KY 15 From Campton to Hazard

Programming Study

Perry, Breathitt, and Wolfe Counties

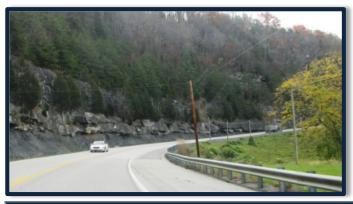












FINAL REPORT

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Prepared For:



Prepared By:



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Chapter 1 INTRODUCTION

1.1 PURPOSE OF STUDY

The Kentucky Transportation Cabinet (KYTC) has undertaken this review of previous planning, design, and environmental analysis work on KY 15 from the Bert T. Combs Mountain Parkway Exit 43 at Campton in Wolfe County (including KY 15S from KY 15 at Milepoint [MP] 9.5 to the Parkway) to MP 14.5 north of Hazard in Perry County. This 47.9-mile section of KY 15 in Wolfe, Breathitt, and Perry counties is referenced in this report as the "KY 15 Study Area." The primary purposes of this examination are to:

- Provide an independent evaluation of the previous work with regard to deficiencies, projects, and priorities, including a review of design plans and a review and update of the purpose and need statement and project goals.
- Identify new improvements with consideration to practical solutions and other design parameters to reduce costs.
- Review cost estimates and prepare planning-level cost estimates for any new projects including estimates of any practical solutions, design options or other design revisions.
- The purpose of this study is to provide sufficient information to make an informed decision about how best to move forward with the widening of KY 15. Proposed roadway improvements with fewer than four lanes and/or with a design speed less than 60 mph were excluded from the development of new alternative alignments or the evaluation of potential cost savings for previously proposed design sections.
- Develop a project development plan for each Corridor Segment including cost estimates by phase, and priority sections for programming.

1.2. Previous Studies

The following studies have been developed in recent years by KYTC for KY 15 along and near the section that is the subject of this study:

- Scoping Study, KY 15, Jeff to Grapevine, prepared for KYTC by Bernardin, Lochmueller and Associates, December 1996.
- Preliminary Line and Grade Design Report, KY 15 and KY 15/KY 550 Interchange, Perry County, Item Number 10-269.0, prepared for KYTC by GRW Engineers, Inc., October 1995.
- Froject Scoping Report, Perry Breathitt Wolfe Counties, KY 15, Hazard to Campton Road, prepared for KYTC by WMB Inc., January 1994.
- (E) Advanced Planning Study, KY 15, Hazard to Campton, prepared for KYTC by WSA, August 1998.

- Finding of No Significant Impact, KY 15 from Morton Boulevard in Perry County (MP 14.5) to the vicinity of KY 28 (MP 20.7), approved by KYTC in June 2004 and by FHWA in July 2004.
- Draft Environmental Assessment, KY 15 from the vicinity of KY 28 in Perry County (MP 20.7) to 0.5 mile north of KY 1110 near Haddix in Breathitt County (MP 9.0), June 1999.
- Finding of No Significant Impact and Appended Environmental Assessment, KY 15 from 0.6 miles north of KY 476 near Haddix in Breathitt County (MP 8.3) to 0.4 miles north of KY 205 near Vancleve, May 2000.

In addition to the studies listed, the following project development activities have occurred on the following sections of KY 15:

- The section between MP 20.7 and MP 24.4 in Breathitt County has been reconstructed and was opened to traffic in 2008.
- The section between MP 17.9 and MP 20.7 in Breathitt County is currently undergoing reconstruction at the time of this report.
- The section in Breathitt County between KY 476 near Haddix (MP 7.6) and MP 17.9 was approximately 50% complete in Phase II Design before work was halted.
- The section between MP 7.6 in Breathitt County and the vicinity of KY 28 in Perry County (MP 20.7) was approximately 90% complete in Phase I Design before work was halted.
- The section between MP 16.9 and MP 20.7 in Perry County had proceeded to plans for a Preliminary Line-and-Grade Inspection before work was halted.

Design files for previous work are not included herein, but have been organized on electronic media. Due to the different dates that some of this work was performed, some of the beginning/ending points for previous work overlapped, particularly in the vicinity of KY 28 in Perry County and near Haddix in Breathitt County.

1.3 CORRIDOR SECTIONS

The KY 15 Study Area has been divided into seven sections (Sections A-G) that may be considered "Segments of Independent Utility" (SIUs). An eighth section (Section H), between MP 14.5 and MP 16.9 in Perry County, was included in the analysis for system continuity, and because the previous environmental analysis of the section between MP 16.9 and MP 21.5 extended southward to MP 14.5. Previous design work on the eighth section had proceeded to the submission of Right-of-Way plans in October 2003 before work was stopped. Those corridor sections are shown in Figure 1 and are described on the following page:

CORRIDOR SECTION	LOCATION	DISTANCE
Section A	KY 15 From MP 24.4 in Breathitt County to the Mountain Parkway Exit 43 at Campton Via KY 15S	12.8 miles
Section B	KY 15 From MP 20.7 to MP 24.4 in Breathitt County	3.7 miles
Section C	KY 15 From MP 17.9 to MP 20.7 in Breathitt County	2.8 miles
Section D	KY 15 From MP 7.7 to MP 17.9 in Breathitt County	10.2 miles
Section E	KY 15 From MP 5.4 to MP 7.7 in Breathitt County	2.3 miles
Section F	KY 15 From MP 21.5 in Perry County to MP 5.4 in Breathitt County	9.1 miles
Section G	KY 15 From MP 16.9 to MP 21.5 in Perry County	4.6 miles
Section H	KY 15 From MP 14.5 to MP 16.9 in Perry County	2.4 miles
TOTAL LENG	TH OF ALL SECTIONS	47.9 miles

Included is a summary of previous work for the eighth section; however, analysis and recommendations regarding Section H were beyond the scope of this report.

1.4 REPORT ORGANIZATION

The history of the various corridor sections shows that they had advanced to various stages of completion of planning, design, and/or environmental analysis before work was halted. The following chapters of this report fully address the corridor sections that comprise the KY 15 Study Area, and describe the recommended priorities resulting from the evaluation of the corridor sections.

- Chapter Two Summary of Staged Improvements
- Chapter Three—All Corridor Sections
- Chapter Four—Corridor Section A (Campton to Vancleve)
- Chapter Five—Corridor Section B (Vancleve to Kenny King Road)
- Chapter Six—Corridor Section C (Kenny King Road to Park Road)
- Chapter Seven—Corridor Section D (Park Road to Haddix)
- Chapter Eight—Corridor Section E (Haddix to 2 ¼ miles south of KY 476)
- Chapter Nine—Corridor Section F (2 ¼ miles south of KY 476 to just north of KY 28)
- Chapter Ten—Corridor Section G (Just north of KY 28 to Capitol Hill Drive)
- © Chapter Eleven—Corridor Section H (Capitol Hill Drive to Morton Boulevard)
- © Chapter Twelve—Summary of Corridor Sections
- Chapter Thirteen —Recommended Priorities

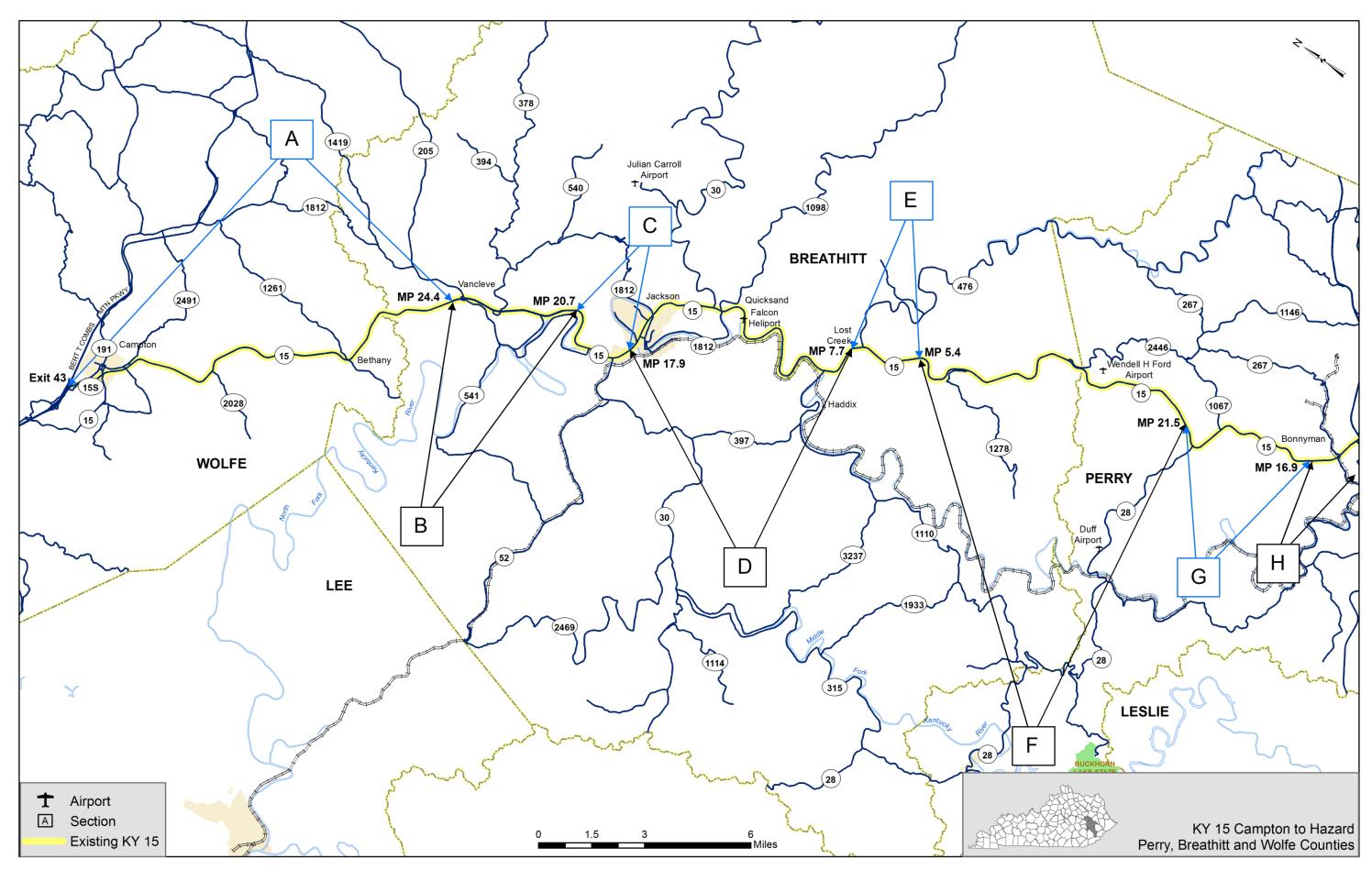


Figure 1: KY 15 Study Sections

1.5 PURPOSE AND NEED

The Appalachian Regional Commission (ARC) was established by Congress in the 1965 Appalachian Development Act. That same Act established the Appalachian Development Highway System (ADHS), intended to provide both access and connectivity to assist in fostering economic development in the region. KY 15 in the project study area is part of ADHS Corridor I, which begins at the KY 15/US 119 junction in Whitesburg and ends 126.2 miles north at the Mountain Parkway junction with I-64 near Winchester. Early improvements on this corridor using both State and ADHS funds led to this route being declared complete sometime in the late 1960's or early 1970's. However, in today's economic market, this route is still in need of the below discussed improvements in an effort to provide a transportation system that helps to deliver economic opportunities to distressed Appalachian counties.

Notwithstanding ARC's declaration that, in effect, Corridor I was complete, the purpose of further improvements is to enhance mobility and improve safety while enhancing access for economic development opportunities for north-south travel from the Mountain Parkway to the Hal Rogers Parkway between I-75, 50 miles to the west, and US 23, 35 miles to the east. The needs are to improve the roadway geometrics, reduce the number of crashes, reduce travel times, increase passing opportunities, and enhance the quality of life in this distressed region.

Chapter 2 SUMMARY OF STAGED IMPROVEMENTS

KY 15 between the Hal Rogers Parkway at Hazard and the Bert T. Combs Mountain Parkway at Campton is characterized by deficient roadway geometrics, the presence of slower moving heavy trucks, and restricted passing opportunities. These conditions are more prevalent between Hazard and Jackson than between Jackson and Campton.

Improvements to KY 15 have been discussed for nearly 50 years. The Appalachian Development Highway System included this roadway, as well as sections to the north and to the south, as part of ADHS Corridor I. A planning study to recommend priorities was initiated by KYTC nearly 20 years ago.

Roadway design activities have advanced to the point of right-of-way purchase at the southern end of the corridor north of Hazard. One section north of Jackson has been reconstructed and a second section is currently being reconstructed.

A strategy for staged improvements to the corridor has been recommended, and may be summarized in these stages:

 Address the current congestion on KY 15 near Jackson by reconstruction along the existing alignment. The total estimated cost of these recommendations is \$456 million.

- ii. Complete improvements between Hazard and Jackson beginning at the south end and proceeding northward in affordable construction sections.
- iii. Complete improvements in the vicinity of Campton.
- iv. Construct a Jackson Bypass east of the current KY 15 alignment.
- v. Complete the corridor improvements from Campton to Vancleve.

Chapter 3

ALL CORRIDOR SECTIONS

KY 15 within the study area is functionally classified as a Principal Arterial route and is classified for maintenance purposes as a State Primary route. It is included on both the National Highway System (NHS) and the federally designated portion of the National Truck Network (NTN). Its gross truck weight limit class is 80,000 pounds (AAA). Table A-1 in Appendix A summarizes existing conditions.

Access control is very important when planning for a regional facility such as KY 15. Each alternative was studied and updated for costs as partial control of access with minimum spacing in rural areas of 1200 feet and urban areas (through Jackson) of 600 feet. Frontage roads were included in the estimates where appropriate and when needed.

Chapter 4

CORRIDOR SECTION A (Campton to Vancleve)

4.1 PROJECT LOCATION

The northern terminus of Corridor Section A, actually KY 15S, is Exit 43 on the Mountain Parkway at Campton in Wolfe County. KY 15S begins at the exit and terminates 1.0 mile south at the KY 15/KY 191 intersection. Following the KY 15/15S/191 intersection (KY 15 MP 9.5), the KY 15 Study Area proceeds southward on KY 15 to its southern terminus at MP 24.4 in Breathitt County. The length of Section A is 12.8 miles.

4.2 PROJECT HISTORY

This Corridor Section was included in both the "Project Scoping Report, Perry — Breathitt — Wolfe Counties, KY 15, Hazard to Campton Road," prepared for KYTC by WMB Inc. in January 1994, and in the "Advanced Planning Study, KY 15, Hazard to Campton," prepared for KYTC by WSA in August 1998. The WMB study recommended four-lane improvements to KY 15 within Corridor Section A along the existing alignment at an estimated cost of \$85.6 million (in 1993 dollars). The WSA study was only an abbreviated Programming Study, and it estimated the cost of improving Section A to be \$158 million (in 1997 dollars) using the same parameters as the WMB study.

4.3 Environmental Status

The 1994 WMB report included an Environmental Overview but no detailed Environmental Assessment (EA). As an abbreviated Programming Study, the 1998 WSA report followed KYTC policy at that time by including a brief Environmental Overview and an Environmental Footprint map.

4.4 EXISTING CONDITIONS

i. Geometric Characteristics

Corridor Section A is characterized by two 12-foot-wide lanes and 10-foot-wide shoulders. Except for the portion near Campton, Highway Information System (HIS) data indicates 60% passing sight distance except for 90% near the Breathitt-Wolfe County line.

ii. Traffic Information

Current average daily traffic (ADT) volumes range from about 7,000 vehicles per day (vpd) near Campton to about 4,000 vpd near the Breathitt-Wolfe County line. More than 460,000 tons of coal annually are shipped northbound. Average travel speeds are near 50 mph, with a slightly lower speed near Campton. The average travel speed contributes to a level-of-service (LOS) C, except near Campton where it is D. Volume-to-capacity (v/c) ratios range from 0.24 to 0.34.

Projected annual traffic growth rates within this corridor section are modest: 1% on KY 15S, 0% on KY 15 from MP 1.7 to MP 9.5, and 0.5% south of MP 1.7. Average travel speeds in the Year 2035 under a "no-build" scenario will decline only slightly (not more that 1.2 mph), if at all. V/C ratios increase to a range of 0.26 to 0.41, but LOS values remain unchanged.

Under the four-lane improvement scenario in the WMB study, the average Year 2035 travel speed is conservatively estimated to increase from 50 mph to 59 mph, v/c ratios would not exceed 0.14, and the LOS would be A throughout Corridor Section A. Travel time would be reduced from 13 minutes to less than 11 minutes.

iii. Crash Information

At the time of this report, the KYTC Critical Rate Calculator used 2009-2011 crash data. That information showed a Critical Crash Rate Factor (CCRF) of 0.82 for Corridor Section A. Statistically speaking, Corridor Section A does not have a crash concern. Two fatal crashes occurred in clear weather with dry roadways, but no other commonality existed in these two crashes.

iv. Adequacy Rating (AR) and Percentile

The composite AR for Corridor Section A ranges from 89.6 upward, except for the segment of KY 15 between MP 8.7 and MP 9.5. That segment appeared to need pavement resurfacing at the time of the AR calculation. Without that need, the AR for that section would have been greater than 93.

4.5 COST ESTIMATE

Current year estimated construction phase costs for improvements to Section A ranges from \$85.7 million to \$95.5 million.

Chapter 5

CORRIDOR SECTION B (Vancleve to Kenny King Road)

5.1 Project Location

The northern terminus of Corridor Section B is MP 24.4 near Vancleve and the southern terminus is MP 20.7 in Breathitt County, a distance of 3.7 miles.

5.2 Project History

Corridor Section B was reconstructed and opened to traffic in 2008. This section was reconstructed, essentially on a new alignment, to the east of the former roadway.

5.3 ENVIRONMENTAL STATUS

Corridor Section B was included in the "Finding of No Significant Impact (Short Form FONSI) and Appended Environmental Assessment," dated May 2000.

5.4 Existing Conditions

i. Geometric Characteristics

Corridor Section B is characterized by four 12-foot-wide driving lanes, 10-foot-wide outer shoulders, and 6-foot-wide inner shoulders separated by a 28-foot-wide depressed grass median.

ii. Traffic Information

The current ADT volume is estimated to be about 7,300 vpd. More than 460,000 tons of coal annually are shipped northbound. The average travel speed is near 60 mph, the LOS is A, and the v/c ratio is 0.07.

Traffic growth in Corridor Section B is projected to be 0.5% annually. Average Year 2035 travel speeds are estimated to remain near 60 mph, the v/c ratio would be 0.08, and the LOS would still be A. It is estimated that reconstruction of Corridor Section B reduced its travel time by 2.5 minutes.

iii. Crash Information

During the first three and a half years that the new four-lane alignment on Corridor Section B was open to traffic, there were 17 reported crashes involving no fatalities and a total of seven injuries. During the final three and a half years when the old alignment was used as KY 15, there were 43 crashes and a total of one fatality and twenty-eight injuries. The CCRF for the new road is 0.40.

iv. Adequacy Rating and Percentile

The AR for the newly reconstructed Corridor Section B is 92.3.

Chapter 6

CORRIDOR SECTION C (Kenny King Road to Park Road)

6.1 PROJECT LOCATION

The northern terminus of Corridor Section C is MP 20.7 and the southern terminus is MP 17.9 in Breathitt County, a distance of 2.8 miles.

6.2 PROIECT HISTORY

Corridor Section C is currently being reconstructed. This section is being reconstructed on a new alignment to the east of the current roadway.

6.3 Environmental Status

Corridor Section C was included in the "Finding of No Significant Impact (Short Form FONSI) and Appended Environmental Assessment," dated May 2000.

6.4 EXISTING CONDITIONS

i. Geometric Characteristics

Corridor Section C is being reconstructed to four 12 foot-wide driving lanes, 10 foot-wide outer shoulders, and 6-foot-wide inner shoulders separated by a 28 foot-wide depressed grass median.

ii. Traffic Information

There is a significant difference in the current traffic volumes on Corridor Section C north and south of the KY 15 intersection with KY 30 west. North of this intersection, the current ADT volume is about 7,300 vpd whereas south of this intersection, the ADT is estimated to be 18,200 vpd. More than 460,000 tons of coal annually are shipped northbound north of the intersection with KY 30 west, while nearly 625,000 tons are shipped northbound annually south of that point. In a *Traffic Forecast Report* prepared by KYTC in January 2011, the traffic growth in Corridor Section C was projected to be 1.00% annually. The current average travel speed is about 30 mph, the v/c ratio is 0.72, and the LOS is E. Without the improvements currently under construction, the average year 2035 travel speed is estimated to be less than 27 mph with a v/c ratio of 0.91 and an LOS remaining at E. With the improvements, the average travel speed is estimated to be near 60 mph and the v/c ratio would be 0.35. The LOS would be A north of the intersection with KY 30 and B south of that point. It is estimated that reconstruction of Corridor Section C will reduce its travel time by 3.5 minutes.

iii. Crash Information

KYTC data showed a CCRF of 0.40 for Corridor Section C. Statistically speaking, Corridor Section C does not have a crash concern. No fatalities were recorded in this corridor during the analysis time period.

iv. Adequacy Rating and Percentile

The AR south of the intersection with KY 30 west is 51.2, placing this section in the worst 1% of roads in Kentucky. North of that intersection, the AR is 92.3.

Chapter 7 CORRIDOR SECTION D (Park Road to Haddix)

7.1 PROJECT LOCATION

The northern terminus of Corridor Section D is MP 17.9 and the southern terminus is MP 7.7 near Haddix in Breathitt County. The length of Section D along the existing alignment is 10.2 miles. The length of the previously recommended alternative for Section D is 7.1 miles.

7.2 PROJECT HISTORY

Phase II Design of Corridor Section D was approximately 50% complete by WMB at the time work was stopped. The estimated cost of constructing the preferred alternative for Corridor Section D (in 1999 dollars) was approximately \$150 million. The WSA study, using figures from the (then) Recommended 1998 Highway Plan, had estimated the cost of Corridor Section D at \$108 million.

7.3 ENVIRONMENTAL STATUS

Corridor Section D was included in the "Finding of No Significant Impact (Short Form FONSI) and Appended Environmental Assessment," dated May 2000.

7.4 EXISTING CONDITIONS

i. Geometric Characteristics

Most of Corridor Section D is characterized by two 12-foot-wide lanes and 10-foot-wide shoulders. The portion south of MP 8.8 has 11-foot-wide driving lanes, while the urban development section north of MP 16.3 has 4-foot-wide shoulders. South of MP 16.3, HIS data indicates 35-40% passing sight distance; passing is prohibited north of that point.

ii. Traffic Information

Current ADT volumes range from about 18,300 vpd near the intersection with Washington Avenue in Jackson (KY 1812 west) to about 6,600 vpd near KY 476. Nearly 625,000 tons of coal are shipped northbound annually in Corridor Section D. Travel speeds average 32 mph south of KY 1812 east and 28 mph north of that point. South of the urban development section the travel speed is about 47 mph. The current year LOS is D south of Roark Ridge Road (MP 16.3) and E north of that point. V/C ratios progressively improve from 0.77 at the north end of Corridor Section D to 0.33 at the south end.

Projected annual traffic growth rates within this corridor section are modest: 0.5% annually north of the intersection with KY 476 and 1.00% annually south of that point. Since a portion of Corridor Section D is already operating near capacity levels, the average travel speeds in

the Year 2035 under a "no-build" scenario will decline only slightly except for the section north of KY 1812 east, where the reduction exceeds 2 mph. V/C ratios increase and range from 0.87 at the north end of the section to 0.36 at the south end, but LOS values remain unchanged.

Under the improvement scenario developed in Phase II Design, the average Year 2035 travel speed is conservatively estimated to increase to 59 mph, v/c ratios would not exceed 0.34, and the LOS would be A throughout Corridor Section D except for the section north of KY 1812 east where the LOS would be B. Travel time would be reduced by nearly 3.5 minutes.

iii. Crash Information

KYTC data showed a CCRF of 0.54 for Corridor Section D. There were two fatal crashes during the analysis time period.

iv. Adequacy Rating and Percentile

The AR north of the intersection with Roark Ridge Road is less than 54, placing this section in the worst 1% of roads in Kentucky. South of that point, the AR ranges from 81.1 to 89.6.

7.5 COST ESTIMATE

Current year estimated construction phase costs for improvements to Section D ranges from \$71.4 million to \$137.9 million.

Chapter 8

CORRIDOR SECTION E (Haddix to 2 1/4 Miles South of KY 476)

8.1 PROJECT LOCATION

The northern terminus of Corridor Section E is MP 7.7 near Haddix and the southern terminus is MP 5.4 in Breathitt County. The length of Section E is 2.3 miles.

8.2 PROJECT HISTORY

Phase I Design of Corridor Section E was approximately 90% complete by WMB at the time previous work was stopped. A preferred alternative (improvements along the existing roadway) was recommended. The WSA study, using figures from the (then) Recommended 1998 Highway Plan, had estimated the cost of a slightly longer version of Corridor Section D at \$26.6 million.

8.3 Environmental Status

The only environmental analysis report provided as part of the current study was a portion of the "Revised Draft Environmental Assessment," which covers both Corridor Sections E and F. This document includes the comment "Draft Submitted June 30, 1999." However, other correspondence includes an August 11, 2000, memorandum from the State Highway Engineer to the Chief District 10 Engineer indicating that document had been "approved" by the Federal Highway Administration (FHWA).

8.4 Existing Conditions

i. Geometric Characteristics

Corridor Section E is characterized by two 11-foot-wide lanes and 10-foot-wide shoulders. HIS data indicates 40% passing sight distance.

ii. Traffic Information

The current ADT volume is 6,100 vpd. Travel speeds average 48 mph. The current year LOS is D and the v/c ratio is 0.33.

Traffic growth rates within this corridor section are projected to be 1.00% annually. Corridor Section E would continue to operate at LOS D in the Year 2035

Nearly 1.6 million tons of coal are shipped annually in Corridor Section E, 60% of it southbound.

under a "no-build" scenario. Travel speed would decline slightly to 47 mph, and the v/c ratio would increase to 0.39.

Under the improvement scenario considered in Phase I Design, Year 2035 travel speed is conservatively estimated to increase to 59 mph, v/c ratios would not exceed 0.13, and the LOS would be A. Travel time would be reduced by about half a minute.

iii. Crash Information

KYTC data showed a CCRF of 0.14 for Corridor Section E. No fatal crashes were reported.

iv. Adequacy Rating and Percentile

The AR for Corridor Section E is 89.6, placing this section in the 48th percentile of similar roads statewide. Horizontal curvature is described as having infrequent curves with design speeds less than the prevailing speed limit on the section.

8.5 COST ESTIMATE

Current year estimated construction phase costs for improvements to Section E ranges from \$25.7 million to \$27.8 million.

Chapter 9

CORRIDOR SECTION F (2 1/4 Miles South of KY 476 to just north of KY 28)

9.1 PROJECT LOCATION

The northern terminus of Corridor Section F is MP 5.4 in Breathitt County and the southern terminus is MP 21.5 in Perry County. The length of Section F is 9.1 miles.

9.2 PROJECT HISTORY

Phase I Design of Corridor Section F was approximately 90% complete by WMB at the time work was stopped. A preferred alternative (improvements principally along the existing roadway) was being recommended. The WSA study, using figures from the (then) Recommended 1998 Highway Plan, had estimated the cost of a slightly shorter version of Corridor Section F at \$112.2 million.

9.3 Environmental Status

The only environmental analysis report provided as part of the current study was a portion of the "Revised Draft Environmental Assessment," which covers Corridor Sections E and F. This document includes the comment "Draft Submitted June 30, 1999." However, other correspondence includes an August 11, 2000, memorandum from the State Highway Engineer to the Chief District 10 Engineer indicating that document had been "approved" by FHWA.

9.4 EXISTING CONDITIONS

i. Geometric Characteristics

Corridor Section F is characterized by two 11-foot-wide lanes and 10-foot-wide shoulders in Breathitt County and two 12-foot-wide lanes and 6-foot-wide shoulders in Perry County. HIS data indicates 40-43% passing sight distance.

ii. Traffic Information

Current ADT volumes are 6,000 vpd near the northern end and 8,000 vpd near the southern end of Section F. More than 1.3 million tons of coal are shipped annually in Section F, slightly more than half of which travels southbound. Travel speeds average 48 mph in the northern portion of Section F but only 38 mph in the southern portion. The current year LOS is D in the northern portion of Section F but E in the southern portion, and v/c ratios are 0.33 and 0.39, respectively.

Traffic growth rates within this corridor section are projected to be 1.00% annually. Corridor Section F would continue to operate at LOS D (northern portion) and E (southern portion) in the Year 2035 under a "no-build" scenario. Travel speed would decline slightly to 47 mph in the northern section and 36 mph in the southern section, and the v/c ratios would increase to 0.39 and 0.47, respectively.

Under the improvement scenario being considered in Phase I Design, Year 2035 travel speed is conservatively estimated to increase to 59 mph, v/c ratios would not exceed 0.17, and the LOS would be A. Travel time would be reduced by more than 4.5 minutes.

iii. Crash Information

KYTC data showed a CCRF of 0.80 for Corridor Section F. One fatal crash was reported.

iv. Adequacy Rating and Percentile

The AR for the Perry County portion of Corridor Section F is 76, placing this section in only the 15th percentile of similar roads statewide. Horizontal curvature is described as having several curves severely affecting travel speeds, while vertical grades are described as

frequently limiting sight distance. The AR for the Breathitt County portion is 89.6. Horizontal curves infrequently have speeds less than the prevailing speed limit, while some vertical grades have reduced sight distance.

9.5 COST ESTIMATE

Current year estimated construction phase costs for improvements to Section F range from \$64.6 million to \$70.7 million.

Chapter 10

CORRIDOR SECTION G (Just north of KY 28 to Capitol Hill Drive)

10.1 PROJECT LOCATION

The northern terminus of Corridor Section G is MP 21.5 and the southern terminus is MP 16.9, both in Perry County. The length of Section G is 4.6 miles.

10.2 PROJECT HISTORY

Preliminary design plans for a Line-and-Grade Inspection were submitted by Vaughn and Melton in October 2002. A preferred alternative, principally on new alignment to the west of the existing roadway, was recommended. The WSA study, using figures from the (then) Recommended 1998 Highway Plan, had estimated the cost of a slightly longer version of Corridor Section G at \$38.7 million.

10.3 Environmental Status

Corridor Section G was included in the "Finding of No Significant Impact," dated June 2004.

10.4 EXISTING CONDITIONS

i. Geometric Characteristics

Corridor Section G is characterized by two 12-foot-wide lanes and 6-foot-wide shoulders. HIS data indicates 43% passing sight distance.

ii. Traffic Information

The current ADT volume is 11,400 vpd. More than 1.3 million tons of coal are shipped annually in the northern portion of Section F, slightly more than half of which travels southbound. South of the intersection with KY 1067, the annual tonnage increases by nearly 70%; south of KY 1067, nearly three fourths of the coal tonnage is southbound. Travel speeds average 35 mph in Section G. The current year LOS is E, and the v/c ratio is 0.54.

Traffic growth rates within this corridor section are projected to be 0.75% annually. Corridor Section G would continue to operate at LOS E in the Year 2035 under a "no-build" scenario. Travel speed would decline to 29 mph, and the v/c ratio would increase to 0.84.

Under the improvement scenario considered in the previous design, Year 2035 travel speed is conservatively estimated to increase to 59 mph, v/c ratios would not exceed 0.32, and the LOS would be A or B. Travel time would be reduced by more than 3.5 minutes.

iii. Crash Information

KYTC data showed a CCRF of 0.74 for Corridor Section G. Three fatal crashes were reported with one fatality in each.

iv. Adequacy Rating and Percentile

The AR for Corridor Section G is 76, placing this section in only the 15th percentile of similar roads statewide. Horizontal curvature is described as having several curves severely affecting travel speeds, while vertical grades are described as frequently limiting sight distance.

10.5 COST ESTIMATE

Qk4 current year estimated construction phase costs for improvements to Section G range from \$37.1 million to \$53.4 million.

Chapter 11

CORRIDOR SECTION H (Capitol Hill Drive to Morton Boulevard)

11.1 PROJECT LOCATION

The northern terminus of Corridor Section H is MP 16.9 and the southern terminus is MP 14.5, both in Perry County. The length of Section F is 2.4 miles.

11.2 PROJECT HISTORY

Right-of-Way Plans were submitted by GRW Engineers in October 2003. A preferred alternative, principally along the existing alignment, was recommended. The KYTC FY 2012–2018 Highway Plan includes funding for all remaining project phases, with construction being scheduled for FY 2017.

11.3 ENVIRONMENTAL STATUS

Corridor Section H was included in the "Finding of No Significant Impact," dated June 2004.

11.4 EXISTING CONDITIONS

i. Geometric Characteristics

Corridor Section H is characterized by four 12-foot-wide lanes and 9-foot-wide shoulders south of KY 267, and by two 12-foot-wide lanes and 6-foot-wide shoulders north of KY 267. HIS data indicates at least 43% passing sight distance.

ii. Traffic Information

Current ADT volumes range from 11,400 vpd north of KY 267 to 19,000 vpd between the Hal Rogers Parkway and Morton Boulevard. Travel speeds average 30 mph in Section H: higher north of KY 267 and lower south of that point. The current year LOS is E, and the v/c ratio is 0.54 north of KY 267 and 0.82 south of KY 267.

Traffic growth rates within this corridor section are projected to be 2.00% annually. Corridor Section H would continue to operate at LOS E in the Year 2035 north of KY 267 and would diminish to LOS F south of that point under a "no-build" scenario. Travel speed would decline to 21 mph.

Under the improvement scenario being considered in the previous design, Year 2035 v/c ratios would not exceed 0.49, and the LOS would be A or B north of KY 267 and B or C south of KY 267. Travel time would be reduced by more than 3.0 minutes.

iii. Crash Information

KYTC data showed a CCRF of 1.79 for Corridor Section H. Crashes per mile occur almost six times more frequently south of KY 267 than north of KY 267. The number of crashes south of KY 267 (63 in 2009; 42 in 2010; and 49 in 2011) appears to be trending downward, though the pattern isn't definitive. Nearly 2/3 (62.6%) of the crashes occurred on dry pavement in daylight. (Daylight crashes on dry pavement represent those that occur where the driving environment is least likely to be problematical for the driver.) Slightly more than half of these (53%) were rear-end crashes. A relatively high percentage of these rear-end crashes (76.6%) occurred either in the immediate vicinity of a traffic signal or during peak hours where the traffic queuing caused by those signals might have extended over an extended distance. Two fatal crashes were reported with one fatality in each.

iv. Adequacy Rating and Percentile

The AR for Corridor Section H north of KY 267 is 76, placing this section in only the 15th percentile of similar roads statewide. Horizontal curvature is described as having several curves severely affecting travel speeds, while vertical grades are described as frequently limiting sight distance. The AR south of KY 267 is 55, placing this section in the worst 1% of roads in Kentucky. Horizontal curvature is described as having several curves severely affecting travel speeds. The crash history south of KY 267 (the CCRF on that portion is 2.32) also contributes to the low AR.

Chapter 12 SUMMARY OF CORRIDOR SECTIONS

12.1 Project Location

The northern terminus of the KY 15 Corridor Study is Exit 43 on the Mountain Parkway at Campton in Wolfe County. The southern terminus is MP 14.5 in Perry County. The length of the KY 15 Corridor Study is 47.9 miles.

12.2 Project History

An overall "KY 15 Corridor Planning Study" was completed in 1994. Phase I Design was approximately 90% complete on the portion between MP 20.3 in Perry County and MP 7.6 in Breathitt County when work was halted. Phase II Design was approximately 50% complete on the portion between MP 7.6 and MP 17.9 in Breathitt County when work was halted. The section between MP 16.8 and MP 20.3 was ready for a Preliminary Line-and-Grade Inspection when work was halted. Right-of-Way Plans had been submitted on the section between MP 14.5 and MP 16.9 in Perry County when work was halted. One section, between MP 20.7 and MP 24.4 in Breathitt County, was widened to four travel lanes and opened to traffic in 2008. The section immediately south of that, between MP 17.9 and MP 20.7, is currently under reconstruction to four travel lanes and should be opened to traffic in 2013.

12.3 ENVIRONMENTAL STATUS

The 1994 KY 15 Corridor Planning Study included a broad environmental overview, and this work is the only environmental work performed to date between MP 24.4 in Breathitt County and the Mountain Parkway. An EA-FONSI, dated May 2000, covered the section between MP 7.6 and MP 17.9 in Breathitt County. A "Revised Draft Environmental Assessment," dated June 1999, covered the section between MP 20.3 in Perry County and MP 7.6 in Breathitt County. An EA-FONSI, dated June 2004, covered the section between MP 14.5 and MP 20.3 in Perry County.

12.4 EXISTING CONDITIONS

i. Geometric Characteristics

North of MP 24.4 in Breathitt County and south of MP 17.9 in Breathitt County, KY 15 generally has two 12-foot-wide driving lanes, with short sections of 11-foot-wide driving lanes, and shoulder widths generally 6-foot-wide or wider (a short segment has 4-foot-wide shoulders). The section between MP 21.1 and MP 24.4 in Breathitt County has four 12-foot-wide driving lanes, 10-foot-wide outer shoulders, and 6-foot-wide inner shoulders separated by a 28-foot-wide depressed grass median. The section between MP 17.9 and MP 20.7 in Breathitt County is currently being

If the originally proposed improvements to KY 15 had already been implemented, the cumulative time savings from Hazard to the Mountain Parkway at Campton would have been nearly 20 minutes for each vehicle.

reconstructed to that same four-lane geometric configuration.

On the two-lane sections, the percent passing sight distance is generally greater between Jackson and Campton than between Hazard and Jackson.

ii. Traffic Information

Current ADT volumes are greatest near Jackson (18,300 vpd) and north of Hazard (19,000 vpd). Between Hazard and Jackson, the average daily traffic is generally between 6,000 and 9,000 vpd, while north of Jackson the ADT ranges from 4,000 to 7,000 vpd. Average travel speeds range from 28 mph in the segments through Jackson and just north of Hazard, to 60 mph along the reconstructed Section B. Current levels of service range from A in the newly constructed Section B to E around Jackson and just north of Hazard.

Significant coal tonnage is shipped along KY 15, particularly south of KY 28 in Perry County.

iii. Crash Information

CCRF for each analysis section are discussed above. In addition, the 0.7-mile section in Jackson between the Goodyear Store at 361 KY 15 South (MP 17.1) and Brewer Drive (MP 17.8) shows a CCRF of 1.69. The number of crashes there (26 in 2009; 24 in 2010; and 16 in 2011) is trending downward over time. More than 2/3 (68.2%) of these crashes occurred on dry pavement in daylight. While 46.7% of the crashes were rear-end, 25.8% were angle crashes. The rear-end crashes are to be expected, given the two traffic signals in this 0.7 section, but the frequency of angle crashes is somewhat unusual. All but one of these angle crashes involved a vehicle entering or exiting a side entrance. Enhanced access control should be considered as a part of future roadway improvements.

The intersection of KY 15 with KY 15S and KY 191 in Wolfe County has a CCRF of 2.45. Unfortunately, the number of crashes appears to be increasing over time (5 in 2009; 6 in 2010; and 7 in 2011). However, the relatively small number of crashes (18) that results in a high CCRF may be more a function of relatively low traffic volumes than an indicator of a significant safety deficiency on this roadway.

iv. Adequacy Rating and Percentile

The ARs range from 95.0 along 15S just south of the Mountain Parkway to 51.2 along existing Section C. Discounting the section currently under reconstruction, the lowest AR, 53.5, was in the urban section through Jackson.

12.5 COST ESTIMATES

Current year estimated construction phase costs for improvements to Section A and Sections D through G range from \$284.5 million to \$385.3 million. Cost Estimates based on quantities and unit prices are shown in Appendix C.

Chapter 13 RECOMMENDED PRIORITIES

Priorities for improvements to KY 15 in Perry, Breathitt, and Wolfe counties are discussed below, shown in Table 1, and depicted in Figure 2. Table 2 lists alternatives that were considered but not recommended, including a brief statement of the reasons for not being recommended. Options for combining several of the improvements are listed based on what may be acceptable construction phase costs. Completion of corridor improvements is a high regional priority, and this would be facilitated by having the fewest stages possible. Criteria for recommending the following include traffic volume served, crash frequency, current LOS, and continuity of construction segments.

KY 15 RECOMMENDED PRIORITIES

		Section	Segment						CONST	RUCTION ES	TIMATE (MILLIONS)		Estimated															
Priority	County (ies)			Description	Beginning MP	Ending MP	Length (Miles)	Design	R/W	Utilities	Construction	Alternate Construction	Design and Environmental Status	2035 Daily Traffic	Current CCRF	Current LOS												
1	Breathitt	D Existing	3 Urban	From existing construction near Panbowl Road north of Jackson to just south of the intersection with Miller Hollow Road	17.9	16.3	1.6	\$1.1	\$4.8	\$0.8	\$4.9														No previous Design work;	21,000	1.15-1.67	E
	Breathitt	D Existing	3 Rural	From just south of the intersection with Miller Hollow Road to just south of Walmart Shopping Center	16.3	15.6	0.7	\$0.5	\$0.5	\$0.2	\$11.2	\$33.7	EA would need to be both updated and revised															
2	Breathitt	D Existing	2	From just south of Walmart shopping center to a half-mile south of the intersection with KY 30 East	15.6	14.1	1.5	\$1.8	\$0.3	\$0.8	\$17.6			14,400	1.2	E												
3	Perry	G Existing	All	Along existing alignment (except for a new KY 28 interchange) from north of a new interchange at KY 28 to near Capitol Hill Drive	21.5	16.9	4.6	\$3.2	\$6.3	\$1.2	\$40.1	\$56.1	No Design work along existing alignment; FONSI would need to be revised and updated. R/W purchase has begun on new alignment alternative.	13,800	0.61-0.82	E												
4	Perry	F	1	Along existing alignment from just north of Wendell Ford Airport entrance road to north of new interchange at KY 28	24.3	21.5	2.8	\$1.6	\$1.5	\$1.0	\$16.0		Phase I Design 90% completed; EA would need to be updated	10,200	0.35	E												
5	Breathitt/ Perry	F	2	Along existing alignment from vicinity of Noble Road south of Watts in Breathitt County to just north of Wendell Ford Airport entrance road in Perry County	3.0	24.3	3.9	\$2.5	\$2.7	\$1.3	\$29.5	co	Phase I Design 90% completed; EA would need to be updated	7,600	0.35	D-E												
6	Breathitt	F	3	Along existing alignment from approx 2.2 miles south of KY 476 East to vicinity of Noble Road south of Watts	5.4	3.0	2.4	\$2.3	\$1.6	\$0.9	\$24.2	<i>\$33.1</i>	Phase I Design 90% completed; EA would need to be updated	7,600	0.35	D												
7	Breathitt	E	All	Along existing alignment from approx 300 feet north of KY 476 East to approx 2.2 miles south of KY 476 East	7.7	5.4	2.3	\$2.5	\$1.5	\$0.8	\$27.8	\$27.8	Phase I Design 90% completed; EA would need to be updated	7,600	0.24	D												
8	Breathitt	D East	1	New alignment (east of existing) from a half-mile south of the intersection with KY 30 East to approx 300 feet north of KY 476 East	14.1*	7.7	3.9	\$3.5	\$0.6	\$0.1	\$43.3	\$43.3	No previous Design work; EA would need to be both updated and revised	8,500	0.37	E												
9	Wolfe	А	3	5-lane Curb & Gutter segment in Campton from KY 15S at the Mountain Parkway to just south of current 3-lane section near MP 8.2 on KY 15 **	1.1	8.2	2.6	\$1.8	\$1.6	\$1.0	\$17.9***	\$17.9***	No previous Design work or Environmental Analysis	6,900-8,800	0.30-1.04	C-D												
10	Breathitt	D East	3	From near the north end of existing construction to just south of Walmart Shopping Center on new alignment east of existing KY 15	17.9*	15.6*	3.5	\$4.6	\$0.9	\$0.3	\$77.0****	\$77.0****	No previous Design work; EA would need to be both updated and revised	5,100	0.36	E****												
11	Wolfe	А	2	Along existing alignment from 5-lane curb and gutter segment in priority 9 above to approx MP 2.9 north of Bethany	8.2	2.9	5.3	\$3.0	\$2.6	\$1.7	\$37.4	\$37.4	No previous Design work or Environmental Analysis	5,400	0.39	С												
12	Breathitt/ Wolfe	A	1	Along existing alignment from approx MP 2.9 in Wolfe County north of Bethany to north end of existing 4-lane (MP 24.4 in Breathitt County)	2.9	24.4	4.9	\$3.1	\$2.3	\$1.6	\$38.6	\$38.6	No previous Design work or Environmental Analysis	4,800	0.31-0.42	С												

Milepoints of existing alignment. New alignment will result in milepoint modifications. Thus, length does not equal difference in milepoints.

Notes: Construction cost estimates include a generalized additional amount for frontage roads. Specific locations and lengths of frontage roads will be determined in subsequent project development phases. Also, Section B has been constructed, Section C is currently under construction and Section H is included in the current KYTC Highway Plan; therefore, they are omitted from this table.

Table 1: KY 15 Recommended Priorities

KY 15 Programming Study

^{**} Another option would be to stop this at the intersection with KY 3355, which would be 0.7 mile shorter.

^{***} Use of a rural 5-lane cross section would reduce this cost by 8-9%

^{****} High construction phase cost of this segment due in part to a \$15 million structure

^{*****} Currently LOS E. If Priority 1 were to be constructed before Priority 10, the LOS would be A or B

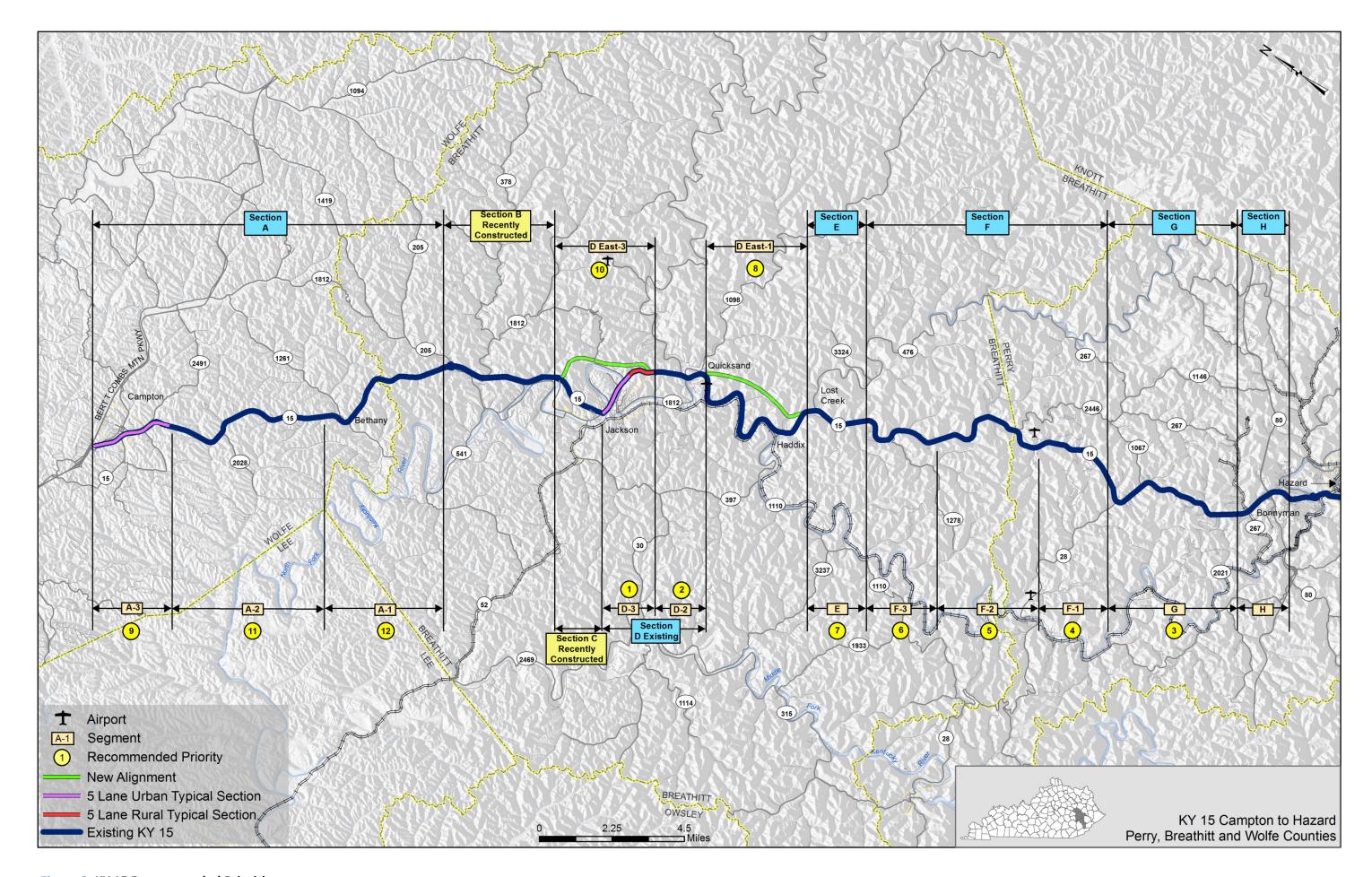


Figure 2: KY 15 Recommended Priorities

ALTERNATIVES CONSIDERED BUT NOT RECOMMENDED												
Section	Segment	Length (Miles)	Construction Cost Estimate (millions)	Reason Not Recommended								
A on New Alignment	3	2.5	\$27.3	Unpopular with public; not consistent with current Mountain Parkway improvement project								
Original D West		7.0	\$123.4	More expensive; difficult to segment into viable construction projects								
Modified D West	1	1.9	\$10.8	Still leaves a large portion difficult to segment into viable construction projects								
Modified D West	2	5.6	\$111.0	More expensive; difficult to segment into viable construction projects								
Modified D Existing	1	5.2	\$42.3	New alignment provides shorter distance for slightly less overall cost								
G on New Alignment		4.3	\$53.8	Significantly more costly than staying on existing alignment								

Note: Construction cost estimates include a generalized additional amount for frontage roads. Specific locations and lengths of frontage roads will be determined in subsequent project development phases.

Table 2: KY 15 Alternatives Considered But Not Recommended

PRIORITIES #1 AND #2

The first recommended priority is Segment 3 of Section D along the existing KY 15 alignment. From just south of the shopping center that includes Walmart on the southern city limits of Jackson to just south of the intersection of KY 15 with Miller Hollow Road, a distance of 0.7 mile, the improvement would be a five-lane rural cross-section. From just south of Miller Hollow Road to the existing construction near Panbowl Road, a distance of 1.6 miles, the improvement would be a five-lane curb-and-gutter cross section.

The estimated future year ADT volume is 21,000 vpd, the highest traffic volumes north of Hazard. The current LOS is E. The CCRF for this segment ranges from 1.15 to 1.67. The advantages of improving this segment immediately include addressing the most significant current LOS and CCRF issues. However, these improvements would be aimed at what is, in essence, a local street rather than system improvements to KY 15 between the Hal Rogers and Mountain parkways. The principal disadvantage of this recommendation is the possibility that these improvements would be seen as the only ones ever

needed along this segment of KY 15. Nonetheless, this recommendation is made to address the traffic and safety issues cited above as well as for the following additional considerations:

- The improvements are estimated to cost \$24 million. An eastern bypass of Jackson with similar termini is estimated to cost \$82.9 million. The western bypass of Jackson originally proposed is estimated to cost \$133.8 million. (A modified version of the western bypass developed to allow some minor segmenting is estimated to be only slightly less at \$133.1 million.)
- If this segment of the KY 15 system improvements on a Jackson bypass were constructed prior to major improvements between Hazard and Jackson, the newly generated traffic volumes would be small, and the trips using this bypass would simply be current through trips immediately north and south of Jackson. The western bypass, being a shorter distance and hence having a shorter travel time, would likely attract 6,150 vpd. The estimated cost for a western bypass is \$121.8 to \$123.4 million. A western bypass is difficult to segment into viable construction projects. An eastern bypass, being slightly longer and having a slightly greater travel time, would likely attract only 5,100 vpd. This would leave between 14,900 and 15,900 vpd on existing KY 15, resulting in continued congestion and, potential, crash problems.

If Priority #1 were to be constructed, the estimated cost for the construction phase would be only \$16.1 million. Improvements in Priority #1 could be lengthened to a logical construction terminus to include a more aggressive construction phase. Sections north of Priority #1 are currently under construction or have been constructed. Thus, the second priority would be immediately south of Priority #1. The logical construction segment for Priority #2 would be from the shopping center that includes Walmart on the southern city limits of Jackson to approximately one-half mile south of the intersection with KY 30 East, a distance of 1.5 miles. This improvement would be a four-lane cross section with a 40-foot-wide median generally along the existing alignment. The estimated future year ADT volume for Priority #2 is 14,400 vpd, the second highest traffic volumes north of Hazard. The LOS is E and the CCRF for this segment is 1.2. The estimated construction cost phase of Priorities #1 and #2 combined is \$33.7 million. Figure 2 and Table 1 show these and all recommended priorities.

It is noted that a higher estimated construction cost phase (i.e., an even longer recommended section) would likely be acceptable. However, the discussion below will point out that extending this recommendation to the next logical construction break would result in a total construction phase cost of \$77 million, which is considered too high to be a practical recommendation.

PRIORITIES #3 AND #4

The third recommended priority is Section G, generally along the existing KY 15 alignment (except for a new KY 28 interchange) from MP 16.9 near Capitol Hill Drive through the new interchange at KY 28, a distance of 4.6 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. The estimated future year ADT volume is 13,800 vpd, the third highest traffic volumes north of Hazard. The LOS is E and the CCRF for this segment ranges from 0.61 to 0.82. The estimated cost of this improvement to Section G along the existing alignment is \$50.8 million, including \$40.1 million for the construction phase. The estimated cost for the new alignment west of existing KY 15 (originally recommended in the previous work) is \$61.5 million, including a construction phase of \$53.8 million. Significant overall cost savings could be realized by making improvements to KY 15 along the existing alignment despite higher estimated costs for right-of-way purchase and utility relocation. A decision will

have to be made whether it is prudent to stay with the previous cross-country alignment or perform the additional work necessary to stay along the existing alignment.

If Priority #3 were to be constructed, the estimated cost for the construction phase would be \$40.1 million. Improvements in Priority #3 could possibly be lengthened to a logical construction terminus to include a more aggressive construction phase. Thus, the recommended Priority #4 is Segment 1 of Section F. This segment extends from just north of the new interchange with KY 28 to just north of Wendell Ford Airport entrance road, a distance of 2.8 miles. This improvement would be a four-lane cross section with a 40-foot-wide median generally along the existing alignment. The estimated future year ADT volume on Segment 1 of Section F is 10,200 vpd, the fourth highest traffic volumes north of Hazard. The LOS is E and the CCRF for this segment is 0.35. The estimated cost of implementing Priority #4 is \$20.1 million, including \$16 million for the construction phase. The estimated construction cost phase of Priorities #3 and #4 combined is \$56.1 million.

PRIORITIES #5 AND #6

The fifth recommended priority is Segment 2 of Section F, generally along the existing KY 15 alignment from just north of Wendell Ford Airport Road in Perry County to vicinity of Noble Road south of Watts in Breathitt County, a distance of 3.9 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. The estimated future year ADT volume is 7,600 vpd. The LOS transitions from E at the south end to D at the north end. The CCRF for this segment is 0.35. The estimated cost of this improvement to Segment 2 of Section F along the existing alignment is \$36.0 million, including \$29.5 million for the construction phase. This segment is recommended as a continuation of previously recommended improvements to the south.

Since the construction phase of Priority #5 is \$29.5 million, improvements in Priority #5 could possibly be lengthened to a logical construction terminus to include a more aggressive construction phase. Thus, the recommended Priority #6 is Segment 3 of Section F, generally along the existing alignment from vicinity of Noble Road south of Watts to approx 2.2 miles south of KY 476 East, a distance of 2.4 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. This segment is recommended as a continuation of previously recommended improvements to the south. The estimated future year ADT volume is 7,600 vpd, while the current LOS is D. The CCRF for this segment is 0.35. The estimated cost of this improvement to Segment 3 of Section F along the existing alignment is \$29.0 million, including \$24.2 million for the construction phase. The estimated construction cost phase of Priorities #5 and #6 combined is \$53.7 million. Priorities #5 and #6 could be pursued separately or together.

PRIORITY #7

The seventh recommended priority is Section E, generally along the existing alignment from approximately 2.2 miles south of KY 476 East to approx 300 feet north of KY 476 East, a distance of 2.3 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. This segment is recommended for the next priority as a continuation of previously recommended improvements to the south. The estimated future year traffic volume is 7,600 vpd, and the current LOS is D. The CCRF for this segment is 0.24. The estimated cost of this improvement to Section E along the existing alignment is \$32.6 million, including \$27.8 million for the construction phase.

PRIORITY #8

The eighth recommended priority is Segment 1 of Section D, on new alignment east of the existing KY 15 from approximately 300 feet north of KY 476 East to approximately one-half mile south of the intersection with KY 30 East, a distance of 3.9 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. The estimated cost of this improvement to Segment 1 of Section D on new alignment is \$47.5 million, including \$43.3 million for the construction phase. Though only modestly less costly than Segment 1 of Section D along the existing alignment (\$50.8 million estimated cost, including \$42.3 million for construction), the new alignment option reduces the travel distance for this segment by 1.3 miles. This segment is recommended as a continuation of previously recommended improvements to the south. The estimated future year ADT volume is 8,500 vpd, and the current LOS is E. The CCRF for this segment is 0.37.

PRIORITY #9

The ninth recommended priority is Segment 3 of Section A in Campton, along the existing alignment from just south of current three-lane section near MP 8.2 to the Mountain Parkway, a distance of 2.6 miles. This improvement would be a five-lane curb-and-gutter cross section. The estimated cost improvement is \$22.3 million, including \$17.9 million for the construction phase. At Project Team Meeting #3, it was suggested that the curb and gutter section perhaps could terminate at the new elementary school (KY 3355), which would reduce the length of this segment by 0.7 mile and increase the length of

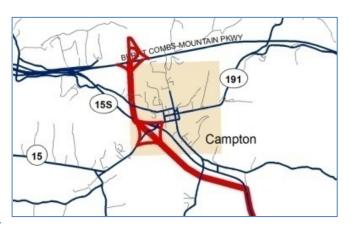


Figure 3: New Alignment through Campton (WMB Study, 1994)

Priority #11 by the same amount. A rural five-lane cross section would reduce construction costs by nearly 9%.

The 1994 "KY 15 Corridor Planning Study" by WMB Engineers had considered a new alignment just south and west of existing KY 15 from near MP 8.2 south of Campton, a new interchange with existing KY 15 near MP 9.8, and a new interchange with the Mountain Parkway just east of the interchange at MP 43 (Figure 3). Public opinion expressed during that study indicated this option was not popular, and improvements since constructed to the Mountain Parkway (and currently under construction) have reduced its practicality. Further, the estimated cost of that option could be significantly higher than improvements along the existing route, principally due to the need to construct two interchanges.

Segment A-3 is recommended because congestion through Campton would be the greatest cause of delay in the KY 15 Corridor following construction of the first eight priorities. Estimated future year ADT volumes range from 6,900 to 8,800 vpd. The current LOS diminishes from C on the south end to D near the KY 15/KY 15S/KY 191 intersection. The CCRF for this segment ranges from 0.30 to 1.04.

PRIORITY #10

The tenth recommended priority is Segment 3 of Section D, on new alignment east of existing KY 15 from just south of the Walmart Shopping Center to near the north end of the existing construction, a distance of 3.5 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. In the discussion above, recommended Priority #1 would improve existing KY 15 in this same vicinity to address (1) immediate congestion concerns, and (2) the projection that construction of a Jackson bypass prior to major improvements between Hazard and Jackson would result in relatively low traffic volumes. Previous recommended priorities have included improvements to all sections between Hazard and the south side of Jackson. Thus, construction of a Jackson bypass would be appropriate at this stage for system continuity. The estimated cost of this priority, Segment 3 of Section D on a new alignment east of Jackson, is \$82.8 million, including \$77 million for the construction phase. Although shorter than Segment 1 of Section D (Priority #8 above), the estimated cost of Segment 3 of Section D is higher due in part to a \$15.1 million structure. This is considerably less costly than improvements on a new alignment west of Jackson (\$133.8 million, including \$123.4 million for the construction phase), and is more compatible with Priorities #2 and #8, above.

PRIORITY #11

The eleventh recommended priority is Segment 2 of Section A, along the existing alignment from MP 2.9 north of Bethany in Wolfe County to the five-lane curb-and-gutter segment in Priority #9, a distance of 5.3 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. Of the two remaining unprioritized segments, this one has a slightly higher projected ADT volume (5,400 vpd) than the one to the south discussed below (4,800 vpd). The estimated cost of this improvement to Segment 2 of Section A is \$44.7 million, including \$37.4 million for the construction phase.

PRIORITY #12

The twelfth and final recommended priority is Segment 1 of Section A, along the existing alignment from the north terminus of the existing four-lane section at MP 24.4 near Vancleve in Breathitt County to MP 2.9 north of Bethany in Wolfe County, a distance of 4.9 miles. This improvement would be a four-lane cross section with a 40-foot-wide median. The estimated cost of this improvement to Segment 2 of Section A is \$45.6 million, including \$38.6 million for the construction phase.



County	Route	Beginning MP	Beginning Feature	Ending MP	Ending Feature	Length	Functional Class	State System	NHS ?	NTN ?	Truck Weight Class	# of Through Lanes	Lane Width (ft)	Shoulder Width (ft)	Percent Passing Sight Distance >1500 ft
MOLEE	KY 15S	0.000	W 101W 15	0.405		0.405									
WOLFE	KY 155		KY 191/KY 15	0.195		0.195	Dein sin al Autorial	State Primary (Other)	Ιγ	F	AAA	2	12	10	60
		0.195		0.935	Manustain Bastanan Organia	0.740	Principal Arterial	State Primary (Other)	ľ	Г	AAA	2	12	10	60
		0.935		1.045	Mountain Parkway Overpass	0.110									
WOLFE	KY 15	0	Breathitt County Line	1.732	KY 1261	1.732									
VVOLFE	KT 13	1.732	KY 1261	8.870	Elkins Road	7.138	Principal Arterial	State Primary (Other)	Υ	F	AAA	2	12	10	60
	1	8.870	Elkins Road	9.515	KY 191 and KY 15S	0.645	Fillicipal Attellal	State Filliary (Other)			777	2	12	10	0
		0.070	EIKIIIS ROad	9.515	RT 191 allu RT 193	0.043								·	U
BREATHITT	KY 15	0.000	Perry County Line	5.989	1.75 mile south of KY 476	5.989									
DICEXTITUTE	10	5.989	1.75 mile south of KY 476	7.737	KY 476	1.748		State Primary (Other)						10	
		7.737	KY 476	8.330	0.6 miles north of KY 476	0.593							11		40
		8.330	0.6 miles north of KY 476	8.837	Begin 12' wide lanes	0.507									
		8.837	Begin 12' wide lanes	14.644	KY 1089/KY 1812	5.807									35
		14.644	KY 1089/KY 1812	16.329	Roark Ridge Road	1.685						2			40
		16.329	Roark Ridge Road	17.446	KY 1812E	1.117	Principal Arterial		Y	F	AAA				0
		17.446	KY 1812E	17.936	KY 1812	0.490							1020	4	0
		17.936	KY 1812	18.465	KY 30	0.529							12		0
		18.465	KY 30	21.052	Begin 4 Lanes	2.587								10	25
		21.052	Begin 4 Lanes	24.475	Resume 2 Lanes	3.423						4		12	
		24.475	Resume 2 Lanes	26,446	Wolfe County Line	1.971						2	1	10	90
PERRY	KY 15	14.512	Morton Bl∨d	15.968	KY 267	1.456						3/4/3		4	61
		15.968	KY 267	16.798	Capitol Hill Dri∨e	0.830	Principal Arterial								
		16.798	Capitol Hill Dri∨e	20.335	0.4 miles south of KY 28	3.537		State Primary (Other)	Y	F	AAA	2	12	6	43
		20.335	0.4 miles south of KY 28	25.179	Breathitt County Line	4.844									

Table A-1, Part 1: Existing Conditions

County	Route	Beginning MP	Beginning Feature	Ending MP	Ending Feature	Median	Access Control	Annual Tone of Coal	Latest ADT	Year of Latest ADT	Traffic Growth Rate	Unrounded Forecast 2035 ADT	Forecast 2035 ADT	CCRF*	Composite Adequacy Rating	Composite Adequacy Rating Percentile			
WOLFE	KY 15S	0.000	KY 191/KY 15	0.195		15' Raised Mountable			sames.	121016		100000000	20222	51216.51	2220				
		0.195		0.935		None		460,324 northbound	6,776	2,009	1.00%	8,777	8,800	0.308	95.00	74.84			
		0.935		1.045	Mountain Parkway Overpass	30' Depressed													
MOLEE	IOV 45	0	December 1 in a	4.700	1/1/ 4004			A CONTRACTOR OF THE STATE OF TH	44.00	2000	0.500/	4.700	4.000	0.400	00.00	47.04			
WOLFE	KY 15	0	Breathitt County Line	1.732	KY 1261	None	None	461641 norhbound	4183	2009	0.50%	4.762	4,800	0.426	89.60	47.84			
		1.732	KY 1261	8.870	Elkins Road	T) 6 (I T)			5358	2010	0.00%	5.358	5,400	0.393	92.30	63.18			
		8.870	Elkins Road	9.515	KY 191 and KY 15S	TWLTL	1		6905	2011	0.00%	6,905	6,900	1.041	76.25	14.87			
	107.15									0010	1.000/								
BREATHITT	KY 15	0.000	Perry County Line	5.989	1.75 mile south of KY 476			634,119 northbound	5943	2010	1.00%	7.621	7,600	0.351	4				
		5.989	1.75 mile south of KY 476	7.737	KY 476			954,055 southbound	6057	2011	1.00%	7,621	7,600	0.239	89.60	47.84			
		7.737	KY 476	8.330	0.6 miles north of KY 476	None		465,008 northbound	6580	2009	0.50%	7,491	7,500	0.555					
		8.330	0.6 miles north of KY 476	8.837	Begin 12' wide lanes	None				0.50%	3.50703	17.30.00	0.208						
		8.837	Begin 12' wide lanes	14.644	KY 1089/KY 1812				7480	2010	0.50%	8,473	8,500	0.364	81.10	24.21			
		14.644	KY 1089/KY 1812	16.329	Roark Ridge Road		ne L	9269	2011	0.50%	10,448	10,500	0.369	88.55	41.11				
		16.329	Roark Ridge Road	17.446	KY 1812E		14.70	622,946 northbound	12624	2009	0.50%	14,372	14,400	1.202	53.50	0.55			
		17.446	KY 1812E	17.936	KY 1812	14			18261	2011	0.50%	20,583	20,600	1.672	51.20	0.37			
		17.936	KY 1812	18.465	KY 30				16422	2009	1.00%	21,271	21,300	1.151	01.20	5.67			
		18.465	KY 30	21.052	Begin 4 Lanes	None		466.274 northbound	10422	2009	0.50%	18,696	18,700	0.247					
		21.052	Begin 4 Lanes	24.475	Resume 2 Lanes	32		, , , , , , , , , , , , , , , , , , , ,	4183	2009	0.50%	4,762	4.800	0.322	92.30	63.18			
		24.475	Resume 2 Lanes	26.446	Wolfe County Line	None		461,641 northbound	+100	2009	0.50%	4,702	4,000	0.314					
																4214			
PERRY	KY 15	14.512	Morton Bl∨d	15.968	KY 267			377,174 northbound	18,400	2011	2.00%	29,595	29,600	2.034	54.70	0.64			
		15.968	KY 267	16.798	Capitol Hill Drive	100000		578,383 northbound 2,076,326 southbound	11,390	2,009	2.00%	19,060	19,100	0.609					
		16.798	Capitol Hill Drive	20.335	0.4 miles south of KY 28	None		None	None	None	592,721-648,454 northbound 954055-1,771,527 southbound	11,000	2,000	0.75%	13,832	13,800	0.821	76.00	14.81
		20.335	0.4 miles south of KY 28	25.179	Breathitt County Line			1,089,329 northbound 1,205,073 southbound	8013	2011	1.00%	10,174	10,200	0.349					

Table A-1, Part 2: Existing Conditions

APPENDIX B PROJECT TEAM MEETING MINUTES

AGENDA

Project Team Meeting #1 KY 15 Programming Study Breathitt, Perry, and Wolfe Counties

Date: April 12, 2012 Time: 10:00 a.m.

Location: KYTC District 10, Jackson, KY

- I. Introductions
- II. Work Accomplished Prior to This Meeting
 - a. Traffic Forecasts
 - i. Analysis Sections Identified
 - ii. Growth Rates for Each Section Approved by KYTC
 - b. Consultants Who Performed Prior Planning, Environmental, and Design
 - i. WMB
 - ii. GRW
 - iii. Vaughn & Melton
 - iv. THE Engineers
- III. Purpose of This Meeting: Summary of Previous Work
- IV. Next Steps
 - a. Obtain and compile HIS data, traffic data, crash data
 - b. Calculate current and future year V/C ratios
 - c. Project team meeting to present and discuss this information







Architecture

Engineering

Construction

MEETING MINUTES

Project: Programming Study for KY 15 Breathitt, Perry, and Wolfe Counties

Mountain Parkway Interchange in Wolfe County to MP 16.8 in Perry County

Purpose: Project Team Meeting #1

Place: District 10 - Jackson

Meeting Date: April 12, 2012

10:00 a.m. EST

Prepared By: Annette Coffey

In Attendance: Jill Asher KYTC, Division of Planning

Shane Tucker

KYTC, Division of Planning

Corbett Caudill

KYTC, District 10 – Jackson

Jason Blackburn

KYTC, District 10 – Jackson

Keith Caudill KYTC, CO Highway Design

Eunice Holland Kentucky River Area Development District

Taylor Kelly Qk4
Annette Coffey Qk4
Bruce Siria Qk4

The objective of the meeting was to present a summary of work that was previously performed on this corridor. The meeting started with introductions and meeting handouts consisting of: an agenda, spreadsheet of annual growth rates to be used for future tasks, a corridor map divided into sections, and maps of preferred and previously studied alignments within the corridor, and detailed information regarding previous work performed on each section. For district use, flash drives were given to the Project Manager with the presented information and appropriate design files. The meeting was turned over to Bruce Siria with Qk4 to present a summary of previous corridor efforts and Qk4 work to date.

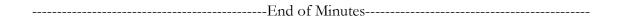
KY 15 Programming Study Breathitt, Perry, and Wolfe Counties April 12, 2012 Project Team #1 Meeting Minutes Page 2 of 2

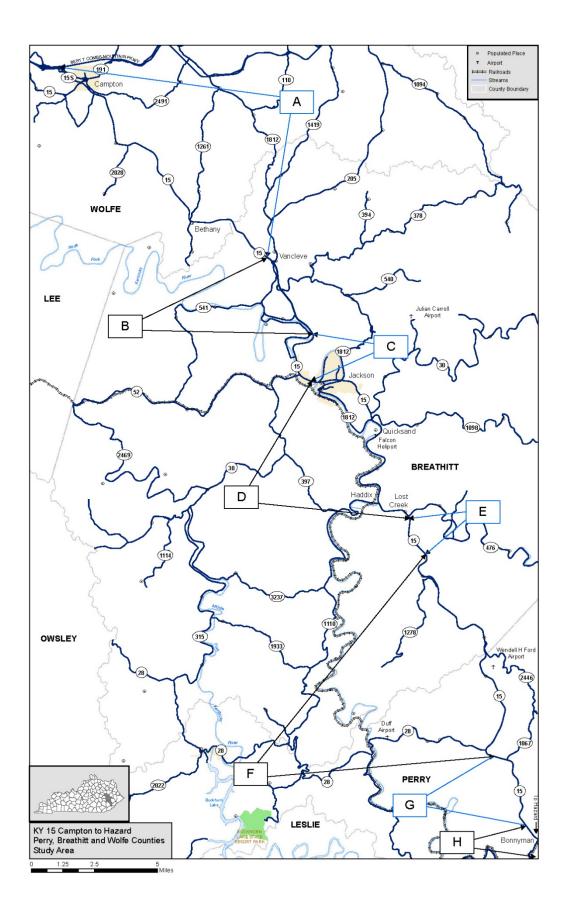
Mr. Siria began his presentation with recognition and appreciation of WMB, GRW, Vaughn & Melton, and THE Engineers for their cooperation in providing Qk4 with the information necessary to complete this task. One of the early tasks for Qk4 was to divide the corridor into logical sections, and propose growth rates to the Division of Planning. Those rates were presented in tabular form and ranged from 0% in Wolfe County to 1.0% in Perry County. Then, each corridor section was presented in detail (see minute attachments).

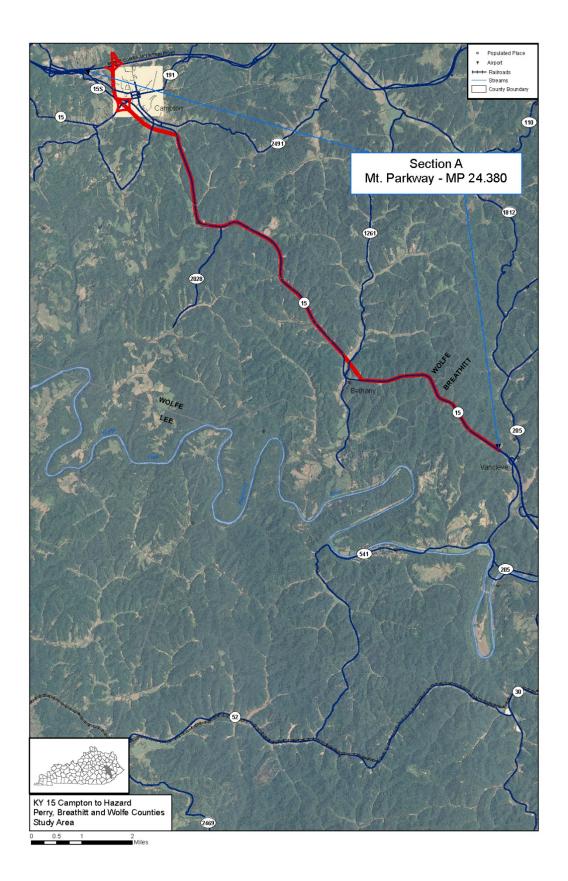
Comments during the presentation regarding sections are summarized below:

- 1. Section D there is a current UPL project to widen only KY 15 through Jackson. Local officials support widening KY 15 through town regardless of whether a bypass constructed.
- 2. To be consistent with constructed sections of KY 15, the design speed for each section should be 60 mph. The typical section for the four-lane constructed segments has a 40 feet separation between directions. The 40 feet is measured from inside white line to inside white line. To be consistent, this should be the maximum typical section for any new improvements investigated.
- 3. Barrier walls should be considered as typical section modifications are considered.
- 4. The sections from Jackson (Section D) south should be the focus of Qk4 future work.
- 5. In Jackson, widening the existing, and an alignment to the east rather than west should be investigated. The previously proposed eastern alignment has very expensive bridge costs in the first mile.
- 6. Qk4 should concentrate on construction sections of \$40 million or less. To achieve that goal, the district felt that staying close to the existing alignment will have to be re-evaluated.
- 7. Any focus on Section A should be below the two interchanges. In addition, a bypass of Campton and new interchange with the Mt. Parkway is not desirable and should not be considered.
- 8. Access control will be an issue if improvements are proposed along the existing roadway.
- 9. This route provides important regional connectivity from US 23 to the Mountain Parkway.

The next steps for Qk4 will be to present capacity analysis, traffic projections, and crash analysis. District personnel requested that the aforementioned analyses presentation be deferred to the same meeting where new improvements options considering "practical solutions" or other design revisions with corresponding cost estimates for widening of KY 15 are presented.







SECTION A

NORTHERN TERMINUS:

MT. PARKWAY EXIT 43, WOLFE COUNTY 0.6 MILES NORTH OF KY 205 (MP 24.010), BREATHITT COUNTY SOUTHERN TERMINUS:

LENGTH: 12.63 MILES

ITEM NUMBER: NONE

LATEST PLANNING/DESIGN WORK: WMB OVERALL CORRIDOR STUDY - 1994

ENVIRONMENTAL OVERVIEW FROM WMB STUDY LATEST ENVIROMENTAL STATUS:

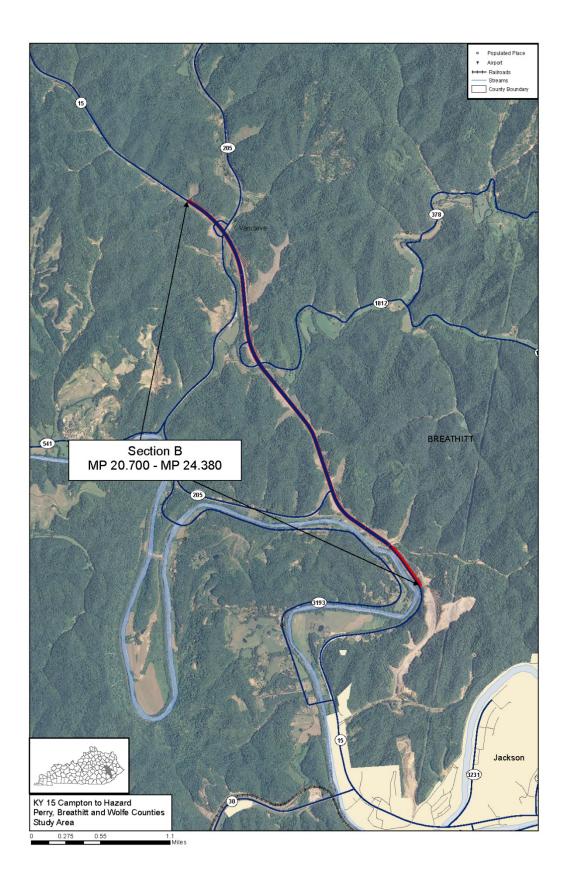
RECOMMENDATION: IMPROVEMENTS TO EXISTING CORRIDOR EXCEPT

CAMPTON BYPASS

PROPOSED TYPICAL SECTION: 4 12' LANES, 10' PAVED SHOULDER, 40' DEPRESSED MEDIAN

	1994 COST ESTIMATE	RESIDENTIAL RELOCATIONS	OTHER RELOCATIONS	CEMETERIES	TOTAL PARCELS	OTHER
RECOMMENDED ALTERNATIVE (EXISTING CORRIDOR)	\$126.3 MILLION	62	34	0	163	LOCAL OFFICIALS STRONGLY PREFERRED THAT CAMPTON NOT BE BYPASSED
ALTERNATES D, E, AND F	\$153.1 MILLION	79	8	1	129	NECESSITATES BYPASS OF CAMPTON, NEW INTERCHANGE ON MOUNTAIN PARKWAY, AND MAY IMPACT WATER QUALITY OF CAMPTON LAKE

F	FROM TO		Traffic Forecast and	Latest Actual Count	Future Annual Traffic	
MP	DESCRIPTION	MP	DESCRIPTION	Year From Previous Work	and Year	Growth Percentage Approved by KYTC
0.000	KY 15	1.045	Mt. Parkway Exit 43	8600 (2015)	6776 (2009)	1.00%
8.235	Swift Camp Creek Rd	9.515	KY 15S/KY 191	8700 (2015)	5358-6905 (2010-11)	0.00%
1.732	KY 1261N in Wolfe County	8.235	Swift Camp Creek Rd	4500-5400 (2015)	5358 (2010)	0.00%
24 380	0.6 miles north of KY 205	1.732	KY 1261N in Wolfe County	5500 (2015)	4183 (2009)	0.50%



SECTION B

NORTHERN TERMINUS:

0.6 MILES NORTH OF KY 205 (MP 24.010), WOLFE COUNTY JUST SOUTH OF KENNY KING RD (MP 20.700), BREATHITT COUNTY **SOUTHERN TERMINUS:**

LENGTH: **3.68 MILES**

ITEM NUMBER: 270.87; 270.97

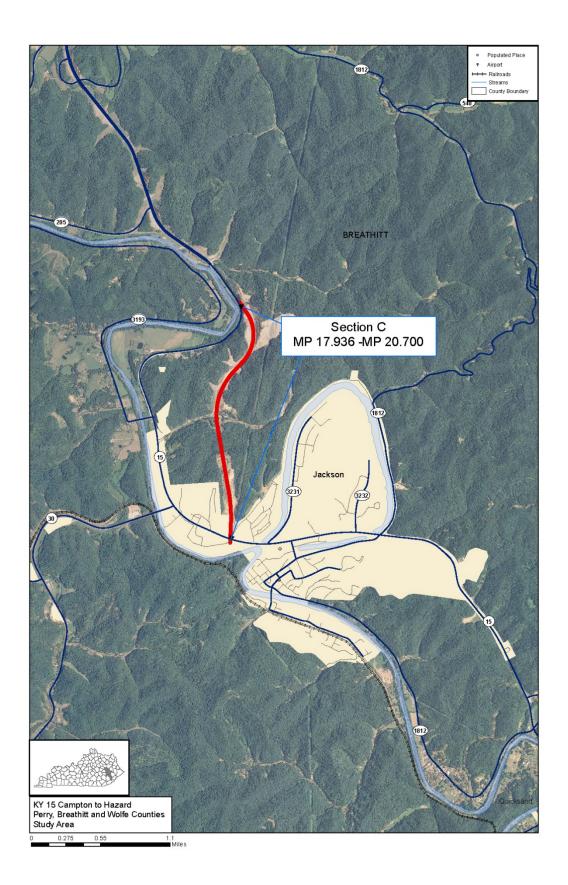
LATEST WORK: RECONSTRUCTED IN 2007-2008

TYPICAL SECTION: 4 12' LANES, 10' PAVED SHOULDER, 40' DEPRESSED MEDIAN

TRAFFIC DATA:

LATEST COUNT: 6983 (2010) 7260 (2011) 9700 LATEST ESTIMATE: 2025 FORECAST ADT:

GROWTH RATE USED IN DESIGN PLANS: 1.65% ANNUALLY



SECTION C

JUST SOUTH OF KENNY KING RD (MP 20.700) BREATHITT COUNTY JUNCTION WITH EXISTING KY 15 @ PANBOWL ROAD (MP 17.936) **NORTHERN TERMINUS:** SOUTHERN TERMINUS:

LENGTH: **2.76 MILES**

ITEM NUMBER: 270.60; 270.67; 270.70; 270.77

LATEST WORK: UNDER CONSTRUCTION NOW

4 12' LANES, 10' PAVED SHOULDER, 40' DEPRESSED MEDIAN TYPICAL SECTION:

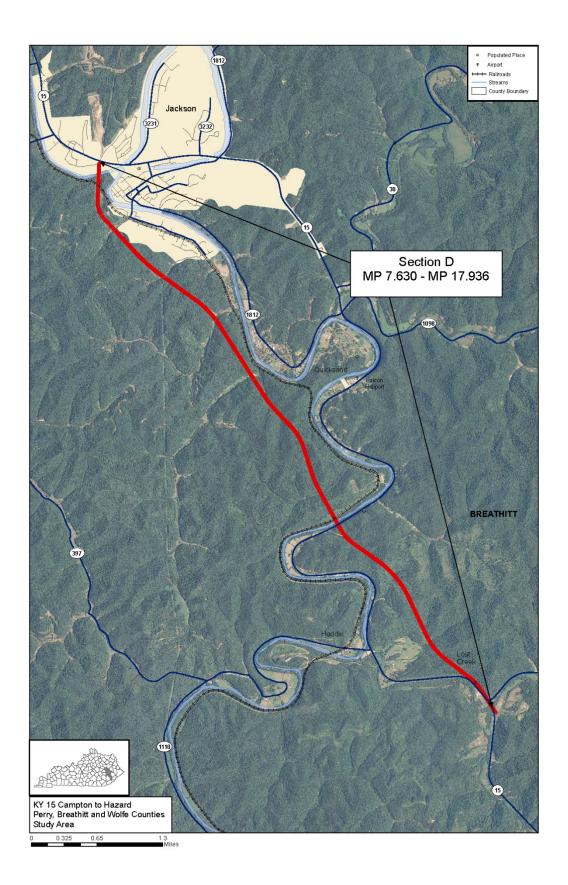
TRAFFIC DATA:

LATEST TRAFFIC ESTIMATE:

5600 (2010) 6000 (KYTC TRAFFIC FORECAST) 2020 FORECAST ADT:

16,850 (KYTC DESIGN PLANS) **GROWTH RATE USED:** 1.00% (KYTC TRAFFIC FORECAST)

1.60% (KYTC DESIGN PLANS)



SECTION D

JUNCTION WITH EXISTING KY 15 @ PANBOWL ROAD (MP 17.936) 575 FEET SOUTH OF KY 476 NEAR HADDIX (MP 7.63) **NORTHERN TERMINUS:**

SOUTHERN TERMINUS:

LENGTH: **10.3 MILES**

ITEM NUMBER: 270.11

LATEST PLANNING/DESIGN WORK: WMB ESTIMATES PHASE II DESIGN WAS 50% COMPLETE

LATEST ENVIROMENTAL STATUS: EA FONSI MAY, 2000

RECOMMENDATION IN EA: ALTERNATE 2

• SHORTEST STRUCTURE TO SPAN NORTH FORK OF KY

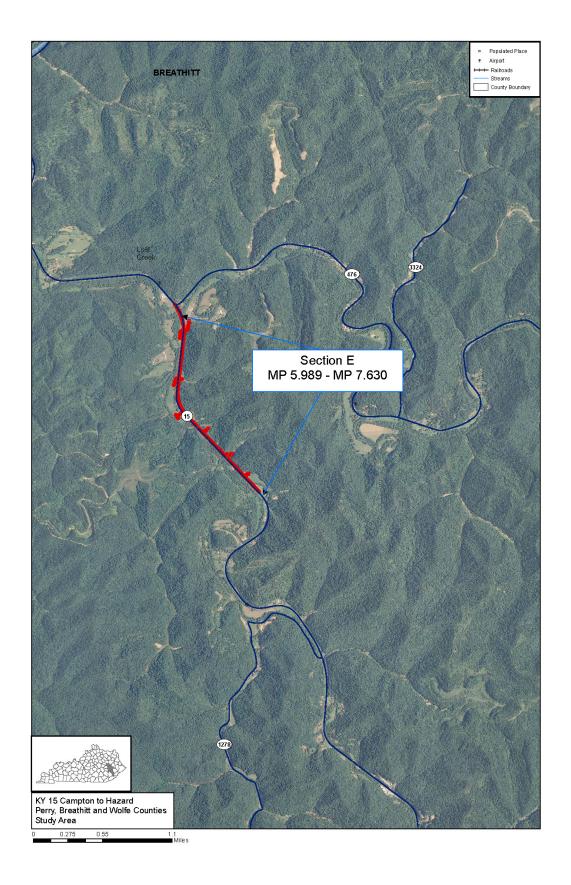
RIVER

• LESS POTENTIAL STABILITY PROBLEMS

• LOCAL OFFICIALS PREFERRED THIS ALTERNATIVE

PROPOSED TYPICAL SECTION: 4 12' LANES, 10' PAVED SHOULDER, 40' DEPRESSED MEDIAN

	1999 COST ESTIMATE (MILLIONS)	RESIDENTIAL RELOCATIONS	BUSINESSES	OTHER RELOCATIONS	FEET OF STREAM RECHANNELIZATION REQUIRED	ACRES OF PRIME FARMLAND TAKEN	HAZMAT SITES
RECOMMENDED ALTERNATIVE (ALTERNATIVE 2 IN EA)	\$148.2	51 FIXED, 38 MOBILE	14	11	21,533	23	6
OTHER ALTERNATIVES CONSIDERED (FROM EA)							
ALTERNATIVE 1	\$153.8	51 FIXED, 38 MOBILE	14	11	22,014	21	6
ALTERNATIVE 3	\$157.8	48 FIXED, 32 MOBILE	7	5	21,030	21	6
ALTERNATIVE 4	\$157.0	45 FIXED, 40 MOBILE	14	8	20,472	17	6
ALTERNATIVE 5	\$157.9	48 FIXED, 34 MOBILE	14	5	21,949	21	6
ALTERNATIVE 6	\$159.0	48 FIXED, 38 MOBILE	20	13	22,014	27	10
ALTERNATIVE 7	\$158.3	50 FIXED, 38 MOBILE	14	10	21,456	0	6



SECTION E

NORTHERN TERMINUS: 575 FEET SOUTH OF KY 476 (MP 7.63) SOUTHERN TERMINUS: 1.75 MILES SOUTH OF KY 476 (MP 5.99)

LENGTH: 1.64 MILES

ITEM NUMBER: 285.00

LATEST PLANNING/DESIGN WORK: WMB ESTIMATES PHASE I DESIGN WAS 90% COMPLETE

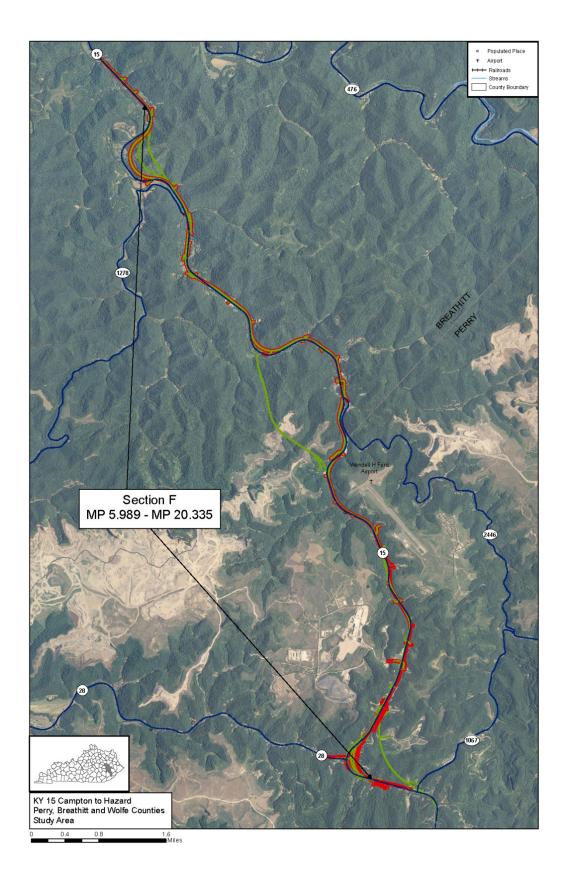
LATEST ENVIROMENTAL STATUS: DRAFT EA JUNE, 1999

RECOMMENDATION IN EA: ALTERNATE 1

PROPOSED TYPICAL SECTION: 4 12' LANES, 10' PAVED SHOULDER, 40' DEPRESSED MEDIAN

ENVIRONMENTAL COMPARISON OF ALTERNATIVES (INCLUDES ITEM 10-286)	RESIDENTIAL RELOCATIONS	BUSINESSES	CEMETERY IMPACTS	FEET OF STREAM RECHANNELIZATION REQUIRED	ACRES OF WETLANDS	HAZMAT SITES	
RECOMMENDED ALTERNATIVE (ALT 9 SOUTH, ALT 1 NORTH)	22 FIXED, 51 MOBILE	13	8	1,469	1.6	5	
OTHER ALTERNATIVES CONSIDERED							
ALTERNATIVE 8	40 FIXED, 63 MOBILE	4	5	8,135	1.2	3	
ALTERNATIVE 9	22 FIXED, 38 MOBILE	5	5	5,855	1.6	2	
ALTERNATIVE 8 SOUTH, ALTERNATE 1 NORTH	53 FIXED, 66 MOBILE	13	8	4,000	1.2	6	
ALTERNATIVE 1	CONSIDERED INITIALLY, BUT DISMISSED—EXCEPT WHEN PAIRED WITH ALT 8 OR 9 AT KY15/KY28 INTERSECTION						
ALTERNATIVE 2	CONSIDERED INITIALLY, BUT DISMISSED FROM DETAILED EVALUATION BECAUSE DEFICIENCIES AT KY15/KY28 INTERSECTION NOT ALLEVIATED						
ALTERNATIVE 3	CONSIDERED INI	CONSIDERED INITIALLY, BUT DISMISSED FROM DETAILED EVALUATION BECAUSE DEFICIENCIES AT KY15/KY28 INTERSECTION NOT ALLEVIATED					

F	ROM		TO	Traffic Forecast and	Latest Actual Count	Future Annual Traffic Growth Percentage Approved by KYTC	
MP	DESCRIPTION	МР	DESCRIPTION	Year From Previous Work	and Year		
5.989	1.75 mile south of KY 476	7.630	575 feet south of KY 476	7,800 (2015)	6,057 (2010)	1.00%	



SECTION F

NORTHERN TERMINUS: 1.75 MILES SOUTH OF KY 476 (MP 5.99 BREATHITT CO.) SOUTHERN TERMINUS: 0.40 MILES SOUTH OF KY 28 (MP 20.335 PERRY CO.)

LENGTH: 10.83 MILES

ITEM NUMBER: 286.00

LATEST PLANNING/DESIGN WORK: WMB ESTIMATES PHASE I DESIGN WAS 90% COMPLETE

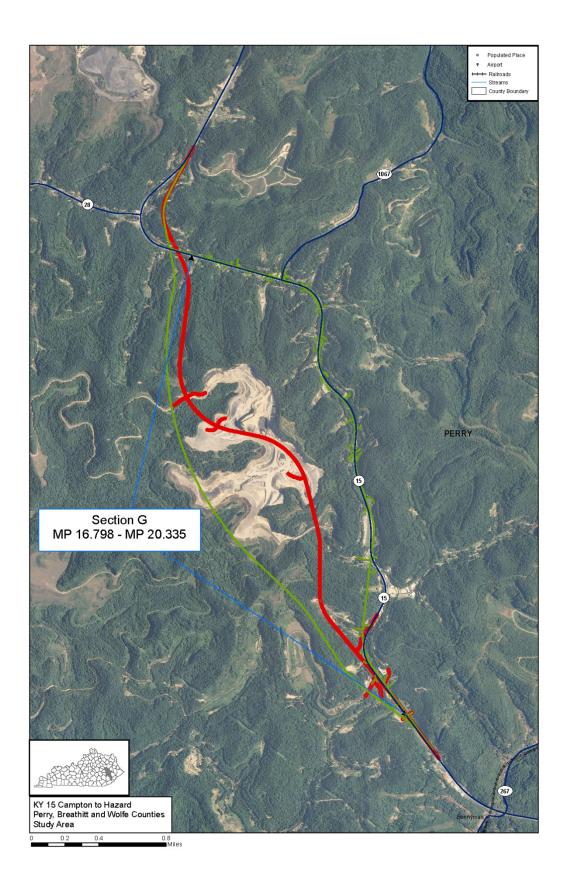
LATEST ENVIROMENTAL STATUS: DRAFT EA JUNE, 1999

RECOMMENDATION IN EA: ALTERNATE 1 SOUTH TO APPROX MP 22.7, THEN ALT 9

PROPOSED TYPICAL SECTION: 4 12' LANES, 10' PAVED SHOULDER, 40' DEPRESSED MEDIAN

ENVIRONMENTAL COMPARISON OF ALTERNATIVES (INCLUDES ITEM 10-285)	RESIDENTIAL RELOCATIONS	BUSINESSES	CEMETERY IMPACTS	FEET OF STREAM RECHANNELIZATION REQUIRED	ACRES OF WETLANDS	HAZMAT SITES	
RECOMMENDED ALTERNATIVE (ALT 9 SOUTH, ALT 1 NORTH)	22 FIXED, 51 MOBILE	13	8	1,469	1.6	5	
OTHER ALTERNATIVES CONSIDERED							
ALTERNATIVE 8	40 FIXED, 63 MOBILE	4	5	8,135	1.2	3	
ALTERNATIVE 9	22 FIXED, 38 MOBILE	5	5	5,855	1.6	2	
ALTERNATIVE 8 SOUTH, ALTERNATE 1 NORTH	53 FIXED, 66 MOBILE	13	8	4,000	1.2	6	
ALTERNATIVE 1	CONSIDERED INITIALLY, BUT DISMISSED—EXCEPT WHEN PAIRED WITH ALT 8 OR 9 AT KY15/KY28 INTERSECTION						
ALTERNATIVE 2	CONSIDERED INITIALLY, BUT DISMISSED FROM DETAILED EVALUATION BECAUSE DEFICIENCIES AT KY15/KY28 INTERSECTION NOT ALLEVIATED						
ALTERNATIVE 3	CONSIDERED INI	CONSIDERED INITIALLY, BUT DISMISSED FROM DETAILED EVALUATION BECAUSE DEFICIENCIES AT KY15/KY28 INTERSECTION NOT ALLEVIATED					

F	ROM	ТО		Traffic Forecast and	Latest Actual Count	Future Annual Traffic	
MP	DESCRIPTION	МР	DESCRIPTION	Year From Previous Work	and Year	Growth Percentage Approved by KYTC	
4.047	KY 1278	5.989	1.75 mile south of KY 476	6200 (2015)	6057 (2011)	1.00%	
0.529	KY 2446	4.047	KY 1278	7900-10,100 (2015)	5943 (2011)	1.00%	
0.000	Perry County Line	0.529	KY 2446 in Breathitt County	7900-10,100 (2015)	5943 (2011)	1.00%	
20.735	KY 28 in Perry County	25.179	Breathitt County Line	7900-10,100 (2015)	8013 (2011)	1.00%	
20.335	0.4 mile south of KY 28	20.735	KY 28 in Perry County	7900-10,100 (2015)	11390 (2009)	0.75%	



SECTION G

0.40 MILES SOUTH OF KY 28 (MP 20.335 PERRY CO.) CAPITOL HILL DRIVE (MP 16.847) **NORTHERN TERMINUS:**

SOUTHERN TERMINUS:

3.54 MILES LENGTH:

ITEM NUMBER: 269.01

LATEST PLANNING/DESIGN WORK: V & M PLANS FOR P L & G INPECTION SUBMITTED OCT 2002

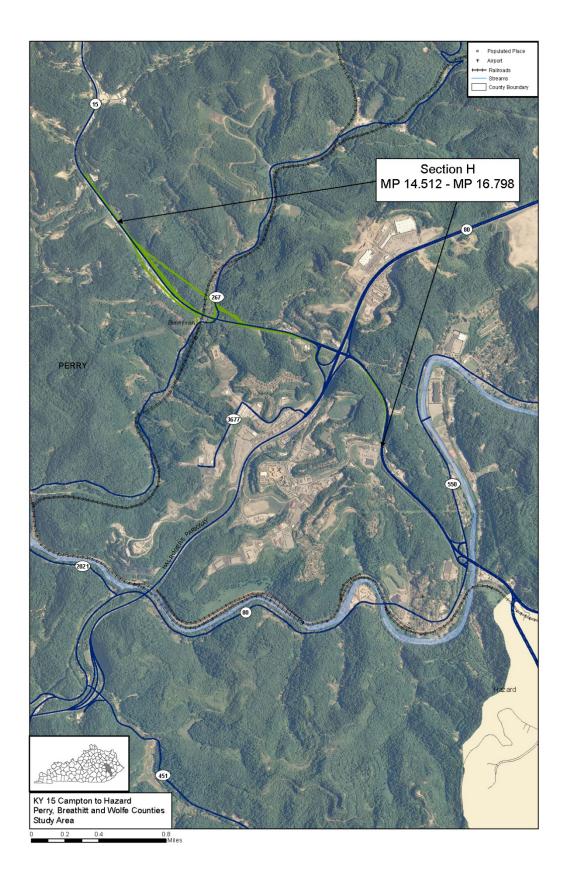
LATEST ENVIROMENTAL STATUS: EA FONSI JUNE, 2004

RECOMMENDATION IN EA: ALTERNATE 2

PROPOSED TYPICAL SECTION: 4 12' LANES, 10' PAVED SHOULDER, 40' DEPRESSED MEDIAN

ENVIRONMENTAL COMPARISON OF ALTERNATIVES (INCLUDES ITEM 10-269.02)	ESTIMATED COST (MILLIONS)	RESIDENTIAL IMPACTS	BUSINESS IMPACTS	CHURCH IMPACTS	CEMETERY IMPACTS	FEET OF STREAM RECHANNELIZATION REQUIRED	ACRES OF WETLANDS	HAZMAT SITES
RECOMMENDED ALTERNATIVE (ALTERNATIVE 2 IN EA)	\$56.9 (UPDATED TO \$58.4 IN 2008)	36	6	2	2	3,,750	0.92	2
OTHER ALTERNATIVES CONSIDERED								
ALTERNATIVE 1	\$69.4	26	0	1	4	5,610	3.05	2
ON EXISTING ALIGNMENT	\$52.6	95	15	0	2	10,338	0.2	6

F	ROM		ТО	Traffic Forecast and	Latest Actual Count	Future Annual Traffic Growth Percentage Approved by KYTC	
MP	DESCRIPTION	МР	DESCRIPTION	Year From Previous Work	and Year		
16.798	Capitol Hill Drive	20.335	0.4 mile south of KY 28	11,510 (2025)	8013 (2011)	0.75%	



SECTION H

NORTHERN TERMINUS: CAPITOL HILL DRIVE (MP 16.847) SOUTHERN TERMINUS: MORTON BLVD (MP 14.512)

LENGTH: 2.34 MILES

ITEM NUMBER: 269.02 (PREVIOUS); 159.00 (NEW HIGHWAY PLAN)

LATEST PLANNING/DESIGN WORK: R/W PLANS SUBMITTED IN OCT, 2003

LATEST ENVIROMENTAL STATUS: EA FONSI JUNE, 2004

RECOMMENDATION IN EA: IMPROVE EXISTING ALIGNMENT

PROPOSED TYPICAL SECTION: 4 12' LANES, 6' PAVED SHOULDER, 14' FLUSH MEDIAN

ENVIRONMENTAL COMPARISON OF ALTERNATIVES (INCLUDES ITEM 10-269.01)	ESTIMATED COST (MILLIONS)	RESIDENTIAL IMPACTS	BUSINESS	CHURCH	CEMETERY	FEET OF STREAM RECHANNELIZATION REQUIRED	ACRES OF WETLANDS	HAZMAT SITES
RECOMMENDED ALTERNATIVE (ON EXISTING ALIGNMENT)	\$52.6	95	15	0	2	10,338	0.2	6
OTHER ALTERNATIVES CONSIDERED								
ALTERNATIVE 1	\$69.4	26	0	1	4	5,610	3.05	2
ALTERNATIVE 2	\$56.9	36	6	2	2	3750	0.92	2

F	ROM	ТО		Traffic Forecast and	Latest Actual Count	Future Annual Traffic	
MP	DESCRIPTION	МР	DESCRIPTION	Year From Previous Work	and Year	Growth Percentage Approved by KYTC	
14.512	Morton Blvd	16.798	Capitol Hill Drive	22300 (2020)	17830 (2008)	2.00% (KYTC forecast dated Mar 2002)	

AGENDA

Project Team Meeting #2 KY 15 Programming Study Breathitt, Perry, and Wolfe Counties

Date: October 24, 2012

Time: 1:30 p.m.

Location: KYTC District 10, Jackson, KY

- I. Purpose of This Meeting:
 - a. Discuss 2012 Cost Estimates by Section
 - i. As originally proposed
 - ii. New corridor in Section D
 - iii. Along existing alignment in Sections D and G
 - iv. Alternative geometrics and pavement design
 - b. Discussion of KY 28 Intersection
 - c. Project Team Decides Which Concepts to Segment
- II. Next Steps
 - a. Segment Alternatives Recommended by Project Team
 - b. Cost Estimates Prepared for Each Segment
 - c. Priority Segments Recommended to Project Team







MEETING MINUTES

Engineering

Construction

Project: Programming Study for KY 15 Breathitt, Perry, and Wolfe Counties

Mountain Parkway Interchange in Wolfe County to MP 16.8 in Perry County

Purpose: Project Team Meeting #2

Place: District 10 - Jackson

Meeting Date: October 24, 2012

1:30 p.m. EDT

Prepared By: Bruce Siria

In Attendance: Jill Asher KYTC, Division of Planning

Sreenu Gutti KYTC, Division of Planning
Steve Ross KYTC, Division of Planning
Jason Blackburn KYTC, District 10 – Jackson
Darren Back KYTC, District 10 – Jackson
Brent Weddington KYTC, District 10 – Jackson

Aric Skaggs KYTC, District 10 – Jackson Min Jiang KYTC, District 10 – Jackson

Will Jiang Ri To, District to – Jackson

Eunice Holland Kentucky River Area Development District

Annette Coffey Qk4
Duffy Ford Qk4
Bruce Siria Qk4

Jason Blackburn noted that this was the second official project team meeting on the KY 15 Planning Study (the meeting on August 20 being an informal, interim discussion) and that the end purpose of the study was to prepare a summary notebook that would be useful both to District 10 personnel not familiar with previous work on KY 15 and to stress to external stakeholders the importance of the corridor.

Relevant central office and district personnel changes were announced. Sreenu Gutti will take over as central office coordinator for this study. Jill Asher is transferring to the Division of Highway Design effective

KY 15 Programming Study Breathitt, Perry, and Wolfe Counties October 24, 2012 Project Team #2 Meeting Minutes Page 2 of 3

November 1. Mikael Pelfrey will assume Jill's duties as leader of the Corridor Planning Team in the Division of Planning. Aric Skaggs was introduced as the new Branch Manager for Project Development in District 10. Min Jiang and Brent Weddington of D-10 were also introduced.

Darren Back asked if WMB had shared an inspection report documenting why the "Westside of Jackson" corridor was preferred. Bruce Siria answered in the negative, indicating that Qk4 only had the EA FONSI for that segment. Jason indicated that the public and local officials had indicated concerns with a "Westside" alternative. (Note: The EA FONSI indicates that the preferred alignment within the "Westside of Jackson" corridor was recommended "after consideration of public input, environmental impacts, and transportation objectives". The preferred alignment was also 3 to 7 percent less costly than others considered.)

Bruce then narrated a brief PowerPoint presentation focusing on KY 15 corridor sections D, E, F, and G, including new corridors in Section D and an along existing Section G alternative. The cost estimates for the KY 15 junction at KY 28 included a diamond interchange; further cost savings would be possible with a modification there. Regardless, the existing KY 15 intersection with KY 28 should be relocated. The project team recommended that the interchange option continue to be included.

Jason commented that Section D was the most troublesome for the district office. "Westside" corridor has no tie-down points for construction segmentation, and connectors back to existing KY 15 necessitate crossing (or even relocating) the river. "Eastside" corridor is more attractive from that perspective.

The project team suggested unit costs of \$75,000 per house and \$500 per acre (in the 'cross-country' options). Right-of-Way and utility relocation costs will be developed by District 10. District staff asked Qk4 to provide Right-of-Way acreage, number of business/residential relocations, and disturb limits.

The current Qk4 cost estimates include the KY 15/KY 28 interchange in Section F. It will be moved to the estimate for Section G to mesh with the previous design work on Section G. (Note: The KY 15/KY 28 junction was included in the prior work for Section F, but later work for Section G also included that location.)

Possible construction segmentation for study sections was discussed:

No segmentation of sections E or G was needed.

For section F, the following general segments were suggested:

- 1. From MP 21.504 to the northern airport entrance road (MP 23.813) {2.3 miles}
- 2. From MP 23.813 to beginning of tangent section at MP 2.6 {4.0 miles}
- 3. From MP 2.6 to the northern end of Section F (MP 5.989) {3.4 miles}

KY 15 Programming Study Breathitt, Perry, and Wolfe Counties October 24, 2012 Project Team #2 Meeting Minutes Page 3 of 3

For section D, there is no need to try to segment the "Westside" option. For the "Eastside" option, and for the option along the existing alignment, various combinations of the two were suggested.

The project team reiterated that Qk4 was not to further examine a 30-foot median option, although the work Qk4 has done to date may be included in the final report. Barrier wall options are to be included in the segment cost estimates to ascertain the level of right-of-way savings that option may provide. The project team indicated that pavement design options did not need to be considered in the segment cost estimates.

At the next meeting, Qk4 will present cost estimates by project development phase for the segments described above. Qk4 will also present a cost estimate by phase for section A (Vancleve to Campton). Finally, Qk4 will recommend a priority order for KY 15 improvement segments and its rationale for those recommendations.

The meeting concluded at approximately 3:00	p.m.
	-End of Minutes

AGENDA

Project Team Meeting #3 KY 15 Programming Study Breathitt, Perry, and Wolfe Counties

Date: January 16, 2013

Time: 10:30 a.m.

Location: KYTC District 10, Jackson, KY

- I. Purpose of This Meeting:
 - a. Discussion of Priority Segments
- II. Next Steps
 - a. Letter Agreement Extension
 - b. Submission of Draft Report
 - c. Schedule







Architecture

Engineering

MEETING MINUTES

Construction

Project: Programming Study for KY 15 Breathitt, Perry, and Wolfe Counties

Mountain Parkway Interchange in Wolfe County to MP 16.8 in Perry County

Purpose: Project Team Meeting #3

Place: District 10 - Jackson

Meeting Date: January 16, 2013

10:30 a.m. EDT

Prepared By: Annette Coffey

In Attendance: Sreenu Gutti KYTC, Division of Planning

Steve Ross KYTC, Division of Planning

Jason Blackburn KYTC, District 10 – Jackson

Darren Back KYTC, District 10 – Jackson

Brent Weddington KYTC, District 10 – Jackson

Aric Skaggs KYTC, District 10 – Jackson

Min Jiang KYTC, District 10 – Jackson

Michael D. Miller Kentucky River Area Development District

Eunice Holland Kentucky River Area Development District

Annette Coffey Qk4

Duffy Ford Qk4

Bruce Siria (teleconference) Qk4

Jason Blackburn noted that this was the third official project team meeting on the KY 15 Planning Study. At this meeting Qk4 was to present their recommendations for priorities for the project based on input from the previous meetings, existing and future conditions. At that point, he turned the meeting over to Annette Coffey of Qk4.

Annette provided an agenda, a summary of the process for establishing the recommended priorities for KY 15 improvements, a spreadsheet containing KY 15 segments and a priority for each,

KY 15 Programming Study Breathitt, Perry, and Wolfe Counties January 16, 2013 Project Team #3 Meeting Minutes Page 2 of 3

recommended by Qk4 and a summary map. Each is attached for reference. The main considerations in establishing the priorities were current LOS, crash history, and existing and projected traffic. She then led the group through each priority section 1-12.

The following were items to be clarified, or noted:

- Show in the Recommended Priorities spreadsheet for Priority 1 the breakout of rural and urban.
- Insert in the column "Estimated Future Daily Traffic" the Design Year 2035
- For Priority 9 Section A Segment 3, we may want to consider stopping the curb and gutter at the new elementary school (KY 3355). Include this comment in the final report and an estimated difference in cost per mile between a 5-lane rural and a 5-lane curb and gutter section.
- Clarify the difference in costs between Priority 8 and Priority 10 both on the spreadsheet and in the final report. Even though Section 10 is shorter it is \$34 Million, higher in construction costs. Much of the difference is due to a \$15.1 million structure. This will be clarified in the final report.
- Add a column stating at what point in the past this section was taken to e.g. through Phase I
 design and an approved final environmental document.
- Include the sections B and C so as not to leave any sections out.
- A clarification was asked on the footnote on the spreadsheet which states "Priority 10 is currently LOS E. If Priority 1 were to be constructed before Priority 8 the LOS would be B." Several were concerned this would hamper chance of the final segment of the bypass ever being constructed.
- Qk4 was asked to send the draft Purpose and Need for the project out to everyone at the meeting for review and comment.
- Mr. Miller stated that the 80 miles from Campton to Whitesburg is the most important road in the area and it carries a considerable amount of the commercial traffic.
- It was requested that Qk4 either develop another spreadsheet or add to the existing spreadsheet what other alignments were studied and add comments as to why they were not selected e.g. D West.
- In the final report, Qk4 should include the fact that much of Segment G was years ago recommended on new alignment. Even though it may be cheaper to go along the existing, KYTC will have to make a decision whether it is prudent to stay with the previous cross country alignment or back up and go along the existing KY 15.

Jason stated that the District will take the recommended priorities under advisement and they look forward to a final report. A time extension may be necessary to complete the final report. Qk4 was asked by Steve Ross, to submit a letter to Mikael Pelfrey of Central Office Planning outlining the reasons for the extension. Qk4 will submit minutes of the meeting to everyone at the meeting for comment, and will submit a draft report within 60 days.

KY 15 Programming Study Breathitt, Perry, and Wolfe Counties January 16, 2013 Project Team #3 Meeting Minutes Page 3 of 3

To ensure that KY 15 operates as intended in the goals of the project, access control will be very important when implementing segments of KY 15. Each alternative studied and updated for costs with this study effort, was estimated as partial control of access with minimum spacing in rural areas of 1200' and urban (through Jackson) 600 feet. Frontage roads were included in the estimates where appropriate and when needed.

The meeting concluded at approximately 12:00 p.m.
End of Minutes

Priorities for improvements to KY 15 in Perry, Breathitt, and Wolfe counties are listed below in 12 stages. Options for combining several of the improvements are listed based on what may be acceptable construction phase costs. KYTC's desire is to complete this project at the earliest practicable date, and this would be facilitated by having the fewest stages possible. However, construction cost levels must be reasonable for future listings as a single project in the KYTC Highway Plan. Criteria for recommending the following 12 priorities include traffic volume served, crash frequency, current level of service (LOS), and continuity of construction segments.

Priorities #1 and #2

The first recommended priority is Segment 3 of Section D along the existing KY 15 alignment. From just south of the shopping center that includes Walmart on the southern city limits of Jackson to just north of the intersection of KY 15 with Miller Hollow Road, a distance of 0.72 miles, the improvement would be a 5-lane rural cross-section. From Miller Hollow Road to the existing construction near Panbowl Road, a distance of 1.53 miles, the improvement would be a 5-lane curb-and-gutter cross-section.

Estimated future year traffic volumes are 21,000 vehicles daily, the highest traffic volumes north of Hazard. The current LOS is E. The critical crash rate factor (CCRF) for this segment ranges from 1.15 to 1.67. The advantages of improving this segment immediately include addressing the most significant current LOS and CCRF issues. However, these improvements would be aimed at what is, in essence, a local street rather than system improvements to KY 15 between the Hal Rogers and Mountain parkways. The principal disadvantage of this recommendation is the possibility that these improvements would be seen as the only ones ever needed along this segment of KY 15. Nonetheless, this recommendation is made to address the traffic and safety issues cited above as well as for the following additional considerations:

- Cost: This improvement is estimated to cost \$24 million. An eastern bypass of Jackson with similar termini is estimated to cost \$82.9 million. The western bypass of Jackson originally proposed is estimated to cost \$133.8 million. (A modified version of the western bypass developed by Qk4 to allow some minor segmenting is estimated to be only slightly less at \$133.1 million.)
- If this segment of the KY 15 system improvements on a Jackson bypass were constructed prior to major improvements between Hazard and Jackson, the newly generated traffic volumes would be small, and the trips using this bypass would simply be current through trips immediately north and south of Jackson. The western bypass, being a shorter distance and hence having a shorter travel time, would likely attract 6,150 vehicles per day. An eastern bypass, being slightly longer and having a slightly greater travel time, would likely attract only 5,100 vehicles per day. This would leave between 14,900 and 15,900 vehicles daily on existing KY 15, resulting in continued congestion and, likely, crash problems.

If Priority #1 were to be constructed, the estimated cost for the construction phase would be only \$16.1 million. Improvements in Priority #1 could be lengthened to a logical construction terminus to

include a more aggressive construction phase. Sections north of Priority #1 are currently under construction or have been constructed. Thus, the second priority would be immediately south of Priority #1. The logical construction segment for Priority #2 would be from the shopping center that includes Walmart on the southern city limits of Jackson to approximately one-half mile south of the intersection with KY 30 East, a distance of 1.47 miles. Estimated future year traffic volumes for Priority #2 are 14,400 vehicles daily, the second highest traffic volumes north of Hazard. The LOS is E and the CCRF for this segment is 1.2. The estimated construction cost phase of Priorities #1 and #2 combined is \$33.7 million. Figure 1 depicts this combined recommendation.

It is noted that a higher estimated construction cost phase (i.e., an even longer recommended section) would likely be acceptable. However, the discussion below will point out that extending this recommendation to the next logical construction break would result in a total construction phase cost of \$77 million, which is considered too high to be a practical recommendation.

The next sequence of recommended priorities is between Hazard and Jackson, starting at the southern terminus and progressing south-to-north until tying in to Priority #2.

Priorities #3 and #4

The third recommended priority is Section G, generally along the existing KY 15 alignment (except for a new KY 28 interchange) from MP 16.8 near Capitol Hill Drive through the new interchange at KY 28, a distance of 4.49 miles. (Note: neither this recommendation nor others for improvements along the existing alignment preclude spot locations identified in final design where short distances of new alignment are used.) This improvement would be a 4-lane cross section with a 40-foot-wide median. Estimated future year traffic volumes are 13,800 vehicles daily, the third highest traffic volumes north of Hazard. The LOS is E and the CCRF for this segment ranges from 0.61 to 0.82. The estimated cost of these improvements to Section G along the existing alignment is \$50.8 million, including \$40.1 million for the construction phase. The estimated cost for the new alignment west of existing KY 15 (originally recommended in the previous work) is \$61.5 million, including a construction phase of \$53.8 million. Significant overall cost savings could be realized despite higher estimated costs for right-of-way purchase and utility relocation. Priorities #1 through #3 are depicted in Figure 2.

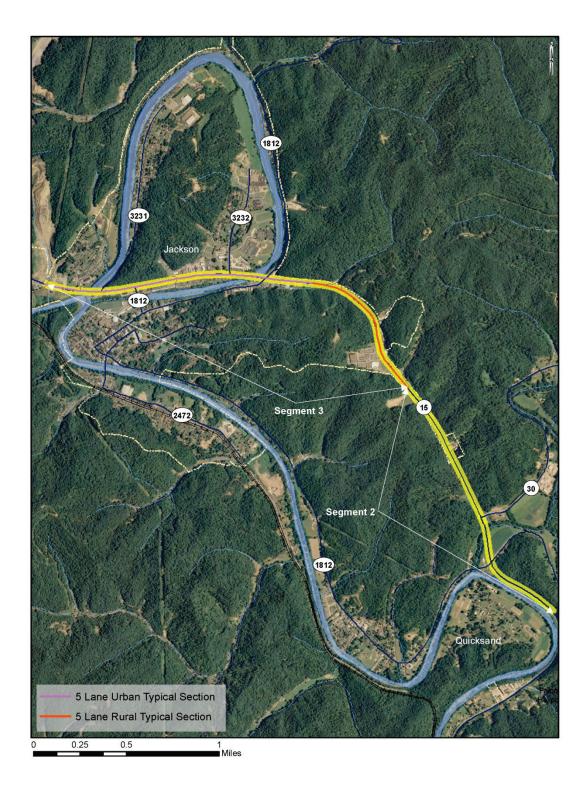


Figure 1: Priorities #1 and #2

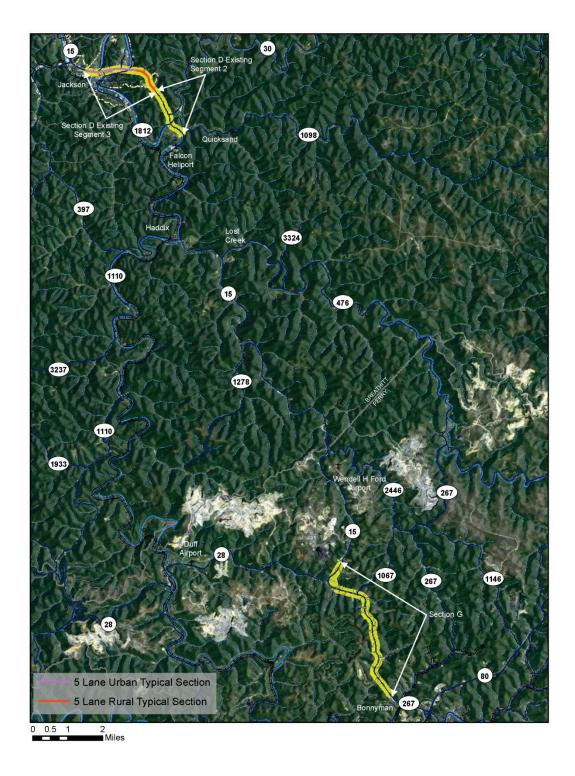


Figure 2: Priorities #1 through #3

If Priority #3 were to be constructed, the estimated cost for the construction phase would be \$40.1 million. Improvements in Priority #3 could possibly be lengthened to a logical construction terminus to include a more aggressive construction phase. Thus, the recommended Priority #4 is Segment 1 of Section F. This segment extends from just north of the new interchange with KY 28 to just north of Wendell Ford Airport entrance road, a distance of 2.83 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median generally along the existing alignment. Estimated future year traffic volumes on Segment 1 of Section F are 10,200 vehicles daily, the fourth highest traffic volumes north of Hazard. The LOS is E and the CCRF for this segment is 0.35. The estimated cost of implementing Priority #4 is \$20 million, including \$16 million for the construction phase. The estimated construction cost phase of Priorities #3 and #4 combined is \$56.1 million. If KYTC considers this to be too aggressive for a single construction project, Priorities #3 and #4 could be pursued separately. Priorities #1 through #4 are shown in Figure 3.

Priorities 5 and 6

The fifth recommended priority is Segment 2 of Section F, generally along the existing KY 15 alignment from just north of Wendell Ford Airport Road in Perry County to vicinity of Noble Road south of Watts in Breathitt County, a distance of 3.94 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median. Estimated future year traffic volumes are 7,600 vehicles daily. The LOS transitions from E at the south end to D at the north end. The CCRF for this segment is 0.35. The estimated cost of these improvements to Segment 2 of Section F along the existing alignment is \$36.0 million, including \$29.5 million for the construction phase. This segment is recommended as a continuation of previously recommended improvements to the south. This recommendation is shown in Figure 4.

Since the construction phase of Priority #5 is \$29.5 million, improvements in Priority #5 could possibly be lengthened to a logical construction terminus to include a more aggressive construction phase. Thus, the recommended Priority #6 is Segment 3 of Section F generally along the existing alignment from vicinity of Noble Road south of Watts to approx 2.23 miles south of KY 476 East, a distance of 2.36 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median. This segment is recommended as a continuation of previously recommended improvements to the south. Estimated future year traffic volumes are 7,600 vehicles daily, while the current LOS is D. The CCRF for this segment is 0.35. The estimated cost of these improvements to Segment 3 of Section F along the existing alignment is \$29.0 million, including \$24.2 million for the construction phase. The estimated construction cost phase of Priorities #5 and #6 combined is \$53.6 million. If KYTC considers this to be too aggressive for a single construction project, Priorities #5 and #6 could be pursued separately. Priorities #1 through #6 are shown in Figure 5.

Priority #7

The seventh recommended priority is Section E, generally along the existing alignment from approximately 2.23 miles south of KY 476 East to approx 300 feet north of KY 476 East, a distance of 2.29 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median. This segment

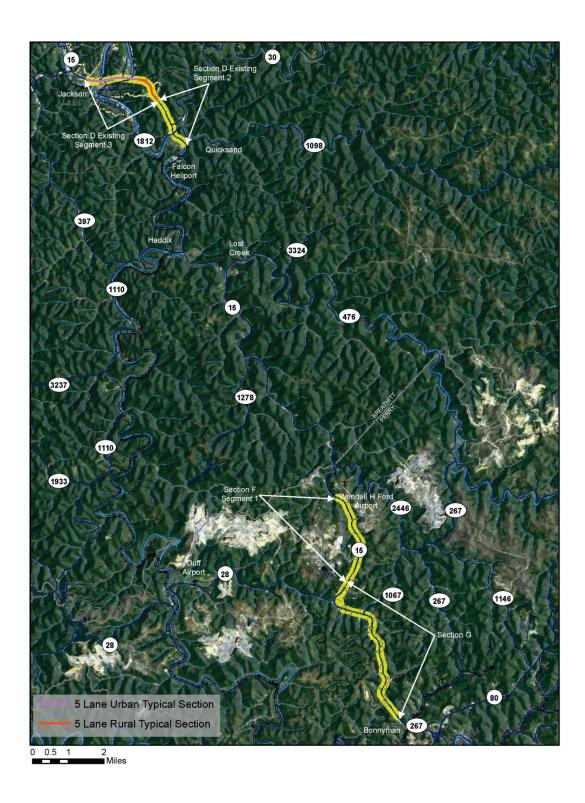


Figure 3: Priorities #1 through #4

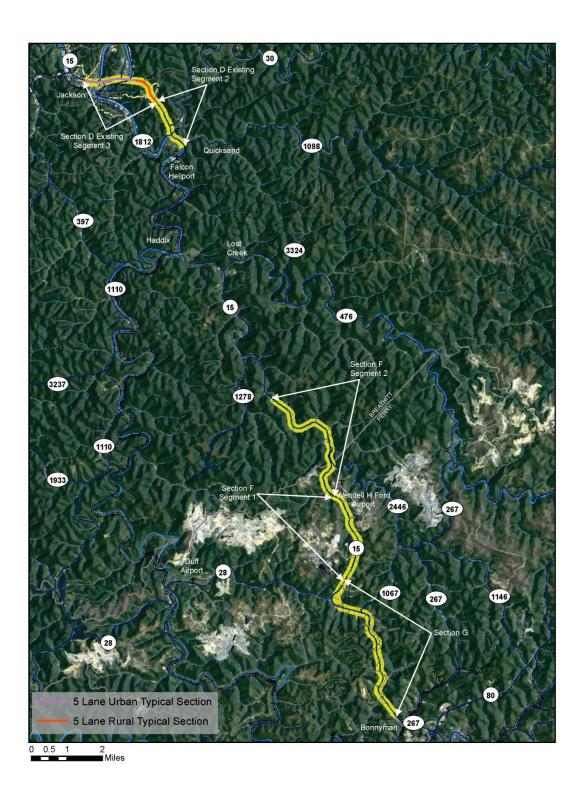


Figure 4: Priorities #1 through #5



Figure 5: Priorities #1 through #6

is recommended for the next priority as a continuation of previously recommended improvements to the south. Estimated future year traffic volumes are 7,600 vehicles daily, and the current LOS is D. The CCRF for this segment is 0.24. The estimated cost of these improvements to Section E along the existing alignment is \$32.6 million, including \$27.8 million for the construction phase. Priorities #1 through #7 are shown in Figure 6.

Priority #8

The eighth recommended priority is Segment 1 of Section D, on new alignment east of the existing KY 15 from approximately 300 feet north of KY 476 East to approximately one-half mile south of the intersection with KY 30 East, a distance of 3.90 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median. The estimated cost of these improvements to Segment 1 of Section D on new alignment is \$47.4 million, including \$43.3 million for the construction phase. Though only modestly less costly than Segment 1 of Section D along the existing alignment (\$50.8 million estimated cost, including \$42.3 million for construction), the new alignment option reduces the travel distance for this segment by 1.29 miles. This segment is recommended as a continuation of previously recommended improvements to the south. Estimated future year traffic volumes are 8,500 vehicles daily, and the current LOS is E. The CCRF for this segment is 0.37. Priorities #1 through #8 are shown in Figure 7.

Priority #9

The ninth recommended priority is Segment 3 of Section A in Campton, along the existing alignment of from just south of current 3-lane section near MP 8.2 to the Mountain Parkway, a distance of 2.59 miles. This improvement would be a 5-lane curb-and-gutter cross-section. The estimated cost of this improvement is \$23.3 million, including \$19.4 million for the construction phase. The 1994 KY 15 Corridor Planning Study by WMB Engineers had considered a new alignment just south and west of existing KY 15 from near MP 8.2 south of Campton, a new interchange with existing KY 15 near MP 9.8, and a new interchange with the Mountain Parkway just east of the (then) partial interchange at MP 43. Public involvement during that study indicated this option was not popular, and improvements since constructed to the Mountain Parkway (and currently under construction) have reduced its practicality.

The WMB Study estimated the cost of the alternative for Segment 3 of Section A on new



alignment would be 22% (\$5 million in 2012 dollars) more costly than improvements along the existing route. This segment is recommended because congestion through Campton would be the greatest cause of delay in the KY 15 Corridor following construction of the first eight priorities. Estimated future year traffic volumes range from 6,900 to 8,800 vehicles daily. The current LOS diminishes from C on the south end

to D near the KY 15/KY 15S/KY 191 intersection. The CCRF for this segment ranges from 0.30 to 1.04. Priorities #1 through #9 are shown in Figure 8.



Figure 6: Priorities #1 through #7



Figure 7: Priorities #1 through #8



Figure 8: Priorities #1 through #9

Priority #10

The tenth recommended priority is Segment 3 of Section D, on new alignment east of existing KY 15 from just south of the Walmart Shopping Center to near the north end of the existing construction, a distance of 3.45 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median. In the discussion above, recommended Priority #1 would improve existing KY 15 in this same vicinity to address (1) immediate congestion concerns and (2) the projection that construction of a Jackson bypass prior to major improvements between Hazard and Jackson would result in relatively low traffic volumes. Previous recommended priorities have included improvements to all sections between Hazard and the south side of Jackson. Thus, construction of a Jackson bypass would be appropriate at this stage. The estimated cost of these improvements to Segment 3 of Section D on a new alignment east of Jackson is \$82.9 million, including \$77 million for the construction phase. This is considerably less costly than improvements on a new alignment west of Jackson (\$133.8 million, including \$123.4 million for the construction phase), and is more compatible with Priorities #2 and #8 above. Priorities 1 through 10 are shown in Figure 9.

Priority #11

The eleventh recommended priority is Segment 2 of Section A, along the existing alignment from MP 2.9 north of Bethany in Wolfe County to the 5-lane curb-and-gutter segment in Priority #9, a distance of 5.25 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median. Of the two remaining unprioritized segments, this one has a slightly higher projected daily traffic volume (5,400) than the one to the south discussed below (4,800). The estimated cost of these improvements to Segment 2 of Section A is \$44.7 million, including \$37.4 million for the construction phase. Priorities #1 through #11 are shown in Figure 10.

Priority #12

The twelfth and final recommended priority is Segment 1 of Section A, along the existing alignment from the north terminus of the existing 4-lane section at MP 24.4 near Vancleve in Breathitt County to MP 2.9 north of Bethany in Wolfe County, a distance of 4.93 miles. This improvement would be a 4-lane cross section with a 40-foot-wide median. The estimated cost of these improvements to Segment 2 of Section A is \$45.6 million, including \$38.6 million for the construction phase. Priorities #1 through #12 are shown in Figure 11.

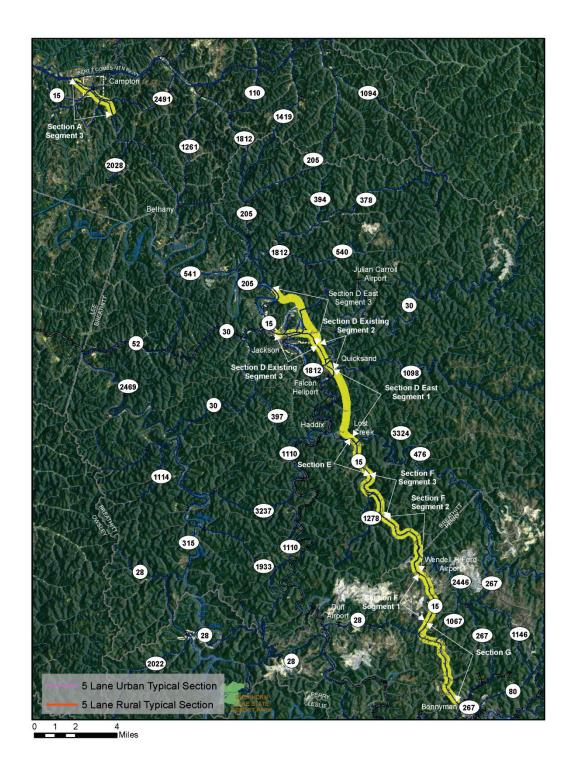


Figure 9: Priorities #1 through #10

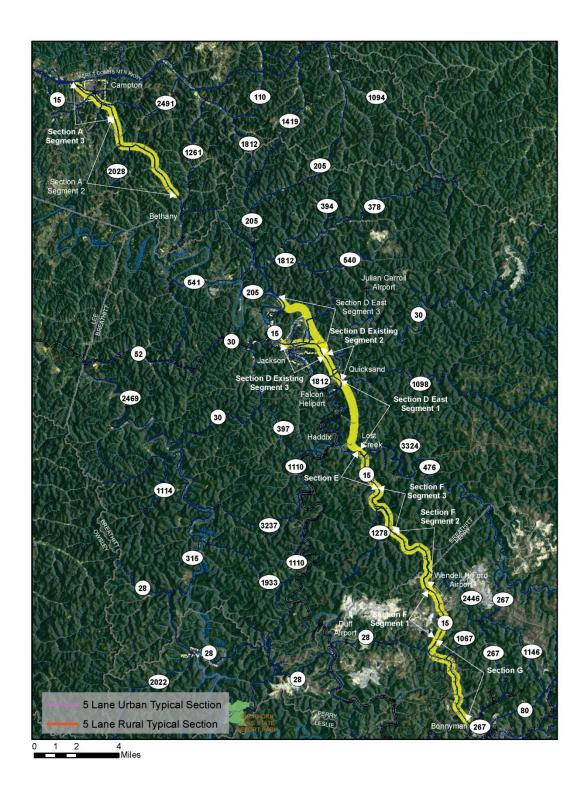


Figure 10: Priorities #1 through #11

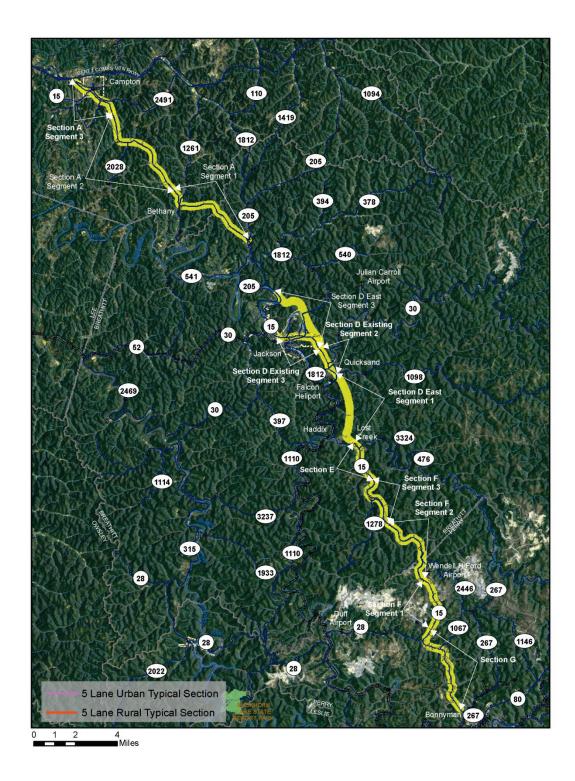


Figure 11: Priorities #1 through #12

RECOMMENDED PRIORITIES

								Cost Estimate (Millions)				Estimated Eutura Daily	Current	Current	
Priority	County (ies)	Section	Segment	Description	Beginning MP	Ending MP	Length (Miles)	Design	R/W	Util	Construction	Alternate Construction	Estimated Future Daily Traffic	Current CCRF	Current LOS
1	Breathitt	D Existing	3	From just south of Wal-mart Shopping Center to Existing Construction near Panbowl Road north of Jackson	15.6	17.9	2.3	\$1.6	\$5.3	\$1.0	\$16.1	\$33.7	21,000	1.15-1.67	E
2	Breathitt	D Existing	2	From a half-mile south of the intersection with KY 30 East to just south of Wal-mart shopping center	14.1	15.6	1.5	\$1.8	\$0.3	\$0.8	\$17.6	Ş33.7	14,400	1.2	E
3	Perry	G Existing	All	Along existing alignment (except for a new KY 28 interchange) fromnear Capitol Hill Drive through new interchange at KY 28	16.9	21.5	4.5	\$3.2	\$6.3	\$1.2	\$40.1	\$56.1	13,800	0.61-0.82	E
4	Perry	F	1	Along existing alignment from new interchange at KY 28 to just north of Wendell Ford Airport entrance road	21.5	24.3	2.8	\$1.6	\$1.5	\$1.0	\$16.0	\$30.1	10,200	0.35	E
5	Breathitt/Perry	F	2	Along existing alignment from just north of Wendell Ford Airport Road entrance in Perry County to vicinity of Noble Road south of Watts in Breathitt County	24.3	3.0	3.9	\$2.5	\$2.7	\$1.3	\$29.5	\$53.7	7,600	0.35	D-E
6	Breathitt	F		Along existing alignment from vicinity of Noble Road south of Watts to approx 2.23 miles south of KY 476 East	3.0	5.4	2.4	\$2.3	\$1.6	\$0.9	\$24.2		7,600	0.35	D
7	Breathitt	E	All	Along existing alignment from approx 2.23 miles south of KY 476 East to approx 300 feet north of KY 476 East	5.4	7.7	2.3	\$2.5	\$1.5	\$0.8	\$27.8	\$27.8	7,600	0.24	D
8	Breathitt	D East	1	New alignment (east of existing) from approx 300 feet north of KY 476 East to a half-mile south of the intersection with KY 30 East	7.7	14.1**	3.9	\$3.5	\$0.6	\$0.1	\$43.3	\$43.3	8,500	0.37	E
9	Wolfe	А	3	5-lane Curb & Gutter segment in Campton from just south of current 3-lane section near MP 8.2 on KY 15 to KY 15S at the Mountain Parkway	8.2	1.1	2.6	\$1.8	\$1.6	\$1.0	\$17.9	\$17.9	6,900-8,800	0.30-1.04	C-D
10	Breathitt	D East	3	From just south of Wal-mart Shopping Center on new alignment east of existing KY 15 to near north end of existing construction	15.6**	17.9**	3.5	\$4.6	\$0.9	\$0.3	\$77.0	\$77.0	5,100	0.36	E*
11	Wolfe	А	2	Along existing alignment from approx MP 2.9 north of Bethany to 5-lane curb and gutter segment in priority 9 above	2.9	8.2	5.3	\$3.0	\$2.6	\$1.7	\$37.4	\$37.4	5,400	0.39	С
12	Breathitt/Wolfe	А	1	Along existing alignment from north end of existing 4-lane (MP 24.38 in Breathitt County) to approx MP 2.9 in Wolfe County north of Bethany	24.4	2.9	4.9	\$3.1	\$2.3	\$1.6	\$38.6	\$38.6	4,800	0.31-0.42	С

^{*} Currently LOS E. If Priority 1 were to be constructed before Priority 8, the LOS would be B

^{**} Milepoints of existing alignment. New alignment will result in milepoint modifications. Thus, length does not equal difference in milepoints.

SECTION A

SEGMENT 1

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:		From STA:		2000+00.00		
UPN		To STA:		2260+50.00)	
Fed No.		Net Length, mile:		4.93		
Item No.		Type of Construction:	(Grade, Drain & Su	rfaci	ng
Road Name:	KY 15 - Section A Segment 1 (20' Median)	Class of Road:		Rural Arteria	al	
Item #	Item	Quantity	Unit	Unit Price	_	Amount
	4L-20' Median Const. (2000+00 to 2260+50)	26,050	FEET	\$ 1,075.00	\$	28,003,750
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	Mainline Bridges (Sta. 2219+87+/-)	12,420	SQ FT	\$ 175.00	\$	2,173,500
	Manimic Bridges (Sta. 221) 107 (7)	12,120	5211	Ψ 173.00	\$	2,173,300
	2024+20 ~ 14' x 10' RCBC		LP SUM		\$	280,000
	2046+10 ~ 14' x 10' RCBC		LP SUM		\$	280,000
	2057+50 ~ 12' x 10' RCBC		LP SUM		\$	240,000
	2073+40 ~ 10' x 6' RCBC		LP SUM		\$	120,000
	2088+55 ~ 6' x 4' RCBC		LP SUM		\$	50,000
	2159+80 ~ 8' x 6' RCBC		LP SUM		\$	100,000
	2193+50 ~ 10' x 8' RCBC		LP SUM		\$	160,000
	2210+00 ~ 12' x 10' RCBC		LP SUM		\$	240,000
	2233+20 ~ DBL 12' x 10' RCBC		LP SUM		\$	480,000
	2259+50 ~ DBL 12' x 10' RCBC		LP SUM		\$	480,000
	MOBILIZATION		@ 3%		\$	978,218
	DEMOBILIZATION		@ 1.5%		\$	489,109
					<u> </u>	
				uction-SubTotal	_	34,074,576
				0 Engr & Contg	_	3,407,458
				nstruction-Total		37,482,034
				uction Cost/Mile	\$	7,597,126
Estimated by:		Lasted Edited:	12/1/2012	_		
Checked by:		Lasted Edited:		=		

 Right-of-way
 \$2,107,167

 Utilities
 \$1,645,000

 Construction
 \$37,482,034

 Total Cost
 \$41,234,201

 Cost/Mile
 \$8,357,642

Sec A1_20ft 1

Bureau of Highways

ESTIMATE SHEET

County of		From STA:		2000+00.00		
UPI		To STA:		2260+50.00)	
Fed No		Net Length, mile:		4.93		
Item No		Type of Construction:	(Grade, Drain & Su Rural/Urban Art	rfacii	<u>ıg</u>
Road Name	EXECUTE: KY 15 - Section A Segment 1 (30' Median)	Class of Road:		erial		
Item #	Item	Quantity	Unit	Unit Price		Amount
	4L-30' Median Const. (2000+00 to 2260+50)	26,050	FEET	\$ 1,000.00	\$	26,050,000
	Mainline Bridges (Sta. 2219+87+/-)	10,530	SQ FT	\$ 200.00	\$	2,106,000
					\$	_
	2024+20 ~ 14' x 10' RCBC		LP SUM		\$	295,000
	2046+10 ~ 14' x 10' RCBC		LP SUM		\$	295,000
	2057+50 ~ 12' x 10' RCBC		LP SUM		\$	250,000
	2073+40 ~ 10' x 6' RCBC		LP SUM		\$	125,000
	2088+55 ~ 6' x 4' RCBC		LP SUM		\$	52,500
	2159+80 ~ 8' x 6' RCBC		LP SUM		\$	105,000
	2193+50 ~ 10' x 8' RCBC		LP SUM		\$	170,000
	2210+00 ~ 12' x 10' RCBC		LP SUM		\$	250,000
	2233+20 ~ DBL 12' x 10' RCBC		LP SUM		\$	500,000
	2259+50 ~ DBL 12' x 10' RCBC		LP SUM		\$	500,000
	MODILIZATION		@ 3%		φ	020.055
	MOBILIZATION				\$	920,955
	DEMOBILIZATION		@ 1.5%		3	460,478
	1		Const	uotion CubTotal	Φ	22 070 022
				uction-SubTotal		32,079,933
				0 Engr & Contg nstruction-Total		3,207,993
				nstruction-1 otal uction Cost/Mile	-	35,287,926 7,152,409
Datin-4-11	y D Ford	Lasted Edited:	12/1/2012	uction Cost/Mille	φ	7,132,409
Estimated by Checked by		Lasted Edited:	12/1/2012	-		
CHECKEG D	y	Lasieu Eulleu:		-		

 Right-of-way
 \$2,107,167

 Utilities
 \$1,645,000

 Construction
 \$35,287,926

 Total Cost
 \$39,040,093

 Cost/Mile
 \$7,912,925

Sec A1_30ft 1

Bureau of Highways

ESTIMATE SHEET

County of:	f: Breathitt, Wolfe From STA: 2000+00.00					
UPN	,	To STA:		2260+50.00	,	
Fed No.		Net Length, mile:		4.93		
Item No.		Type of Construction:	(Grade, Drain & Su	rfaci	ng
Road Name:	KY 15 - Section A Segment 1 (40' Median)	Class of Road:		Rural/Urban Art		
	-	•				
Item #	Item	Quantity	Unit	Unit Price		Amount
	4L-40' Median Const. (2000+00 to 2260+50)	26,050	FEET	\$ 1,100.00	\$	28,655,000
	Mainline Bridges (Sta. 2219+87+/-)	11,340	SQ FT	\$ 200.00	\$	2,268,000
					\$	-
	2024+20 ~ 14' x 10' RCBC		LP SUM		\$	310,000
	2046+10 ~ 14' x 10' RCBC		LP SUM		\$	310,000
	2057+50 ~ 12' x 10' RCBC		LP SUM		\$	265,000
	2073+40 ~ 10' x 6' RCBC		LP SUM		\$	130,000
	2088+55 ~ 6' x 4' RCBC		LP SUM		\$	55,000
	2159+80 ~ 8' x 6' RCBC		LP SUM		\$	110,000
	2193+50 ~ 10' x 8' RCBC		LP SUM		\$	175,000
	2210+00 ~ 12' x 10' RCBC		LP SUM		\$	265,000
	2233+20 ~ DBL 12' x 10' RCBC		LP SUM		\$	530,000
	2259+50 ~ DBL 12' x 10' RCBC		LP SUM		\$	530,000
	MOBILIZATION		@ 3%		\$	1,008,090
	DEMOBILIZATION		@ 1.5%		\$	504,045
			Constr	uction-SubTotal	\$	35,115,135
			+1	0 Engr & Contg		3,511,514
				nstruction-Total		38,626,649
			Constr	uction Cost/Mile	\$	7,829,125
Estimated by:	D. Ford	Lasted Edited:	12/1/2012			
Checked by:		Lasted Edited:		=		
	· · · · · · · · · · · · · · · · · · ·					

 Right-of-way
 \$2,261,653

 Utilities
 \$1,645,000

 Construction
 \$38,626,649

 Total Cost
 \$42,533,302

 Cost/Mile
 \$8,620,953

Sec A1_40ft 1

SECTION A

SEGMENT 1

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - SECTION A (Segment 1)

STA. 2000+00 to 2260+50

			Approx. Ex.	KY15 R/W			Acreage	Resi	dential	Bus	iness	
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	26050	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$125,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	9,633,177	221.1	2,084,000	47.8	7,549,177	173.3	\$86,653	24	\$1,800,000	3	\$375,000	\$2,261,653
20 & 30ft	9,242,427	212.2	2,084,000	47.8	7,158,427	164.3	\$82,167	22	\$1,650,000	3	\$375,000	\$2,107,167

SECTION A

SEGMENT 2

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of: UPN	Wolfe		2260+50.00 2537+50.00					
		Not I anoth mile		2337+30.00 5.25				
Fed No.		Net Length, mile: Type of Construction:		J.23	c:			
Item No.	KY 15 - Section A Segment 2 (20' Median)	Class of Road:		Rural Arteria	1	ng		
Road Name:	KY 15 - Section A Segment 2 (20 Median)	Class of Road:	Ruidi Alteriai					
Item #	Item	Quantity	Unit	Unit Price		Amount		
HeIII#	4L-20' Median Const. (2260+50 to 2537+50)	27,700	FEET	\$ 1,075.00	\$	Amount 29,777,500		
	4L-20 Median Const. (2200+30 to 2337+30)	27,700	FEEI	\$ 1,075.00	Ф	29,777,300		
	2281+30 ~ DBL 12' x 10' RCBC		LP SUM		\$	480,000		
	2289+65 ~ DBL 10' x 8' RCBC		LP SUM		\$	320,000		
	2342+80 ~ 12' x 8' RCBC		LP SUM		\$	190,000		
	2412+00 ~ 10' x 6' RCBC		LP SUM		\$	120,000		
	2432+20 ~ 10' x 8' RCBC		LP SUM		\$	160,000		
	2431+50 ~ 12' x 10' RCBC		LP SUM		\$	240,000		
	2434+85 ~ 5' x 4' RCBC		LP SUM		\$	40,000		
	2471+60 ~ 12' x 10' RCBC		LP SUM		\$	240,000		
	2481+55 ~ 10' x 6' RCBC		LP SUM		\$	120,000		
	MOBILIZATION		@ 3%		\$	950,625		
	DEMOBILIZATION		@ 1.5%		\$	475,313		
	Construction-SubTotal +10 Engr & Contg							
		Construction-Total \$						
				uction Cost/Mile		36,424,781 6,943,063		
Estimated by:	D. Ford	Lasted Edited:	12/1/2012	-				
Checked by:		Lasted Edited:	-	-				
- J		-		•				

 Right-of-way
 \$2,323,491

 Utilities
 \$1,705,000

 Construction
 \$36,424,781

 Total Cost
 \$40,453,272

 Cost/Mile
 \$7,710,949

Sec A2_20ft 1

Bureau of Highways

ESTIMATE SHEET

	Wolfe	From STA:	ΓA: 2260+50.00 ΓA: 2537+50.00			
Fed No.		Net Length, mile:		5.25	1	
Item No.		Type of Construction:			rfaci	ng
Road Name:	KY 15 - Section A Segment 2 (30' Median)	Class of Road:		Rural/Urban Art		
Ttouc I tuille.	111 13 Section 11 Segment 2 (30 Median)			Traini, Ciban in	criur	
Item #	Item	Quantity	Unit	Unit Price		Amount
	4L-30' Median Const. (2260+50 to 2537+50)	27,700	FEET	\$ 1,000.00	\$	27,700,000
	,	,				
	2201 20 PPL 12L 10LPCPC		I D CI D I		Φ.	505.000
	2281+30 ~ DBL 12' x 10' RCBC		LP SUM		\$	505,000
	2289+65 ~ DBL 10' x 8' RCBC		LP SUM		\$	335,000
	2342+80 ~ 12' x 8' RCBC		LP SUM		\$	200,000
	2412+00 ~ 10' x 6' RCBC 2432+20 ~ 10' x 8' RCBC		LP SUM LP SUM		\$	125,000 170,000
	2432+20 ~ 10 x 8 RCBC 2431+50 ~ 12' x 10' RCBC		LP SUM		\$	250,000
	2431+30 ~ 12 x 10 RCBC 2434+85 ~ 5' x 4' RCBC		LP SUM		\$	42,500
	2471+60 ~ 12' x 10' RCBC		LP SUM		\$	250,000
	2481+55 ~ 10' x 6' RCBC		LP SUM		\$	125,000
	2401133 × 10 × 0 Rebe		LI SCIVI		Ψ	123,000
	MOBILIZATION		@ 3%		\$	891,075
	DEMOBILIZATION		@ 1.5%		\$	445,538
				uction-SubTotal	\$	31,039,113
				0 Engr & Contg		3,103,911
				nstruction-Total		34,143,024
				uction Cost/Mile	\$	6,508,129
Estimated by		Lasted Edited:		-		
Checked by:		Lasted Edited:		-		

 Right-of-way
 \$2,323,491

 Utilities
 \$1,705,000

 Construction
 \$34,143,024

 Total Cost
 \$38,171,515

 Cost/Mile
 \$7,276,014

Sec A2_30ft 1

Bureau of Highways

ESTIMATE SHEET

County of:	Wolfe	From STA:		2260+50.00				
UPN		To STA:		2537+50.00				
Fed No.		Net Length, mile:		5.25				
Item No.		Type of Construction:	G	rade, Drain & Su	rfaci	ng		
Road Name:	KY 15 - Section A Segment 2 (40' Median)	Class of Road:		Rural/Urban Art	terial			
Item#	Item	Quantity	Unit	Unit Price		Amount		
	4L-40' Median Const. (2260+50 to 2537+50)	27,700	FEET	\$ 1,100.00	\$	30,470,000		
	2281+30 ~ DBL 12' x 10' RCBC		LP SUM		\$	530,000		
	2289+65 ~ DBL 10' x 8' RCBC		LP SUM		\$	350,000		
	2342+80 ~ 12' x 8' RCBC		LP SUM		\$	210,000		
	2412+00 ~ 10' x 6' RCBC		LP SUM		\$	130,000		
	2432+20 ~ 10' x 8' RCBC		LP SUM		\$	175,000		
	2431+50 ~ 12' x 10' RCBC		LP SUM		\$	265,000		
	2434+85 ~ 5' x 4' RCBC		LP SUM		\$	45,000		
	2471+60 ~ 12' x 10' RCBC		LP SUM		\$	265,000		
	2481+55 ~ 10' x 6' RCBC		LP SUM		\$	130,000		
	MOBILIZATION		@ 3%		\$	977,100		
	DEMOBILIZATION		@ 1.5%		\$	488,550		
	DEMODILIZATION		w 1.3%		φ	400,330		
			Constr	uction-SubTotal	\$	34,035,650		
		0 Engr & Contg	Ψ	3,403,565				
				nstruction-Total	\$	37,439,215		
				action Cost/Mile		7,136,428		
Estimated by:	D. Ford	Lasted Edited:			•	,,		
Checked by:		Lasted Edited:		•				
		·		•				

 Right-of-way
 \$2,553,261

 Utilities
 \$1,705,000

 Construction
 \$37,439,215

 Total Cost
 \$41,697,476

 Cost/Mile
 \$7,948,111

Sec A2_40ft 1

SECTION A

SEGMENT 2

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - SECTION A (Segment 2)

STA. 2260+50 to 2537+50

			Approx. Ex.	KY15 R/W			Acreage	Resi	dential	Bus	iness	
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	27700	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	9,034,067	207.4	2,216,000	50.9	6,818,067	156.5	\$78,261	24	\$1,800,000	9	\$675,000	\$2,553,261
20 & 30ft	8,618,567	197.9	2,216,000	50.9	6,402,567	147.0	\$73,491	22	\$1,650,000	8	\$600,000	\$2,323,491
										·		

SECTION A

SEGMENT 3

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of: Wolfe		From STA:		2537+50.00		
UPN		To STA:				
Fed No.		Net Length, mile:		2.59		
Item No.		Type of Construction:	G	rade, Drain & Su	rfaci	ng
Road Name:	KY 15 - Section A Segment 3 (5-lane C&G)	Class of Road:		Rural Arteria	1	<u>8</u>
Item #	Item	Quantity	Unit	Unit Price		Amount
π	5L-C and G Const. (2537+50 to 2674+00)	13,650	FEET	\$ 1,200.00	\$	16,380,000
	5L-C and G Const. (2557+50 to 2074+00)	13,030	FEET	\$ 1,200.00	φ	10,380,000
	2556+00 ~ 5' x 4' RCBC		LP SUM		\$	40,000
	2590+50 ~ 10' x 5' RCBC		LP SUM		\$	100,000
	2601+05 ~ 8' x 5' RCBC		LP SUM		\$	80,000
	2617+65 ~ 14' x 10' RCBC				\$	
	2017+03 ~ 14 X 10 RCBC		LP SUM		Ф	280,000
	MOBILIZATION		@ 3%		\$	506,400
	DEMOBILIZATION		@ 1.5%		\$	253,200
		'	Constr	uction-SubTotal	\$	17,639,600
				0 Engr & Contg		1,763,960
				nstruction-Total	\$	19,403,560
				action Cost/Mile		7,505,553
Estimated by:	D. Ford	Lasted Edited:	12/1/2012		~	.,. 50,000
Checked by:		Lasted Edited:	12, 1, 2012	•		
checked by.		Eusted Edited.		-		

 Right-of-way
 \$844,280

 Utilities
 \$1,070,000

 Construction
 \$19,403,560

 Total Cost
 \$21,317,840

 Cost/Mile
 \$8,246,022

Sec A3_5L C-G

Bureau of Highways

ESTIMATE SHEET

County of:	Wolfe Wolfe	From STA:	2537+50.00			
UPN		To STA:		2674+00.00		
		Net Length, mile:		2.59	c ·	
Item No.	KY 15 - Section A Segment 3 (20' Median)	Type of Construction:		rade, Drain & Su		ıg
Road Name:	KY 15 - Section A Segment 3 (20' Median)	Class of Road:		Rural Arteria	ll	
Item #	Item	Quantity	Unit		Amount	
Teem "	4L-20' Median Const. (2537+50 to 2674+00)	13,650	FEET	Unit Price \$ 1,075.00	\$	14,673,750
	, ,	,		,		
	2556 00 51 41 DCDC		I D GID I		Φ.	10.000
	2556+00 ~ 5' x 4' RCBC		LP SUM		\$	40,000
	2590+50 ~ 10' x 5' RCBC		LP SUM		\$	100,000
	2601+05 ~ 8' x 5' RCBC 2617+65 ~ 14' x 10' RCBC		LP SUM		\$	80,000
	2017+03 ~ 14 X 10 RCBC		LP SUM		Ф	280,000
	MOBILIZATION		@ 3%		\$	455,213
	DEMOBILIZATION		@ 1.5%		\$	227,606
				uction-SubTotal	\$	15,856,569
				0 Engr & Contg	Φ.	1,585,657
				nstruction-Total		17,442,226
10 10 10 10	D.F. I	¥ . (******		uction Cost/Mile	\$	6,746,883
Estimated by:		Lasted Edited:	12/1/2012	-		
Checked by:	•	Lasted Edited:		-		

 Right-of-way
 \$1,523,197

 Utilities
 \$1,070,000

 Construction
 \$17,442,226

 Total Cost
 \$20,035,423

 Cost/Mile
 \$7,749,966

Sec A3_20ft 1

Bureau of Highways

ESTIMATE SHEET

County of:	Wolfe	From STA:		2537+50.00		
UPN		To STA:		2674+00.00		
Fed No.		Net Length, mile:		2.59		
Item No.		Type of Construction:	C	Grade, Drain & Su	rfacii	ng
Road Name:	KY 15 - Section A Segment 3 (30' Median)	Class of Road:		Rural/Urban Art	erial	,
		-				
Item #	Item	Quantity	Unit	Unit Price		Amount
	4L-30' Median Const. (2537+50 to 2674+00)	13,650	FEET	\$ 1,000.00	\$	13,650,000
	,	,				
	2556+00 ~ 5' x 4' RCBC		LP SUM		\$	42,500
	2590+50 ~ 10' x 5' RCBC		LP SUM		\$	105,000
	2601+05 ~ 8' x 5' RCBC		LP SUM		\$	85,000
	2617+65 ~ 14' x 10' RCBC		LP SUM		\$	295,000
	2017+03 ~ 14 X 10 RCBC		LI SUM		Ψ	293,000
	MOBILIZATION		@ 3%		\$	425,325
	DEMOBILIZATION		@ 1.5%		\$	212,663
	DEWOBILIZATION		@ 1.570		Ф	212,003
			Constr	uction-SubTotal	Φ	1/1 015 /100
Con				0 Engr & Contg	Ψ	14,815,488
				nstruction-Total	Φ	16,297,036
				uction Cost/Mile		6,303,909
Estimated by:	D. Ford	Lasted Edited:		action Cost/Wille	Ψ	0,505,505
Checked by:		Lasted Edited:		-		
Checken by.		Lasica Eunea.		-		

 Right-of-way
 \$1,523,197

 Utilities
 \$1,070,000

 Construction
 \$16,297,036

 Total Cost
 \$18,890,233

 Cost/Mile
 \$7,306,991

Sec A3_30ft 1

Bureau of Highways

ESTIMATE SHEET

County of:	Wolfe	From STA:		2537+50.00		
UPN		To STA:		2674+00.00		
Fed No.		Net Length, mile:		2.59		
Item No.		Type of Construction:	C	Grade, Drain & Su	rfaci	ng
Road Name:	KY 15 - Section A Segment 3 (40' Median)	Class of Road:		Rural/Urban Art	erial	
Item #	Item	Quantity	Unit	Unit Price		Amount
	4L-20' Median Const. (2537+50 to 2674+00)	13,650	FEET	\$ 1,100.00	\$	15,015,000
	2556+00 ~ 5' x 4' RCBC		LP SUM		\$	45,000
	2590+50 ~ 10' x 5' RCBC		LP SUM		\$	110,000
	2601+05 ~ 8' x 5' RCBC		LP SUM		\$	90,000
	2617+65 ~ 14' x 10' RCBC		LP SUM		\$	310,000
	MOBILIZATION		@ 3%		\$	467,100
	DEMOBILIZATION DEMOBILIZATION		@ 1.5%		\$	233,550
	DEMOBILIZATION		@ 1.5%		Ф	233,330
			Constr	uction-SubTotal	Ф	16,270,650
				0 Engr & Contg	φ	1,627,065
				nstruction-Total	\$	17,897,715
				uction Cost/Mile		6,923,072
Estimated by:	D. Ford	Lasted Edited:			Ψ	0,223,072
Checked by:		Lasted Edited:		-		
zazanea oy.				-		

 Right-of-way
 \$1,600,547

 Utilities
 \$1,070,000

 Construction
 \$17,897,715

 Total Cost
 \$20,568,262

 Cost/Mile
 \$7,956,075

Sec A3_40ft 1

SECTION A

SEGMENT 3

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - SECTION A (Segment 3)

STA. 2537+50 to 2674+00

			Approx. Ex. KY15 R/W		Acreage	Residential		Bus	siness			
	Approxim	ate Gross	Assume 8	0' Width	Approxir	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propos	ed R/W	KY15 Length	13650	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	3,317,653	76.2	1,092,000	25.1	2,225,653	51.1	\$25,547	1	\$75,000	20	\$1,500,000	\$1,600,547
20 & 30ft	3,112,903	71.5	1,092,000	25.1	2,020,903	46.4	\$23,197	1	\$75,000	19	\$1,425,000	\$1,523,197
5L C&G	2,771,653	63.6	1,092,000	25.1	1,679,653	38.6	\$19,280	1	\$75,000	10	\$750,000	\$844,280
									·			

SECTION D

EAST

ESTIMATES

SEGMENT 1B

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

	ESTIMA	ATE SHEET					
County of:	Breathitt	From STA:			838+50.00		
UPN		To STA:			1044+50.00		
Fed No.		Net Length, mile: Type of Construction:			3.90		
Item No.		Type of Construction:	G	rade	, Drain & Su	rfaci	ng
Road Name:	KY 15 -East Section D Seg 1b (20ft Median)	Class of Road:			Rural Arteria	1	
•		-					
Item #	Item	Quantity	Unit	Ţ	Unit Price		Amount
	Roadway Exc (Mainline)	6,999,013	CU YD	\$	2.50	\$	17,497,533
	Asph Surf CL3 (Mainline Driving Lanes)	7,553	TON	\$	85.00	\$	642,005
	Asph Base CL3 (Mainline Driving Lanes)	60,757	TON	\$	80.00	\$	4,860,560
	CS Base (Mainline Driving Lanes)	27,200	TON	\$	16.00	\$	435,200
	Asph Surf CL2 (Mainline Shoulders)	5,901	TON	\$	85.00	\$	501,585
	Asph Base CL2 (Mainline Shoulders)	15,343	TON	\$	80.00	\$	1,227,440
	CS Base (Mainline Shoulders)	74,516	TON	\$	16.00	\$	1,192,256
	Roadway Exc (Approaches/Entrances)	242,795	CU YD	\$	2.50	\$	606,988
	Asph Surf CL2 (Approach Rd Driving Lanes)	639	TON	\$	85.00	\$	54,315
	Asph Base CL2 (Approach Rd Driving Lanes)	2,196	TON	\$	80.00	\$	175,680
	CS Base (Approach Rd Driving Lanes)	2,292	TON	\$	16.00	\$	36,672
	Asph Surf (CL2 Approach Rd Shoulders)	103	TON	\$	85.00	\$	8,755
	Asph Base CL2 (Approach Rd Shoulders)	262	TON	\$	80.00	\$	20,960
	CS Base (Approach Rd Shoulders)	892	TON	\$	16.00	\$	14,272
	Concrete Median Barrier	20,600	LF	\$	55.00	\$	1,133,000
				1			
	MISC ITEMS (@ 25%)					\$	7,101,805
	WISC TILMS (@ 2570)					Ψ	7,101,003
	868+35 ~ 5' x 4' RCBC		LP SUM			\$	100,000
	879+00 ~ 10' x 6' RCBC		LP SUM			\$	330,000
	934+40 ~ 12' x 8' RCBC		LP SUM			\$	725,000
	936+50 ~ 12' x 6' RCBC		LP SUM			\$	700,000
	1012+80 ~ 6' x 4' RCBC		LP SUM			\$	190,000
							, i
	MOBILIZATION		@ 3%			\$	1,126,621
	DEMOBILIZATION		@ 1.5%			\$	563,310
					on-SubTotal	\$	39,243,957
					ngr & Contg		3,924,396
					uction-Total	_	43,168,353
			Constru	uctio	n Cost/Mile	\$	11,064,510

Estimated by: D. Ford
Lasted Edited: 12/1/2012
Checked by: Lasted Edited: Lasted Edited:

 Right-of-way
 \$555,329

 Utilities
 \$145,000

 Construction
 \$43,168,353

 Total Cost
 \$43,868,682

 Cost/Mile
 \$11,244,012

East SecD1b_20

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		838+50.00		
UPN		To STA:		1044+50.00		
Fed No.		Net Length, mile:		3.90		
Item No.		Type of Construction:	G	Grade, Drain & Su	rfaci	ng
	KY 15 -East Section D Seg 1b (30ft Median)	Class of Road:		Rural Arteria		8
Troug I (mile)	TIT TO EMBY SOUTHING SOR TO (CONTINUOUS)			11010111	-	
Item#	Item	Quantity	Unit	Unit Price		Amount
π	Roadway Exc (Mainline)	7,087,699	CU YD	\$ 2.50	\$	17,719,248
	Asph Surf CL3 (Mainline Driving Lanes)	7,553	TON	\$ 85.00	\$	642,005
	Asph Base CL3 (Mainline Driving Lanes)	60,757	TON	\$ 80.00	\$	4,860,560
	CS Base (Mainline Driving Lanes)	27,200	TON	\$ 16.00	\$	435,200
	Asph Surf CL2 (Mainline Shoulders)				\$	
	1 /	3,462	TON			294,270
	Asph Base CL2 (Mainline Shoulders)	9,001	TON	\$ 80.00	\$	720,080
	CS Base (Mainline Shoulders)	72,210	TON	\$ 16.00	\$	1,155,360
	Roadway Exc (Approaches/Entrances)	242,795	CU YD	\$ 2.50	\$	606,988
	Asph Surf CL2 (Approach Rd Driving Lanes)	639	TON	\$ 85.00	\$	54,315
	Asph Base CL2 (Approach Rd Driving Lanes)	2,196	TON	\$ 80.00	\$	175,680
	CS Base (Approach Rd Driving Lanes)	2,292	TON	\$ 16.00	\$	36,672
	Asph Surf (CL2 Approach Rd Shoulders)	103	TON	\$ 85.00	\$	8,755
	Asph Base CL2 (Approach Rd Shoulders)	262	TON	\$ 80.00	\$	20,960
	CS Base (Approach Rd Shoulders)	892	TON	\$ 16.00	\$	14,272
	MISC ITEMS (@ 25%)				\$	6,686,091
	IMBC ITEMS (C 2570)				Ψ	0,000,071
	868+35 ~ 5' x 4' RCBC		LP SUM		\$	105,000
	879+00 ~ 10' x 6' RCBC		LP SUM		\$	350,000
	934+40 ~ 12' x 8' RCBC		LP SUM		\$	760,000
	936+50 ~ 12' x 6' RCBC		LP SUM			725,000
					\$	
	1012+80 ~ 6' x 4' RCBC		LP SUM		\$	200,000
	MOBILIZATION		@ 3%		\$	1,067,114
	DEMOBILIZATION		@ 1.5%		\$	533,557
				uction-SubTotal	\$	37,171,127
				0 Engr & Contg		3,717,113
			Co	nstruction-Total	\$	40,888,239
			Constru	uction Cost/Mile	\$	10,480,092
Estimated by:	D. Ford	Lasted Edited:	12/1/2012			·
•		_				

Estimated by: D. Ford Lasted Edited: 12/1/2012

Checked by: Lasted Edited: Lasted

 Right-of-way
 \$555,329

 Utilities
 \$145,000

 Construction
 \$40,888,239

 Total Cost
 \$41,588,568

 Cost/Mile
 \$10,659,594

East SecD1b_30

Bureau of Highways

ESTIMATE SHEET

	L'S I IIVIA	ATE SHEET					
County of:	Breathitt	From STA:			838+50.00		
UPN					044+50.00		
Fed No.		Net Length, mile:			3.90		
Item No.		Type of Construction:	G	rade.		rfaci	ng
Road Name:	KY 15 -East Section D Seg 1b (40ft Median)	Class of Road:			ural Arteria		
		-					
Item#	Item	Quantity	Unit	Ur	nit Price		Amount
	Roadway Exc (Mainline)	7,555,470	CU YD	\$	2.50	\$	18,888,675
	Asph Surf CL3 (Mainline Driving Lanes)	7,553	TON	\$	85.00	\$	642,005
	Asph Base CL3 (Mainline Driving Lanes)	60,757	TON	\$	80.00	\$	4,860,560
	CS Base (Mainline Driving Lanes)	27,200	TON	\$	16.00	\$	435,200
	Asph Surf CL2 (Mainline Shoulders)	4,406	TON	\$	85.00	\$	374,510
	Asph Base CL2 (Mainline Shoulders)	11,456	TON	\$	80.00	\$	916,480
	CS Base (Mainline Shoulders)	80,423	TON	\$	16.00	\$	1,286,768
	Roadway Exc (Approaches/Entrances)	242,795	CU YD	\$	2.50	\$	606,988
	Asph Surf CL2 (Approach Rd Driving Lanes)	639	TON	\$	85.00	\$	54,315
	Asph Base CL2 (Approach Rd Driving Lanes)	2,196	TON	\$	80.00	\$	175,680
	CS Base (Approach Rd Driving Lanes)	2,292	TON	\$	16.00	\$	36,672
	Asph Surf (CL2 Approach Rd Shoulders)	103	TON	\$	85.00	\$	8,755
	Asph Base CL2 (Approach Rd Shoulders)	262	TON	\$	80.00	\$	20,960
	CS Base (Approach Rd Shoulders)	892	TON	\$	16.00	\$	14,272
	MISC ITEMS (@ 25%)					\$	7,080,460
	MISC ITEMS (@ 25%)					φ	7,080,400
	868+35 ~ 5' x 4' RCBC		LP SUM			\$	112,500
	879+00 ~ 10' x 6' RCBC		LP SUM			\$	365,000
	934+40 ~ 12' x 8' RCBC		LP SUM			\$	800,000
	936+50 ~ 12' x 6' RCBC		LP SUM			\$	750,000
	1012+80 ~ 6' x 4' RCBC		LP SUM			\$	210,000
						т.	
	MOBILIZATION		@ 3%			\$	1,129,194
	DEMOBILIZATION		@ 1.5%			\$	564,597
					-SubTotal	\$	39,333,591
					r & Contg		3,933,359
					tion-Total		43,266,950
			Constru	uction	Cost/Mile	\$	11,089,781

Estimated by: D. Ford Lasted Edited: 12/1/2012
Checked by: Lasted Edited: Lasted Edited:

 Right-of-way
 \$558,876

 Utilities
 \$145,000

 Construction
 \$43,266,950

 Total Cost
 \$43,970,826

 Cost/Mile
 \$11,270,192

East SecD1b_40

SECTION D

EAST

ESTIMATES

SEGMENT 1B

RIGHT-OF-WAY

KY 15 PLANNING STUDY - East SECTION D (Segment 1b)

STA. 838+50 **to** 1044+50

			Approx. Ex.	KY15 R/W			Acreage	Resid	lential	Business		
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	3690	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	9,780,488	224.5	295,200	6.8	9,485,288	217.8	\$108,876	4	\$300,000	2	\$150,000	\$558,876
20 & 30ft	9,471,488	217.4	295,200	6.8	9,176,288	210.7	\$105,329	4	\$300,000	2	\$150,000	\$555,329

SECTION D

EAST

ESTIMATES

SEGMENT 2

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		1044+50.0)()	
UPN		To STA:		1121+65.0	00	
Fed No.		Net Length, mile:		1.46		
Item No.		Type of Construction:	(Grade, Drain & S	urfac	ing
Road Name:	KY 15 -East Section D Seg 2 (20ft Median)	Class of Road:		Rural Arter		
		_				
Item #	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	1,680,785	CU YD	\$ 2.50) \$	4,201,963
	Asph Surf CL3 (Mainline Driving Lanes)	2,719	TON	\$ 85.00) \$	231,115
	Asph Base CL3 (Mainline Driving Lanes)	21,870	TON	\$ 80.00		1,749,600
	CS Base (Mainline Driving Lanes)	9,791	TON	\$ 16.00) \$	156,656
	Asph Surf CL2 (Mainline Shoulders)	2,124	TON	\$ 85.00	_	180,540
	Asph Base CL2 (Mainline Shoulders)	5,523	TON	\$ 80.00	_	441,840
	CS Base (Mainline Shoulders)	27,959	TON	\$ 16.00	_	447,344
	Roadway Exc (Approaches/Entrances)	23,430	CU YD	\$ 2.50	_	58,575
	Asph Surf CL2 (Approach Rd Driving Lanes)	287	TON	\$ 85.00	_	24,395
	Asph Base CL2 (Approach Rd Driving Lanes)	1,868	TON	\$ 80.00		149,440
	CS Base (Approach Rd Driving Lanes)	1,510	TON	\$ 16.00		24,160
	Asph Surf (CL2 Approach Rd Shoulders)	-,	TON	\$ 85.00		
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	_	
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	_	
	Concrete Median Barrier	7,410	LF	\$ 55.00	_	407,550
	Control Ivious Burrer	7,120		φ 20.00	,	.07,000
					+	
					_	
					_	
					_	
					+	
					+	
	MISC ITEMS (@ 25%)				\$	2,018,295
	MISC ITEMS (@ 2570)				Ψ	2,010,273
	Mainline Bridges (Sta. 1077+14)	28,060	SQ FT	\$ 175.00) \$	4,910,500
	Mammie Bridges (Sta. 1077+14)	20,000	5011	Ψ 173.00	γ ψ	4,710,300
					+	
					+	
					+	
					+	
					+-	
					+	
					+	
					$+\!-$	
					+	
					+	
					+	
	MODILIZATION		@ 3%		- t	450.050
	MOBILIZATION				\$	450,059
	DEMOBILIZATION		@ 1.5%		\$	225,030
	<u> </u>		C 1		1 6	15 (77 0/1
				ruction-SubTota		15,677,061
				10 Engr & Cont	_	1,567,706
				onstruction-Tota		17,244,767
	D.F. I	*		ruction Cost/Mi	.e 3	11,801,992
Estimated by:		Lasted Edited:	12/1/2012	_		
Checked by:		Lasted Edited:		_		

 Right-of-way
 \$324,036

 Utilities
 \$230,000

 Construction
 \$17,244,767

 Total Cost
 \$17,798,803

 Cost/Mile
 \$12,181,164

East SecD2_20

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		1044+50.00)	
UPN		To STA:		1121+65.00)	
Fed No.		Net Length, mile:		1.46		
Item No.		Type of Construction:	G	rade, Drain & Su	rfaci	ng
	KY 15 -East Section D Seg 2 (30ft Median)	Class of Road:		Rural Arteria		8
		_				
Item#	Item	Quantity	Unit	Unit Price		Amount
Ttem #	Roadway Exc (Mainline)	1,701,557	CU YD	\$ 2.50	\$	4,253,893
	Asph Surf CL3 (Mainline Driving Lanes)	2,719	TON	\$ 85.00	\$	231,115
	Asph Base CL3 (Mainline Driving Lanes)	21,870	TON	\$ 80.00	\$	1,749,600
	CS Base (Mainline Driving Lanes)	9,791	TON	\$ 16.00	\$	156,656
	Asph Surf CL2 (Mainline Shoulders)	1,246	TON	\$ 85.00	\$	105,910
	Asph Base CL2 (Mainline Shoulders)	3,240	TON	\$ 80.00	\$	259,200
	CS Base (Mainline Shoulders)		TON			
	` ′	25,992			\$	415,872
	Roadway Exc (Approaches/Entrances)	23,430	CU YD	\$ 2.50	\$	58,575
	Asph Surf CL2 (Approach Rd Driving Lanes)	287	TON	\$ 85.00	\$	24,395
	Asph Base CL2 (Approach Rd Driving Lanes)	1,868	TON	\$ 80.00	\$	149,440
	CS Base (Approach Rd Driving Lanes)	1,510	TON	\$ 16.00	\$	24,160
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$ 85.00	\$	-
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	-
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	_
	MISC ITEMS (@ 25%)				\$	1,857,204
	Mainline Bridges (Sta. 1077+14)	23,790	SQ FT	\$ 200.00	\$	4,758,000
	MOBILIZATION		@ 3%		\$	421,321
	DEMOBILIZATION		@ 1.5%		\$	210,660
						•
			Constr	uction-SubTotal	\$	14,676,001
				0 Engr & Contg		1,467,600
				nstruction-Total	\$	16,143,601
				action Cost/Mile	_	11,048,375
Estimated by:	D. Ford	Lasted Edited:	12/1/2012			•
Checked by:		Lasted Edited:		•		
•		-		•		

 Right-of-way
 \$324,036

 Utilities
 \$230,000

 Construction
 \$16,143,601

 Total Cost
 \$16,697,637

 Cost/Mile
 \$11,427,547

East SecD2_30

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		1044+50.00		
UPN		To STA:		1121+65.00)	
Fed No.		Net Length, mile:		1.46		
Item No.		Type of Construction:	(Grade, Drain & Su	rfaci	ng
Road Name:	KY 15 -East Section D Seg 2 (40ft Median)	Class of Road:		Rural Arteria		
		_				
Item #	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	1,927,281	CU YD	\$ 2.50	\$	4,818,203
	Asph Surf CL3 (Mainline Driving Lanes)	2,719	TON	\$ 85.00	\$	231,115
	Asph Base CL3 (Mainline Driving Lanes)	21,870	TON	\$ 80.00	\$	1,749,600
	CS Base (Mainline Driving Lanes)	9,791	TON	\$ 16.00	\$	156,656
	Asph Surf CL2 (Mainline Shoulders)	1,586	TON	\$ 85.00	\$	134,810
	Asph Base CL2 (Mainline Shoulders)	4,124	TON	\$ 80.00	\$	329,920
	CS Base (Mainline Shoulders)	28,948	TON	\$ 16.00	\$	463,168
	Roadway Exc (Approaches/Entrances)	23,430	CU YD	\$ 2.50	\$	58,575
	Asph Surf CL2 (Approach Rd Driving Lanes)	287	TON	\$ 85.00	\$	24,395
	Asph Base CL2 (Approach Rd Driving Lanes)	1,868	TON	\$ 80.00	\$	149,440
	CS Base (Approach Rd Driving Lanes)	1,510	TON	\$ 16.00	\$	24,160
	Asph Surf (CL2 Approach Rd Shoulders)	7	TON	\$ 85.00	\$	
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	
	, and (pp					
	MISC ITEMS (@ 25%)				\$	2,035,011
	112112 (0 20,0)				Ψ	
	Mainline Bridges (Sta. 1077+14)	25,620	SQ FT	\$ 200.00	\$	5,124,000
	Transmit Bridges (Star 1577 117)	20,020	2411	200.00	Ψ	2,12.,000
	MOBILIZATION		@ 3%		\$	458,972
	DEMOBILIZATION		@ 1.5%		\$	229,486
			- 1.0/0		*	
	<u>.</u>		Constr	uction-SubTotal	\$	15,987,510
	_			0 Engr & Contg	_	1,598,751
				nstruction-Total	\$	17,586,261
				uction Cost/Mile	_	12,035,704
Estimated by:	D. Ford	Lasted Edited:	12/1/2012		,	
Checked by:		Lasted Edited:	–	-		

 Right-of-way
 \$325,364

 Utilities
 \$230,000

 Construction
 \$17,586,261

 Total Cost
 \$18,141,625

 Cost/Mile
 \$12,415,785

East SecD2_40

SECTION D

EAST

ESTIMATES

SEGMENT 2

RIGHT-OF-WAY

KY 15 PLANNING STUDY - East SECTION D (Segment 2)

STA. 1044+50 **to** 1121+65

			Approx. Ex.	KY15 R/W			Acreage	Resid	lential	Business		
	Approxim	ate Gross	Assume 8	0' Width	Approxir	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	7125	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	2,779,731	63.8	570,000	13.1	2,209,731	50.7	\$25,364	1	\$75,000	3	\$225,000	\$325,364
20 & 30ft	2,664,006	61.2	570,000	13.1	2,094,006	48.1	\$24,036	1	\$75,000	3	\$225,000	\$324,036

SECTION D

EAST

ESTIMATES

SEGMENT 3B

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

	Breathitt	From STA:						
UPN		To STA:		1304+00.00)			
Fed No.		Net Length, mile:		3.45				
Item No.		Type of Construction:	(Brade, Drain & Su	rfaci	ng		
Road Name:	KY 15 -East Section D Seg 3b (20ft Median)	Class of Road:	Rural Arterial					
Item #	Item	Quantity	Unit	Unit Price		Amount		
	Roadway Exc (Mainline)	12,648,054	CU YD	\$ 2.50	\$	31,620,135		
	Asph Surf CL3 (Mainline Driving Lanes)	6,411	TON	\$ 85.00		544,935		
	Asph Base CL3 (Mainline Driving Lanes)	51,570	TON	\$ 80.00	\$	4,125,600		
	CS Base (Mainline Driving Lanes)	23,087	TON	\$ 16.00	\$	369,392		
	Asph Surf CL2 (Mainline Shoulders)	5,009	TON	\$ 85.00	\$	425,765		
	Asph Base CL2 (Mainline Shoulders)	13,023	TON	\$ 80.00		1,041,840		
	CS Base (Mainline Shoulders)	65,929	TON	\$ 16.00	\$	1,054,864		
	Roadway Exc (Approaches/Entrances)	34,560	CU YD	\$ 2.50	\$	86,400		
	Asph Surf CL2 (Approach Rd Driving Lanes)	700	TON	\$ 85.00	\$	59,500		
	Asph Base CL2 (Approach Rd Driving Lanes)	5,561	TON	\$ 80.00	\$	444,880		
	CS Base (Approach Rd Driving Lanes)	2,449	TON	\$ 16.00	\$	39,184		
	Asph Surf (CL2 Approach Rd Shoulders)	318	TON	\$ 85.00	\$	27,030		
	Asph Base CL2 (Approach Rd Shoulders)	828	TON	\$ 80.00	\$	66,240		
	CS Base (Approach Rd Shoulders)	2,797	TON	\$ 16.00	\$	44,752		
	Concrete Median Barrier	17,375	LF	\$ 55.00	\$	955,625		
	MISC ITEMS (@ 25%)				\$	10,226,536		
	Mainline Bridges (Sta. 1227+72)	79,120	SQ FT	\$ 175.00	\$	13,846,000		
	-							
	1165+60 ~ 6' x 5' RCBC		LP SUM		\$	305,000		
	MOBILIZATION		@ 3%		\$	1,958,510		
	DEMOBILIZATION		@ 1.5%		\$	979,255		
						-		
		•	Constr	ruction-SubTotal	\$	68,221,443		
			+1	0 Engr & Contg		6,822,144		
			Co	nstruction-Total	\$	75,043,587		
			Constr	uction Cost/Mile	\$	21,729,100		

Estimated by: D. Ford	Lasted Edited:	12/1/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$852,179

 Utilities
 \$290,000

 Construction
 \$75,043,587

 Total Cost
 \$76,185,766

 Cost/Mile
 \$22,059,822

East SecD3b_20

Bureau of Highways

ESTIMATE SHEET

	ESTIMA	TE SHEET							
County of:	Breathitt	From STA:							
UPN		To STA:		1304+00.0)				
Fed No.		Net Length, mile:							
Item No.		Type of Construction:							
Road Name:	KY 15 -East Section D Seg 3b (30ft Median)	Class of Road:		Rural Arteri	al				
Item#	Item	Quantity	Unit	Unit Price	Ī	Amount			
	Roadway Exc (Mainline)	12,800,005	CU YD	\$ 2.50	\$	32,000,013			
	Asph Surf CL3 (Mainline Driving Lanes)	6,411	TON	\$ 85.00	\$	544,935			
	Asph Base CL3 (Mainline Driving Lanes)	51,570	TON	\$ 80.00		4,125,600			
	CS Base (Mainline Driving Lanes)	23,087	TON	\$ 16.00		369,392			
	Asph Surf CL2 (Mainline Shoulders)	2,938	TON	\$ 85.00		249,730			
	Asph Base CL2 (Mainline Shoulders)	7,640	TON	\$ 80.00	\$	611,200			
	CS Base (Mainline Shoulders)	61,291	TON	\$ 16.00	\$	980,656			
	Roadway Exc (Approaches/Entrances)	34,560	CU YD	\$ 2.50	\$	86,400			
	Asph Surf CL2 (Approach Rd Driving Lanes)	700	TON	\$ 85.00	\$	59,500			
	Asph Base CL2 (Approach Rd Driving Lanes)	5,561	TON	\$ 80.00	\$	444,880			
	CS Base (Approach Rd Driving Lanes)	2,449	TON	\$ 16.00	\$	39,184			
	Asph Surf (CL2 Approach Rd Shoulders)	318	TON	\$ 85.00	\$	27,030			
	Asph Base CL2 (Approach Rd Shoulders)	828	TON	\$ 80.00	\$	66,240			
	CS Base (Approach Rd Shoulders)	2,797	TON	\$ 16.00	\$	44,752			
	MISC ITEMS (@ 25%)				\$	9,912,378			
	Mainline Bridges (Sta. 1227+72)	67,080	SQ FT	\$ 200.00	\$	13,416,000			
	1165+60 ~ 6' x 5' RCBC		LP SUM		\$	310,000			
					$oldsymbol{ol}}}}}}}}}}}}}}}}}$				
					<u> </u>				
	MOBILIZATION		@ 3%		\$	1,898,637			
	DEMOBILIZATION		@ 1.5%		\$	949,318			
				<u> </u>	<u> </u>				
				ruction-SubTota		66,135,845			
				0 Engr & Contg		6,613,585			
			Co	nstruction-Tota	1 \$	72,749,430			

Estimated by: D. Ford Lasted Edited: 12/1/2012
Checked by: Lasted Edited: Lasted Edited:

 Right-of-way
 \$852,179

 Utilities
 \$290,000

 Construction
 \$72,749,430

 Total Cost
 \$73,891,609

 Cost/Mile
 \$21,395,541

East SecD3b_30

Construction Cost/Mile \$

21,064,820

Bureau of Highways

ESTIMATE SHEET

	Breathitt	From STA:		1121+65.00					
UPN		To STA:							
Fed No.		Net Length, mile:		3.45					
Item No.		Type of Construction:	C	rade, Drain & Su	rfaci	ng			
Road Name:	KY 15 -East Section D Seg 3b (40ft Median)	Class of Road:		Rural Arteria					
		_							
Item #	Item	Quantity	Unit	Unit Price		Amount			
	Roadway Exc (Mainline)	13,523,443	CU YD	\$ 2.50	\$	33,808,608			
	Asph Surf CL3 (Mainline Driving Lanes)	6,411	TON	\$ 85.00	\$	544,935			
	Asph Base CL3 (Mainline Driving Lanes)	51,570	TON	\$ 80.00	\$	4,125,600			
	CS Base (Mainline Driving Lanes)	23,087	TON	\$ 16.00	\$	369,392			
	Asph Surf CL2 (Mainline Shoulders)	3,740	TON	\$ 85.00	\$	317,900			
	Asph Base CL2 (Mainline Shoulders)	9,724	TON	\$ 80.00	\$	777,920			
	CS Base (Mainline Shoulders)	68,262	TON	\$ 16.00	\$	1,092,192			
	Roadway Exc (Approaches/Entrances)	34,560	CU YD	\$ 2.50	\$	86,400			
	Asph Surf CL2 (Approach Rd Driving Lanes)	700	TON	\$ 85.00	\$	59,500			
	Asph Base CL2 (Approach Rd Driving Lanes)	5,561	TON	\$ 80.00	\$	444,880			
	CS Base (Approach Rd Driving Lanes)	2,449	TON	\$ 16.00	\$	39,184			
	Asph Surf (CL2 Approach Rd Shoulders)	318	TON	\$ 85.00	\$	27,030			
	Asph Base CL2 (Approach Rd Shoulders)	828	TON	\$ 80.00	\$	66,240			
	CS Base (Approach Rd Shoulders)	2,797	TON	\$ 16.00	\$	44,752			
	es Base (ripproach na shoulders)	2,777	1011	Ψ 10.00	Ψ	11,732			
	MICCITEMS (@ 250/)				φ	10 451 122			
	MISC ITEMS (@ 25%)				\$	10,451,133			
	M. '. I' D. 'I (\$\sqrt{207}, 70)	72.240	COLT	Φ 200.00	d.	1.4.440.000			
	Mainline Bridges (Sta. 1227+72)	72,240	SQ FT	\$ 200.00	\$	14,448,000			
	1167 60 CL FLDCDC		I D CID (Ф	225.000			
	1165+60 ~ 6' x 5' RCBC		LP SUM		\$	325,000			
					-				
	MOBILIZATION		@ 3%		\$	2,010,860			
	DEMOBILIZATION		@ 1.5%		\$	1,005,430			
				<u> </u>		70,044,956			
Construction-SubTotal									
				0 Engr & Contg		7,004,496			
				nstruction-Total	_	77,049,452			
			Constr	uction Cost/Mile	\$	22,309,904			
Estimated by:	D. Ford	Lasted Edited:	12/1/2012	_					
Checked by:		Lasted Edited:		-					

Right-of-way Utilities \$930,319 \$290,000 **\$77,049,452** Construction

\$78,269,771 **Total Cost** \$22,663,251 Cost/Mile

East SecD3b_40

SECTION D

EAST

ESTIMATES

SEGMENT 3B

RIGHT-OF-WAY

KY 15 PLANNING STUDY - East SECTION D (Segment 3b)

STA. 1121+65 **to** 1304+00

			Approx. Ex.	KY15 R/W			Acreage	Resid	lential	Bus	iness	
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	1035	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	9,258,172	212.5	82,800	1.9	9,175,372	210.6	\$105,319	11	\$825,000	0	\$0	\$930,319
20 & 30ft	8,984,647	206.3	82,800	1.9	8,901,847	204.4	\$102,179	10	\$750,000	0	\$0	\$852,179

SECTION D
EXISTING ALIGNMENT
SEGMENT 1A
ESTIMATES
CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

UPN	Breathitt	To STA:		1112+58 00)	
Fed No.		Net Length, mile: Type of Construction:		5.19	<u> </u>	
Item No.	KY 15 - Section D Segment 1a (20' Median)	Type of Construction: Class of Road:		Rural Arteria	rracii	ng
Road Name:	KY 15 - Section D Segment 1a (20 Median)	_ Class of Road:		Rurai Arteria	11	
T #	Tr	0	TT	Hata Data	_	A
Item #	Item	Quantity	Unit	Unit Price	Φ.	Amount
	4L-20' Median Const. (838+50 to 946+00)	10,750	FEET	\$ 1,075.00	\$	11,556,250
	4L-20' Median Const. (946+00 to 1010+00)	6,400	FEET	\$ 1,940.00	\$	12,416,000
	4L-20' Median Const. (1010+00 to 1112+58)	10,258	FEET	\$ 1,075.00	\$	11,027,350
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					\$	
	907+20 ~ 12' x 10' RCBC		LP SUM		\$	240,000
	938+50 ~ 8' x 6' RCBC		LP SUM		\$	100,000
	989+50 ~ DBL 10' x 8' RCBC		LP SUM		\$	320,000
	1005+50 ~ 10' x 5' RCBC		LP SUM		\$	100,000
	1025+70 ~ 4' x 4' RCBC		LP SUM		\$	35,000
	1082+50 ~ 6' x 4' RCBC		LP SUM		\$	50,000
	1002+30 × 0 × 4 RCBC		LI SUNI		Ψ	30,000
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	MODILIZATION		@ 20/		Φ.	1.075.220
	MOBILIZATION		@ 3%		\$	1,075,338
	DEMOBILIZATION		@ 1.5%		\$	537,669
			~	<u> </u>		
				ruction-SubTotal		37,457,607
				10 Engr & Contg		3,745,761
				nstruction-Total		41,203,368
				uction Cost/Mile	\$	7,937,601
Estimated by:		Lasted Edited:	12/1/2012	_		
Checked by:		Lasted Edited:		_		

 Right-of-way
 \$3,630,401

 Utilities
 \$1,110,000

 Construction
 \$41,203,368

 Total Cost
 \$45,943,769

 Cost/Mile
 \$8,850,814

Sec D1a_20ft

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		838+50.00	1			
UPN		To STA:		1112+58.00)			
Fed No.		Net Length, mile:	ength, mile: 5.19					
Item No.		Type of Construction:	C	Grade, Drain & Su	ırfaci	ng		
	KY 15 - Section D Segment 1a (30' Median)	Class of Road:		Rural Arteri				
	, , , , , , , , , , , , , , , , , , ,	-						
Item #	Item	Quantity	Unit	Unit Price	T	Amount		
Tem #	4L-30' Median Const. (838+50 to 946+00)	10,750	FEET	\$ 1,000.00	\$	10,750,000		
	4L-30' Median Const. (946+00 to 1010+00)	6,400	FEET	\$ 1,900.00		12,160,000		
	4L-30' Median Const. (1010+00 to 1112+58)	10,258	FEET	\$ 1,000.00	\$	10,258,000		
	4L-30 Wedian Const. (1010+00 to 1112+38)	10,236	FEET	\$ 1,000.00	Ψ	10,238,000		
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					+-			
	907+20 ~ 12' x 10' RCBC		LP SUM		\$	250,000		
	938+50 ~ 8' x 6' RCBC		LP SUM		\$	105,000		
	989+50 ~ DBL 10' x 8' RCBC		LP SUM		\$	335,000		
					_			
	1005+50 ~ 10' x 5' RCBC		LP SUM		\$	105,000		
	1025+70 ~ 4' x 4' RCBC		LP SUM		\$	37,500		
	1082+50 ~ 6' x 4' RCBC		LP SUM		\$	52,500		
					₩			
					₩			
					₩			
					╄			
	MOBILIZATION		@ 3%		\$	1,021,590		
	DEMOBILIZATION		@ 1.5%		\$	510,795		
			Constr	uction-SubTota	I \$	35,585,385		
			+1	0 Engr & Contg	;	3,558,539		
				nstruction-Total		39,143,924		
				uction Cost/Mile		7,540,861		
Estimated by:	D. Ford	Lasted Edited:	12/1/2012		4	, ,,,,,,,,		
Checked by:		Lasted Edited:		=				

 Right-of-way
 \$3,630,401

 Utilities
 \$1,110,000

 Construction
 \$39,143,924

 Total Cost
 \$43,884,325

 Cost/Mile
 \$8,454,073

Sec D1a_30ft

Bureau of Highways

ESTIMATE SHEET

	Breathitt			838+50.00			
UPN		•	1112+58.00				
Fed No.		Net Length, mile:		5.19			
Item No.		Type of Construction:				ng	
Road Name:	KY 15 - Section D Segment 1a (40' Median)	Class of Road:		Rural Arteria	1		
Item #	Item	Quantity	Unit	Unit Price		Amount	
Item #	4L-40' Median Const. (838+50 to 946+00)	10,750	FEET	\$ 1,100.00	\$	11,825,000	
	4L-40' Median Const. (946+00 to 1010+00)	6,400	FEET	\$ 2,000.00	\$	12,800,000	
	4L-40' Median Const. (1010+00 to 1112+58)	10,258	FEET	\$ 1,100.00	\$	11,283,800	
	4L-40 Niculai Colist. (1010+00 to 1112+36)	10,230	ILLI	ψ 1,100.00	Ψ	11,203,000	
	007 - 20 121 101 DCDC		I D CIIM		\$	265,000	
	907+20 ~ 12' x 10' RCBC 938+50 ~ 8' x 6' RCBC		LP SUM LP SUM		\$		
	989+50 ~ DBL 10' x 8' RCBC		LP SUM LP SUM		\$	110,000 350,000	
	1005+50 ~ 10' x 5' RCBC		LP SUM		\$	110,000	
	1025+70 ~ 4' x 4' RCBC		LP SUM		\$	40,000	
	1082+50 ~ 6' x 4' RCBC		LP SUM		\$	55,000	
	1082+30 ~ 0 X 4 RCBC		LF SUM		φ	33,000	
	MOBILIZATION		@ 3%		\$	1,105,164	
	DEMOBILIZATION		@ 1.5%		\$	552,582	
	<u> </u>		Constr	uction-SubTotal	\$	38,496,546	
				0 Engr & Contg		3,849,655	
			Co	nstruction-Total	\$	42,346,201	
			Constr	uction Cost/Mile	\$	8,157,762	
Estimated by:		Lasted Edited:	12/1/2012	_			
Checked by:		Lasted Edited:					

 Right-of-way
 \$3,935,120

 Utilities
 \$1,110,000

 Construction
 \$42,346,201

 Total Cost
 \$47,391,321

 Cost/Mile
 \$9,129,676

Sec D1a_40ft

SECTION D
EXISTING ALIGNMENT
SEGMENT 1A
ESTIMATES
RIGHT-OF-WAY

KY 15 PLANNING STUDY - Ex. Alignment SECTION D (Segment 1a)

STA. 838+50 to 1112+58

			Approx. Ex.	KY15 R/W			Acreage	Resid	dential	Bus	iness	
	Approxima	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	d R/W	KY15 Length	27408	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	11,786,337	270.6	2,192,640	50.3	9,593,697	220.2	\$110,120	42	\$3,150,000	9	\$675,000	\$3,935,120
20 & 30ft	11,375,217	261.1	2,192,640	50.3	9,182,577	210.8	\$105,401	39	\$2,925,000	8	\$600,000	\$3,630,401

SECTION D
EXISTING ALIGNMENT
SEGMENT 2
ESTIMATES
CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

	Breathitt		1112+58.00 1190+00.00					
		Net Length, mile:		1.47				
Item No.	KY 15 - Sec D Seg 2 (20ft Median)	Type of Construction:	Grade, Drain & Surfacing					
Road Name:	KY 15 - Sec D Seg 2 (20ft Median)	Class of Road:	Rural Arterial					
Item #	Item	Quantity	Unit	Unit Price		Amount		
	Roadway Exc (Mainline)	1,680,785	CU YD	\$ 2.50	\$	4,201,963		
	Asph Surf CL3 (Mainline Driving Lanes)	2,719	TON	\$ 85.00	\$	231,115		
	Asph Base CL3 (Mainline Driving Lanes)	21,870	TON	\$ 80.00	\$	1,749,600		
	CS Base (Mainline Driving Lanes)	9,791	TON	\$ 16.00		156,656		
	Asph Surf CL2 (Mainline Shoulders)	2,124	TON	\$ 85.00	\$	180,540		
	Asph Base CL2 (Mainline Shoulders)	5,523	TON	\$ 80.00	\$	441,840		
	CS Base (Mainline Shoulders)	27,959	TON	\$ 16.00	\$	447,344		
	Roadway Exc (Approaches/Entrances)	23,430	CU YD	\$ 2.50	\$	58,575		
	Asph Surf CL2 (Approach Rd Driving Lanes)	287	TON	\$ 85.00	\$	24,395		
	Asph Base CL2 (Approach Rd Driving Lanes)	1,868	TON	\$ 80.00	\$	149,440		
	CS Base (Approach Rd Driving Lanes)	1,510	TON	\$ 16.00	\$	24,160		
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$ 85.00	\$	-		
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	-		
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	-		
	Concrete Median Barrier	7,410	LF	\$ 55.00	\$	407,550		
	MISC ITEMS (@ 25%)				\$	2,018,295		
						_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	Mainline Bridges (Sta. 1077+14)	28,060	SQ FT	\$ 175.00	\$	4,910,500		
		_==,===	~ (_	1,2 - 0,2 0 0		
	MOBILIZATION		@ 3%		\$	450,059		
	DEMOBILIZATION		@ 1.5%		\$	225,030		
	DEMODIFICATION		₩ 1.J/0		ψ	223,030		
			Constr	<u> </u> uction-SubTotal	\$	15,677,061		
				0 Engr & Contg	Ψ	1,567,706		
				nstruction-Total	\$	17,244,767		
				uction Cost/Mile		11,760,833		
			Constit	CONTINUE	÷	11,700,033		

Estimated by: D. Ford Lasted Edited: 12/1/2012
Checked by: Lasted Edited: Lasted Edited:

 Right-of-way
 \$250,232

 Utilities
 \$805,000

 Construction
 \$17,244,767

 Total Cost
 \$18,299,999

 Cost/Mile
 \$12,480,496

SecD2_20

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:	A:1112+58.00					
UPN		To STA:		1190+00.00)			
Fed No.		Net Length, mile:		1.47				
nem no.		Net Length, mile: Type of Construction:	G	Grade, Drain & Su	rfaci	ing		
Road Name:	KY 15 - Sec D Seg 2 (30ft Median)	Class of Road:		Rural Arteria	ıl			
Item#	Item	Quantity	Unit	Unit Price		Amount		
	Roadway Exc (Mainline)	1,701,557	CU YD	\$ 2.50	\$	4,253,893		
	Asph Surf CL3 (Mainline Driving Lanes)	2,719	TON	\$ 85.00	\$	231,115		
	Asph Base CL3 (Mainline Driving Lanes)	21,870	TON	\$ 80.00	\$	1,749,600		
	CS Base (Mainline Driving Lanes)	9,791	TON	\$ 16.00	\$	156,656		
	Asph Surf CL2 (Mainline Shoulders)	1,246	TON	\$ 85.00	\$	105,910		
	Asph Base CL2 (Mainline Shoulders)	3,240	TON	\$ 80.00	\$	259,200		
	CS Base (Mainline Shoulders)	25,992	TON	\$ 16.00	\$	415,872		
	Roadway Exc (Approaches/Entrances)	23,430	CU YD	\$ 2.50	\$	58,575		
	Asph Surf CL2 (Approach Rd Driving Lanes)	287	TON	\$ 85.00	\$	24,395		
	Asph Base CL2 (Approach Rd Driving Lanes)	1,868	TON	\$ 80.00	\$	149,440		
	CS Base (Approach Rd Driving Lanes)	1,510	TON	\$ 16.00	\$	24,160		
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$ 85.00	\$			
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	-		
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$			
	MISC ITEMS (@ 25%)				\$	1,857,204		
	Mainline Bridges (Sta. 1077+14)	23,790	SQ FT	\$ 200.00	\$	4,758,000		
	MODII IZATION		@ 3%		\$	421 221		
	MOBILIZATION DEMOBILIZATION		@ 1.5%		\$	421,321 210,660		
	DEMODILIZATION		w 1.5%		Þ	210,000		
Construction-SubTotal S								
				0 Engr & Contg		14,676,001 1,467,600		
				nstruction-Total		16,143,601		
				uction Cost/Mile		11,009,844		
Estimated by	D. Ford	Lasted Edited:	12/1/2012	action Cost wille	Ψ	11,007,074		
Estimated by: D. Ford Lasted Edited: 12/1/2012 Checked by: Lasted Edited: 12/1/2012								

 Right-of-way
 \$250,232

 Utilities
 \$805,000

 Construction
 \$16,143,601

 Total Cost
 \$17,198,833

 Cost/Mile
 \$11,729,506

SecD2_30

Bureau of Highways

ESTIMATE SHEET

	Breathitt	From STA:	:1112+58.00					
UPN					0			
Fed No.		Net Length, mile:		1.47				
nem No.		Type of Construction:				ng		
Road Name:	KY 15 - Sec D Seg 2 (40ft Median)	Class of Road:		Rural Arter	al			
				_				
Item #	Item	Quantity	Unit	Unit Price		Amount		
	Roadway Exc (Mainline)	1,927,281	CU YD	\$ 2.50		4,818,203		
	Asph Surf CL3 (Mainline Driving Lanes)	2,719	TON	\$ 85.00		231,115		
	Asph Base CL3 (Mainline Driving Lanes)	21,870	TON	\$ 80.00		1,749,600		
	CS Base (Mainline Driving Lanes)	9,791	TON	\$ 16.00		156,656		
	Asph Surf CL2 (Mainline Shoulders)	1,586	TON	\$ 85.00		134,810		
	Asph Base CL2 (Mainline Shoulders)	4,124	TON	\$ 80.00	_	329,920		
	CS Base (Mainline Shoulders)	28,948	TON	\$ 16.00		463,168		
	Roadway Exc (Approaches/Entrances)	23,430	CU YD	\$ 2.50	_	58,575		
	Asph Surf CL2 (Approach Rd Driving Lanes)	287	TON	\$ 85.00		24,395		
	Asph Base CL2 (Approach Rd Driving Lanes)	1,868	TON	\$ 80.00	\$	149,440		
	CS Base (Approach Rd Driving Lanes)	1,510	TON	\$ 16.00	\$	24,160		
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$ 85.00	\$	-		
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	_		
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	-		
					1			
	MISC ITEMS (@ 25%)				\$	2,035,011		
					十	, , , , , , , , , , , , , , , , , , , ,		
	Mainline Bridges (Sta. 1077+14)	25,620	SQ FT	\$ 200.00	\$	5,124,000		
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					+			
					†			
					1			
					1			
				1	†			
				1	†			
				1	†			
				†	+			
	MOBILIZATION		@ 3%	†	\$	458,972		
	DEMOBILIZATION		@ 1.5%	†	\$	229,486		
	220312		C 1.5/0	 	Ψ	227,400		
			Constr	uction-SubTota	1 \$	15,987,510		
				0 Engr & Cont		1,598,751		
				nstruction-Tota		17,586,261		
				uction Cost/Mile		11,993,730		
Estimated by:	D. Ford	Lasted Edited:	12/1/2012		- Ψ	11,775,750		
Estimated by.	212014	Lasted Laned.	12/1/2012	_				

Estimated by: D. Ford Lasted Edited: 12/1/2012

Checked by: Lasted Edited: Lasted

 Right-of-way
 \$251,565

 Utilities
 \$805,000

 Construction
 \$17,586,261

 Total Cost
 \$18,642,826

 Cost/Mile
 \$12,714,301

SecD2_40

SECTION D
EXISTING ALIGNMENT
SEGMENT 2
ESTIMATES
RIGHT-OF-WAY

KY 15 PLANNING STUDY - Ex. Alignment SECTION D (Segment 2)

STA. 1112+58 to 1190+00

			Approx. Ex. KY15 R/W		Acreage	Residential		Business				
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	7125	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	2,884,320	66.2	570,000	13.1	2,314,320	53.1	\$26,565	0	\$0	3	\$225,000	\$251,565
20 & 30ft	2,768,190	63.5	570,000	13.1	2,198,190	50.5	\$25,232	0	\$0	3	\$225,000	\$250,232

SECTION D

EXISTING ALIGNMENT

SEGMENT 3A

ESTIMATES

CONSTRUCTION

County of:	Breathitt	From STA:	: 1190+00.00			
		To STA:		1227+95.00		
Fed No.		Net Length, mile:		0.72		
Item No.	KY 15 - Section D Segment 3a	Type of Construction:	(ıg
Road Name:	KY 15 - Section D Segment 3a	Class of Road:		Rural Arteria	.1	
Item#	Item	Quantity	Unit	Unit Price		Amount
Teem "	5L Rural Construction (1190+00 to 1227+95)	3,795	FEET	\$ 1,100.00	\$	4,174,500
	(11) 0 (00 to 122 (1) 0)	5,775	1221	φ 1,100.00	Ψ	.,17.,000
	1104 : 00 - 51 - 41 DCDC		I D CI DA		ď	50,000
	1194+00 ~ 5' x 4' RCBC		LP SUM		\$	50,000
	MOBILIZATION		@ 3%		\$	126,735
	DEMOBILIZATION		@ 1.5%		\$	63,368
				uction-SubTotal	\$	4,414,603
				0 Engr & Contg		441,460
				nstruction-Total		4,856,063
				uction Cost/Mile	\$	6,756,261
Estimated by:		Lasted Edited:	12/1/2012	-		
Checked by:		Lasted Edited:				

Bureau of Highways

ESTIMATE SHEET

County of: UPN	1190+00.00 1308+56.00)				
Fed No.		Net Length, mile: Type of Construction:		2.25		
Item No.	KY 15 - Section D Segment 3a	Type of Construction:	C	Grade, Drain & Su	rfaci	ng
Road Name:	KY 15 - Section D Segment 3a	Class of Road:		Rural Arteria	ıl	
Item #	Item	Quantity	Unit	Unit Price		Amount
	5L Rural Construction (1190+00 to 1227+95)	3,795	FEET	\$ 1,100.00	\$	4,174,500
	5L C-G Construction (1227+95 to 1308+56)	8,061	FEET	\$ 1,200.00	\$	9,673,200
	1194+00 ~ 5' x 4' RCBC		LP SUM		\$	50,000
	1233+50 ~ 8' x 6' RCBC		LP SUM		\$	100,000
					L	
					<u> </u>	
					<u> </u>	
					L	
	MOBILIZATION		@ 3%		\$	419,931
	DEMOBILIZATION		@ 1.5%		\$	209,966
					<u> </u>	
				uction-SubTotal		14,627,597
				0 Engr & Contg		1,462,760
				nstruction-Total		16,090,356
.	D. T			uction Cost/Mile	\$	7,165,746
Estimated by:		Lasted Edited:	12/1/2012	-		
Checked by:		Lasted Edited:		-		

 Right-of-way
 \$5,340,209

 Utilities
 \$965,000

 Construction
 \$16,090,356

 Total Cost
 \$22,395,565

 Cost/Mile
 \$9,973,733

Sec D3a

SECTION D
EXISTING ALIGNMENT
SEGMENT 3A
ESTIMATES
RIGHT-OF-WAY

KY 15 PLANNING STUDY - Ex. Alignment SECTION D (Segment 3a)

STA. 1190+00 to 1308+56

			Approx. Ex. KY15 R/W				Acreage	Resid	Residential		Business	
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	11856	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
5Lane	2,273,473	52.2	948,480	21.8	1,324,993	30.4	\$15,209	41	\$3,075,000	30	\$2,250,000	\$5,340,209

SECTION D

WEST

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		838+50.00		
UPN	T	To STA:		1206+50.64		
Fed No.		Net Length, mile:		6.97		
Item No.		Type of Construction:	G	rade, Drain & Su	rfac	ing
Road Name:	KY 15 - West Section D (20ft Median)	Class of Road:				
		•				
Item #	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	13,574,406	CU YD	\$ 2.50	\$	33,936,015
	Asph Surf CL3 (Mainline Driving Lanes)	13,655	TON	\$ 85.00	\$	1,160,675
	Asph Base CL3 (Mainline Driving Lanes)	109,667	TON	\$ 80.00	\$	8,773,360
	CS Base (Mainline Driving Lanes)	48,992	TON	\$ 16.00	\$	783,872
	Asph Surf CL2 (Mainline Shoulders)	9,979	TON	\$ 85.00	\$	848,215
	Asph Base CL2 (Mainline Shoulders)	25,945	TON	\$ 80.00	\$	2,075,600
	CS Base (Mainline Shoulders)	126,164	TON	\$ 16.00	\$	2,018,624
	Roadway Exc (Ramps)	50,474	CU YD	\$ 2.50	\$	126,185
	Asph Surf CL3 (Ramps)	181	TON	\$ 85.00	\$	15,385
	Asph Base CL3 (Ramps)	1,460	TON	\$ 80.00	\$	116,800
	CS Base (Ramps)	658	TON	\$ 16.00	\$	10,528
	Asph Surf CL2 (Ramp Shoulders)	66	TON	\$ 85.00	\$	5,610
	Asph Base CL2 (Ramp Shoulders)	170	TON	\$ 80.00	\$	13,600
	CS Base (Ramp Shoulders)	1,226	TON	\$ 16.00	\$	19,616
	Roadway Exc (Approaches/Entrances)	283,068	CU YD	\$ 2.50	\$	707,670
	Asph Surf CL2 (Approach Rd Driving Lanes)	910	TON	\$ 85.00	\$	77,350
	Asph Base CL2 (Approach Rd Driving Lanes)	4,159	TON	\$ 80.00	\$	332,720
	CS Base (Approach Rd Driving Lanes)	3,267	TON	\$ 16.00	\$	52,272
	Asph Surf (CL2 Approach Rd Shoulders)	35	TON	\$ 85.00	\$	2,975
	Asph Base CL2 (Approach Rd Shoulders)	84	TON	\$ 80.00	\$	6,720
	CS Base (Approach Rd Shoulders)	291	TON	\$ 16.00	\$	4,656
	Concrete Median Barrier	35,350	LF	\$ 55.00	\$	1,944,250
	Concrete Median Barrier	33,330	Li	Ψ 33.00	Ψ	1,744,230
	MISC ITEMS (@ 25%)				\$	13,258,175
	MISC TIEMS (@ 2570)				Ψ	13,236,173
	Mainline Bridges (Sta. 961+04)	55,660	SQ FT	\$ 175.00	\$	9,740,500
	Mainline Bridges (Sta. 101+04) Mainline Bridges (Sta. 1179+55)	15,180	SQ FT	\$ 175.00	\$	2,656,500
	Mainline Bridges (Sta. 1179+33) Mainline Bridges (Sta. 1190+02)	89,240	SQ FT	\$ 175.00	\$	15,617,000
	Ramp A	18,246	SQ FT	\$ 175.00		3,193,050
	Ramp D	25,400	SQ FT	\$ 175.00	\$	4,445,000
	868+35 ~ 5' x 4' RCBC	23,400	LP SUM	Ψ 173.00	\$	107,500
	878+80 ~ 10' x 6' RCBC		LP SUM		\$	355,000
	977+60 ~ 8' x 6' RCBC		LP SUM		\$	240,000
	1048+68 ~ 24' x 10' 3-Sided Arch Culvert		LP SUM		\$	1,200,000
	1082+59 ~ 12' x 10' RCBC		LP SUM		\$	1,035,000
	1119+74 ~ 6' x 4' RCBC		LP SUM		\$	95,000
	1119+74 ~ 0 X 4 RCBC 1155+20 ~ 6' X 5' RCBC		LP SUM		\$	225,000
	1133+20 ~ 0 X 3 KCBC		LF SUM		Ф	223,000
	MORILIZATION		@ 3%		¢	2 156 012
	MOBILIZATION DEMOBILIZATION		@ 1.5%		\$	3,156,013 1,578,006
	DEMODILIZATION		w 1.5%		ф	1,378,006
			Canat	<u> </u> uction-SubTotal	¢	109,934,442
				0 Engr & Contg nstruction-Total		10,993,444
						120,927,886
			Constri	uction Cost/Mile	Ф	17,350,221

Estimated by: D. Ford	Lasted Edited:	11/26/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,573,407

 Utilities
 \$860,000

 Construction
 \$120,927,886

 Total Cost
 \$124,361,293

 Cost/Mile
 \$17,842,832

Bureau of Highways

ESTIMATE SHEET

County of:					838+50.00		
UPN		To STA: _			1206+50.64		
Fed No.		Net Length, mile:			6.97		
Item No.		Type of Construction:	G	rade			ng
Road Name:	KY 15 - West Section D (30ft Median)	Class of Road:			Rural Arteria	1	
Item #	Item	Quantity	Unit	l i	Unit Price		Amount
παιι π	Roadway Exc (Mainline)	13,175,670	CU YD	\$	2.50	\$	32,939,175
	Asph Surf CL3 (Mainline Driving Lanes)	13,655	TON	\$	85.00	\$	1,160,675
	Asph Base CL3 (Mainline Driving Lanes)	109,667	TON	\$	80.00	\$	8,773,360
	CS Base (Mainline Driving Lanes)	48,992	TON	\$	16.00	\$	783,872
	Asph Surf CL2 (Mainline Shoulders)	5,870	TON	\$	85.00	\$	498,950
	Asph Base CL2 (Mainline Shoulders)	15,263	TON	\$	80.00	\$	1,221,040
	CS Base (Mainline Shoulders)	122,163	TON	\$	16.00	\$	1,954,608
	Roadway Exc (Ramps)	50,474	CU YD	\$	2.50	\$	126,185
	Asph Surf CL3 (Ramps)	181	TON	\$	85.00	\$	15,385
	Asph Base CL3 (Ramps)	1,460	TON	\$	80.00	\$	116,800
	CS Base (Ramps)	658	TON	\$	16.00	\$	10,528
	Asph Surf CL2 (Ramp Shoulders)	66	TON	\$	85.00	\$	5,610
	Asph Base CL2 (Ramp Shoulders)	170	TON	\$	80.00	\$	13,600
	CS Base (Ramp Shoulders)	1,226	TON	\$	16.00	\$	19,616
	Roadway Exc (Approaches/Entrances)	283,068	CU YD	\$	2.50	\$	707,670
	Asph Surf CL2 (Approach Rd Driving Lanes)	910	TON	\$	85.00	\$	77,350
	Asph Base CL2 (Approach Rd Driving Lanes)	4,159	TON	\$	80.00	\$	332,720
	CS Base (Approach Rd Driving Lanes)	3,267	TON	\$	16.00	\$	52,272
	Asph Surf (CL2 Approach Rd Shoulders)	35	TON	\$	85.00	\$	2,975
	Asph Base CL2 (Approach Rd Shoulders)	84	TON	\$	80.00	\$	6,720
	CS Base (Approach Rd Shoulders)	291	TON	\$	16.00	\$	4,656
	es base (Approach Ru Shoulders)	291	TON	Ψ	10.00	Ψ	4,030
	MISC ITEMS (@ 25%)					\$	12,205,942
	Mainline Bridges (Sta. 961+04)	47,190	SQ FT	\$	200.00	\$	9,438,000
	Mainline Bridges (Sta. 1179+55)	12,870	SQ FT	\$	200.00	\$	2,574,000
	Mainline Bridges (Sta. 1190+02)	75,660	SQ FT	\$	200.00	\$	15,132,000
	Ramp A	15,469	SQ FT	\$	200.00	\$	3,093,800
	Ramp D	21,535	SQ FT	\$	200.00	\$	4,307,000
	868+35 ~ 5' x 4' RCBC		LP SUM			\$	110,000
	878+80 ~ 10' x 6' RCBC		LP SUM			\$	360,000
	977+60 ~ 8' x 6' RCBC		LP SUM			\$	245,000
	1048+68 ~ 24' x 10' 3-Sided Arch Culvert		LP SUM			\$	1,225,000
	1082+59 ~ 12' x 10' RCBC		LP SUM			\$	1,050,000
	1119+74 ~ 6' x 4' RCBC		LP SUM			\$	97,500
	1155+20 ~ 6' x 5' RCBC		LP SUM			\$	227,500
	MOBILIZATION		@ 3%			\$	2,966,685
	DEMOBILIZATION		@ 1.5%			\$	1,483,343

Estimated by: D. Ford	Lasted Edited:	11/26/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,573,407

 Utilities
 \$860,000

 Construction
 \$113,673,490

 Total Cost
 \$117,106,897

 Cost/Mile
 \$16,802,002

West SecD_30

103,339,537

10,333,954

113,673,490

16,309,391

Construction-SubTotal \$

Construction Cost/Mile

+10 Engr & Contg

Construction-Total \$

Bureau of Highways

ESTIMATE SHEET

County of:					838+50.00		
UPN End No		Not Longth wile.			1206+50.64	•	
rea No.		Net Length, mile:		ملم مدا	6.97	c:	
Item No.	KY 15 - West Section D (40ft Median)	Type of Construction: Class of Road:			Rural Arteria		ing
Road Name:	K i 13 - West Section D (401t Median)	Class of Road:			Rurai Arteria	LI .	
Item#	Item	Quantity	Unit	Ţ	Unit Price		Amount
	Roadway Exc (Mainline)	14,740,272	CU YD	\$	2.50	\$	36,850,680
	Asph Surf CL3 (Mainline Driving Lanes)	13,655	TON	\$	85.00	\$	1,160,675
	Asph Base CL3 (Mainline Driving Lanes)	109,667	TON	\$	80.00	\$	8,773,360
	CS Base (Mainline Driving Lanes)	48,992	TON	\$	16.00	\$	783,872
	Asph Surf CL2 (Mainline Shoulders)	7,470	TON	\$	85.00	\$	634,950
	Asph Base CL2 (Mainline Shoulders)	19,422	TON	\$	80.00	\$	1,553,760
	CS Base (Mainline Shoulders)	136,077	TON	\$	16.00	\$	2,177,232
	Roadway Exc (Ramps)	50,474	CU YD	\$	2.50	\$	126,185
	Asph Surf CL3 (Ramps)	181	TON	\$	85.00	\$	15,385
	Asph Base CL3 (Ramps)	1,460	TON	\$	80.00	\$	116,800
	CS Base (Ramps)	658	TON	\$	16.00	\$	10,528
	Asph Surf CL2 (Ramp Shoulders)	66	TON	\$	85.00	\$	5,610
	Asph Base CL2 (Ramp Shoulders)	170	TON	\$	80.00	\$	13,600
	CS Base (Ramp Shoulders)	1,226	TON	\$	16.00	\$	19,616
	Roadway Exc (Approaches/Entrances)	283,068	CU YD	\$	2.50	\$	707,670
	Asph Surf CL2 (Approach Rd Driving Lanes)	910	TON	\$	85.00	\$	77,350
	Asph Base CL2 (Approach Rd Driving Lanes)	4,159	TON	\$	80.00	\$	332,720
	CS Base (Approach Rd Driving Lanes)	3,267	TON	\$	16.00	\$	52,272
	Asph Surf (CL2 Approach Rd Shoulders)	35	TON	\$	85.00	\$	2,975
	Asph Base CL2 (Approach Rd Shoulders)	84	TON	\$	80.00	\$	6,720
	CS Base (Approach Rd Shoulders)	291	TON	\$	16.00	\$	4,656
	MISC ITEMS (@ 25%)					\$	13,356,654
		70.05 0	~~~		• • • • • •		
	Mainline Bridges (Sta. 961+04)	50,820	SQ FT	\$	200.00	\$	10,164,000
	Mainline Bridges (Sta. 1179+55)	13,860	SQ FT	\$	200.00	\$	2,772,000
	Mainline Bridges (Sta. 1190+02)	81,480	SQ FT	\$	200.00	\$	16,296,000
	Ramp A	16,659	SQ FT	\$	200.00		3,331,800
	Ramp D	23,192	SQ FT	\$	200.00	\$	4,638,400
	868+35 ~ 5' x 4' RCBC		LP SUM	-		\$	112,500
	878+80 ~ 10' x 6' RCBC		LP SUM			\$	365,000
	977+60 ~ 8' x 6' RCBC		LP SUM			\$	250,000
	1048+68 ~ 24' x 10' 3-Sided Arch Culvert		LP SUM			\$	1,245,000
	1082+59 ~ 12' x 10' RCBC		LP SUM			\$	1,060,000
	1119+74 ~ 6' x 4' RCBC		LP SUM			\$	100,000
	1155+20 ~ 6' x 5' RCBC		LP SUM			\$	230,000
	MOBILIZATION	+	@ 3%			\$	3,220,439
	DEMOBILIZATION DEMOBILIZATION		@ 1.5%			\$	1.610.220
	1171 (1915 71211 /1775 1 15 71 8		W L. 170			LI)	1.010.440

Estimated by: D. Ford	Lasted Edited:	11/12/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,804,787

 Utilities
 \$860,000

 Construction
 \$123,396,492

 Total Cost
 \$127,061,279

 Cost/Mile
 \$18,230,214

West SecD_40

Construction-SubTotal \$

+10 Engr & Contg

Construction-Total \$
Construction Cost/Mile \$

112,178,629

11,217,863 123,396,492

17,704,406

SECTION D

WEST

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - West SECTION D

STA. 838+50 **to** 1209+00

			Approx. Ex. KY15 R/W			Acreage	Residential		Business			
	Approxima	ate Gross	Assume 8	0' Width	Approxim	ate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	d R/W	KY15 Length	0	Prop. R/W F	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	15,663,005	359.6	0	0.0	15,663,005	359.6	\$179,787	26	\$1,950,000	9	\$675,000	\$2,804,787
20 & 30ft	15,107,255	346.8	0	0.0	15,107,255	346.8	\$173,407	24	\$1,800,000	8	\$600,000	\$2,573,407

SECTION D
WEST ALTERNATIVE 2
SEGMENT 1
ESTIMATES
CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		838+50.00				
UPN		To STA:		938+50.00				
Fed No.		Net Length, mile:		1.89				
Item No.		Type of Construction:	C	Grade, Drain & Su	rfaci	ng		
Road Name:	KY 15 - West Alt2 Sec D Seg 1 (20ft Median)	Class of Road:		Rural Arteria				
		-						
Item #	Item	Quantity	Unit	Unit Price		Amount		
	Roadway Exc (Mainline)	819,977	CU YD	\$ 2.50	\$	2,049,943		
	Asph Surf CL3 (Mainline Driving Lanes)	3,946	TON	\$ 85.00	\$	335,410		
	Asph Base CL3 (Mainline Driving Lanes)	31,675	TON	\$ 80.00	\$	2,534,000		
	CS Base (Mainline Driving Lanes)	14,139	TON	\$ 16.00	\$	226,224		
	Asph Surf CL2 (Mainline Shoulders)	2,727	TON	\$ 85.00	\$	231,795		
	Asph Base CL2 (Mainline Shoulders)	7,091	TON	\$ 80.00	\$	567,280		
	CS Base (Mainline Shoulders)	34,595	TON	\$ 16.00	\$	553,520		
	Roadway Exc (Approaches/Entrances)	35,000	CU YD	\$ 2.50	\$	87,500		
	Asph Surf CL2 (Approach Rd Driving Lanes)	325	TON	\$ 85.00	\$	27,625		
	Asph Base CL2 (Approach Rd Driving Lanes)	1,687	TON	\$ 80.00	\$	134,960		
	CS Base (Approach Rd Driving Lanes)	1,180	TON	\$ 16.00	\$	18,880		
	Asph Surf (CL2 Approach Rd Shoulders)	35	TON	\$ 85.00	\$	2,975		
	Asph Base CL2 (Approach Rd Shoulders)	84	TON	\$ 80.00	\$	6,720		
	CS Base (Approach Rd Shoulders)	291	TON	\$ 16.00	\$	4,656		
	Concrete Median Barrier	10,000	LF	\$ 55.00	\$	550,000		
	CONTROL HADDWIN BULLION	10,000		ψ 22.00	Ψ	220,000		
	MISC ITEMS (@ 25%)				\$	1,832,872		
	IMISC TILINIS (© 25%)				Ψ	1,032,072		
					-			
					-			
					-			
	868+35 ~ 5' x 4' RCBC		LP SUM		\$	105,000		
	878+80 ~ 10' x 6' RCBC		LP SUM		\$	355,000		
	0/0+80 ~ 10 X 0 KCBC		LF SUM		Ф	333,000		
					-			
	MOBILIZATION		@ 3%		\$	288,731		
	DEMOBILIZATION		@ 1.5%		\$	144,365		
	DEMODILIZATION		w 1.J%		φ	144,303		
			Constr	<u> </u> uction-SubTotal	Φ	10,057,456		
				0 Engr & Contg		1,005,746		
				nstruction-Total		11,063,202		
				uction Cost/Mile	_	5,841,371		
Estimated by:	D. Ford	Lasted Edited:		ucuon Cosumile	ψ	5,041,5/1		
-		_	12/7/2012	-				
Checked by:		Lasted Edited:						

 Right-of-way
 \$1,232,325

 Utilities
 \$200,000

 Construction
 \$11,063,202

 Total Cost
 \$12,495,527

 Cost/Mile
 \$6,597,638

West Alt2 SecD1_20

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt						
UPN		To STA:		938+50.00			
Fed No.		Net Length, mile:	1.89				
Item No.		Type of Construction:	Grade, Drain & Su			ing	
Road Name:	KY 15 - West Alt2 Sec D Seg 1 (30ft Median)	Class of Road:		Rural Arteria	al		
Item#	Item	Quantity	Unit	Unit Price		Amount	
	Roadway Exc (Mainline)	818,669	CU YD	\$ 2.50	\$	2,046,673	
	Asph Surf CL3 (Mainline Driving Lanes)	3,946	TON	\$ 85.00	\$	335,410	
	Asph Base CL3 (Mainline Driving Lanes)	31,675	TON	\$ 80.00	\$	2,534,000	
	CS Base (Mainline Driving Lanes)	14,139	TON	\$ 16.00	\$	226,224	
	Asph Surf CL2 (Mainline Shoulders)	1,616	TON	\$ 85.00	\$	137,360	
	Asph Base CL2 (Mainline Shoulders)	4,202	TON	\$ 80.00	\$	336,160	
	CS Base (Mainline Shoulders)	33,428	TON	\$ 16.00	\$	534,848	
	Roadway Exc (Approaches/Entrances)	35,000	CU YD	\$ 2.50	\$	87,500	
	Asph Surf CL2 (Approach Rd Driving Lanes)	325	TON	\$ 85.00	\$	27,625	
	Asph Base CL2 (Approach Rd Driving Lanes)	1,687	TON	\$ 80.00	\$	134,960	
	CS Base (Approach Rd Driving Lanes)	1,180	TON	\$ 16.00	\$	18,880	
	Asph Surf (CL2 Approach Rd Shoulders)	35	TON	\$ 85.00	\$	2,975	
	Asph Base CL2 (Approach Rd Shoulders)	84	TON	\$ 80.00	\$	6,720	
	CS Base (Approach Rd Shoulders)	291	TON	\$ 16.00	\$	4,656	
	MISC ITEMS (@ 25%)				\$	1,608,498	
	868+35 ~ 5' x 4' RCBC		LP SUM		\$	110,000	
	878+80 ~ 10' x 6' RCBC		LP SUM		\$	360,000	
	MOBILIZATION		@ 3%		\$	255,375	
	DEMOBILIZATION		@ 1.5%		\$	127,687	
				<u> </u>			
				uction-SubTotal	_	8,895,551	
				0 Engr & Contg		889,555 9,785,106	
Construction-Total							
				uction Cost/Mile	\$	5,166,536	
Estimated by:	D. Ford	Lasted Edited:	12/7/2012				

Checked by: Lasted Edited:

 Right-of-way
 \$1,232,325

 Utilities
 \$200,000

 Construction
 \$9,785,106

 Total Cost
 \$11,217,431

 Cost/Mile
 \$5,922,803

West Alt2 SecD1_30

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		838+50.00		
UPN		To STA:		938+50.00		
Fed No.		Net Length, mile:		1.89		
Item No.		Type of Construction:			rfaci	ng
	KY 15 - West Alt2 Sec D Seg 1 (40ft Median)	Class of Road:				
		•				
Item#	Item	Quantity	Unit	Unit Price		Amount
Ttem #	Roadway Exc (Mainline)	1,037,435	CU YD	\$ 2.50	\$	2,593,588
	Asph Surf CL3 (Mainline Driving Lanes)	3,946	TON	\$ 85.00	\$	335,410
	Asph Base CL3 (Mainline Driving Lanes)	31,675	TON	\$ 80.00	\$	2,534,000
	CS Base (Mainline Driving Lanes)	14,139	TON	\$ 16.00	\$	226,224
	Asph Surf CL2 (Mainline Shoulders)	2,056	TON	\$ 85.00	\$	174,760
	Asph Base CL2 (Mainline Shoulders)	5,345	TON	\$ 80.00	\$	427,600
	CS Base (Mainline Shoulders)	37,250	TON		\$	
	`	· · · · · · · · · · · · · · · · · · ·				596,000
	Roadway Exc (Approaches/Entrances)	35,000	CU YD	\$ 2.50	\$	87,500
	Asph Surf CL2 (Approach Rd Driving Lanes)	325	TON	\$ 85.00	\$	27,625
	Asph Base CL2 (Approach Rd Driving Lanes)	1,687	TON	\$ 80.00	\$	134,960
	CS Base (Approach Rd Driving Lanes)	1,180	TON	\$ 16.00	\$	18,880
	Asph Surf (CL2 Approach Rd Shoulders)	35	TON	\$ 85.00	\$	2,975
	Asph Base CL2 (Approach Rd Shoulders)	84	TON	\$ 80.00	\$	6,720
	CS Base (Approach Rd Shoulders)	291	TON	\$ 16.00	\$	4,656
	MISC ITEMS (@ 25%)				\$	1,792,725
	868+35 ~ 5' x 4' RCBC		LP SUM		\$	112,500
	878+80 ~ 10' x 6' RCBC		LP SUM		\$	365,000
	MOBILIZATION		@ 3%		\$	283,234
	DEMOBILIZATION		@ 1.5%		\$	141,617
					Ť	- : - ; - : /
	ı		Constr	uction-SubTotal	\$	9,865,973
				0 Engr & Contg		986,597
				nstruction-Total		10,852,570
				action Cost/Mile		5,730,157
Estimated by:	D. Ford	Lasted Edited:	12/7/2012		, -	- , 3,127
Checked by:		Lasted Edited:	12, 1, 2012	•		
chicked by.		Zasted Balled.		•		

 Right-of-way
 \$1,309,047

 Utilities
 \$200,000

 Construction
 \$10,852,570

 Total Cost
 \$12,361,617

 Cost/Mile
 \$6,526,934

West Alt2 SecD1_40

SECTION D
WEST ALTERNATIVE 2
SEGMENT 1
ESTIMATES
RIGHT-OF-WAY

KY 15 PLANNING STUDY - West Alternate 2 SECTION D (Segment 1)

STA. 838+50 **to** 938+50

	Approx. Ex. KY15 R/W				Acreage	Residential		Business				
	Approximate Gross		Assume 80' Width		Approximate Net		Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	10000	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	3,766,162	86.5	800,000	18.4	2,966,162	68.1	\$34,047	14	\$1,050,000	3	\$225,000	\$1,309,047
20 & 30ft	3,616,162	83.0	800,000	18.4	2,816,162	64.7	\$32,325	13	\$975,000	3	\$225,000	\$1,232,325

SECTION D
WEST ALTERNATIVE 2
SEGMENT 2
ESTIMATES
CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:	938+50.00
UPN		To STA:	1234+20.00
Fed No.		Net Length, mile:	5.60
Item No.		Type of Construction:	Grade, Drain & Surfacing
Road Name:	KY 15 - West Alt2 Sec D Seg 2 (20ft Median)	Class of Road:	Rural Arterial

Item #	Item	Quantity	Unit		nit Price		Amount
	Roadway Exc (Mainline)	12,463,272	CU YD	\$	2.50	\$	31,158,180
	Asph Surf CL3 (Mainline Driving Lanes)	9,709	TON	\$	85.00	\$	825,265
	Asph Base CL3 (Mainline Driving Lanes)	78,219	TON	\$	80.00	\$	6,257,520
	CS Base (Mainline Driving Lanes)	35,090	TON	\$	16.00	\$	561,440
	Asph Surf CL2 (Mainline Shoulders)	7,841	TON	\$	85.00	\$	666,485
	Asph Base CL2 (Mainline Shoulders)	20,386	TON	\$	80.00	\$	1,630,880
	CS Base (Mainline Shoulders)	99,164	TON	\$	16.00	\$	1,586,624
	Roadway Exc (Ramps)	50,474	CU YD	\$	2.50	\$	126,185
	Asph Surf CL3 (Ramps)	181	TON	\$	85.00	\$	15,385
	Asph Base CL3 (Ramps)	1,460	TON	\$	80.00	\$	116,800
	CS Base (Ramps)	658	TON	\$	16.00	\$	10,528
	Asph Surf CL2 (Ramp Shoulders)	66	TON	\$	85.00	\$	5,610
	Asph Base CL2 (Ramp Shoulders)	170	TON	\$	80.00	\$	13,600
	CS Base (Ramp Shoulders)	1,226	TON	\$	16.00	\$	19,616
	Roadway Exc (Approaches/Entrances)	60,210	CU YD	\$	2.50	\$	150,525
	Asph Surf CL2 (Approach Rd Driving Lanes)	584	TON	\$	85.00	\$	49,640
	Asph Base CL2 (Approach Rd Driving Lanes)	2,472	TON	\$	80.00	\$	197,760
	CS Base (Approach Rd Driving Lanes)	2,087	TON	\$	16.00	\$	33,392
	MISC ITEMS (@ 25%)					\$	10,856,359
	Mainline Bridges (Sta. 986+18)	53,360	SQ FT	\$	175.00	\$	9,338,000
	Mainline Bridges (Sta. 1204+75)	15,640	SQ FT	\$	175.00	\$	2,737,000
	Mainline Bridges (Sta. 1215+25)	89,240	SQ FT	\$	175.00	\$	15,617,000
	Ramp A	16,659	SQ FT	\$	175.00	\$	2,915,325
	Ramp D	23,192	SQ FT	\$	175.00	\$	4,058,600
	1000 05 01 51 000		T D CITY			Φ.	250,000
	1003+05 ~ 8' x 6' RCBC		LP SUM			\$	250,000
	1073+90 ~ 24' x 10' 3-Sided Arch Culvert		LP SUM			\$	1,245,000
	1107+80 ~ 12' x 10' RCBC		LP SUM			\$	985,000
	1144+95 ~ 6' x 4' RCBC		LP SUM			\$	75,000
	1180+40 ~ 6' x 5' RCBC		LP SUM			\$	200,000
	MOBILIZATION		@ 3%			\$	2,751,082
	DEMOBILIZATION		@ 1.5%			\$	1,375,541
						-	,- · - ,- · - 1
			Constr	uction	-SubTotal	\$	95,829,341
					r & Contg	_	9,582,934
					tion-Total	\$	105,412,275
					Cost/Mile		18,822,347

Estimated by: D. Ford	Lasted Edited:	12/7/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,758,981

 Utilities
 \$450,000

 Construction
 \$105,412,275

 Total Cost
 \$108,621,256

 Cost/Mile
 \$19,395,341

West Alt2 SecD2_20

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		938+	-50.00			
UPN		To STA:		1234-	+20.00)		
Fed No.		Net Length, mile:		5.	.60			
Item No.		Type of Construction:	: Grade, Drain & Surfacing					
Road Name:	KY 15 - West Alt2 Sec D Seg 2 (30ft Median)	Class of Road:		Rural Arterial				
Item #	Item	Quantity	Unit	Unit Pı	rice		Amount	
	Roadway Exc (Mainline)	12,661,000	CU YD	\$	2.50	\$	31,652,500	
	Asph Surf CL3 (Mainline Driving Lanes)	9,709	TON	\$	85.00	\$	825,265	
	Asph Base CL3 (Mainline Driving Lanes)	78,219	TON	\$	80.00	\$	6,257,520	

HeIII#	Itelli	Qualitity	Ullit	U.	IIII FIICE		Amount			
	Roadway Exc (Mainline)	12,661,000	CU YD	\$			31,652,500			
	Asph Surf CL3 (Mainline Driving Lanes)	9,709	TON	\$	85.00	\$	825,265			
	Asph Base CL3 (Mainline Driving Lanes)	78,219	TON	\$	80.00	\$	6,257,520			
	CS Base (Mainline Driving Lanes)	35,090	TON	\$	16.00	\$	561,440			
	Asph Surf CL2 (Mainline Shoulders)	4,616	TON	\$	85.00	\$	392,360			
	Asph Base CL2 (Mainline Shoulders)	12,002	TON	\$	80.00	\$	960,160			
	CS Base (Mainline Shoulders)	95,998	TON	\$	16.00	\$	1,535,968			
	Roadway Exc (Ramps)	50,474	CU YD	\$	2.50	\$	126,185			
	Asph Surf CL3 (Ramps)	181	TON	\$	85.00	\$	15,385			
	Asph Base CL3 (Ramps)	1,460	TON	\$	80.00	\$	116,800			
	CS Base (Ramps)	658	TON	\$	16.00	\$	10,528			
	Asph Surf CL2 (Ramp Shoulders)	66	TON	\$	85.00	\$	5,610			
	Asph Base CL2 (Ramp Shoulders)	170	TON	\$	80.00	\$	13,600			
	CS Base (Ramp Shoulders)	1,226	TON	\$	16.00	\$	19,616			
	Roadway Exc (Approaches/Entrances)	60,210	CU YD	\$	2.50	\$	150,525			
	Asph Surf CL2 (Approach Rd Driving Lanes)	584	TON	\$	85.00	\$	49,640			
	Asph Base CL2 (Approach Rd Driving Lanes)	2,472	TON	\$	80.00	\$	197,760			
	CS Base (Approach Rd Driving Lanes)	2,087	TON	\$	16.00	\$	33,392			
	MISC ITEMS (@ 25%)					\$	10,731,064			
	Mainline Bridges (Sta. 986+18)	45,240	SQ FT	\$	200.00	\$	9,048,000			
	Mainline Bridges (Sta. 1204+75)	13,260	SQ FT	\$	200.00	\$	2,652,000			
	Mainline Bridges (Sta. 1215+25)	75,660	SQ FT	\$	200.00	\$	15,132,000			
	Ramp A	16,659	SQ FT	\$	200.00	\$	3,331,800			
	Ramp D	23,192	SQ FT	\$	200.00	\$	4,638,400			
	1003+05 ~ 8' x 6' RCBC		LP SUM			\$	245,000			
	1073+90 ~ 24' x 10' 3-Sided Arch Culvert		LP SUM			\$	1,220,000			
	1107+80 ~ 12' x 10' RCBC		LP SUM			\$	975,000			
	1144+95 ~ 6' x 4' RCBC		LP SUM			\$	72,500			
	1180+40 ~ 6' x 5' RCBC		LP SUM			\$	190,000			
	1100140 0 A3 Rebe		LI SCIVI			Ψ	170,000			
	MOBILIZATION		@ 3%			\$	2,734,801			
	DEMOBILIZATION		@ 1.5%			\$	1,367,400			
	Construction-SubTotal									
			+1	0 Eng	gr & Contg		9,526,222			
			Co	nstru	ction-Total	\$	104,788,440			
			Constru	uction	Cost/Mile	\$	18,710,956			

Estimated by: D. Ford	Lasted Edited:	12/7/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,758,981

 Utilities
 \$450,000

 Construction
 \$104,788,440

 Total Cost
 \$107,997,421

 Cost/Mile
 \$19,283,949

West Alt2 SecD2_30

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:			938+50.00		
UPN		To STA:			1234+20.00		
Fed No.		Net Length, mile:			5.60		
Item No.		Type of Construction:	C	Grad	e, Drain & Su	rfac	ing
Road Name:	KY 15 - West Alt2 Sec D Seg 2 (40ft Median)	Class of Road:			Rural Arteria		
		_					
Item#	Item	Quantity	Unit		Unit Price		Amount
	Roadway Exc (Mainline)	13,486,633	CU YD	\$	2.50	\$	33,716,583
	Asph Surf CL3 (Mainline Driving Lanes)	9,709	TON	\$	85.00	\$	825,265
	Asph Base CL3 (Mainline Driving Lanes)	78,219	TON	\$	80.00	\$	6,257,520
	CS Base (Mainline Driving Lanes)	35,090	TON	\$	16.00	\$	561,440
	Asph Surf CL2 (Mainline Shoulders)	5,874	TON	\$	85.00	\$	499,290
	Asph Base CL2 (Mainline Shoulders)	15,271	TON	\$	80.00	\$	1,221,680
	CS Base (Mainline Shoulders)	106,937	TON	\$	16.00	\$	1,710,992
	Roadway Exc (Ramps)	50,474	CU YD	\$	2.50	\$	126,185
	Asph Surf CL3 (Ramps)	181	TON	\$	85.00	\$	15,385
	Asph Base CL3 (Ramps)	1,460	TON	\$	80.00	\$	116,800
	CS Base (Ramps)	658	TON	\$	16.00	\$	10,528
	Asph Surf CL2 (Ramp Shoulders)	66	TON	\$	85.00	\$	5,610
	Asph Base CL2 (Ramp Shoulders)	170	TON	\$	80.00	\$	13,600
	CS Base (Ramp Shoulders)	1,226	TON	\$	16.00	\$	19,616
	Roadway Exc (Approaches/Entrances)	60,210	CU YD	\$	2.50	\$	150,525
	Asph Surf CL2 (Approach Rd Driving Lanes)	584	TON	\$	85.00	\$	49,640
	Asph Base CL2 (Approach Rd Driving Lanes)	2,472	TON	\$	80.00	\$	197,760
	CS Base (Approach Rd Driving Lanes)	2,087	TON	\$	16.00	\$	33,392
		,					,
	MISC ITEMS (@ 25%)					\$	11,382,953
							, , ,
	Mainline Bridges (Sta. 986+18)	48,720	SQ FT	\$	200.00	\$	9,744,000
	Mainline Bridges (Sta. 1204+75)	14,280	SQ FT	\$	200.00	\$	2,856,000
	Mainline Bridges (Sta. 1215+25)	81,480	SQ FT	\$	200.00	\$	16,296,000
	Ramp A	16,659	SQ FT	\$	200.00		3,331,800
	Ramp D	23,192	SQ FT	\$	200.00	\$	4,638,400
		,-/ -	~ ~ ~ ~	<u> </u>		_	.,,
				l			
	1003+05 ~ 8' x 6' RCBC		LP SUM	1		\$	250,000
	1073+90 ~ 24' x 10' 3-Sided Arch Culvert		LP SUM	1		\$	1,245,000
	1107+80 ~ 12' x 10' RCBC		LP SUM			\$	985,000
			~ ~ ~	1		~	- 00,000

75,000

200,000

2,896,079

1,448,039

100,880,082

10,088,008

110,968,090

19,814,390

\$

\$

\$

\$

Construction-SubTotal \$ +10 Engr & Contg

Construction Cost/Mile

Construction-Total \$

LP SUM

LP SUM

@ 3%

@ 1.5%

Estimated by: D. Ford Lasted Edited: 12/7/2012

Checked by: Lasted Edited: Lasted

 Right-of-way
 \$2,989,072

 Utilities
 \$450,000

 Construction
 \$110,968,090

 Total Cost
 \$114,407,162

 Cost/Mile
 \$20,428,469

1144+95 ~ 6' x 4' RCBC

1180+40 ~ 6' x 5' RCBC

MOBILIZATION

DEMOBILIZATION

West Alt2 SecD2_40

SECTION D
WEST ALTERNATIVE 2
SEGMENT 2
ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - West Alternate 2 SECTION D (Segment 2)

STA. 938+50 **to** 1234+20

				KY15 R/W			Acreage	Resid	dential	Bus	iness	
	Approxima	ate Gross	Assume 8	0' Width	Approxim	ate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	d R/W	KY15 Length	0	Prop. R/W F	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	12,115,995	278.1	0	0.0	12,115,995	278.1	\$139,072	32	\$2,400,000	6	\$450,000	\$2,989,072
20 & 30ft	11,672,445	268.0	0	0.0	11,672,445	268.0	\$133,981	30	\$2,250,000	5	\$375,000	\$2,758,981

SECTION E
ESTIMATES
CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:		717+50.00		
UPN		To STA:		838+50.00		
Fed No.		Net Length, mile:				
Item No.		Type of Construction:			ırfaci	ing
Road Name:		Class of Road:		Rural Arteria		
		-				
Item #	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	656,260	CU YD	\$ 3.25	\$	2,132,845
	Asph Surf CL3 (Mainline Driving Lanes)	4,201	TON	\$ 85.00	_	357,085
	Asph Base CL3 (Mainline Driving Lanes)	33,764	TON	\$ 80.00	_	2,701,120
	CS Base (Mainline Driving Lanes)	15,098	TON	\$ 16.00		241,568
	Asph Surf CL2 (Mainline Shoulders)	3,159	TON	\$ 85.00	\$	268,515
	Asph Base CL2 (Mainline Shoulders)	8,214	TON	\$ 80.00	\$	657,120
	CS Base (Mainline Shoulders)	39,967	TON	\$ 16.00	_	639,472
	Roadway Exc (Approaches/Entrances)	166,735	CU YD	\$ 3.25	_	541,889
	Asph Surf CL2 (Approach Rd Driving Lanes)	913	TON	\$ 85.00	_	77,605
	Asph Base CL2 (Approach Rd Driving Lanes)	3,378	TON	\$ 80.00	_	270,240
	CS Base (Approach Rd Driving Lanes)	3,235	TON	\$ 16.00	\$	51,760
	Asph Surf (CL2 Approach Rd Shoulders)	3,233	TON	\$ 85.00	\$	31,700
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	_	
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	
	Concrete Median Barrier	11,150	LF	\$ 55.00	\$	613,250
	Concrete Median Barrier	11,130	LI	\$ 33.00	φ	013,230
	MISC ITEMS (@ 25%)				\$	2,138,117
	MISC TIEMS (@ 25%)				φ	2,136,117
	Mainline Bridges (Sta. 771+80)	25,300	SQ FT	\$ 175.00	\$	4,427,500
	Mainline Bridges (Sta. 771+80) Mainline Bridges (Sta. 782+53)	26,496	SQ FT	\$ 175.00	\$	4,636,800
	Mainline Bridges (Sta. 831+81)	23,000	SQ FT	\$ 175.00	\$	4,025,000
	Wallinges (Sta. 651+61)	23,000	SQTT	\$ 175.00	φ	4,023,000
	749+50 ~ 6' x 5' RCBC		LP SUM		\$	60,000
	761+76 ~ 6' x 5' RCBC		LP SUM		\$	65,000
	Appr 763+00 Rt. ~ 5' x 5' RCBC		LP SUM		\$	35,000
	801+40 ~ 6' x 5' RCBC		LP SUM		\$	65,000
	001+40 ~ 0 X 3 RCBC		LI SUM		Ψ	05,000
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	MOBILIZATION		@ 3%		\$	720,147
	DEMOBILIZATION		@ 1.5%		\$	360,073
	DEMODILIZATION		w 1.J%	 	Ψ	300,073
			Const	<u> </u> ruction-SubTotal	\$	25,085,106
				0 Engr & Contg	_	2,5085,106
				nstruction-Total		27,593,617
				nstruction-1 otal uction Cost/Mile	-	12,040,851
Patimate 11	D. Ford	Logi-JEdic 1		uchon Cost/Mile	Φ	12,040,831
Estimated by:		Lasted Edited:	11/26/2012	-		
Checked by:		Lasted Edited:		_		

 Right-of-way
 \$1,078,739

 Utilities
 \$830,000

 Construction
 \$27,593,617

 Total Cost
 \$29,502,356

 Cost/Mile
 \$12,873,755

West SecE_20

Bureau of Highways

ESTIMATE SHEET

County of:		From STA:			717+50.00		
UPN		To STA: _			838+50.00		
Fed No.		Net Length, mile:			2.29		
Item No.		Type of Construction:	C	Grade			ng
Road Name:	KY 15 - West Section E (30ft Median)	Class of Road:			Rural Arteria	.1	
Item #	Item	Quantity	Unit		Unit Price		Amount
	Roadway Exc (Mainline)	666,400	CU YD	\$	3.25	\$	2,165,800
	Asph Surf CL3 (Mainline Driving Lanes)	4,201	TON	\$	85.00	\$	357,085
	Asph Base CL3 (Mainline Driving Lanes)	33,764	TON	\$	80.00	\$	2,701,120
	CS Base (Mainline Driving Lanes)	15,098	TON	\$	16.00	\$	241,568
	Asph Surf CL2 (Mainline Shoulders)	1,861	TON	\$	85.00	\$	158,185
	Asph Base CL2 (Mainline Shoulders)	4,839	TON	\$	80.00	\$	387,120
	CS Base (Mainline Shoulders)	38,683	TON	\$	16.00	\$	618,928
	Roadway Exc (Approaches/Entrances)	166,735	CU YD	\$	3.25	\$	541,889
	Asph Surf CL2 (Approach Rd Driving Lanes)	913	TON	\$	85.00	\$	77,605
	Asph Base CL2 (Approach Rd Driving Lanes)	3,378	TON	\$	80.00	\$	270,240
	CS Base (Approach Rd Driving Lanes)	3,235	TON	\$	16.00	\$	51,760
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$	85.00	\$	-
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$	80.00	\$	-
	CS Base (Approach Rd Shoulders)		TON	\$	16.00	\$	-
	MISC ITEMS (@ 25%)					\$	1,892,825
	Mainline Bridges (Sta. 771+80)	21,450	SQ FT	\$	200.00	\$	4,290,000
	Mainline Bridges (Sta. 782+53)	22,464	SQ FT	\$	200.00	\$	4,492,800
	Mainline Bridges (Sta. 831+81)	19,500	SQ FT	\$	200.00	\$	3,900,000
	749+50 ~ 6' x 5' RCBC		LP SUM			\$	62,500
	761+76 ~ 6' x 5' RCBC		LP SUM			\$	67,500
	Appr 763+00 Rt. ~ 5' x 5' RCBC		LP SUM			\$	35,000
	801+40 ~ 6' x 5' RCBC		LP SUM			\$	67,500
	MOBILIZATION		@ 3%			\$	671,383
	DEMOBILIZATION		@ 1.5%			\$	335,691
			Constr	ucti	on-SubTotal	\$	23,386,499
					ngr & Contg		2,338,650
					uction-Total		25,725,149
			Constr	uctio	on Cost/Mile	\$	11,225,520

Estimated by: D. Ford Lasted Edited: 11/26/2012 Checked by: Lasted Edited:

Right-of-way \$1,078,739 Utilities \$830,000 Construction \$25,725,149 **Total Cost** \$27,633,888 Cost/Mile \$12,058,424

West SecE_30

Bureau of Highways

ESTIMATE SHEET

	Breathitt	From STA: _ To STA:		717+50.00 838+50.00		
Fed No.		Net Length, mile:		2.29		
Item No.		Type of Construction:	G	Grade, Drain & Su	rfaci	ng
Road Name:	KY 15 - West Section E (40ft Median)	Class of Road:		Rural Arteria		
Item #	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	805,196	CU YD	\$ 3.25	\$	2,616,887
	Asph Surf CL3 (Mainline Driving Lanes)	4,201	TON	\$ 85.00	\$	357,085
	Asph Base CL3 (Mainline Driving Lanes)	33,764	TON	\$ 80.00	\$	2,701,120
	CS Base (Mainline Driving Lanes)	15,098	TON	\$ 16.00	\$	241,568
	Asph Surf CL2 (Mainline Shoulders)	2,368	TON	\$ 85.00	\$	201,280
	Asph Base CL2 (Mainline Shoulders)	6,157	TON	\$ 80.00	\$	492,560
	CS Base (Mainline Shoulders)	43,092	TON	\$ 16.00	\$	689,472
	Roadway Exc (Approaches/Entrances)	166,735	CU YD	\$ 3.25	\$	541,889
	Asph Surf CL2 (Approach Rd Driving Lanes)	913	TON	\$ 85.00		77,605
	Asph Base CL2 (Approach Rd Driving Lanes)	3,378	TON	\$ 80.00	\$	270,240
	CS Base (Approach Rd Driving Lanes)	3,235	TON	\$ 16.00	\$	51,760
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$ 85.00	\$	-
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	-
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	-
	MISC ITEMS (@ 25%)				\$	2,060,367
	Mainline Bridges (Sta. 771+80)	23,100	SQ FT	\$ 200.00	\$	4,620,000
	Mainline Bridges (Sta. 782+53)	24,192	SQ FT	\$ 200.00	\$	4,838,400
	Mainline Bridges (Sta. 831+81)	21,000	SQ FT	\$ 200.00	\$	4,200,000
	749+50 ~ 6' x 5' RCBC		LP SUM		\$	65,000
	761+76 ~ 6' x 5' RCBC		LP SUM		\$	70,000
	Appr 763+00 Rt. ~ 5' x 5' RCBC		LP SUM		\$	35,000
	801+40 ~ 6' x 5' RCBC		LP SUM		\$	70,000
	MODII IZ ATION		@ 20/		Ф	726.007
	MOBILIZATION		@ 3%		\$	726,007
	DEMOBILIZATION		@ 1.5%		\$	363,003
			Constr	<u> </u> uction-SubTotal	\$	25,289,243
				0 Engr & Contg	_	2,528,924
				nstruction-Total		27,818,167
				uction Cost/Mile		12,138,837
			2 V2 (,,,

Estimated by: D. Ford
Lasted Edited: 11/12/2012
Checked by: Lasted Edited: Lasted Edited:

 Right-of-way
 \$1,455,822

 Utilities
 \$830,000

 Construction
 \$27,818,167

 Total Cost
 \$30,103,989

 Cost/Mile
 \$13,136,286

West SecE_40

SECTION E

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - West SECTION E

STA. 717+50 **to** 838+50

			Approx. Ex. KY15 R/W				Acreage	Resid	lential	Bus	siness	
	Approxim	ate Gross	Assume 8	0' Width	Approxim	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	12100	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	3,653,216	83.9	968,000	22.2	2,685,216	61.6	\$30,822	16	\$1,200,000	3	\$225,000	\$1,455,822
20 & 30ft	3,471,716	79.7	968,000	22.2	2,503,716	57.5	\$28,739	13	\$975,000	1	\$75,000	\$1,078,739
								·				

SECTION F

SEGMENT 1

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Perry	From STA:		228+50.00		
UPN		To STA:		378+00.00		
Fed No.		Net Length, mile:		2.83		
Item No.		Type of Construction:			rfaci	ing
	KY 15 - West Section F Segmet 1 (20ft Median)	Class of Road:		Rural Arteria		<u> </u>
rtoud I tullio.	111 15 West Section 1 Segment 1 (2011 Medium)	Class of Road.		Traini i ii toi i		
Item #	Item	Quantity	Unit	Unit Price		Amount
π	Roadway Exc (Mainline)	1,231,126	CU YD	\$ 2.50	\$	3,077,815
	Asph Surf CL3 (Mainline Driving Lanes)	5,619	TON	\$ 85.00	\$	477,615
	Asph Base CL3 (Mainline Driving Lanes)	45,166	TON	\$ 80.00	\$	3,613,280
	CS Base (Mainline Driving Lanes)	20,200	TON	\$ 16.00	\$	
					\$	323,200
	Asph Surf CL2 (Mainline Shoulders)	4,255	TON	\$ 85.00		361,675
	Asph Base CL2 (Mainline Shoulders)	11,063	TON	\$ 80.00	\$	885,040
	CS Base (Mainline Shoulders)	53,675	TON	\$ 16.00	\$	858,800
	Roadway Exc (Appr/Entrances/Ramps)	171,460	CU YD	\$ 2.50	\$	428,650
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,059	TON	\$ 85.00	\$	90,015
	Asph Base CL2 (Approach Rd Driving Lanes)	4,349	TON	\$ 80.00	\$	347,920
	CS Base (Approach Rd Driving Lanes)	3,766	TON	\$ 16.00	\$	60,256
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$ 85.00	\$	_
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	_
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	
	Concrete Median Barrier	14,950	LF	\$ 55.00	\$	822,250
		1 1,500		ψ 22.00	Ψ	022,200
					 	
					 	
	MIGG ITENAG (© 250/)				Φ.	2.026.620
	MISC ITEMS (@ 25%)				\$	2,836,629
					—	
					<u> </u>	
					Ь.	
	315+72 ~ 8' x 7' RCBC Extension		LP SUM		\$	45,000
	MOBILIZATION		@ 3%		\$	426,844
	DEMOBILIZATION	+			\$	
	DEMODILIZATION	1	@ 1.5%		Ф	213,422
	<u> </u>		O : 4		Φ	14.000.412
				uction-SubTotal		14,868,412
				0 Engr & Contg		1,486,841
				nstruction-Total		16,355,253
			Constru	uction Cost/Mile	\$	5,776,303

Estimated by: D. Ford	Lasted Edited:	11/21/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$1,387,473

 Utilities
 \$1,020,000

 Construction
 \$16,355,253

 Total Cost
 \$18,762,726

 Cost/Mile
 \$6,626,568

West SecF1_20

Bureau of Highways

ESTIMATE SHEET

County of:	Perry	From STA:		228+50.00		
UPN		To STA:		378+00.00		
Fed No.		Net Length, mile:		2.83		
Item No.		Type of Construction:			rfaci	ng
	KY 15 - West Section F Segmet 1 (30ft Median)	Class of Road:		Rural Arteria		
	<u> </u>	-				
Item #	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	1,239,358	CU YD	\$ 2.50	\$	3,098,395
	Asph Surf CL3 (Mainline Driving Lanes)	5,619	TON	\$ 85.00	\$	477,615
	Asph Base CL3 (Mainline Driving Lanes)	45,166	TON	\$ 80.00	\$	3,613,280
	CS Base (Mainline Driving Lanes)	20,200	TON	\$ 16.00	\$	323,200
	Asph Surf CL2 (Mainline Shoulders)	2,490	TON	\$ 85.00	\$	211,650
	Asph Base CL2 (Mainline Shoulders)	6,475	TON	\$ 80.00	\$	518,000
	CS Base (Mainline Shoulders)	52,049	TON	\$ 16.00	\$	832,784
	Roadway Exc (Appr/Entrances/Ramps)	171,460	CU YD	\$ 2.50	\$	428,650
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,059	TON	\$ 85.00	\$	90,015
	Asph Base CL2 (Approach Rd Driving Lanes)	4,349	TON	\$ 80.00	\$	347,920
	CS Base (Approach Rd Driving Lanes)	3,766	TON	\$ 16.00	\$	60,256
	Asph Surf (CL2 Approach Rd Shoulders)	2,	TON	\$ 85.00	\$	-
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	_
	The same of the sa					
	MISC ITEMS (@ 25%)				\$	2,500,441
	(= = + + + + + + + + + + + + + + + + +				_	
	315+72 ~ 8' x 7' RCBC Extension		LP SUM		\$	45,000
	MOBILIZATION		@ 3%		\$	376,416
	DEMOBILIZATION		@ 1.5%		\$	188,208
						·
		•	Constr	ruction-SubTotal	\$	13,111,831
			+1	0 Engr & Contg		1,311,183
				nstruction-Total		14,423,014
			Constr	uction Cost/Mile	\$	5,093,880
Estimated by:	D. Ford	Lasted Edited:	11/21/2012			

 Right-of-way
 \$1,387,473

 Utilities
 \$1,020,000

 Construction
 \$14,423,014

 Total Cost
 \$16,830,487

 Cost/Mile
 \$5,944,145

Checked by:

West SecF1_30

Lasted Edited:

Bureau of Highways

ESTIMATE SHEET

County of:	Perry	From STA:		228+50.00		
UPN		To STA:		378+00.00		
Fed No.		Net Length, mile:		2.83		
Item No.		Type of Construction:	(Grade, Drain & Su	rfaci	ng
	KY 15 - West Section F Segmet 1 (40ft Median)	Class of Road:		Rural Arteria		
		-				
Item #	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	1,548,926	CU YD	\$ 2.50	\$	3,872,315
	Asph Surf CL3 (Mainline Driving Lanes)	5,619	TON	\$ 85.00	\$	477,615
	Asph Base CL3 (Mainline Driving Lanes)	45,166	TON	\$ 80.00	\$	3,613,280
	CS Base (Mainline Driving Lanes)	20,200	TON	\$ 16.00	\$	323,200
	Asph Surf CL2 (Mainline Shoulders)	3,170	TON	\$ 85.00	\$	269,450
	Asph Base CL2 (Mainline Shoulders)	8,242	TON	\$ 80.00	\$	659,360
	CS Base (Mainline Shoulders)	57,962	TON	\$ 16.00	\$	927,392
	Roadway Exc (Appr/Entrances/Ramps)	171,460	CU YD	\$ 2.50	\$	428,650
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,059	TON	\$ 85.00	\$	90,015
	Asph Base CL2 (Approach Rd Driving Lanes)	4,349	TON	\$ 80.00	\$	347,920
	CS Base (Approach Rd Driving Lanes)	3,766	TON	\$ 16.00	\$	60,256
	Asph Surf (CL2 Approach Rd Shoulders)	- 7	TON	\$ 85.00	\$	
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$ 80.00	\$	
	CS Base (Approach Rd Shoulders)		TON	\$ 16.00	\$	_
	`					
	MISC ITEMS (@ 25%)				\$	2,767,363
	, ,					
	315+72 ~ 8' x 7' RCBC Extension		LP SUM		\$	50,000
	MOBILIZATION		@ 3%		\$	416,604
	DEMOBILIZATION		@ 1.5%		\$	208,302
			Constr	uction-SubTotal	\$	14,511,723
				0 Engr & Contg		1,451,172
				nstruction-Total		15,962,895
			Constr	uction Cost/Mile	\$	5,637,732
Estimated by:	D. Ford	Lasted Edited:	11/12/2012			·

 Right-of-way
 \$1,465,047

 Utilities
 \$1,020,000

 Construction
 \$15,962,895

 Total Cost
 \$18,447,942

 Cost/Mile
 \$6,515,394

Checked by:

West SecF1_40

Lasted Edited:

SECTION F

SEGMENT 1

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - West SECTION F (Segment 1)

STA. 228+50 to 378+00

			Approx. Ex.	Approx. Ex. KY15 R/W		Acreage	Resi	dential	Bus	iness		
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	14950	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$125,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	4,684,931	107.6	1,196,000	27.5	3,488,931	80.1	\$40,047	14	\$1,050,000	3	\$375,000	\$1,465,047
20 & 30ft	4,460,681	102.4	1,196,000	27.5	3,264,681	74.9	\$37,473	13	\$975,000	3	\$375,000	\$1,387,473

SECTION F

SEGMENT 2

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

	LSTIMA	TE SHEET					
County of:	Perry, Breathitt	From STA:			378+00.00		
UPN		To STA:			586+00.00		
Fed No.		Net Length, mile:			3.94		
Item No.		Net Length, mile: Type of Construction:	C	rade	, Drain & Su	rfaci	ng
Road Name:	KY 15 - West Section F Segmet 2 (20ft Median)	Class of Road:			Rural Arteria	ıl	
		-					
Item #	Item	Quantity	Unit	Ţ	Unit Price		Amount
	Roadway Exc (Mainline)	2,152,131	CU YD	\$	2.50	\$	5,380,328
	Asph Surf CL3 (Mainline Driving Lanes)	7,900	TON	\$	85.00	\$	671,500
	Asph Base CL3 (Mainline Driving Lanes)	63,450	TON	\$	80.00	\$	5,076,000
	CS Base (Mainline Driving Lanes)	28,350	TON	\$	16.00	\$	453,600
	Asph Surf CL2 (Mainline Shoulders)	5,756	TON	\$	85.00	\$	489,260
	Asph Base CL2 (Mainline Shoulders)	14,967	TON	\$	80.00	\$	1,197,360
	CS Base (Mainline Shoulders)	72,444	TON	\$	16.00	\$	1,159,104
	Roadway Exc (Appr/Entrances/Ramps)	157,380	CU YD	\$	2.50	\$	393,450
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,204	TON	\$	85.00	\$	102,340
	Asph Base CL2 (Approach Rd Driving Lanes)	4,643	TON	\$	80.00	\$	371,440
	CS Base (Approach Rd Driving Lanes)	4,255	TON	\$	16.00	\$	68,080
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$	85.00	\$	-
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$	80.00	\$	-
	CS Base (Approach Rd Shoulders)		TON	\$	16.00	\$	-
	Concrete Barrier Median	20,500	LF	\$	55.00	\$	1,127,500
		ŕ					
				<u> </u>			
				<u> </u>			
	MISC ITEMS (@ 25%)			<u> </u>		\$	4,122,491
				<u> </u>			
	Mainline Bridges (Sta. 461+51)	26,312	SQ FT	\$	175.00	\$	4,804,800
		- 7-		Ħ			
	421+88 ~ 8' x 8' Dbl RCBC Extension		LP SUM			\$	210,000
	485+05 ~ 12' x 6' Triple RCBC Extension		LP SUM			\$	190,000
	508+20 ~ 12' x 6' RCBC Extension		LP SUM	1		\$	105,000
	508+20(Entr Right) ~ 12' x 6' RCBC		LP SUM	1		\$	35,000
	576+12 ~ 6' x 5' RCBC Extension		LP SUM	1		\$	60,000
	576112 6 N.S. REDE EMERSION		Er Sein	1		Ψ	00,000
				\vdash			
				 			
				 			

		Construction Cost/Mile	\$
Estimated by: D. Ford	Lasted Edited:	11/12/2012	
Checked by:	Lasted Edited:		

 Right-of-way
 \$2,477,489

 Utilities
 \$1,315,000

 Construction
 \$29,906,832

 Total Cost
 \$33,699,321

 Cost/Mile
 \$8,554,443

MOBILIZATION

DEMOBILIZATION

West SecF2_30

@ 3%

@ 1.5%

Construction-SubTotal \$

+10 Engr & Contg

Construction-Total \$

780,518

390,259

27,188,029

2,718,803

29,906,832

7,591,734

Bureau of Highways

ESTIMATE SHEET

County of:	Perry, Breathitt	From STA:		378+00.00	
UPN		To STA:		586+00.00	
Fed No.		Net Length, mile:		3.94	
Item No.		Type of Construction: Grade, Drain & Surfacing			
Road Name:	KY 15 - West Section F Segmet 2 (30ft Median)	Class of Road:		Rural Arteria	ıl
Item #	Item	Ouantity	Unit	Unit Price	Amount

Item#	Item	Quantity	Unit		nit Price		Amount
	Roadway Exc (Mainline)	2,152,131	CU YD	\$	2.50	\$	5,380,328
	Asph Surf CL3 (Mainline Driving Lanes)	7,900	TON	\$	85.00	\$	671,500
	Asph Base CL3 (Mainline Driving Lanes)	63,450	TON	\$	80.00	\$	5,076,000
	CS Base (Mainline Driving Lanes)	28,350	TON	\$	16.00	\$	453,60
	Asph Surf CL2 (Mainline Shoulders)	3,352	TON	\$	85.00	\$	284,920
	Asph Base CL2 (Mainline Shoulders)	8,714	TON	\$	80.00	\$	697,120
	CS Base (Mainline Shoulders)	70,356	TON	\$	16.00	\$	1,125,69
	Roadway Exc (Appr/Entrances/Ramps)	157,380	CU YD	\$	2.50	\$	393,45
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,204	TON	\$	85.00	\$	102,34
	Asph Base CL2 (Approach Rd Driving Lanes)	4,643	TON	\$	80.00	\$	371,44
	CS Base (Approach Rd Driving Lanes)	4,255	TON	\$	16.00	\$	68,08
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$	85.00	\$	
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$	80.00	\$	
	CS Base (Approach Rd Shoulders)		TON	\$	16.00	\$	
	MIGGITTING (@ 25%)					Φ.	2.656.11
	MISC ITEMS (@ 25%)					\$	3,656,11
	Mainline Bridges (Sta. 461+51)	24,024	SQ FT	\$	200.00	\$	4,804,80
	421+88 ~ 8' x 8' Dbl RCBC Extension		LP SUM	1		\$	220,00
	485+05 ~ 12' x 6' Triple RCBC Extension		LP SUM			\$	200,00
	508+20 ~ 12' x 6' RCBC Extension		LP SUM			\$	115,00
	508+20(Entr Right) ~ 12' x 6' RCBC		LP SUM			\$	35,00
	576+12 ~ 6' x 5' RCBC Extension		LP SUM			\$	65,00
	MOBILIZATION		@ 3%			\$	711,6
	DEMOBILIZATION		@ 1.5%			\$	355,8
			Comete		n CubTatal	¢	24 707 0
					n-SubTotal	\$	24,787,8
					gr & Contg ction-Total	ď	2,478,7
			Co	netru	ction_Total	- W	27,266,5

Estimated by: D. Ford	Lasted Edited:	11/21/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,477,489

 Utilities
 \$1,315,000

 Construction
 \$27,266,591

 Total Cost
 \$31,059,080

 Cost/Mile
 \$7,884,228

West SecF2_30

Bureau of Highways

ESTIMATE SHEET

County of:	Perry, Breathitt	From STA:			378+00.00		
UPN		To STA:			586+00.00		
Fed No.		Net Length, mile:			3.94		
Item No.		Type of Construction:	G	rade	, Drain & Su	rfaci	ng
Road Name:	KY 15 - West Section F Segmet 2 (40ft Median)	Class of Road:			Rural Arteria	.1	
Item #	Item	Quantity	Unit	J	Jnit Price		Amount
	Roadway Exc (Mainline)	2,598,457	CU YD	\$	2.50	\$	6,496,143
	Asph Surf CL3 (Mainline Driving Lanes)	7,900	TON	\$	85.00	\$	671,500
	Asph Base CL3 (Mainline Driving Lanes)	63,450	TON	\$	80.00	\$	5,076,000

Roadway Exc (Mainline)	2,598,457	CU YD	\$	2.50	\$ 6,496,143
Asph Surf CL3 (Mainline Driving Lanes)	7,900	TON	\$	85.00	\$ 671,500
Asph Base CL3 (Mainline Driving Lanes)	63,450	TON	\$	80.00	\$ 5,076,000
CS Base (Mainline Driving Lanes)	28,350	TON	\$	16.00	\$ 453,600
Asph Surf CL2 (Mainline Shoulders)	4,268	TON	\$	85.00	\$ 362,780
Asph Base CL2 (Mainline Shoulders)	11,096	TON	\$	80.00	\$ 887,680
CS Base (Mainline Shoulders)	78,326	TON	\$	16.00	\$ 1,253,216
Roadway Exc (Appr/Entrances/Ramps)	157,380	CU YD	\$	2.50	\$ 393,450
Asph Surf CL2 (Approach Rd Driving Lanes)	1,204	TON	\$	85.00	\$ 102,340
Asph Base CL2 (Approach Rd Driving Lanes)	4,643	TON	\$	80.00	\$ 371,440
CS Base (Approach Rd Driving Lanes)	4,255	TON	\$	16.00	\$ 68,080
Asph Surf (CL2 Approach Rd Shoulders)		TON	\$	85.00	\$ -
Asph Base CL2 (Approach Rd Shoulders)		TON	\$	80.00	\$ -
CS Base (Approach Rd Shoulders)		TON	\$	16.00	\$ -
MISC ITEMS (@ 25%)					\$ 4,034,057
Mainline Bridges (Sta. 461+51)	24,024	SQ FT	\$	200.00	\$ 4,804,800
421+88 ~ 8' x 8' Dbl RCBC Extension		LP SUM			\$ 225,000
485+05 ~ 12' x 6' Triple RCBC Extension		LP SUM			\$ 205,000
508+20 ~ 12' x 6' RCBC Extension		LP SUM			\$ 120,000
508+20(Entr Right) ~ 12' x 6' RCBC		LP SUM			\$ 35,000
576+12 ~ 6' x 5' RCBC Extension		LP SUM			\$ 65,000
			1		
MOBILIZATION		@ 3%			\$ 768,753
DEMOBILIZATION		@ 1.5%			\$ 384,376
				n-SubTotal	\$ 26,778,215
				gr & Contg	2,677,822
				ction-Total	29,456,037
	Losted Edited		uctior	n Cost/Mile	\$ 7,477,302

Estimated by: D. Ford	Lasted Edited:	11/12/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,681,070

 Utilities
 \$1,315,000

 Construction
 \$29,456,037

 Total Cost
 \$33,452,107

 Cost/Mile
 \$8,491,689

West SecF2_40

SECTION F

SEGMENT 2

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - West SECTION F (Segment 2)

STA. 378+00 to 586+00

			Approx. Ex.	KY15 R/W			Acreage	Resid	lential	Bus	Business	
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	20800	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$125,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	6,548,855	150.3	1,664,000	38.2	4,884,855	112.1	\$56,070	10	\$750,000	15	\$1,875,000	\$2,681,070
20 & 30ft	6,236,855	143.2	1,664,000	38.2	4,572,855	105.0	\$52,489	9	\$675,000	14	\$1,750,000	\$2,477,489

SECTION F

SEGMENT 3

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Breathitt	From STA:	586+00.00					
UPN		To STA:			717+50.00			
Fed No.		Net Length, mile:	2.49					
Item No.		Type of Construction:	n: Grade, Drain & Surfacing					
Road Name:	KY 15 - West Section F Segmet 3 (20ft Median)	Class of Road:	Rural Arterial					
Item #	Item	Quantity	Unit	Į	Unit Price		Amount	
	Roadway Exc (Mainline)	1,872,857	CU YD	\$	2.50	\$	4,682,143	
	Asph Surf CL3 (Mainline Driving Lanes)	4,768	TON	\$	85.00	\$	405,280	

Item #	Item	Quantity	Unit	Unit P	rice		Amount		
	Roadway Exc (Mainline)	1,872,857	CU YD	\$	2.50	\$	4,682,143		
	Asph Surf CL3 (Mainline Driving Lanes)	4,768	TON		85.00	\$	405,280		
	Asph Base CL3 (Mainline Driving Lanes)	38,328	TON		80.00	\$	3,066,240		
	CS Base (Mainline Driving Lanes)	17,145	TON	\$	16.00	\$	274,320		
	Asph Surf CL2 (Mainline Shoulders)	3,623	TON		85.00	\$	307,955		
	Asph Base CL2 (Mainline Shoulders)	9,421	TON		80.00	\$	753,680		
	CS Base (Mainline Shoulders)	45,694	TON		16.00	\$	731,104		
	Roadway Exc (Appr/Entrances/Ramps)	88,970	CU YD	\$	2.50	\$	222,425		
	Asph Surf CL2 (Approach Rd Driving Lanes)	608	TON		85.00	\$	51,680		
	Asph Base CL2 (Approach Rd Driving Lanes)	1,913	TON		80.00	\$	153,040		
	CS Base (Approach Rd Driving Lanes)	2,181	TON		16.00	\$	34,896		
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$	85.00	\$	-		
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$	80.00	\$	-		
	CS Base (Approach Rd Shoulders)		TON	\$	16.00	\$	-		
	Concrete Barrier Median	12,750	LF	\$	55.00	\$	701,250		
	MISC ITEMS (@ 25%)					\$	2,846,003		
	Mainline Bridges (Sta. 596+21)	16,100	SQ FT	\$ 1	75.00	\$	3,192,000		
	Mainline Bridges (Sta. 635+94)	20,424	SQ FT	\$ 1	75.00	\$	3,712,800		
	647+00 ~ 8' x 6' RCBC Extension		LP SUM			\$	90,000		
	664+62 ~ 10' x 4' RCBC Extension		LP SUM			\$	50,000		
	MOBILIZATION		@ 3%			\$	638,244		
	DEMOBILIZATION		@ 1.5%			\$	319,122		
			Constr	uction-Sul	Total	\$	22,232,183		
	+10 Engr & Contg								
				nstruction			24,455,401		
			Constr	uction Cos	t/Mile	\$	9,819,355		

Estimated by: D. Ford	Lasted Edited:	11/21/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$1,385,112

 Utilities
 \$875,000

 Construction
 \$24,455,401

 Total Cost
 \$26,715,513

 Cost/Mile
 \$10,726,837

Bureau of Highways

	ESTIMA	ATE SHEET						
County of:	Breathitt	From STA:	586+00.00					
UPN		To STA:			717+50.00			
Fed No.		Net Length, mile:						
Item No.		Type of Construction:	C		e, Drain & Su		ing	
Road Name:	KY 15 - West Section F Segmet 3 (30ft Median)	Class of Road:			Rural Arteria	ıl		
Item#	Item	Quantity	Unit		Unit Price		Amount	
	Roadway Exc (Mainline)	1,912,025	CU YD	\$	2.50	\$	4,780,063	
	Asph Surf CL3 (Mainline Driving Lanes)	4,768	TON	\$	85.00	\$	405,280	
	Asph Base CL3 (Mainline Driving Lanes)	38,328	TON	\$	80.00	\$	3,066,240	
	CS Base (Mainline Driving Lanes)	17,145	TON	\$	16.00	\$	274,320	
	Asph Surf CL2 (Mainline Shoulders)	2,119	TON	\$	85.00	\$	180,115	
	Asph Base CL2 (Mainline Shoulders)	5,510	TON	\$	80.00	\$	440,800	
	CS Base (Mainline Shoulders)	44,318	TON	\$	16.00	\$	709,088	
	Roadway Exc (Appr/Entrances/Ramps)	88,970	CU YD	\$	2.50	\$	222,425	
	Asph Surf CL2 (Approach Rd Driving Lanes)	608	TON	\$	85.00	\$	51,680	
	Asph Base CL2 (Approach Rd Driving Lanes)	1,913	TON	\$	80.00	\$	153,040	
	CS Base (Approach Rd Driving Lanes)	2,181	TON	\$	16.00	\$	34,896	
	Asph Surf (CL2 Approach Rd Shoulders)		TON	\$	85.00	\$	-	
	Asph Base CL2 (Approach Rd Shoulders)		TON	\$	80.00	\$	-	
	CS Base (Approach Rd Shoulders)		TON	\$	16.00	\$	-	
	MISC ITEMS (@ 25%)					\$	2,579,487	
							,,,,,,,,	
	Mainline Bridges (Sta. 596+21)	13,650	SQ FT	\$	200.00	\$	3,192,000	
	Mainline Bridges (Sta. 635+94)	17,316	SQ FT	\$	200.00	\$	3,712,800	
	647+00 ~ 8' x 6' RCBC Extension		LP SUM			\$	95,000	

LP SUM

@ 3%

@ 1.5%

55,000

598,567

299,284

20,850,084

2,085,008

22,935,093

9,208,919

\$

\$

Construction-SubTotal \$ +10 Engr & Contg

Construction-Total

 Right-of-way
 \$1,385,112

 Utilities
 \$875,000

 Construction
 \$22,935,093

 Total Cost
 \$25,195,205

 Cost/Mile
 \$10,116,402

MOBILIZATION

DEMOBILIZATION

664+62 ~ 10' x 4' RCBC Extension

West SecF3_30

Bureau of Highways

ESTIMATE SHEET

	LS I IIVII	TE SHEET							
County of:	Breathitt	From STA:	586+00.00						
UPN		To STA:	717+50.00						
Fed No.		Net Length, mile:			2.49				
Item No.		Type of Construction:	C	rade,	Drain & Su	rfaci	ng		
Road Name:	KY 15 - West Section F Segmet 3 (40ft Median)	Class of Road:		R	Rural Arteria	.1			
Item #	Item	Quantity	Unit	U	nit Price		Amount		
	Roadway Exc (Mainline)	2,175,431	CU YD	\$	2.50	\$	5,438,578		
	Asph Surf CL3 (Mainline Driving Lanes)	4,768	TON	\$	85.00	\$	405,280		
	Asph Base CL3 (Mainline Driving Lanes)	38,328	TON	\$	80.00	\$	3,066,240		
	CS Base (Mainline Driving Lanes)	17,145	TON	\$	16.00	\$	274,320		
	Asph Surf CL2 (Mainline Shoulders)	2,698	TON	\$	85.00	\$	229,330		

Asph Base CL3 (Mainline Driving Lanes)	38,328	TON	\$	80.00	\$	3,066,240	
CS Base (Mainline Driving Lanes)	17,145	TON	\$	16.00	\$	274,320	
Asph Surf CL2 (Mainline Shoulders)	2,698	TON	\$	85.00	\$	229,330	
Asph Base CL2 (Mainline Shoulders)	7,015	TON	\$	80.00	\$	561,200	
CS Base (Mainline Shoulders)	49,351	TON	\$	16.00	\$	789,616	
Roadway Exc (Appr/Entrances/Ramps)	88,970	CU YD	\$	2.50	\$	222,425	
Asph Surf CL2 (Approach Rd Driving Lanes)	608	TON	\$	85.00	\$	51,680	
Asph Base CL2 (Approach Rd Driving Lanes)	1,913	TON	\$	80.00	\$	153,040	
CS Base (Approach Rd Driving Lanes)	2,181	TON	\$	16.00	\$	34,896	
Asph Surf (CL2 Approach Rd Shoulders)		TON	\$	85.00	\$	-	
Asph Base CL2 (Approach Rd Shoulders)		TON	\$	80.00	\$	-	
CS Base (Approach Rd Shoulders)		TON	\$	16.00	\$	-	
MISC ITEMS (@ 25%)					\$	2,806,651	
Mainline Bridges (Sta. 596+21)	14,700	SQ FT	\$	200.00	\$	3,192,000	
Mainline Bridges (Sta. 635+94)	18,648	SQ FT	\$	200.00	\$	3,712,800	
647+00 ~ 8' x 6' RCBC Extension		LP SUM			\$	95,000	
664+62 ~ 10' x 4' RCBC Extension		LP SUM			\$	55,000	
MOBILIZATION		@ 3%			\$	632,642	
DEMOBILIZATION		@ 1.5%			\$	316,321	
						•	
<u> </u>		Constr	uction	1-SubTotal	\$	22,037,019	
+10 Engr & Contg							
				ction-Total	\$	2,203,702 24,240,721	
		Constr	uction	Cost/Mile	\$	9,733,156	

Estimated by: D. Ford	Lasted Edited:	11/12/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$1,612,376

 Utilities
 \$875,000

 Construction
 \$24,240,721

 Total Cost
 \$26,728,097

 Cost/Mile
 \$10,731,890

West SecF3_40

SECTION F

SEGMENT 3

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - West SECTION F (Segment 3)

STA. 586+00 to 717+50

			Approx. Ex.	KY15 R/W			Acreage	Resi	dential	Bus	Business	
	Approxim	ate Gross	Assume 8	0' Width	Approxin	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	10200	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$125,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	4,072,188	93.5	816,000	18.7	3,256,188	74.8	\$37,376	21	\$1,575,000	0	\$0	\$1,612,376
20 & 30ft	3,874,938	89.0	816,000	18.7	3,058,938	70.2	\$35,112	18	\$1,350,000	0	\$0	\$1,385,112

SECTION G
EXISTING ALIGNMENT
ESTIMATES
CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

County of:	Perry	From STA:			+.00		
UPN		To STA:			236+91.00		
Fed No.		Net Length, mile:			4.49		
Item No.	KY 15 - Section G 20' Median	Type of Construction:	C	3rade,	Drain & Su	rfaci	ng
Road Name:	KY 15 - Section G 20' Median	Class of Road:		Rura	al/Urban Art	erial	
Item #	Item	Quantity	Unit	+	Init Price		Amount
	4L-20' Median Const. (0+00 to 200+00)	20,000	FEET	\$	1,075.00	\$	21,500,000
	4L-20' Median Const. (200+00 to 236+91)	3,526	FEET	\$	1,940.00	\$	6,840,440
	D 1 E (D (MM20)	125 000	GWWD	Φ.	4.00	Φ	500.000
	Roadway Exc (Ramps/KY28)	125,000	CY YD	\$	4.00	\$	500,000
	Asph Surf CL3 (KY28)	222	TON	\$	85.00	\$	18,870
	Asph Base CL3 (KY28)	1,652	TON	\$	80.00	\$	132,160
	CS Base (KY28)	801	TON	\$	16.00	\$	12,816
	Asph Surf CL3 (Ramps)	585	TON		85.00	\$	49,725
	Asph Base CL3 (Ramps)	4,695	TON TON	\$ \$	80.00	\$	375,600
	CS Base (Ramps)	2,094	TON	Þ	16.00	\$	33,504
	MISC RAMP ITEMS (@ 25%)					Э	280,669
	Mainline Bridge (Sta. 217+05)	15,824	SQ FT	\$	175.00	\$	2,769,200
	Walling Bridge (Sta. 217+03)	13,624	5011	Ψ	175.00	ψ	2,709,200
	30+55 ~ 14' x 10'		LP SUM			\$	580,000
	45+90 ~ 8' x 4'		LP SUM			\$	90,000
	68+60 ~ 8' x 6'		LP SUM			\$	140,000
	163+45 ~ 12' x 10'		LP SUM			\$	340,000
	Lt. Sta. 201+00+/- ~ 14' x 10' RCBC		LP SUM			\$	280,000
	Et. Sta. 2011001/21114 X 10 RCDC		LI SUM			Ψ	200,000
	MOBILIZATION		@ 3%			\$	1,018,290
	DEMOBILIZATION		@ 1.5%			\$	509,145
							, -
		<u>.</u>	Constr	uctio	n-SubTotal	\$	35,470,418
					gr & Contg		3,547,042
					ction-Total	\$	39,017,460
					n Cost/Mile		8,695,800
Estimated by:	D. Ford	Lasted Edited:					
Checked by:		Lasted Edited:		<u>-</u> '			
•		-		-			

 Right-of-way
 \$5,810,501

 Utilities
 \$1,155,000

 Construction
 \$39,017,460

 Total Cost
 \$45,982,961

 Cost/Mile
 \$10,248,197

ExAlignment SecG_20

Bureau of Highways

ESTIMATE SHEET

County of:	ry of: From STA: +.00					
UPN		To STA:		236+91.00		
Fed No.		Net Length, mile:		4.49		
Item No.		Type of Construction:	C	Grade, Drain & Su	rfaci	ng
Road Name:	KY 15 - Section G 30' Median	Class of Road:		Rural/Urban Art	erial	
Item #	Item	Quantity	Unit	Unit Price		Amount
	4L-30' Median Const. (0+00 to 200+00)	20,000	FEET	\$ 1,000.00	\$	20,000,000
	4L-30' Median Const. (200+00 to 236+91)	3,526	FEET	\$ 1,900.00	\$	6,699,400
	Roadway Exc (Ramps/KY28)	125,000	CY YD	\$ 4.00	\$	500,000
	Asph Surf CL3 (KY28)	222	TON	\$ 85.00	\$	18,870
	Asph Base CL3 (KY28)	1,652	TON	\$ 80.00	\$	132,160
	CS Base (KY28)	801	TON	\$ 16.00	\$	12,816
	Asph Surf CL3 (Ramps)	585	TON	\$ 85.00	\$	49,725
	Asph Base CL3 (Ramps)	4,695	TON	\$ 80.00	\$	375,600
	CS Base (Ramps)	2,094	TON	\$ 16.00	\$	33,504
	MISC RAMP ITEMS (@ 25%)			7	\$	280,669
					Ψ	200,000
		+				
		+				
	Mainline Bridge (Sta. 217+05)	13,416	SQ FT	\$ 200.00	\$	2,683,200
	Mainine Bridge (Sta. 217+03)	13,410	SQTT	\$ 200.00	φ	2,083,200
		+				
		+				
		+				
		+				
	20.55.141.101	+	I D CID (Φ.	610.000
	30+55 ~ 14' x 10'		LP SUM		\$	610,000
	45+90 ~ 8' x 4'		LP SUM		\$	95,000
	68+60 ~ 8' x 6'		LP SUM		\$	145,000
	163+45 ~ 12' x 10'	1	LP SUM		\$	355,000
	Lt. Sta. 201+00+/- ~ 14' x 10' RCBC	1	LP SUM		\$	295,000
	MOBILIZATION		@ 3%		\$	968,578
	DEMOBILIZATION		@ 1.5%		\$	484,289
			Constr	uction-SubTotal	\$	33,738,811
			+1	0 Engr & Contg		3,373,881
			Co	nstruction-Total	\$	37,112,692
			Constr	uction Cost/Mile	\$	8,271,285
Estimated by:	D. Ford	Lasted Edited:				
Checked by:		Lasted Edited:		=		
		_		=		

 Right-of-way
 \$5,810,501

 Utilities
 \$1,155,000

 Construction
 \$37,112,692

 Total Cost
 \$44,078,193

 Cost/Mile
 \$9,823,682

ExAlignment SecG_30

Bureau of Highways

ESTIMATE SHEET

County of:	Perry	From STA:			+.00		
UPN		To STA:			236+91.00		
Fed No.		Net Length, mile:			4.49		
Item No.	KY 15 - Section G 40' Median	Type of Construction:	G	irade,	Drain & Su		ng
Road Name:	KY 15 - Section G 40' Median	Class of Road:		Rura	al/Urban Arte	erial	
Item #	Item	Quantity	Unit	_	Init Price		Amount
	4L-40' Median Const. (0+00 to 200+00)	20,000	FEET	\$	1,100.00	\$	22,000,000
	4L-40' Median Const. (200+00 to 236+91)	3,526	FEET	\$	2,000.00	\$	7,052,000
	D 1 E (D /////20)	125 000	CVVD	ď	4.00	Ф	500,000
	Roadway Exc (Ramps/KY28)	125,000	CY YD	\$	4.00	\$	500,000
	Asph Surf CL3 (KY28)	222	TON	\$	85.00	\$	18,870
	Asph Base CL3 (KY28)	1,652	TON	\$	80.00	\$	132,160
	CS Base (KY28)	801	TON	\$	16.00	\$	12,816
	Asph Surf CL3 (Ramps)	585	TON	\$	85.00	\$	49,725
	Asph Base CL3 (Ramps)	4,695	TON	\$	80.00	\$	375,600
	CS Base (Ramps)	2,094	TON	\$	16.00	\$	33,504
	MISC RAMP ITEMS (@ 25%)					\$	280,669
	Mainline Bridge (Sta. 217+05)	14,448	SQ FT	\$	200.00	\$	2,889,600
	Mannine Bridge (Sta. 217+03)	14,440	3Q F1	Φ	200.00	φ	2,889,000
	30+55 ~ 14' x 10'		LP SUM			\$	640,000
	45+90 ~ 8' x 4'		LP SUM			\$	100,000
	68+60 ~ 8' x 6'		LP SUM			\$	150,000
	163+45 ~ 12' x 10'		LP SUM			\$	375,000
	Lt. Sta. 201+00+/- ~ 14' x 10' RCBC		LP SUM			\$	310,000
	Et. Stat. 2011/001/ 11 A 10 ReBe		El Belvi			Ψ	310,000
	MOBILIZATION		@ 3%			\$	1,047,598
	DEMOBILIZATION		@ 1.5%			\$	523,799
					n-SubTotal	\$	36,491,341
					gr & Contg		3,649,134
					ction-Total		40,140,475
				uction	n Cost/Mile	\$	8,946,085
Estimated by:		Lasted Edited:		-			
Checked by:		Lasted Edited:		_			

 Right-of-way
 \$6,339,580

 Utilities
 \$1,155,000

 Construction
 \$40,140,475

 Total Cost
 \$47,635,055

 Cost/Mile
 \$10,616,398

ExAlignment SecG_40

SECTION G
EXISTING ALIGNMENT
ESTIMATES
RIGHT-OF-WAY

KY 15 PLANNING STUDY - Existing Alignment SECTION G

STA. + to 236+91

			Approx. Ex.	Approx. Ex. KY15 R/W		Acreage	Resi	dential	Bus	siness		
	Approxim	ate Gross	Assume 8	0' Width	Approxir	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	20890	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$125,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	7,297,411	167.5	1,671,200	38.4	5,626,211	129.2	\$64,580	22	\$1,650,000	37	\$4,625,000	\$6,339,580
20 & 30ft	6,942,046	159.4	1,671,200	38.4	5,270,846	121.0	\$60,501	20	\$1,500,000	34	\$4,250,000	\$5,810,501

SECTION G

WEST

ESTIMATES

CONSTRUCTION

Bureau of Highways

ESTIMATE SHEET

	LS I IIVIA	ALE SHEET				
County of:	Реггу	From STA:		+.00		
UPN						
Fed No.		Net Length, mile:		4.33		
Item No.		Net Length, mile: Type of Construction:	(Grade, Drain & Su	ırfac	ing
	KY 15 - West Section G (20ft Median)	Class of Road:	-	Rural Arteria	al	8
	(2000)	•				
Item#	Item	Quantity	Unit	Unit Price		Amount
	Roadway Exc (Mainline)	5,705,598	CU YD	\$ 2.50	\$	14,263,995
	Asph Surf CL3 (Mainline Driving Lanes)	8,133	TON	\$ 85.00	\$	691,305
	Asph Base CL3 (Mainline Driving Lanes)	65,419	TON	\$ 80.00	\$	5,233,520
	CS Base (Mainline Driving Lanes)	29,285	TON	\$ 16.00	\$	468,560
	Asph Surf CL2 (Mainline Shoulders)	6,253	TON	\$ 85.00	\$	531,505
	Asph Base CL2 (Mainline Shoulders)	16,259	TON	\$ 80.00	\$	1,300,720
	CS Base (Mainline Shoulders)	78,963	TON	\$ 16.00	\$	1,263,408
	Roadway Exc (Appr/Entrances/Ramps)	192,235	CU YD	\$ 2.50	\$	480,588
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,207	TON	\$ 85.00	\$	102,595
	Asph Base CL2 (Approach Rd Driving Lanes)	6,234	TON	\$ 80.00	\$	498,720
	CS Base (Approach Rd Driving Lanes)	4,305	TON	\$ 16.00	\$	68,880
	Asph Surf (CL2 Approach Rd Shoulders)	78	TON	\$ 85.00	\$	6,630
	Asph Base CL2 (Approach Rd Shoulders)	188	TON	\$ 80.00	\$	15,040
	CS Base (Approach Rd Shoulders)	655	TON	\$ 16.00	\$	10,480
	Asph Surf CL3 (Ramp Driving Lanes)	585	TON	\$ 85.00	\$	49,725
	Asph Base CL3 (Ramp Driving Lanes)	4,695	TON	\$ 80.00	\$	375,600
	CS Base (Ramp Driving Lanes)	2,094	TON	\$ 16.00	\$	33,504
	Asph Surf CL2 (Ramp Shoulders)	208	TON	\$ 85.00	\$	17,680
	Asph Base CL2 (Ramp Shoulders)	539	TON	\$ 80.00	\$	43,120
	CS Base (Ramp Shoulders)	4,281	TON	\$ 16.00	\$	68,496
	Concrete Median Barrier	22,850	LF	\$ 55.00	\$	1,256,750
		22,000		ψ 25.00	Ψ	1,200,700
	MISC ITEMS (@ 25%)				\$	6,695,205
	11110 0 1121110 (0 2070)				Ψ	0,000,200
	Mainline Bridges (Sta. 195+62)	48,944	SQ FT	\$ 175.00	\$	8,565,200
	Mainline Bridges (Sta. 208+63)	16,468	SQ FT	\$ 175.00	\$	2,881,900
		, , , ,			Ħ	, - , - ,
					1	
	30+55 ~ 14' x 10'		LP SUM		\$	570,000
	195+65 ~ 14' x 10' RCBC		LP SUM		\$	660,000
	220+08 ~ 10' x 6' RCBC		LP SUM		\$	300,000
						•
					İ	
	MOBILIZATION		@ 3%		\$	1,393,594
	DEMOBILIZATION		@ 1.5%		\$	696,797
		•	Constr	uction-SubTotal	\$	48,543,517

Estimated by: D. Ford	Lasted Edited:	11/21/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,571,883

 Utilities
 \$1,155,000

 Construction
 \$53,397,869

 Total Cost
 \$57,124,752

 Cost/Mile
 \$13,199,943

West SecG_20

4,854,352

53,397,869

12,338,764

+10 Engr & Contg

Construction-Total \$
Construction Cost/Mile \$

Bureau of Highways

	ESTIMA	ATE SHEET					
County of:	Perry	From STA:			+.00		
UPN	·	To STA:			228+50.00		
Fed No.		Net Length, mile:			4.33		
Item No.		Type of Construction:	(3rade,	Drain & Su	rfaci	ing
Road Name:	KY 15 - West Section G (30ft Median)	Class of Road:		F	Rural Arteria	ıl	
Item #	Item	Quantity	Unit	U	Init Price		Amount
	Roadway Exc (Mainline)	5,769,454	CU YD	\$	2.50	\$	14,423,635
	Asph Surf CL3 (Mainline Driving Lanes)	8,133	TON	\$	85.00	\$	691,305
	Asph Base CL3 (Mainline Driving Lanes)	65,419	TON	\$	80.00	\$	5,233,520
	CS Base (Mainline Driving Lanes)	29,285	TON	\$	16.00	\$	468,560
	Asph Surf CL2 (Mainline Shoulders)	3,669	TON	\$	85.00	\$	311,865
	Asph Base CL2 (Mainline Shoulders)	9,538	TON	\$	80.00	\$	763,040
	CS Base (Mainline Shoulders)	76,520	TON	\$	16.00	\$	1,224,320
	Roadway Exc (Appr/Entrances/Ramps)	192,235	CU YD	\$	2.50	\$	480,588
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,207	TON	\$	85.00	\$	102,595
	Asph Base CL2 (Approach Rd Driving Lanes)	6,234	TON	\$	80.00	\$	498,720
	CS Base (Approach Rd Driving Lanes)	4,305	TON	\$	16.00	\$	68,880
	Asph Surf (CL2 Approach Rd Shoulders)	78	TON	\$	85.00	\$	6,630
	Asph Base CL2 (Approach Rd Shoulders)	188	TON	\$	80.00	\$	15,040
	CS Base (Approach Rd Shoulders)	655	TON	\$	16.00	\$	10,480
	Asph Surf CL3 (Ramp Driving Lanes)	585	TON	\$	85.00	\$	49,725
	Asph Base CL3 (Ramp Driving Lanes)	4,695	TON	\$	80.00	\$	375,600
	CS Base (Ramp Driving Lanes)	2,094	TON	\$	16.00	\$	33,504
	Asph Surf CL2 (Ramp Shoulders)	208	TON	\$	85.00	\$	17,680
	Asph Base CL2 (Ramp Shoulders)	539	TON	\$	80.00	\$	43,120
	CS Base (Ramp Shoulders)	4,281	TON	\$	16.00	\$	68,496
	MISC ITEMS (@ 25%)					\$	6,221,826
	Mainline Bridges (Sta. 195+62)	41,496	SQ FT	\$	200.00	\$	8,299,200
				1 .		1 .	

		,	~ {	-		+	0,,
	Mainline Bridges (Sta. 208+63)	13,962	SQ FT	\$	200.00	\$	2,792,400
	30+55 ~ 14' x 10'		LP SUM			\$	585,000
	195+65 ~ 14' x 10' RCBC		LP SUM			\$	675,000
	220+08 ~ 10' x 6' RCBC		LP SUM			\$	310,000
	MOBILIZATION		@ 3%			\$	1,313,122
	DEMOBILIZATION		@ 1.5%			\$	656,56
			Constr	uction	n-SubTotal	\$	45,740,412
					r & Contg		4,574,04
					ction-Total		50,314,453
			Constr	uction	Cost/Mile	\$	11,626,272
Estimated	by: D. Ford	Lasted Edit	ted: 11/21/2012			-	
Checked	by:	Lasted Edit	ted:	_			

 Right-of-way
 \$2,571,883

 Utilities
 \$1,155,000

 Construction
 \$50,314,453

 Total Cost
 \$54,041,336

 Cost/Mile
 \$12,487,451

West SecG_30

Bureau of Highways

	ESTIMA	ATE SHEET					
County of:	Perry	From STA:			+1.00		
ÚPN		To STA:			228+50.00		
Fed No.		Net Length, mile:			4.33		
Item No.		Type of Construction:	(Grade,	Drain & Su	rfaci	ing
Road Name:		Class of Road:			Rural Arteria		
	· · · · · · · · · · · · · · · · · · ·	_					
Item #	Item	Quantity	Unit	J	Init Price		Amount
	Roadway Exc (Mainline)	6,280,931	CU YD	\$	2.50	\$	15,702,328
	Asph Surf CL3 (Mainline Driving Lanes)	8,133	TON	\$	85.00	\$	691,305
	Asph Base CL3 (Mainline Driving Lanes)	65,419	TON	\$	80.00	\$	5,233,520
	CS Base (Mainline Driving Lanes)	29,285	TON	\$	16.00	\$	468,560
	Asph Surf CL2 (Mainline Shoulders)	4,669	TON	\$	85.00	\$	396,865
	Asph Base CL2 (Mainline Shoulders)	12,139	TON	\$	80.00	\$	971,120
	CS Base (Mainline Shoulders)	85,223	TON	\$	16.00	\$	1,363,568
	Roadway Exc (Appr/Entrances/Ramps)	192,235	CU YD	\$	2.50	\$	480,588
	Asph Surf CL2 (Approach Rd Driving Lanes)	1,207	TON	\$	85.00	\$	102,595
	Asph Base CL2 (Approach Rd Driving Lanes)	6,234	TON	\$	80.00	\$	498,720
	CS Base (Approach Rd Driving Lanes)	4,305	TON	\$	16.00	\$	68,880
	Asph Surf (CL2 Approach Rd Shoulders)	78	TON	\$	85.00	\$	6,630
	Asph Base CL2 (Approach Rd Shoulders)	188	TON	\$	80.00	\$	15,040
	CS Base (Approach Rd Shoulders)	655	TON	\$	16.00	\$	10,480
	Asph Surf CL3 (Ramp Driving Lanes)	585	TON	\$	85.00	\$	49,725
	Asph Base CL3 (Ramp Driving Lanes)	4,695	TON	\$	80.00	\$	375,600
	CS Base (Ramp Driving Lanes)	2,094	TON	\$	16.00	\$	33,504
	Asph Surf CL2 (Ramp Shoulders)	208	TON	\$	85.00	\$	17,680
	Asph Base CL2 (Ramp Shoulders)	539	TON	\$	80.00	\$	43,120
	CS Base (Ramp Shoulders)	4,281	TON	\$	16.00	\$	68,496
	MISC ITEMS (@ 25%)					\$	6,649,581
	Mainline Bridges (Sta. 195+62)	44,688	SQ FT	\$	200.00	\$	8,937,600
	Mainline Bridges (Sta. 195+62) Mainline Bridges (Sta. 208+63)	44,088 15,036	SQ FT	\$	200.00		3,007,000
	DVIAIDIDE DEIGGES (NIA 70X+D3)	12 030	20 FT		/()()()		3 007 700

Asph base CL2 (Approach Ru Shoulders)	100	ION	\$ 80.00		13,040
CS Base (Approach Rd Shoulders)	655	TON	\$ 16.00	\$	10,480
Asph Surf CL3 (Ramp Driving Lanes)	585	TON	\$ 85.00	\$	49,725
Asph Base CL3 (Ramp Driving Lanes)	4,695	TON	\$ 80.00		375,600
CS Base (Ramp Driving Lanes)	2,094	TON	\$ 16.00		33,504
Asph Surf CL2 (Ramp Shoulders)	208	TON	\$ 85.00	\$	17,680
Asph Base CL2 (Ramp Shoulders)	539	TON	\$ 80.00	\$	43,120
CS Base (Ramp Shoulders)	4,281	TON	\$ 16.00	\$	68,496
				4	
MISC ITEMS (@ 25%)		+		\$	6,649,581
Mainline Bridges (Sta. 195+62)	44,688	SQ FT	\$ 200.00) \$	8,937,600
Mainline Bridges (Sta. 208+63)	15,036	SQ FT	\$ 200.00		3,007,200
30+55 ~ 14' x 10'		LP SUM		\$	600,000
195+65 ~ 14' x 10' RCBC		LP SUM		\$	690,000
220+08 ~ 10' x 6' RCBC		LP SUM		\$	315,000
		+			
MOBILIZATION		@ 3%		\$	1,403,931
DEMOBILIZATION		@ 1.5%		\$	701,966
			uction-SubTota	_	48,903,602
			0 Engr & Cont		4,890,360
			nstruction-Tota		53,793,962
Estimated by: D. Ford	Lasted Edite		uction Cost/Mil	e \$	12,430,834

Estimated by: D. Ford	Lasted Edited:	11/12/2012
Checked by:	Lasted Edited:	

 Right-of-way
 \$2,800,817

 Utilities
 \$1,155,000

 Construction
 \$53,793,962

 Total Cost
 \$57,749,779

 Cost/Mile
 \$13,344,953

West SecG_40

SECTION G

WEST

ESTIMATES

RIGHT-OF-WAY

KY 15 PLANNING STUDY - West SECTION G

STA. + to 228+50

			Approx. Ex.	Ex. KY15 R/W		Acreage	Resid	lential	Bus	siness		
	Approxim	ate Gross	Assume 8	0' Width	Approxim	nate Net	Cost @	Reloc.	Cost @	Reloc.	Cost @	TOTAL
Median	Propose	ed R/W	KY15 Length	6085	Prop. R/W	Purchased	\$500	#	\$75,000	#	\$75,000	R/W COST
Width	(SF)	(Acres)	(SF)	(Acres)	(SF)	(Acres)	(Dollar)	(each)	(Dollar)	(each)	(Dollar)	(Dollar)
40 ft	9,269,981	212.8	486,800	11.2	8,783,181	201.6	\$100,817	23	\$1,725,000	13	\$975,000	\$2,800,817
20 & 30ft	8,927,231	204.9	486,800	11.2	8,440,431	193.8	\$96,883	21	\$1,575,000	12	\$900,000	\$2,571,883