GEOGRAPHIC COORDINATES

LATITUDE 38 DEGREES 06 MINUTES NORTH
LONGITUDE 85 DEGREES 50 MINUTES WEST

DESIGNED

% RESTRICTED SD

LEVEL OF SERVICE

MAX. DISTANCE W/O PASSING

STONESTREET ROAD

GROSS LENGTH 3335.00 LIN. FT. 0.632 MILES
ADDED/DEDUCTED } FOR EQUALITIES 0 LIN. FT.
NET LENGTH 3168.70 LIN. FT. 0.600 MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. 8.8 LIN. FT.
BRIDGES 157.50 LIN. FT.

GROSS LENGTH LIN. FT. MILES
ADDED/DEDUCTED } FOR EQUALITIES LIN. FT.
NET LENGTH LIN. FT. MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. LIN. FT.
BRIDGES LIN. FT.

GROSS LENGTH LIN. FT. MILES
ADDED/DEDUCTED } FOR EQUALITIES LIN. FT.
NET LENGTH LIN. FT. MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. LIN. FT.
BRIDGES LIN. FT.

GROSS LENGTH LIN. FT. MILES
ADDED/DEDUCTED } FOR EQUALITIES LIN. FT.
NET LENGTH LIN. FT. MILES
NOT INCLUDED
RAILROAD CROSSINGS NO. LIN. FT.
BRIDGES LIN. FT.

KENTUCKY
DEPARTMENT OF HIGHWAYS
COUNTY OF
JEFFERSON

STONESTREET ROAD - SECTION II

ITEM NO. 5-387.20
PROJECT:
NUMBER: STPM 08785 011
LETTING DATE: 4-25-03

SUBMITTED BY Christoph W. Phillips 2-14-03
LOUISVILLE / JEFFERSON CO. METRO GOVERNMENT DATE

RECOMMENDED BY 2/18/03
DIRECT DESIGN ENGINEER DATE

PLAN APPROVED BY J. M. Howell 3/13/03
STATE HIGHWAY ENGINEER DATE

PLANS PREPARED BY:
BIRCH, TRAUTWEIN & MIMS, INC.
CONSULTING ENGINEERS
3001 TAYLOR SPRINGS DRIVE
LOUISVILLE, KENTUCKY 40220

STATE OF KENTUCKY
J. CRAIG MOUNT
13297
LICENSED PROFESSIONAL ENGINEER

J. Craig Mount 2-11-03
DESIGN ENGINEER DATE

1

RECORD PLANS | CONSTRUCTION PLANS | NO. SETS | DATE

REVIEWED BY
DIVISION OF CONSTRUCTION

PREPARED BY DATE
CHECKED BY DATE
APPROVED BY DATE

Run 224

COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-387.20	R3

CONVENTIONAL SIGNS

- SURVEY LINE
- GRADE LINE (400' V.C.)
- GROUND LINE
- COUNTY LINE
- CORPORATE LIMITS
- PROPERTY LINE (P.L.)
- PROPOSED RIGHT OF WAY (R/W)
- RIGHT OF WAY MARKERS
- BENCH MARK (B.M. NO.4)
- RURAL RIGHT OF WAY MARKER
- MUNICIPAL RIGHT OF WAY MARKER
- EXISTING ROAD
- RAILROAD
- FENCE (CONTROLLED ACCESS)
- FENCE (EXCEPT STONE AND HEDGE)
- TREES
- PIPE CULVERT
- CULVERT
- BRIDGE
- BUILDINGS (1-S FRAME, 1-S BRICK, SHED, 2-S BRICK)
- GUARDRAIL (END TREATMENT, GUARD RAIL, TERMINAL SECTION)

EXISTING / PROPOSED

- LIGHTING POLE
- POWER POLE
- JOINT POWER & TELEPHONE POLE
- TELEPHONE & TELEGRAPH POLE
- ANCHOR, POWER OR TELEPHONE
- STUB POWER
- STUB TELEPHONE
- WATER MAIN (6" WM)
- GAS MAIN (6" GM)
- TELEPHONE DUCT (TP4MTD)
- ELECTRIC DUCT (EL4MTD)
- TELEPHONE MANHOLE (TMH)
- ELECTRIC MANHOLE (EMH)
- SANITARY SEWER (54" SAN)
- STORM SEWER (54" STORM)
- SEWER MANHOLE
- DIRECT BURIAL ELECTRIC CABLE (E)
- DIRECT BURIAL TELEPHONE CABLE (T)
- TOWER
- STONE FENCE
- HEDGE FENCE
- SWAMP OR MARSH
- SPRINGS
- SINKHOLE
- QUARRY SITE
- SILT FENCE (SF)
- SILT CHECK TYPE II (-OR-)
- SILT TRAP A
- SILT TRAP B (-OR-)
- SILT CHECK TYPE I
- LARGE STREAM (KENTUCKY RIVER)
- SMALL STREAM
- INTERMITTENT STREAM
- LAKES OR PONDS
- NORTH POINT

PREPARED BY ______ DATE ______
CHECKED BY ______ DATE ______
APPROVED BY ______ DATE ______

UTILITIY OWNERS

ELECTRIC & GAS
LOUISVILLE GAS & ELECTRIC
820 WEST BROADWAY
P.O. BOX 32020
LOUISVILLE, KENTUCKY 40202
(502) 627-3248

SANITARY SEWER & DRAINAGE
LOUISVILLE & JEFFERSON COUNTY
METROPOLITAN SEWER DISTRICT
700 WEST LIBERTY STREET
LOUISVILLE, KENTUCKY 40202
(502) 540-6000

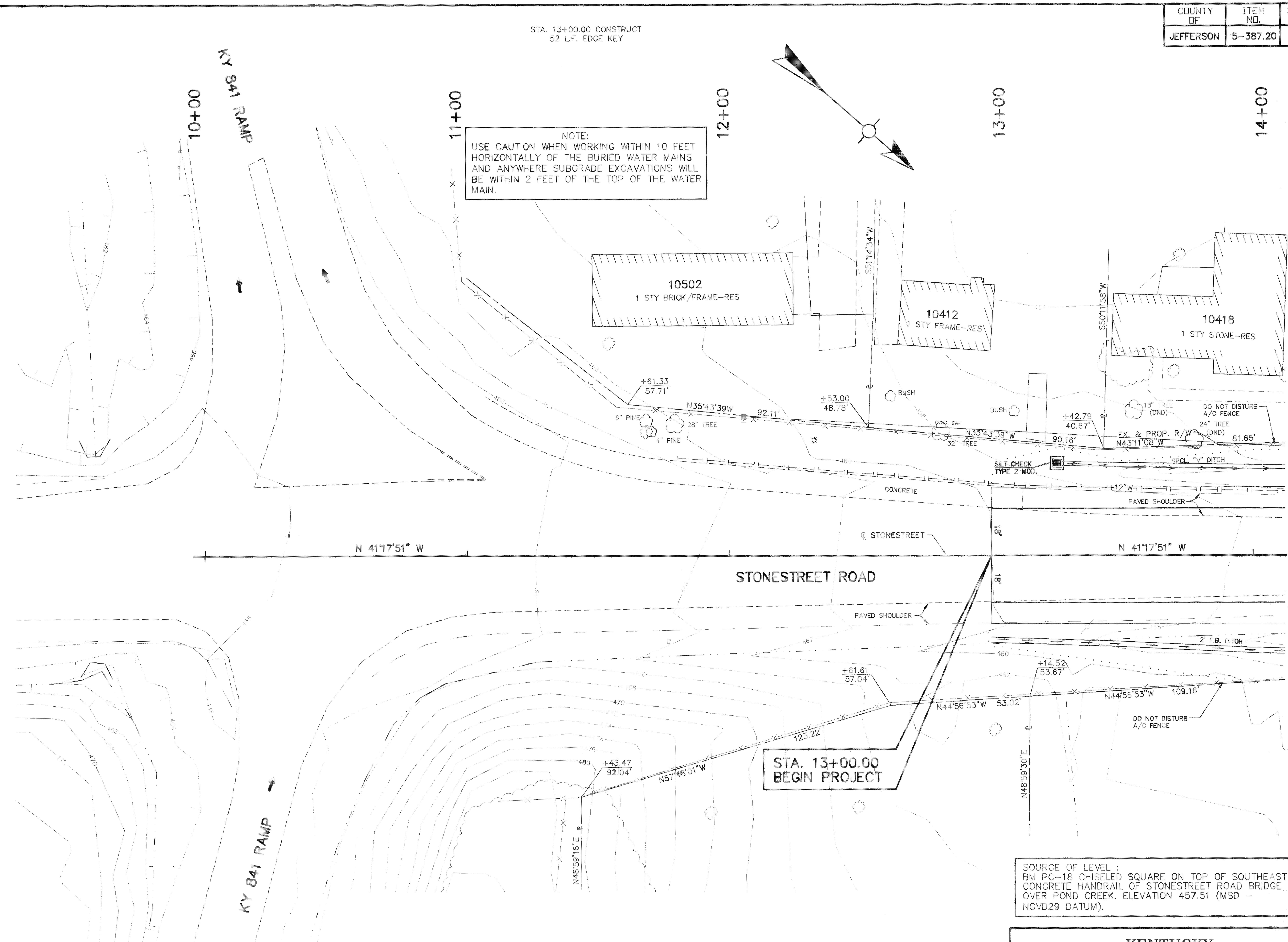
GAS (HIGH PRESSURE)
INDIANA UTILITIES CO.
123 WEST CHESTNUT ST.
CORYDON, IN. 47112
(812) 738-3235

TELEPHONE
BELLSOUTH
3719 BARDSTOWN ROAD
LOUISVILLE, KENTUCKY 40218
(502) 454-1465

WATER
LOUISVILLE WATER CO.
435 SOUTH THIRD STREET
LOUISVILLE, KENTUCKY 40202
(502) 569-3600

CABLE TELEVISION
INSIGHT
11505 ELECTRON DRIVE
LOUISVILLE, KENTUCKY 40299
(502) 448-7336

GAS
WILLIAMS / TEXAS GAS
3800 FREDERICA STREET
OWENSBORO, KY. 42302
(270) 688-6362



DITCH CONSTRUCTION

STATION	LOCATION	SIZE & SHAPE	LINING TYPE	LINING QTY.	d	t
13+25-14+00	LT.	SPCL. V	E.C.B.	58 S.Y.	1.0	–
13+00-14+00	RT.	SPCL. 2' F.B.	C.L. II	71 TONS	1.5	1.25

SILT CHECKS

STATION	LOCATION	TYPE
13+25	LT.	2 MOD.

SCALE : 1" = 20'

KENTUCKY
DEPARTMENT OF HIGHWAYS
COUNTY OF
JEFFERSON

PROJECT NUMBER STPM 08785 011

STONESTREET ROAD 10+00 TO 14+00

9

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COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-387.20	R4

DATUM

476
474
472
470
468
466
464
462
460
458
456
454
452
450
448
446
444

STA. 13+00.00
BEGIN PROJECT

EX. ROADWAY ℄

-2.380%

-1.096%

STA. 13+25.00 – 35.0' LT.
D.B.I. TYPE 11

P.V.C. STA. 13+40.00

V.P.I. 14+00
ELEV. 457.42
120' V.C.
H.L.S.D. = ∞

+00
457.50

-3.60%

2' F.B. SPCL. DT. RT.

SPCL. "V" DT. LT.

455.20
(LT.)

+1.20%

-1.67%

+00
454.67

+50
455.50

+00
453.90

18" PIPE LT. @ -1.367%

452.87
(LT.)

EARTHWORK QUANTITIES
STA. 10+00.00 TO STA. 14+00.00

COMMON	70.7 C.Y.
EMBANKMENT	15.6 C.Y.
DITCHES	47.8 C.Y.

SCALE: 1"=20' HORIZ.
SCALE: 1"=2' VERT.

468.4
467.5
466.1
464.9
463.1
461.2
459.7
459.80
458.0
458.62
457.0
457.61

10+00
11+00
12+00
13+00
14+00

STONESTREET ROAD 10+00 TO 14+00

16

PREPARED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____

VENDORS NAME
1-92
FORM NO. 4C

Cell Library: roadway.cel
Cell Name: spfl
DD-MMM-YYYY HHMM

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PLOT SCALE: 1" = 20'

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COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-387.20	R5

LT. STA. 14+57.31 CONSTRUCT 15' ENTRANCE
(58 SQ. YD. ASPHALT)

LT. STA. 14+81 TO STA. 20+00
CONSTRUCT 450 L.F. STD. CURB & GUTTER

LT. STA. 14+73 TO STA. 20+00
CONSTRUCT 218 S.Y. 4' CONC. SIDEWALK

LT. STA. 19+84.97 CONSTRUCT 22' ENTRANCE
(42 SQ. YD. CONC., 87 SQ. YD. ASPH.)

LT. STA. 15+80 CONSTRUCT
12' ENTRANCE (22 SQ. YD. CONC.)

DITCH LT. STA. 16+63.83 LAYOUT		
DITCH ℄ STA.	STONESTREET ROAD STA.	STONESTREET ROAD OFFSET
P.C. 50+37.00 =	STA. 16+63.83	37.00' LT.
P.I. 50+61.17 =	STA. 16+63.83	61.17' LT.
P.R.C. 50+83.76 =	STA. 16+77.94	80.78' LT.
P.I. 50+99.12 =	STA. 16+86.91	93.26' LT.
P.T. 51+14.07 =	STA. 16+90.25	108.26' LT.
STA. 52+00.00 =	STA. 17+08.93	192.14' LT.

CURVE DATA [1]

P.I. STA 50+60.38
Δ = 35° 43' 06" (RT)
T = 24.17'
L = 46.76'
R = 75.00'
E = 3.80'

CURVE DATA [2]

P.I. STA 50+98.91
Δ = 23° 09' 41" (LT)
T = 15.37'
L = 30.32'
R = 75.00'
E = 1.56'

RT. STA. 17+17 CONSTRUCT 12' ENTRANCE
(27 SQ. YD. CONC., 6 SQ. YD. ASPH.)

RT. STA. 14+58.01 CONSTRUCT 25' ENTRANCE,
(76 SQ. YD. ASPH.) 40 L.F. 36" EQ. CULVERT PIPE &
2 METAL END SECTION TYPE 1-36" EQ.

RT. STA. 14+86 TO STA. 20+00
CONSTRUCT 392 L.F. STD. CURB & GUTTER

RT. STA. 17+56.40 CONSTRUCT 9' ENTRANCE
(22 SQ. YD. CONC., 10 SQ. YD. ASPH.)

RT. STA. 18+61.82 CONSTRUCT 14' ENTRANCE
(29 SQ. YD. CONC., 17 SQ. YD. ASPH.)

TEMPORARY SILT FENCE		
STATION	LOCATION	L.F.
14+75–16+55	LT.	185
16+85–19+80	LT.	275

SILT CHECKS		
STATION	LOCATION	TYPE
14+40	LT.	2 MOD.
16+40	RT.	II
16+88	95' LT.	II
17+08	190' LT.	II

DITCH CONSTRUCTION						
STATION	LOCATION	SIZE & SHAPE	LINING		d	t
			TYPE	QTY.		
14+00–14+40	LT.	SPCL. V	E.C.B.	31 S.Y.	1.0	–
14+00–14+36	RT.	SPCL. 2' F.B.	C.L. II	26 TONS	1.5	1.25
14+76–16+56	RT.	SPCL. 2' F.B.	E.C.B.	190 S.Y.	1.5	–
16+63.83	35'–45' LT.	SPCL. F.B. TRANSITION	C.L. II	8 TONS	1.0	1.25
16+63.83	45'–192' LT.	SPCL. 2' F.B. W/ 3:1 S.S.	E.C.B.	138 S.Y.	1.0	–

BM #1 – CHISELED SQUARE ON THE SOUTHEAST CORNER OF HEADWALL, 21.6 FEET RT. OF STA. 16+63.4. ELEVATION = 453.300

* TRANSITION CURB HEIGHT FROM 6" TO 0" IN 5 FEET.

SCALE: 1"=20'

STONESTREET ROAD 14+00 TO 20+00 11

PREPARED BY ______ DATE ______
CHECKED BY ______ DATE ______
APPROVED BY ______ DATE ______

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COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-387.20	R6

BM #1 – CHISELED SQUARE ON THE SOUTHEAST CORNER OF HEADWALL, 21.6 FEET RT. OF STA. 16+63.4. ELEVATION = 453.300

V.P.I. 14+00
ELEV. 457.42
120' V.C.
H.L.S.D. = ∞

V.P.I. 16+60
ELEV. 454.57
160' V.C.
H.L.S.D. = ∞

2.380%

-1.096%

+0.445

STA. 14+40.00 – 33.0' LT.
D.B.I. TYPE 11

P.V.T. STA. 14+60.00

P.V.C. STA. 15+80.00

STA. 16+25.00 – LT.
JUNCTION BOX-1

STA. 16+25.00 – LT.
C.B.I. TYPE A-2-2

STA. 16+63.83 – 37.0' LT.
PIPE CULVERT HEADWALL (MODIFIED)

STA. 16+93.75 – LT.
C.B.I. TYPE A-6-6

STA. 16+93.75 – LT.
JUNCTION BOX-3

P.V.T. STA. 17+40.00

STA. 18+21.00 – RT.
C.B.I. TYPE A-6-2

STA. 18+88.00 – RT.
C.B.I. TYPE A-6-2

STA. 19+20.00 – LT.
C.B.I. TYPE A-6-2

STA. 19+40.00 – RT.
C.B.I. TYPE A-6-2

STA. 20+00.00 – RT.
C.B.I. TYPE A-6-2

SPCL. "V" DT. LT.
+00 454.67
-1.67%
+00 453.90
-3.60%
2' F.B. SPCL. DT. RT.
+35 452.60 RT.
454.00 (LT.)
36" EQ. ENT. PIPE RT.
451.30 (LT.)
18" PIPE LT. @ 1.367%
2' F.B. SPCL. DT. RT.
1.00%
18" PIPE LT. @ 1.80%
449.61 (LT.)
448.77 (32.0' LT.)
450.84 (RT.)
454.65 (RT. & LT.)
452.15 (LID) (32.0' LT.)
+56 450.40
448.05 (LT.)
448.05 (LT.)
EX. DBL. 42" x 29" C.M.P.A. (TO REMAIN)
451.82 (LID) (32.0' LT.)
18" PIPE LT. @ 1.70%
448.94 (RT.)
448.52 (LT.)
448.44 (32.0' LT.)
454.42 (RT. & LT.)
EX. ROADWAY ℄
16" PIPE RT. @ 0.75%
15" PIPE LT. @ 0.95%
454.89 (RT.)
449.90 (RT.)
18" PIPE RT. @ 0.75%
15" PIPE LT. @ 0.95%
455.19 (RT.)
450.40 (RT.)
18" PIPE RT. @ 0.50%
455.33 (LT.)
450.60 (LT.)
455.42 (RT.)
450.67 (RT.)
18" PIPE RT. @ 0.50%
EX. 6" WATER
455.69 (RT.)
450.97 (RT.)

Q_{10} = 27.0 CFS HW_{10} = 451.49
Q_{100} = 39.8 CFS HW_{100} = 451.89

Q_{10} = .65 CFS HW_{10} = 452.96
Q_{100} = .98 CFS HW_{100} = 453.06

EARTHWORK QUANTITIES STA. 14+00.00 TO STA. 20+00.00	
COMMON	269.3 C.Y.
EMBANKMENT	1229.0 C.Y.
DITCHES	568.2 C.Y.
EMBANKMENT BENCHING	478.3 C.Y.

SCALE: 1"=20' HORIZ.
SCALE: 1"=2' VERT.

457.3 457.62 | 456.5 456.88 | 456.1 456.32 | 455.6 455.78 | 454.9 455.25 | 454.4 454.92 | 454.4 454.83 | 454.8 454.97 | 455.0 455.19 | 454.9 455.42 | 455.0 455.64 | 455.3 455.86 | 455.5 456.09

14+00 | 15+00 | 16+00 | 17+00 | 18+00 | 19+00 | 20+00

STONESTREET ROAD 14+00 TO 20+00

12

PREPARED BY _____ DATE _____
CHECKED BY _____ DATE _____
APPROVED BY _____

VENDORS NAME
1 92
FORM NO. 4B

Cell Library: roadway.cel
Cell Name: spf

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PLOT SCALE: 1" = 20'

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COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-387.20	R7

LT. STA. 20+06 TO STA. 24+00
CONSTRUCT 346 L.F. STD. CURB & GUTTER

LT. STA. 20+00 TO STA. 25+56
CONSTRUCT 204 S.Y. 4' CONC. SIDEWALK
(TRANSITION TO MEET BRIDGE SIDEWALK)

LT. STA. 23+33.02 CONSTRUCT 28' ENTRANCE
(48 SQ. YD. CONC., 59 YD. ASPHALT)

LT. STA. 24+21.54 CONSTRUCT 14' ENTRANCE
(45 SQ. YD. CONC., 31 SQ. YD. ASPHALT)

LT. STA. 25+02 TO STA. 25+65 CONSTRUCT
62.5 L.F. STEEL "W" BEAM SINGLE FACE GUARDRAIL,
1 CONNECTOR TO BRIDGE END TYPE A AND 1 END
TREATMENT TYPE 4A.

LT. STA. 25+06 TO STA. 25+56
CONSTRUCT 50 L.F. STD. CURB & GUTTER

20+00
21+00
22+00
23+00
24+00
25+00
26+00
10312 DBL WIDE-MOB. HOME
BLOCK GAR.
EUGENE D. ATKINS & BEVERLY S. ATKINS (wf.) D.B. 3837 PG. 462 D.B. 5400 PG. 446
10308 MOB. HOME
EX. 12' ACCESS ESMT. D.B. 3728 PG. 182
EUGENE D. ATKINS & BEVERLY S. ATKINS (wf.) D.B. 5680 PG. 892
TRUSTEES, STONESTREET BAPTIST CHURCH D.B. 3728 PG. 182 D.B. 4108 PG. 281
10304 1 STY-FRAME
DO NOT DISTURB
CSX RAILROAD
TEMP. ESMT.
PERM. ROADWAY EASEMENT
STONESTREET ROAD
℄ STONESTREET RD.
N 41°17'51" W
N 35°13'31" W
BM #2
PC = 20+55.16
PT = 22+30.03
EX. & PROP. R/W
EX. 24" CMP (REMOVE)
CURVE DATA
P.I. STA 21+42.68
Δ = 6° 04' 20" (RT)
T = 87.52'
L = 174.87'
R = 1650'
E = 2.32'
e = 3.29%
RUNOFF = 132'
RUNOUT = 80'
10309 1 STY FRAME-RES
JEFFREY TODD SHERRARD D.B. 7001 PG. 296
POND CREEK INDUSTRIAL PARK INC. D.B. 4412 PG. 238
POND CREEK INDUSTRIAL PARK INC. D.B. 4412 PG. 289
CSX TRANSPORTATION, INC. D.B. 618 PG. 631 D.B. 620 PG. 181
PROP. 2' F.B. DITCH
EX. 24" CMP

RT. STA. 20+00 TO STA. 23+67
CONSTRUCT 304 L.F. STD. CURB & GUTTER

RT. STA. 21+70.60 CONSTRUCT 12' ENTRANCE
(26 SQ. YD. CONC., 52 SQ. YD. ASPHALT)

SILT CHECKS		
STATION	LOCATION	TYPE
25+00	130' RT.	II

TEMPORARY SILT FENCE		
STATION	LOCATION	L.F.
20+10–23+10	LT.	300
23+50–24+05	LT.	55

RT. STA. 25+16 TO STA. 25+79 CONSTRUCT
62.5 L.F. STEEL "W" BEAM SINGLE FACE GUARDRAIL,
1 CONNECTOR TO BRIDGE END TYPE A AND 1 END
TREATMENT TYPE 4A.

RT. STA. 24+12.39 CONSTRUCT 60' ENTRANCE,
(79 SQ. YD. ASPH. – COMM.) 72 L.F. 24" ENTRANCE PIPE
& 2 METAL END SECTIONS TYPE 1.

RT. STA. 25+20 TO STA. 25+70
CONSTRUCT 50 L.F. STD. CURB & GUTTER

DITCH CONSTRUCTION							
STATION	LOCATION	SIZE & SHAPE	LINING TYPE	LINING QTY.	d	t
24+57–25+15**	43'–135' RT.	SPCL. 2' F.B. W/ 3:1 S.S.	E.C.B.	96 S.Y.	1.0	–

** SEE SHEET R23 FOR PROFILE

BM #2 – RAILROAD SPIKE IN POWER POLE #40560-82623 IN FRONT OF 10312 STONESTREET ROAD, 16.6 FEET LT. OF STA. 20+65.3. ELEVATION = 457.243

✳ TRANSITION CURB HEIGHT FROM 6" TO 0" IN 5 FEET.

SCALE: 1"=20'

STONESTREET ROAD 20+00 TO 26+00

13

PREPARED BY ________ DATE
CHECKED BY ________ DATE
APPROVED BY ________ DATE

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COUNTY OF	ITEM NO.	SHEET NO.
JEFFERSON	5-387.20	R8

DATUM

472

470

468

466

464

462

460

458

456

454

452

450

448

446

444

442

440

BM #2 – RAILROAD SPIKE IN POWER POLE #40560-82623 IN FRONT OF 10312 STONESTREET ROAD, 16.6 FEET LT. OF STA. 20+65.3. ELEVATION = 457.243

P.V.C. STA. 20+80.00

V.P.I. 22+10
ELEV. 457.02
260' V.C.
N.P.S.D. = 772'

P.V.T. STA. 23+40.00

TOP OF RAIL +78.99 EL. 455.36

TOP OF RAIL +84.29 EL. 455.33

455.69 (RT.)

+0.445

455.89 (RT.)

455.93 (RT.)

-0.590%

-0.830%

0.00%

-0.816%

EX. ROADWAY ℄

18" PIPE RT. @ 0.50%

18" PIPE RT. @ 0.50%

24" PIPE RT. @ 0.69%

450.97 (RT.)

451.27 (RT.)

451.57 (RT.)

STA. 20+00.00 – RT.
C.B.I. TYPE A-6-2

STA. 20+60.00 – RT.
C.B.I. TYPE A-6-2

STA. 21+20.00 – RT.
C.B.I. TYPE A-6-2

+85
I.E. 451.50

+57
I.E. 451.00

V.P.I. 24+46.99
ELEV. 455.61

V.P.I. 24+76.99
ELEV 455.36

V.P.I. 24+90.00
ELEV 455.36

EARTHWORK QUANTITIES STA. 20+00.00 TO STA. 26+00.00	
COMMON	311.0 C.Y.
EMBANKMENT	732.0 C.Y.
EMBANKMENT BENCHING	374.4 C.Y.

SCALE: 1"=20' HORIZ.
SCALE: 1"=2' VERT.

455.5	456.0	456.3	456.3	456.2	456.0	455.8	455.5	455.5	455.6	455.2	454.2	453.8
456.09	456.31	456.52	456.66	456.69	456.62	456.45	456.19	455.89	455.56	455.28	454.87	454.46

20+00 21+00 22+00 23+00 24+00 25+00 26+00

STONESTREET ROAD 20+00 TO 26+00

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VENDERS NAME
1-92
FORM NO. 48

Cell Library: roadway.cel
Cell Name: spf
DD-MMM-YYYY HHMM

F:\98\980089\PROFILE.dwg Wed Feb 12 15:57:13 2003 98

F:\98\980089\PROFILE.DWG
PLOT SCALE: 1" = 20'

Appendix L – Utility Contacts for Jefferson County

7/14/2011

Utility Owners and Contact Person

For
Jefferson County

1. LG&E KU (Electric)
820 West Broadway
Louisville, KY 40202

Greg Geiser
work: (502) 627-3708
Greg.Geiser@lge-ku.com

LG&E Emergency Number (502) 589-1444
KU Emergency Number 1-800-331-7370

2. LG&E (Gas)
820 West Broadway
Louisville, KY 40202
Emergency Number (502) 589-5511

Greg Geiser
work: (502) 627-3708
Greg.Geiser@lge-ku.com

3. Louisville Water Company
550 South Third Street
Louisville, KY 40202

Daniel Tegene, PE
(502) 569-3649
dtegene@lwcky.com

4. AT&T KY
3719 Bardstown Road - 2nd Floor
Louisville, KY 40218

Morgan Herndon
morgan.herndon@att.com
(502) 458-7312

5. Metropolitan Sewer District
700 West Liberty Street
Louisville, KY 40203-1911

Steve Emly
emly@msdlouky.org
(502)540-6509
Brad Selch
selchb@msdlouky.org
(502) 540-6614
Send to both contacts

6. Insight Communications Company
4701 Commerce Crossings Dr.
Louisville, KY40229

Deno Barbour
Cell: (502) 664-7395
barbour.d@insightcom.com

7. Texas Gas Transmission Corporation
3800 Frederica Street
Owensboro, KY 42302
(270) 688-6325

Tim Turner
(270) 688-6461
tim.turner@bwpmlp.com

8. Marathon Ashland Pipeline Company
1046 Pleasant Valley Rd.

Jeff Erwin
JAErwin@MAPLLC.com or

	Owensboro, KY 42303	JAErwin@MarathonOil.com (270) 926-5579
9.	Indiana Gas Company Inc d.b.a. Vectren Energy Delivery of Indiana, Inc or Ohio River Pipeline Corporation 2520 Lincoln Drive Clarksville, Indiana 47129	Mary Barber mbarber@vectren.com (812) 948-4952
	Line Maintained By Texas Gas Transmission, LLC 3800 Frederica Street Owensboro, Kentucky 42302 Cell: (270) 485-1152	Tim Turner (270) 688-6461 Tim.Turner@bwpmlp.com
10.	Indiana Utilities Corporation 123 West Chestnut Street Corydon, Indiana 47112 (812) 738-3235	Kevin Kinney Ron Timberlake Jackie Rogers iucjrogers@portative.net
11.	Sprint - Fiber Optics 11370 Enterprise Park Dr. Sharonville, OH 45241	Joe Thomas Joseph.J.Thomas@Sprint.com Office (513) 612-4204 Cell (937) 209-9754
12.	Mid-Valley Pipeline Company 4910 Limaburg Road Burlington, KY 41005 FAX (866) 699-1185	Todd Calfee (Richard) (859) 371-4469x14 (859) 630-8271 RTCALFEE@sunocologistics.com
13.	Level 3 Communications 848 S.8th St. Louisville, KY 40202	Kevin Webster Kevin.webster@level3.com (502) 777-8622
14.	Jefferson County Public Schools (JCPS) MIS Dept. 3332 Newburg Road Louisville, KY 40218	Bo Lowrey bo.lowrey@jefferson.kyschools.us Cell (502) 639-2311 (502) 485-3116
15.	Kentucky Data Link (KDL now Windstream) Project Manager	Rick Cunico ph: (618) 648-2420

	3701 Communications Way Evansville, IN 47715 WCI.maintenance.south@windstream.com	cell: (812) 760-6602 Fax: (812) 456-4731 (812) 759-7844(Maintenance)
16	AT&T Legacy 5390 Overbend Trail Suwanee, GA 30024	Scott Logeman Cell: (770) 335-8255 SL1213@att.com
17.	TWTelecom Medinger Tower Jeremy.cornell@TWTELECOM.com 462 S. 4th St., Suite 210 Louisville, KY 40202	Jeremy Cornell (502) 992-1168
	333 West Vine Street, Suite 330 Lexington, KY 40507	Gerald Long Gerald.Long@twtelecom.com (502) 719-2387
18.	City of Taylorsville Sewer & Water 70 Taylorsville Rd., P O Box 279 Taylorsville, KY 40071	Harold Compton hcompton@taylorsvillewater.org (502) 477-3235 Fax: (502) 477-1310
19.	Qwest Communications Company, LLC 700 W Mineral Ave, UTD2734 Littleton, Colorado 80120	George McElvain George.McElvain@qwest.com (303) 992-9931 Cell:720-260-2514 Fax:303-707-3252
20.	Shelby Energy Cooperative P.O. Box 311, 620 Old Finchville Road Shelbyville, KY 40065 (502) 633-4420	Jason Ginn Jason@shelbyenergy.com cell: 502-643-2778
21.	Atmos Energy 130 Stonecrest Road Suite105 (502) 633-2831 ext. 104 Shelbyville, KY 40065	Bernie Anderson cell: 502-321-8073 bernie.anderson@atmosenergy.com AND Earl Taylor

7/14/2011

Earl.taylor@atmosenergy.com
Cell: 859-583-0306
Office: 859-236-2300

AIRPORT CONTACTS

Steve Stoker (502) 375-7360 – FFA Location Manager
Jack Stauble (502) 664-9637 cell – FFA Location Technician

Chuck Hensley (502) 380-8356 EXT 356 – Construction Manager
Louisville Regional Airport Authority

Andy Hepfinger (502) 329-3706 – UPS Construction
Brian Knesco (502) 741-2922 – UPS Construction

Railroad Companies

1. **C.S.X. Transportation, Inc.**
   Contacts:
   David Hall, KY Liaison, (502) 815-1865
   Milton Holder – crossings – cell (502) 817-2011
   John Williams – crossings – cell (502) 376-8745, Office (502) 364-1133
   Joe Malandruco (Florida) – signals (904) 245-1160

2. Norfolk - Southern Railway Company
   Norfolk - Southern Railway Company (Roy Johnson to provide contact data)
   Mr. J. N. Carter, Jr. Chief Engineer
   Bridges and Structures
   Norfolk Southern Corporation
   1200 Peachtree Street
   Atlanta, Georgia 30309

3. Paducah and Louisville Railway, Inc.
   Gerald Gupton, Office: (270) 444-4386