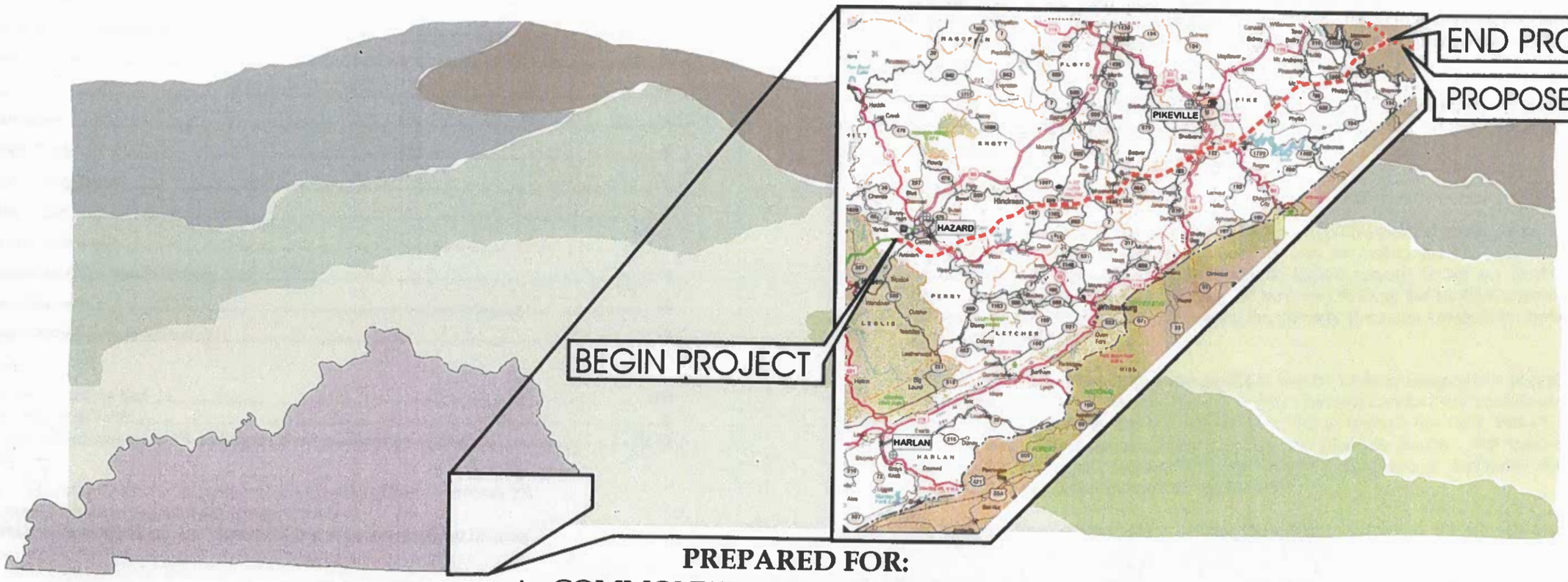
SOUTHERN KENTUCKY CORRIDOR (I-66)
LOCATION STUDY
HAZARD, KENTUCKY to WEST VIRGINIA



PREPARED FOR:
COMMONWEALTH OF KENTUCKY
KENTUCKY TRANSPORTATION CABINET

BY:
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STUDY PURPOSE

The purpose of this study is to identify a recommended alignment and cost for the Southern Kentucky Corridor (I-66) (SKC) roadway from the Daniel Boone Parkway at Hazard to a junction with the proposed Interstate 73 in West Virginia. The I-73 roadway through West Virginia has been studied and the location is generally noted in the study report titled, *Shawnee Parkway/King Coal Highway Feasibility Study; December 1994; West Virginia Department of Transportation.* The I-73 Corridor goes from Myrtle Beach, South Carolina to Detroit, Michigan with a section located in West Virginia near the Kentucky/West Virginia State Line.

The segment of the Southern Kentucky Corridor (I-66) under study is approximately 137 km (85 miles) in length and traverses four Kentucky Counties (Perry, Knott, Floyd and Pike) and terminates at proposed I-73 in Mingo County, West Virginia.

BACKGROUND

The 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) provided funding for an "Interstate 66 Feasibility Study." The study was concluded in 1994 with the findings that this Southern California to Hampton Roads, Virginia route was not economically feasible because the highway construction costs were greater than the travel benefits. However, the study went on to say that individual segments providing "Linkage to the National Highway System and/or key elements of a state's transportation system" may be economically feasible.

The Kentucky Transportation Cabinet with assistance from the Kentucky Congressional delegation initiated the Kentucky segment study referred to as the Southern Kentucky Corridor (I-66) feasibility study in 1995. That study was completed in May 1997 with the finding that an interstate type facility from I-57 in Missouri to I-73 in West Virginia was economically justified and financially feasible. The feasibility study is documented in the report, *Southern Kentucky Corridor (I-66) Economic Justification and Financial Feasibility, Kentucky Transportation Cabinet, May 1997.*

The Kentucky Transportation Cabinet utilizing these findings proceeded with the next logical step of evaluating the Southern Kentucky Corridor (I-66) by initiating a study to refine the cost and location of the eastern priority section for possible incorporation into the Cabinet's Six-Year Highway Plan.

The first priority section of the SKC (I-66) was identified as the Section between Somerset and London. This section has previously been incorporated into the Six-Year Plan. The second priority section was the section from Hazard to the West Virginia State Line. This is the section under study in this report.

This report will provide the Transportation Cabinet with a recommended alignment location and costs. In addition, this 137 km section of proposed interstate roadway will be subdivided into smaller segments so

that proper consideration can be given to incorporating these segments of the Southern Kentucky Corridor (I-66) route into the Cabinet's Six Year Plan.

STUDY SCOPE

The final approved alignment location for the Southern Kentucky Corridor (I-66) route will require a detailed engineering and environmental analysis that meets the conditions outlined in the National Environmental Protection Act (NEPA). The purpose of this study is not to meet the NEPA conditions but to identify a recommended alignment that can be used to guide the future engineering and environmental activities to achieve future NEPA compliance.

This study will identify a recommended alignment using such readily available design guides as contours, streams, roads, and limited cultural information (schools, churches, cemeteries) to locate alternate Southern Kentucky Corridor (I-66) route alignments. The recommended alignment will be exhibited on 1:12000 mapping horizontal scale and 1:6000 vertical scale. The roadway geometrics will be for a traditional interstate highway design standard using a design speed of 110 km per hour.

The recommended alignment will not be submitted through a formal public meeting/public hearing process. The alternative alignments were shared with the two Area Development Districts that hold the membership of the four counties through which the proposed roadway passes, namely; The Kentucky River Area Development District (Perry and Knott Counties) and the Big Sandy Area Development District (Floyd and Pike Counties). Their support letters are contained in the Appendix to this study report.

The alternative alignments were evaluated based on alignment conditions (grade and curves), construction, right of way and utility relocation costs and number of residential and business relocations. One of the overriding considerations for locating a highway in eastern Kentucky is the number of relocations because available and appropriate housing is extremely limited. These construction and right of way/utility relocation costs are noted in the Cost Estimate Table.

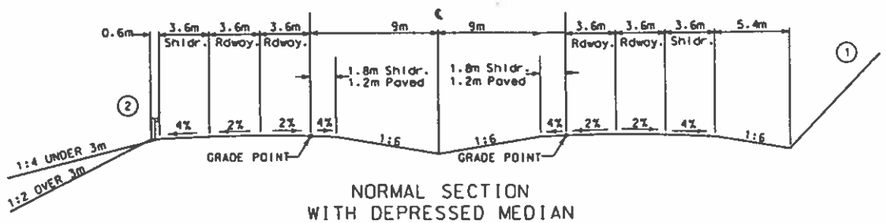
The Southern Kentucky Corridor (I-66) alternate alignments were divided into reasonable cost sections based on possible interchange locations. The SKC (I-66) route was justified on both the road user and economic development conditions. Therefore, accessibility to the SKC (I-66) route is very important. Access points (interchanges) are proposed at special traffic generators e.g. Hazard, Hindman, Wheelwright, Pikeville, Phelps, Carr Fork Lake and Fishtrap Lake, etc.

The cost estimates for the construction costs utilize unit costs typical for the eastern Kentucky region. The total costs were developed using several large cost items (excavation, pavement, large culverts, bridges) and factoring to result in a total construction cost for each segment of the alternate alignments. Right of way estimates including both cost and relocations were also noted for each segment, as was the utility cost.

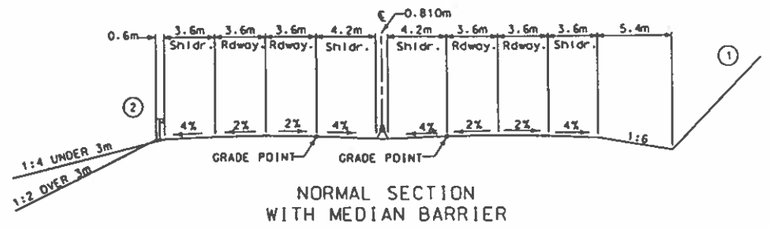
ROADWAY GEOMETRICS DESIGN CRITERIA

The Southern Kentucky Corridor (I-66) roadway design criteria was taken from the American Association of State Highway and Transportation Officials (AASHTO) "Green Book", *A Policy on Geometric Design of Highways and Streets, 1994* and the AASHTO *Roadside Design Guide, 1996.*

- **Typical Roadway Section**
  There are two basic roadway sections that were used in developing cost estimates for this project. The two basic sections consisted of (1) four lanes with an 18 m depressed median and (2) four lanes with a barrier median. The two typical sections were utilized in the development of cost estimates. There were several long sections of SKC (I-66) where the barrier median seemed appropriate. The location of the section breaks are noted in the work sheet but are not noted in this report since the locations will change significantly during the final design phase.



NORMAL SECTION
WITH DEPRESSED MEDIAN



NORMAL SECTION
WITH MEDIAN BARRIER

① CUT SLOPES: 1:1 IF OVER 5.4m
1:2 IF UNDER 5.4m

② SHOULDERS SHALL BE WIDENED 0.6m WHERE GUARDRAIL IS REQUIRED.

The geometric design criteria used for the connecting roads depended on the functional classification of the connecting roadway. Every attempt to shorten the connecting roads was utilized. Since no in depth study of connecting and frontage roads was undertaken, it was anticipated that 8 percent maximum grades would be utilized for short distances.

A detailed description of the design criteria for the Southern Kentucky Corridor (I-66) roadway is included in the appendix.

TERRAIN MODELING

The initial step to use in the development of a computer generated terrain model for assisting in the location of alternate alignments for SKC (I-66) was to obtain USGS quad maps and point files in digital format.

The planimetric files were 7 ½ minute USGS digital line graph (DLG) metric quad maps. The Topography on these maps was limited to streams, roads, railroads, churches and schools. The regular USGS hard copy quads were used to identify housing clusters, cemeteries and utility lines. The regular USGS maps are on a scale of 1:24000 but for study report purposes, the maps were enlarged to 1:12000. These files were based on spot elevations in a 30 meter x 30 meter grid with no break lines. From the point files, digital terrain models (DTM) were created and contours were developed at 50 meter major and 10 m minor intervals.

The planimetrics and point files were digitally developed from the USGS quad mapping from the most recently available data, i.e. base years 1963 to 1969 with photo revision updates between 1976 and 1978.

The digital point files were matched at the seams so that when the contours were created, a seamless planimetric and contour map was created for the entire 110 km study area. This electronic USGS quad data is slightly less accurate than the traditional USGS quad maps which are customarily used in a study of this scale. During the development of the metric contours from the points file the location of certain cultural and terrain features may become slightly repositioned, such as streams, roads, railroads, etc. Therefore, all information generated from this data should be reviewed with regard to the level of accuracy obtainable. This is one of the reasons the alternative alignments should not be viewed as a precise alignment but more of a narrow band.

One of the advantages obtained by utilizing this electronic data is the ability to process more data, more quickly (i.e. cross sections can be cut more often in evaluating earth work than doing it by hand using the hard copy quads. This condition is really important in the investigation and analysis of alternative alignments).

ENVIRONMENTAL CONSIDERATION

An environmental overview was not performed on the Southern Kentucky Corridor (I-66) to provide guidance in the selection of alignment alternatives, primarily because an environmental overview was a bit premature for the purpose of this Location Study. This study will identify an alignment corridor (at least 500 meters in width) not a specific alignment due to the non precise nature of the data. Therefore, an environmental overview would be too costly an effort at this point in the study process. However, several critical environmental impacts were considered in the selection of alternatives and in the selection of a preferred routing.

One of the most critical elements to consider in locating a roadway alignment is the number of relocations, both residential and commercial. Land suitable for development is very limited, as is available and suitable housing. This condition can become a "fatal flaw" in the location of a highway if the number of relocations become unacceptable.

Another environmental condition involves encroachment on blue line streams. Channel changes must be held to a minimum. Also, encroachment on endangered species often becomes an issue when a highway project enters an uninhabited or lightly inhabited hollow.

Cost is certainly an issue with any project and especially a highway project the magnitude of the Southern Kentucky corridor (I-66) project. This 137 km roadway location study traverses some of the most severe terrain (changes in elevation of greater than 300 meters (985 feet) over short distances) in Kentucky and West Virginia. Numerous bridges of substantial length will be necessary in the Pike County portion of the SKC (I-66) alignments. In addition, highway grades will approach 5 percent (the absolute maximum grade for an Interstate Highway) with deep cuts that exceed 150 meters (492 feet).

Mineral Reserves are being mined throughout eastern Kentucky and the Southern Kentucky Corridor (I-66) traverses some of the most heavily mined areas. Many of the areas contain active mines, but many acres have already been mined and are abandoned or reclaimed. Special highway construction procedures will have to be used in areas of mine spoilage and mine runoff. The magnitude of mining and permitted mineral resource areas are so widespread in eastern Kentucky it becomes almost a non-issue in the location of the highway. A cost was included for the possible impact on mineral reserves.

There is no wild and scenic rivers involvement with this portion of the Southern Kentucky Corridor (I-66).

ALIGNMENT OPTIONS

This eastern section of the Southern Kentucky Corridor (I-66) will generally follow the congressional language in the 1995 National Highway System Designation Act, namely, ".....sharing a common corridor with the I-73/74 corridor in West Virginia to a Kentucky corridor centered on the cities of Pikeville, Jenkins, Hazard.....". The alternate alignments understudy begin west of Hazard on the fully controlled portion of the Daniel Boone Parkway and proceed eastward to a junction with the proposed I-73 corridor in West Virginia.

From Hazard the alignments traversed the area between Carr Fork Reservoir and Hindman then proceed generally east northeast to just north of Wheelwright and between Fishtrap Lake and Pikeville to Phelps and on into West Virginia.

There are two alternate alignments (a northern alignment and a southern alignment) identified that on occasion come together in a common routing. These two alignments have been divided into line segments for the purpose of developing alternate alignment options and for subdividing the cost estimate information into useable sections for consideration in the Transportation Cabinet's Six Year Highway Plan.

The location and description of each line segment is briefly presented. Each line segment is illustrated on Alternate Alignment Maps.

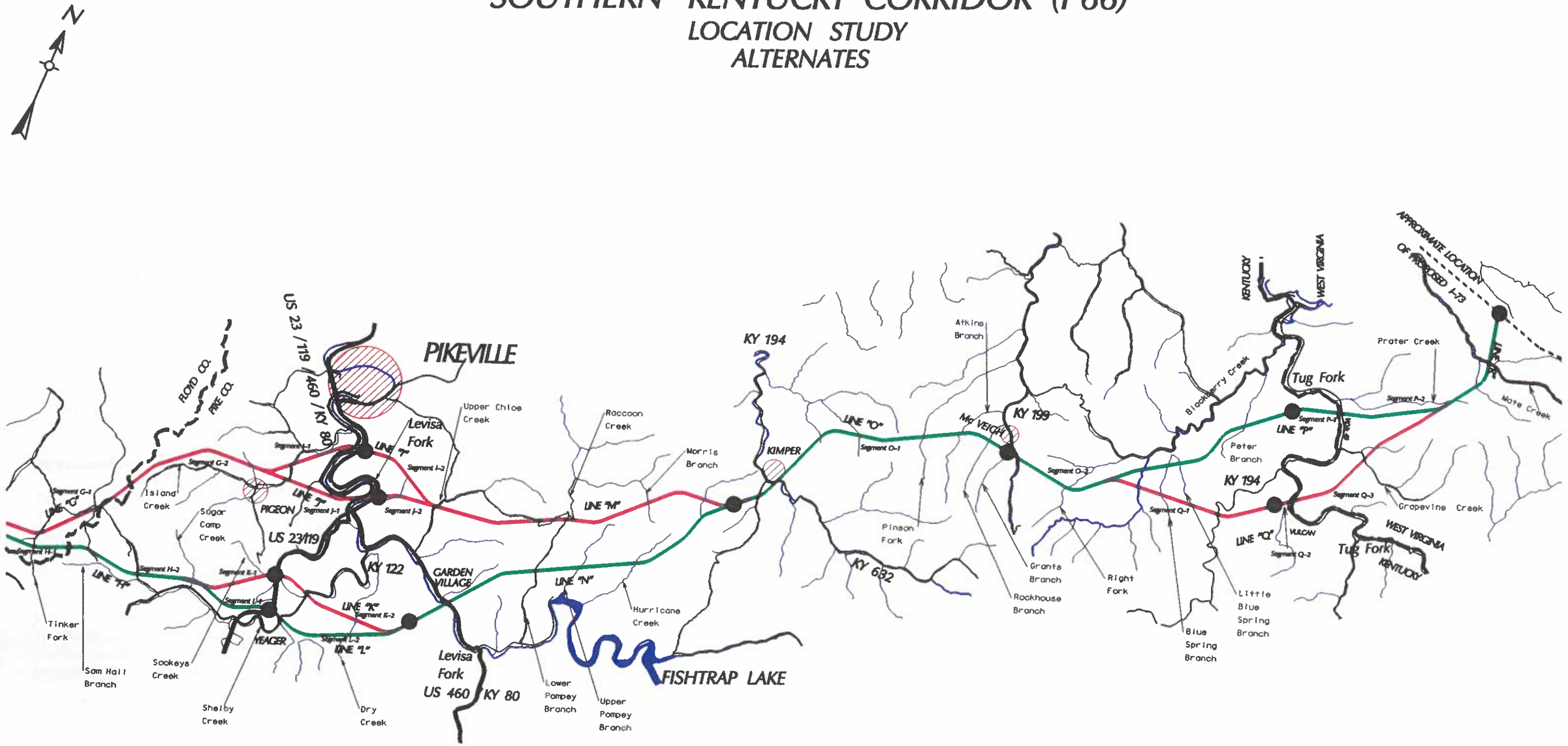
Line A (Northern Alignment)
The Southern Kentucky Corridor (I-66) alignment begins at an interchange with the Daniel Boone Parkway approximately 600 meters west of the KY 451 interchange near Hazard. The alignment then proceeds north easterly around Hazard and north of the partial controlled access portion of KY 80 to a new interchange with KY 15 between Second Creek and KY267 (Line Segment A-1.)

SOUTHERN KENTUCKY CORRIDOR (I 66)

LOCATION STUDY

ALTERNATES

SOUTHERN KENTUCKY CORRIDOR (I 66)
LOCATION STUDY
ALTERNATES



● *POSSIBLE INTERCHANGE LOCATIONS*

From the KY 15 interchange, the alternate then proceeds easterly to an interchange with KY 80 east in the vicinity of KY 1146 near Bulan (Segment A-2).

From the KY 80 east interchange, the alignment generally runs east and parallels KY 1088 on the north until reaching the Knott County Line (Segment A-3).

From the Knott County line, the alignment proceeds easterly crossing KY 721 near Bee Tree Gap and then to a crossing of KY 1231 in the vicinity of Right Fork to an interchange with KY 160 south of Hindman in the vicinity of KY 3391 intersection (Segment 4).

From the KY 160 interchange, the alignment generally parallels KY 160 until it becomes common with Line B at Station 51+200 (Segment A-5)

Line B (Southern Alignment)
This alignment of the Southern Kentucky Corridor (I-66) begins approximately 600 meters west of the KY 451 interchange near Hazard. The alignment then proceeds south and eastward generally paralleling Browns Creek on the south. Upon approaching the head of Browns Creek the alignment turns northeast toward Fourseam where an interchange is provided. An interchange is located near Fourseam on a connector road to KY 15 since an adequate location was not identified for a direct connection with KY 15. (Segment B-1).

This alignment proceeded northeasterly crossing KY 15 and the North Fork of Kentucky River in the vicinity of Glomawr. It continued along Raccoon Creek until reaching the top of the mountain ridge. The alignment generally followed the mountaintop to the county line with Knott County Station 29+000. (Segment B-2).

The alignment stayed on top of the mountain crossing KY 1088 near station 36+150 and proceeded along the mountain top until interchanging with KY 1231 at Station 42+250 (Segment B-3).

From the KY 1231 interchange, the alignment extends northeasterly to a crossing with KY 160 near Brinkley. The terrain in this area was not conducive to an interchange location, so the alignment continued eastward until it became common with Line A at Station 51+200 where an interchange with KY 1393 was located. This interchange provides access to Carr Fork Reservoir, Hindman and Alice Lloyd College (Segment B-4).

Line C (Common Alignment)
Line A and Line B become common to form Line C which begins at an interchange with KY 1393 and proceeds eastward along the top of the mountain, a distance of approximately 5.8 km (3.6 miles), where it separates into Lines D and E at Station 57+000.

Line D (Northern Alignment)
This alignment begins on top of a mountain at Station 57+000 and proceeds in a northward direction until it approaches KY 7. It then generally parallels KY 7 on the northwest side due to Beaver Creek and the CSX Railroad being on the east side of KY 7. An interchange is provided in the vicinity of Beaver Creek School before reaching the community of Topmost (Segment D-1).

The alignment then proceeds eastward crossing KY 7, Beaver Creek and the CSX Railroad north of Topmost and continues up Rock Lick Branch and crosses the mountain into Floyd County (Segment D-2).

From the Floyd County Line, the alignment continues eastward on a down-grade to and along Wolfpen Branch to an interchange with KY 122 north of Jack's Creek and the W. D. Osborne Elementary School. It then proceeds up Riley Creek a short distance (Station 75+600) where the line becomes common with Line E (Segment D-3).

Line E (Southern Alignment)
The segment of the alignment begins on top of a mountain at Station 57+000 and proceeds in an eastward direction to the Right Hand Fork of Bill's Branch and Bill's Branch to an interchange with KY 7 near Kite (Segment E-1).

The alignment then continues in a generally eastward direction along Bates Branch to the top of a ridge where it crosses the Floyd County Line (Segment E-2).

The alignment continues eastward from the Knott County Line along the ridge to Blue Creek, then following Blue Creek and Jack's Creek to an interchange with KY 122 near Jack's Creek and south of the W. D. Osborne Elementary School. The alignment then proceeds eastward a short distance and becomes common with Line D at Station 75+600 where Line F is formed (Segment E-3).

Line F (Common Alignment)
This alignment segment begins where Line D and E become common at Station 75+600 and proceeds northward along Riley Branch crossing KY 979 near Ligon twice with two ramps of the interchange at each crossing. Line F splits into Line G and Line H at the eastern ramps of the divided interchange.

Line G (Northern Alignment)
This alignment begins at the eastern limit of the KY 979 interchange and extends in a northeastward direction crossing several ridge lines. This segment ends at the Pike County Line (Segment G-1).

The second segment begins on top of the ridge at the Floyd County Line and proceeds northeastward and turns east running generally north and parallel to Island Creek. This alignment then develops into two on the approach to a crossing of the Levisa Fork. The alignment separates into Lines I and J near the community of Pigeon on KY 3416 (Segment G-2).

Line H (Southern Alignment)
This line segment begins at the eastern limit of the KY 979 interchange and extends eastward across several ridge tops, Tackett Fork and the right fork of Tinker Fork before reaching the Pike County Line at Station 85+150 on a mountain ridge top (Segment H-1).

The second segment begins at the Floyd County Line and extends east then generally parallels to the north of the Sam Hall Branch Road and KY 122 until it divides into two alignments (Lines K and L) just east of Sugar Camp Creek at Station 90+000 (Segment H-2).

Line I
This line segment begins at the east end of Line Segment G and turns to the northeast crossing the Levisa Fork and US 23, US 119, US 460, and KY 80 with an interchange on the east side and south of the KY 1426 intersection with US 23 (Segment I-1).

The second segment extends southeastward crossing Buck Branch, KY 1460 and Upper Chloe Creek before becoming common with Line J to form Line M (Segment I-2).

Line J
This line segment begins at the east end of Line Segment G and continues in an eastward direction while crossing Island Creek and Marion Branch. It then turns toward the northeast and crosses the Levisa Fork and US 23 with an interchange on the east side (Segment J-1).

From the US 23 interchange, Line J then turns toward the east before crossing Buck Branch, KY 1460 and Upper Chloe Creek where it becomes common with Line I to form Line M (Segment J-2).

Line K
This line segment begins at the east end of Line Segment H (Station 90+000) and turns northeast crossing Sookies Creek and interchanging with US 23/119 (Segment K-1).

From the US 23 interchange the alignment continues eastward crossing Shelby Creek, KY 122 and Dry Creek and becomes common with Line L at Station 98+000 to form Line N (Segment K-2).

Line L
This line segment begins at the east end of Line H (Station 90+000) and turns east to US 23/119 and interchanges south of Sookies Creek (Segment L-1).

From the US 23/119 interchange, the alignment then crosses Shelby Creek and KY 122 before turning toward the northeast and a crossing of Dry Creek before becoming common with Line K at Station 98+000 to form Line N (Segment L-2).

Line M (Northern Alignment)
This line segment begins where Lines I and J become common and continues toward the east crossing KY 3418, Morris Branch and Raccoon Creek before becoming common with Line N at Station 112+600 to form Line O, west of Kimper.

Line N (Southern Alignment)
This line segment begins where Lines K and L become common (Station 98+000) and continues in a northeastward direction crossing the CSX Railroad and the Levisa Fork near the KY 3226 intersection and interchanging with a connector road to Greasy Creek which provides access to US 460/KY 80. It then continues toward the northeast crossing another CSX Rail line, Lower Pompey Branch, KY 1441, Upper Pompey Branch just beyond the reaches of Fishtrap Lake and Fishtrap Ridge Line Road. It turns north along the upper reaches of Hurricane Branch and becomes common with Line M at Station 112+600 to form Line O west of Kimper.

Line O (Common Alignment)
This line segment has no other alternates from Kimper to east of McVeigh. The terrain is very difficult with changes in elevation exceeding 240 meters (790') over short distances. Line O begins at Station 112+600 where Lines M and N become common near Barrett Fork. The alignment proceeds eastward from the interchange with a connector road to KY 194 and crosses Elkhorn Creek, KY 194 south of Kimper, KY 632, the CSX Rail line and Johns Creek. The alignment then turns toward the north and east and crosses the upper reaches of Pinson Fork, Atkins Branch and Rockhouse Branch before interchanging with a connector road at Grants Branch giving access to KY 199 at McVeigh (Segment O-1).

This alignment continues eastward crossing Pond Creek, KY 199 and the mountain. It then continues northeast crossing the Right Fork of Blackberry Creek and runs south of and generally parallel to the Right Fork of Blackberry Creek where the Line divides into Line P and Q, at approximately Station 129+000 (Segment O-2).

Line P (Northern Alignment)
This line segment begins at Line O, Station 129+000 and continues northeastward crossing the Left Fork of Blackberry Creek, KY 3419, Blue Spring Branch, Little Blue Spring Branch and Peter Branch. It then turns toward the east and interchanges using a connector road to West Virginia 49 before crossing the Tug Fork and the Kentucky/West Virginia State Line (Segment P-1).

The alignment crosses the Tug Fork and WV 49 and proceeds generally parallel but to the south of Prater Creek. This line becomes common with Line Q at the Prater Creek headwaters near Station 142+250 (Segment P-2).

Line Q (Southern Alignment)
This line segment begins at Line O, Station 129+000 and continues eastward crossing the left fork of Blackberry Creek, Blue Spring Branch, KY 194 and interchanges with KY 194 north of Phelps (Segment Q-1).

The alignment proceeds eastward from the KY 194 interchange to the Kentucky/West Virginia State Line (Segment Q-2).

This alignment continues eastward from the Kentucky/West Virginia State Line approximately 8 km until the line becomes common with Line P (Segment Q-3).

Line R (Common Alignment)
This line begins where Lines P and Q become common (Station 142+500) and turns to the north after crossing the Norfolk and Southern Railroad, Grapevine Creek and Mate Creek. The alignment ends with an interchange with the proposed alignment for Interstate 73.

TRAFFIC

A traffic model was developed as part of the *Southern Kentucky Corridor (I-66) Economic Justification and Financial Feasibility Study*. The model was a regional model that included all of Kentucky and parts of all the surrounding states including West Virginia. The forecast year for the traffic model was 2025. Basically, the year 2025 traffic for the sections of I-66 from Hazard to West Virginia was approximately 12500 vehicles per day with 25 percent trucks. The truck percentage is slightly higher than the percentage identified in the Kentucky Transportation Center feasibility study, due to the inability of the truck model used in the study to properly reflect the magnitude of coal haul in eastern Kentucky.

COST ESTIMATES

The cost estimates for the Southern Kentucky Corridor (I-66) Location Study was an assemblage of design, right of way, utility and construction estimates to complete a total project cost for each segment. The various line segments are identified in the Cost Estimate Table and defined in narrative form in the report section titled "Alternate Alignments." To better understand the scope of each cost phase a more detailed explanation is provided.

- **Design Costs**
  This project phase includes the preliminary and final project design, the environmental assessment to meet the NEPA requirements and the geotechnical analysis to complete this pre-construction phase of the project. For study cost purposes, this phase was estimated to cost between 3 to 4 ½ percent of the construction costs. The lower percentage was used where the construction segment was in an isolated mountainous area where excavation costs were extremely high. All other areas used 4 ½ percent as a standard condition.

- **Right of Way Costs**
  A field review was made of the alternate alignments including a visit to the local Property Tax Office. The review of tax maps allowed a general value of property to be established. A visit to the Department of Natural Resources also allowed a general assessment of mineral resource activities. Past history with right of way conditions in eastern Kentucky provided a source for cost of condemnations.

  Using these information sources we were able to assemble total acres of right of way takings and costs, total parcel encroachments and residential and business acquisitions, and special property impacts (cemetery, churches, schools, etc.), mineral resource costs and condemnation and administrative cost of accommodating the right of way impacts of this project.

- **Utility Costs**
  A field review of the alignments provide insight into potential relocation impacts of the proposed SKC (I-66) project on the utility companies in the area. The field review provided names, locations, special features such as transmission towers, substations, pump stations, rail and spur lines, etc.

  A listing of utility companies with potential impacts was compiled and a cost of impact was estimated.

- **Construction Costs**
  The construction cost was estimated by utilizing the digital terrain model and placing alternate alignment (plan and profile geometrics) to acquire excavation totals. The terrain model affords the opportunity to quickly evaluate the cut of fill conditions of the numerous alignments to determine best-fit conditions. In this eastern Kentucky area the "best-fit" condition still means many thousand cubic meters of excavation and numerous structures of very significant length and cost.

  The cost estimates were developed by adjusting the alignment profiles both horizontal and vertical to meet the geometric design standards for an interstate type highway and for the terrain conditions. The result of this engineering effort was numerous curves in the alignments and steep grades (approaching 5.0 percent) throughout the project from Perry County to West Virginia.

  The method for estimating the cost was to determine the excavation and pavement quantities and then expanding the roadway estimate by $1,000,000 a kilometer for guard rail, seeding and protection, etc. to end with a total roadway construction cost. The structures (large culverts and bridges) were estimated separately using the unit prices shown in the Construction Cost Estimate Table.

SOUTHERN KENTUCKY CORRIDOR (I-66)
COST ESTIMATES

(Cost in $ millions)

Line Sgmt	Desc. of Location From To	Length km.	Length mi.	Design Cost & Environ., Geotech	Right of Way Cost	Right of Way Parcels	Right of Way Reloc	Utilities Cost	Utilities #-Cos.	Const.	Const. Eng. & Contg.	Total Cost
A-1	DB Pkwy to KY 15	7.30	4.54	3.50	3.40	40	18	2.20	8	78.20	7.80	95.1
A-2	KY 15 to KY 80 East	7.90	4.91	4.70	3.70	42	20	2.40	9	105.60	10.60	127.0
A-3	KY 80 to Knott Co Ln	6.40	3.98	3.20	4.60	53	25	2.90	8	71.90	7.20	89.8
A-4	Knott Co Ln to KY I-60	17.20	10.69	8.00	7.40	75	29	4.80	10	196.80	19.70	236.7
A-5	KY 160 to Line C	3.50	2.17	1.30	1.80	21	8	1.40	9	28.80	2.90	36.2
B-1	DB Pkwy to KY 15	13.30	8.26	6.90	5.70	60	25	3.50	8	153.80	15.40	185.3
B-2	KY 15 to Knott Co line	5.70	3.54	4.30	5.70	50	30	3.50	10	94.10	9.40	117.0
B-3	Co. Ln. to KY 1231	13.25	8.23	3.80	3.20	30	7	1.60	10	85.10	8.50	102.2
B-4	Ky 1231 to Line C	8.95	5.56	2.70	2.10	20	5	1.10	12	59.60	5.90	71.4
C	Line A to Line D	5.80	3.60	2.00	4.70	60	22	4.10	12	44.80	4.50	60.1
D-1	Line C to KY 7	10.00	6.21	6.00	4.60	63	12	3.30	12	133.10	13.30	160.3
D-2	KY 7 to Co Ln.	4.50	2.80	3.20	1.80	27	5	3.40	8	71.70	7.20	87.3
D-3	Co. Ln. to Ln F	3.80	2.36	2.00	1.90	18	6	10.50	10	50.40	5.00	69.8
E-1	Line C to KY 7	6.10	3.79	2.10	4.10	20	6	1.90	12	46.50	4.70	59.3
E-2	KY 7 to Co Ln.	5.70	3.54	3.00	3.50	16	4	1.80	8	111.50	11.20	131.0
E-3	Co. Ln. to Ln F	6.80	4.23	2.10	3.50	30	16	2.50	10	46.10	4.60	58.8
F	Line E to Line G	5.00	3.11	2.80	3.40	50	12	4.40	10	62.20	6.20	79.0
G-1	KY 979 to Pike Co Ln	7.35	4.57	7.80	2.40	32	11	1.40	10	174.00	17.40	203.0
G-2	Pike Co Ln to Line I	3.75	2.33	.90	2.10	14	4	2.50	8	20.80	2.10	28.4
H-1	KY 979 to Pike Co Ln	4.60	2.86	4.60	2.80	34	15	1.00	10	102.90	10.30	121.6
H-2	Pike Co Ln to Line K	4.05	2.52	1.50	2.60	12	7	8.00	10	32.60	3.30	48.0
I-1	Line G to US 23	4.65	2.89	2.30	1.60	15	3	.80	11	52.00	5.20	61.9
I-2	US 23 to Line M	6.75	4.19	5.40	2.40	22	8	1.20	12	120.10	12.00	141.1
J-1	Line G to US 23	6.25	3.88	4.10	2.00	20	6	1.10	12	90.20	9.00	106.4
J-2	US 23 to Line M	4.35	2.70	2.90	1.40	13	3	.80	11	64.80	6.50	76.4
K-1	Line H to US 23	4.25	2.64	2.90	1.60	20	5	1.30	10	63.70	6.40	75.9
K-2	US 23 to Line N	5.95	3.70	4.10	2.30	28	7	1.80	11	90.50	9.10	107.8
L-1	Line H to US 23	4.35	2.70	2.10	1.70	20	6	1.10	10	46.30	4.60	55.8
L-2	US 23 to Line N	5.85	3.64	4.80	2.30	29	8	1.40	11	106.40	10.60	125.5
M	Line I to Line O	10.30	6.40	6.50	3.90	70	13	2.20	11	144.60	14.50	171.7
N	Line K to Line O	13.90	8.64	11.90	1.00	65	24	.50	11	263.20	26.30	302.9
O-1	Line M to KY 199	11.20	6.96	7.40	0.90	8	4	.40	8	210.00	21.00	239.7
O-2	KY 199 to Line Q	3.80	2.36	3.10	7.10	57	31	3.00	10	68.80	6.90	88.9
P-1	Line O to WV St line	8.20	5.10	6.20	2.70	35	19	.80	10	137.40	13.70	160.8
P-2	WV St. line to Line R	7.00	4.35	2.70	2.20	25	11	.70	8	59.00	5.90	70.5
Q-1	Line O to KY 194	7.25	4.50	7.20	2.70	27	15	.80	8	159.00	15.90	185.6
Q-2	KY 194 to WV St line	.60	.37	.30	.30	8	4	.10	6	6.70	.60	8.0
Q-3	WV St line to Line R	8.00	4.97	6.10	2.90	29	13	.90	10	135.50	13.60	159.0
R	Line P to I-73	3.35	2.08	2.80	1.20	14	6	.40	10	62.20	6.20	72.8

Cost Estimates for each defined segment were assembled into total segment costs as illustrated in the Table titled "Southern Kentucky Corridor (I-66) Cost Estimates.

RECOMMENDED ALIGNMENT SELECTION

As previously mentioned, the principle environmental considerations were the number of land parcels impacted and the number of relocations that resulted. Cost and alignment profiles were also considered in the evaluation process that lead to a recommended alignment.

The following are the general considerations that were used in the evaluation of alignment options.

Line A (Northern) versus Line B (Southern)

Categories	Line A	Line B
Length	42.3 km (26.3 miles)	41.2 km (25.6 miles)
Total Cost	$584,800,000	$475,900,000
Cost per km	$13,830,000	$11,550,000
Cost per mile	$22,240,000	$18,590,000
Parcels	231	160
No. of Relocations	100	67

Line B is the recommended alignment option in the comparison. Line B is the southern option and has several very strong advantages.

1. Fewer land parcels impacted.
2. Fewer residential and business relocations.
3. Less total project cost.
4. Affords a southern bypass of Hazard from Daniel Boone Parkway to KY 15 south.
5. Alignment profile is better than Line A due to being able to reach and stay up on the mountain for approximately 21 km (13 miles) from KY 15 to KY 160.
6. Even though Line B is on top of the mountain, an interchange can be provided with KY 1231 and access to Carr Fork Reservoir.
7. There is less travel distance.

The principle negative condition associated with the recommended Line B is the indirect access to KY 80 and northeast Hazard. This condition could be partially remedied by including segment A-1 to the project which then provides for a complete KY 15 bypass of Hazard.

Line C

This is a common alignment for both the Northern and Southern Alignments.

Categories	Line C
Length	5.8 km (3.6 miles)
Total Cost	$60,100,000
Cost per km	$10,360,000
Cost per mile	$16,700,000
Parcels	60
No. of Relocations	22

The terrain and community to be served by the Southern Kentucky Corridor (I-66) roadway limited the number of alignment options in this area. Although several alignment options were studied, this alignment C was the preferred location primarily due to construction costs.

Line D (Northern) versus Line E (Southern)

Categories	Line D	Line E
Length	18.3 km (11.37 miles)	18.6 km (11.56 miles)
Total Cost	$317,400,000	$249,100,000
Cost per km	$17,340,000	$13,390,000
Cost per mile	$27,920,000	$21,550,000
Parcels	108	66
No. of Relocations	23	26

The southern alignment (Line E) is recommended even though the length is longer and the number of relocations is slightly greater. The reasons for this recommendation are:

1. Total project cost is less.
2. Total number of land parcels is less.
3. Construction is less difficult because Line D follows along KY 7 in a side hill cut and Line E crosses over KY 7 and goes up Bates Branch where there is less traffic and fewer parcels.
4. Neither line has a good entry at Jack's Creek but the chance of missing the W. D. Osbourne Elementary School is better with Line E.
5. Line D will impact a cemetery at Jack's Creek.

Line F

This is a common alignment for both the northern and southern alignments.

Categories	Line F
Length	5.0 km (3.11 miles)
Total Cost	$79,000,000
Cost per km	$15,800,000
Cost per mile	$25,400,000
Parcels	50
No. of Relocations	12

Due to the terrain and development in the Corridor, this was the only suitable location for the roadway alignment. Several were studied but the Riley Creek location provides the least negative impact, although as noted in the cost per km category it was one of the highest encountered on the project.

Line G-M (Northern) versus Line H-N (Southern)

The two basic northern and southern alignments have relatively short deviations on the approach to the Levisa Fork and US 23 crossings south of Pikeville. Neither deviation (Line I and J on the Northern Alignment or Lines K and L on the Southern Alignment) seems to make much difference in the overall impact of the proposed roadway as noted below.

Categories/Line	Northern		Southern	
	G-I-M	G-J-M	H-K-N	H-L-N
Length km/mile	32.8/20.4	32.0/19.9	32.75/20.36	32.75/20.36
Total Cost	606,100,000	585,900,000	656,200,000	653,800,000
Cost per km	$18,480,000	$18,310,000	$20,037,000	$19,960,000
Cost per mile	$29,720,000	$29,450,000	$32,230,000	$32,130,000
Parcels	153	149	159	160
No. of Relocations	39	37	58	60

Although the southern alternate is approximately $50,000,000 more than the northern alternate and also has 21 more residential and business relocations, the southern alignment is the recommended alignment. The reasons for recommending the southern alignment, actually alignment H-L-N is due to regional accessibility. The southern alignment has two interchanges and improved access to Fishtrap Lake and Elkhorn City. This southern alignment best complements the Big Sandy Area District desires and recommendations for regional development.

This was the most difficult segment of the Southern Kentucky Corridor (I-66) to locate. The terrain, the Levisa Fork, the major highways, the rail lines and development patterns caused this section of the SKC (I-66) to have high impact and high cost. The final alignment for this section of SKC (I-66) may be somewhere between the northern and southern alignments or a combination. But, this study is recommending the H-L-N alignment.

Line O
This is a common alignment for both the northern and southern alignments.

After studying several alignment options, this alignment was selected. The terrain is very difficult in this general area because the proposed highway corridor is east-west and the drainage relief is north-south. This condition means the excavation costs are very high and numerous large structures will have to be constructed at great expense. This alignment could be shifted as much as several thousand meters and the cost of the project would remain basically the same.

Categories	Line O
Length, km/miles	15.0 (9.32)
Total Cost	$328,600,000
Cost per km	$21,910,000
Cost per mile	$35,258,000
Parcels	65
No. of relocations	35

Line P (Northern) versus Line Q (Southern)
Line P generally follows Blackberry Creek with its high concentration of development and Line Q accesses the southern side of the mountain of Peter Creek and the community of Phelps on the Kentucky side. On the West Virginia side of the Tug Fork, Line P utilizes Prater Creek as a means of accessing the mountain grades. Whereas, Line Q involves some very extensive excavation costs to reach the ridge tops.

Categories	Line P	Line Q
Length km (miles)	15.2 (9.45)	15.85 (9.84)
Total Cost	231,300,000	$352,600,000
Cost per km	$15,220,000	$22,250,000
Cost per mile	$24,500,000	$35,800,000
Parcels	60	64
No. of Relocations	30	32

The northern alignment (Line P) is recommended for obvious reasons, namely:
1. There is over $100,000,000 in project cost savings on this line.
2. There is less travel distance.

The principle negative condition associated with the recommended Line P is the lack of direct access to Phelps.

Line R
This line is common for both the northern and southern alignment. This alignment could shift significantly because the location of Interstate 73 has not been precisely determined. Therefore, the costs and impacts of this segment could and will change as the final alignments of the Southern Kentucky Corridor (I-66) and Interstate 73 become more definite.

Categories	Line R
Length km(miles)	3.35 (2.08)
Total Cost	$72,800,000
Cost per km	$21,700,000
Cost per mile	$35,000,000
Parcels	14
No. of Relocations	6

PUBLIC INVOLVEMENT

The purpose of this Southern Kentucky Corridor (I-66) Location Study was not to determine the final alignment location for the roadway but to narrow the corridor from fifty miles to a narrow band that is about a mile in width. In addition, the purpose of the study was to provide a more definite cost for the roadway from Hazard east to the Interstate 73 connection in West Virginia so that careful consideration can be given to incorporating priority sections of the proposed route into the Kentucky Transportation Cabinet Six Year Highway Plan.

Therefore, with no intention of providing a final location condition into this study and with the need for programming future Transportation Cabinet funding for necessary future phases, the decision was made to provide public participation in the Location Study to an exposure of possible alignments to the two area development districts (ADDs): Kentucky River (Perry and Knott Counties) and Big Sandy (Floyd and Pike Counties) that represent the SKC (I-66) impact area.

The two ADD responses are contained in the report appendix. Basically, the responses from the Kentucky River ADD indicated the Southern alignment was preferable due to fewer relocations, use of previously mined land and opening up some areas that are currently remote. The Big Sandy ADD preferred the recommended location of the SKC (I-66) due to accessibility to area attractions such as Hatfield-McCoy Feud Sites, Fishtrap Lake, Trail and Wildlife Management Area, Breaks Interstate Park, historic Matewan, West Virginia, etc. Also, there was an expression to utilize roadway surplus excavation to level spots near the proposed Interstate Highway for possible industrial park usage.

Based on the ADD responses, the recommended alignment for the Southern Kentucky Corridor (I-66) from Hazard to West Virginia as illustrated in the next report section has received general corridor acceptance.

RECOMMENDED ALIGNMENT SUMMARY

As noted in report sections "Recommended Alignment Selection" and "Public Involvement" the recommended alignment for the Southern Kentucky Corridor (I-66) project is illustrated on the key maps. In

addition the key maps also show the layout sheet number for a particular project location. The key map is on a scale of 1:150000 where the plan/profile sheets are on a scale of 1:12000 horizontal and 1:6000 vertical.

The recommended alignment is denoted as line B-C-E-F-H-L-N-O-P-R. The alignment is basically the southern alignment with only line segment P (Blackberry Creek and access to historic Matewan) a part of the northern alignment.

The following is a summary of the recommended alignment.

Recommended Line B-C-E-F-H-L-N-O-P-R

Recommended Line Segment	Length (km/miles)	Total Cost $ in millions	Cost per km $ in millions	Cost per mi. $ in millions	Parcels	No. of reloc.
Line B	41.2 km (25.6 mi)	$475.90	$11.55	$18.59	160	67
Line C	5.8 km (3.6 mi)	$60.10	$10.36	$16.70	60	22
Line E	18.6 km (11.56 mi)	$249.10	$13.39	$21.55	66	26
Line F	5.0 km (3.11 mi)	$79.00	$15.80	$25.40	50	12
Line H-L-N	32.75 km (20.36 mi)	$653.80	$19.96	$32.13	160	60
Line O	15.00 km (9.32 mi)	$328.60	$21.91	$35.26	65	35
Line P	15.20 km (9.45 mi)	$231.30	$15.22	$24.50	60	30
Line R	3.35 km (2.08 ml)	$72.80	$21.70	$35.00	14	6
Total	**136.90 (85.08)**	**$2150.60**	**$15.71**	**$25.28**	**635**	**258**

As noted in the Cost Estimate Table for each line segment it is possible to divide the recommended alignment into nineteen (19) line segments with accompanying cost and right of way impacts. The above recommended alignment can also be divided into line segments by county as noted below:

Recommended Alignment County Summary

Perry County		Cost in millions				
Line Segmnt	Distance	Design	ROW	Utility	Const	Total
B-1 thru B-2	19.0 km (11.8 mi)	$11.20	$11.40	$7.00	$272.70	**$302.3**
Total	**19.0 km (11.8 mi)**	**$11.20**	**$11.40**	**$7.00**	**$272.70**	**$302.3**

Knott County		Cost in millions				
Line Segmnt	Distance	Design	ROW	Utility	Const	Total
B-3 thru B-4	22.20 km-(13.79 mi)	6.50	5.30	2.70	159.10	**173.60**
C	5.80 km-(3.60 mi)	2.00	4.70	4.10	49.30	**60.10**
E-1 thru E-2	11.80 km-(7.33 mi)	5.10	7.60	3.70	173.90	**190.30**
Total	**39.80 km-(24.72 mi)**	**13.60**	**17.60**	**10.50**	**382.30**	**424.00**

Floyd County		Cost in millions				
Line Segments	Distance	Design	ROW	Utility	Const	Total
E-3	6.80 km-(4.23 mi)	2.10	3.50	2.50	50.70	**58.80**
F	5.00 km-(3.11 mi)	2.80	3.40	4.40	68.40	**79.00**
H-1	4.60 km-(2.86 mi)	4.60	2.80	1.00	113.20	**121.60**
Total	**16.40 km-(10.20 mi)**	**9.50**	**9.70**	**7.90**	**232.30**	**259.40**

Pike County		Cost in millions				
Line Segments	Distance	Design	ROW	Utility	Const	Total
H-2	4.05 km-(2.52 mi)	1.50	2.60	8.00	35.90	**48.00**
L-1 thru L-2	10.20 km-(6.34 mi)	6.90	4.00	2.50	167.90	**181.30**
N	13.90 km-(8.64 mi)	11.90	1.00	.50	289.50	**302.90**
O-1 thru O-2	15.00 km-(9.32 mi)	10.50	8.00	3.40	306.70	**328.60**
P-1	8.20 km-(5.10mi)	6.20	2.70	.80	151.10	**160.80**
Total	**51.35 km-(31.92 mi)**	**37.00**	**18.30**	**15.20**	**951.10**	**1021.60**

Mingo County W.VA.		Cost in millions				
Line Segments	Distance	Design	ROW	Utility	Const	Total
P-2	7.00 km-(4.35 mi)	2.70	2.20	.70	64.90	**70.50**
R	3.35 km-(2.08 mi)	2.80	1.20	.40	68.40	**72.80**
Total	**10.35 km-(6.43 mi)**	**5.50**	**3.40**	**1.10**	**133.30**	**143.30**

In summary the Recommended Alignment for the 137 kilometers (85.07 miles) section of the Southern Kentucky Corridor (I-66) from Hazard to West Virginia is expected to cost a total of $2.15 billion dollars or approximately $15.71 million per kilometer. Approximately 635 parcels of land are involved and 258 relocations are expected. This results in approximately 3 residential or business relocations per mile of interstate design highway. A state summary of cost is reflected below:

State Summary

State	Length (km/miles)	Design	ROW	Utility	Const	Total
Kentucky	126.55 km-(78.64mi)	71.30	57.00	40.60	1838.40	**2007.30**
West Virginia	10.35 km-(6.43 mi)	5.50	3.40	1.10	133.30	**143.30**
Total	**136.90 km-(85.07) mi)**	**76.80**	**60.40**	**41.70**	**1971.70**	**2150.60**

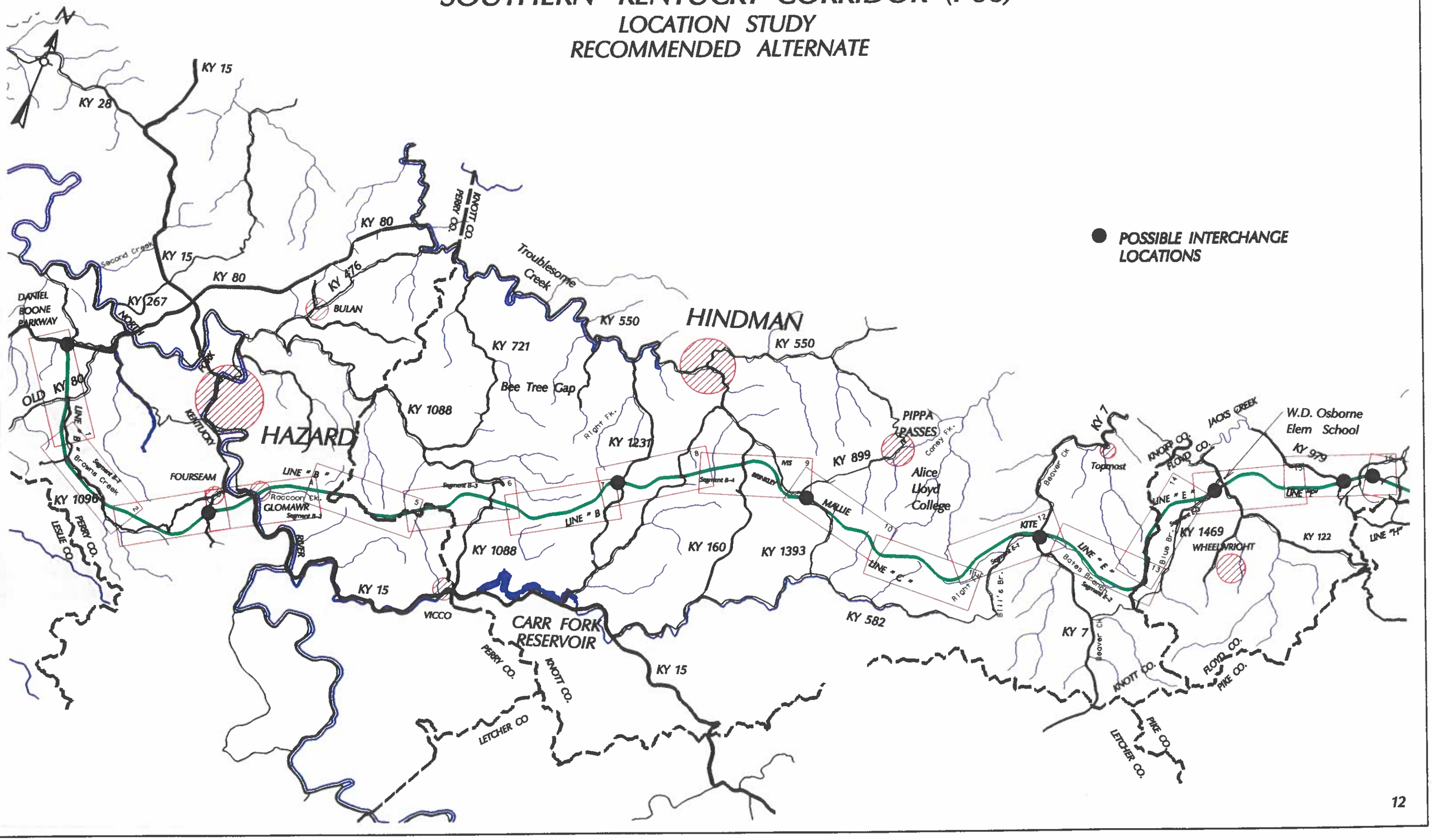
The impacts will be significant given the extensive coal reserves and blue line streams in eastern Kentucky. But when considering the benefits of the project, as documented in the "Southern Kentucky Corridor (I-66) Economic Justification and Financial Feasibility Study developed by the Kentucky Transportation Center", where economic development benefits due to job creation outweighed costs by almost 4 to 1, this Interstate 66 project seems to be a worthy undertaking of public investment.

The total project cost outlined in this Location Study is very much in line with the cost estimates developed for the University of Kentucky, Transportation Center financial feasibility study.

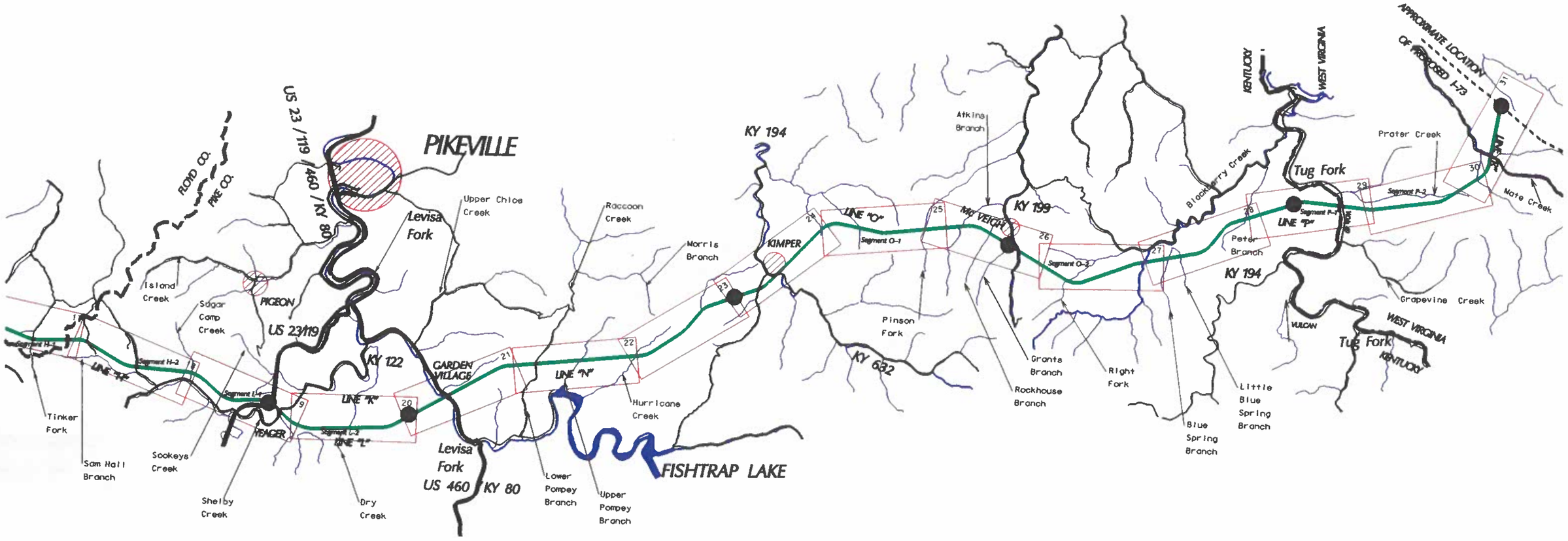
SOUTHERN KENTUCKY CORRIDOR (I 66)

LOCATION STUDY

RECOMMENDED ALTERNATE

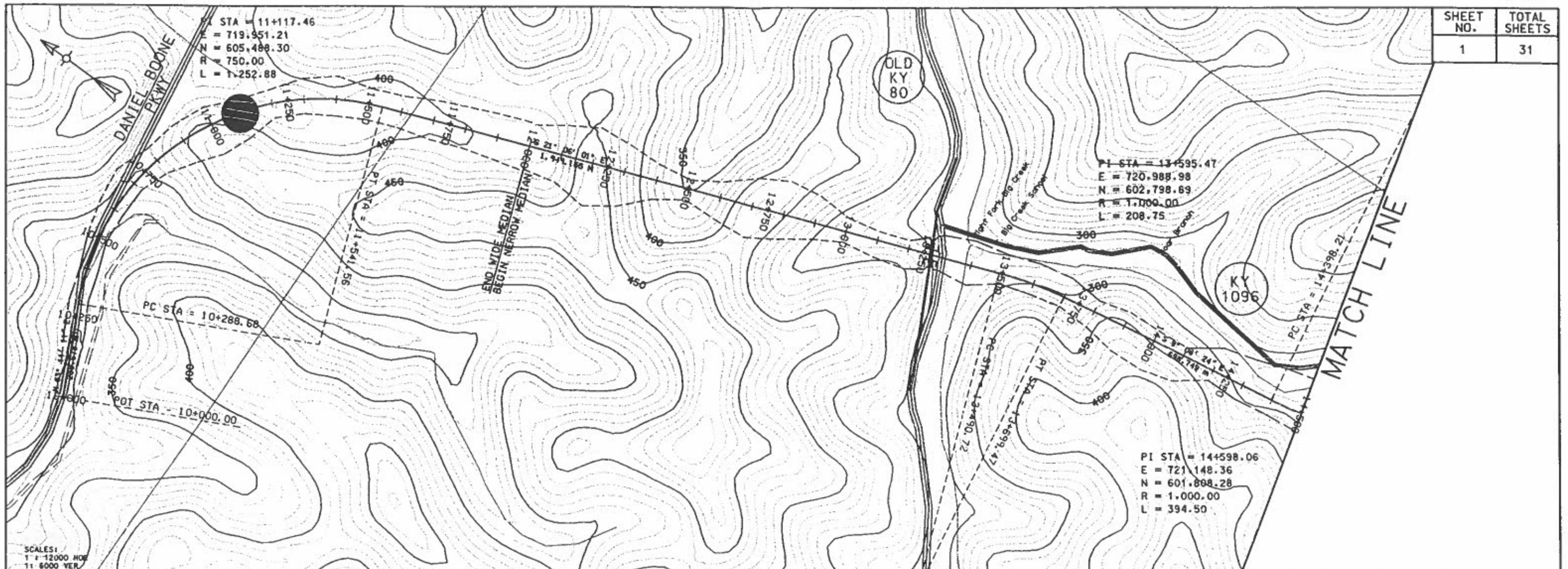


SOUTHERN KENTUCKY CORRIDOR (I 66)
LOCATION STUDY
RECOMMENDED ALTERNATE



SOUTHERN KENTUCKY CORRIDOR
I-66
LOCATION STUDY
APPENDIX

SHEET NO.	TOTAL SHEETS
1	31



SHEET NO.	TOTAL SHEETS
2	31

MATCH LINE

MATCH LINE

PI STA = 14+598.06
E = 721,148.36
N = 601,808.28
R = 1,000.00
L = 394.50

PI STA = 16+083.14
E = 721,932.41
N = 600,540.92
R = 800.00
L = 432.76

PI STA = 17+541.30
E = 723,238.24
N = 599,867.99
R = 2,000.00
L = 281.46

PI STA = 18+573.28
E = 724,213.26
N = 599,528.48
R = 800.00
L = 330.49

KY 1096

KY 1096

LOCAL ROAD

SCALE =
1" = 12000' HOR
1" = 6000' VER

Miniyard Branch

VPI STA = 15+000.00
VPI EL = 343.14
CURVE LEN = 750.00
K = 115

VPI STA = 16+200.00
VPI EL = 298.46
CURVE LEN = 450.00
K = 82

VPI STA = 17+600.00
VPI EL = 347.46
CURVE LEN = 610.00
K = 111

VPI STA = 18+450.00
VPI EL = 330.46
CURVE LEN = 420.00
K = 65

630 570 510 450 390 330 270 210 150 90

14+500 14+750 15+000 15+250 15+500 15+750 16+000 16+250 16+500 16+750 17+000 17+250 17+500 17+750 18+000 18+250 18+500 18+750 19+000

SHEET NO.	TOTAL SHEETS
3	31

MATCH LINE

PI STA = 19+448.44
E = 725,080.52
N = 599,597.03
R = 800.00
L = 135.91

N 85° 31' 50" E
644.184 ft

PT STA = 19+580.32

BEGIN NARROW MEDIAN
END WIDE MEDIAN

KY 1096

PC STA = 21+165.68

PT STA = 21+361.18

PI STA = 21+839.66
E = 727,471.99
N = 599,377.60
R = 1,000.00
L = 1,186.10

PI STA = 23+464.23
E = 728,291.50
N = 600,564.97
R = 1,000.00
L = 531.88

N 27° 18' 22" E
840.056 ft

PC STA = 23+191.84

MATCH LINE

LOCAL ROAD

Buffalo Fork

SCALE :
1" = 12000 HOR.
1" = 6000 VER.

VPI STA = 20+700.00
EL = 431.47

CC 1096

VPI STA = 21+100.00
VPI EL = 449.71
CURVE LEN = 800.00
K = 63

4.50%

VPI STA = 21+500.00
EL = 439.71

VPC STA = 21+750.00
EL = 433.46

VPI STA = 21+900.00
VPI EL = 429.71
CURVE LEN = 300.00
K = 63

(-) 2.50%

VPI STA = 22+050.00
EL = 422.33

(-) 4.90%

VPC STA = 23+115.00
EL = 370.11

VPI STA = 23+485.00

VPI STA = [illegible]
VPI EL = 363.11
CURVE LEN = 370.00
K = 63

630
570
510
450
390
330
270
210
150
90

19+000 19+250 19+500 19+750 20+000 20+250 20+500 20+750 21+000 21+250 21+500 21+750 22+000 22+250 22+500 22+750 23+000 23+250 23+500

SHEET NO.	TOTAL SHEETS
4	31

PI STA = 23+464.23
E = 728,291.50
N = 600,964.97
R = 1,000.00
L = 531.88

PI STA = 24+542.46
E = 729,214.62
N = 601,546.72
R = 1,000.00
L = 363.94

PI STA = 26+218.43
E = 730,224.00
N = 602,889.72
R = 1,000.00
L = 430.16

PI STA = 27+085.54
E = 730,992.52
N = 603,305.70
R = 1,000.00
L = 272.88

LOCAL ROAD

Fourseam church

Buffalo Creek

Eagle Branch

N FORK KY RIVER

KY 15

Goodloe Creek

International Pride church

Elk Branch

MATCH LINE

MATCH LINE

SCALE :
1 : 12000 HOR
1 : 6000 VER

VPI STA = 23+300.00
VPI EL = 361.11
CURVE LEN. = 370.00

VPI STA = 24+100.00
VPI EL = 369.11
CURVE LEN. = 670.00

VPI STA = 25+500.00
VPI EL = 300.51
CURVE LEN. = 800.00
K = 66

VPC STA = 25+115.00
EL = 316.74

VPT STA = 25+885.00
EL = 346.76

VPT STA = 23+723.72
EL = 352.69

1.00%

-3.90%

6.00%

SHEET NO.	TOTAL SHEETS
5	31

MATCH LINE

MATCH LINE

Straight Fork Bee Branch

PERRY COUNTY
KNOTT COUNTY

PI STA = 29+888.43
E = 733,727.52
N = 603,926.60
R = 600.00
L = 456.70

PC STA = 29+648.38

PT STA = 30+105.08

PC STA = 30+509.92

PT STA = 30+866.20

PI STA = 30+772.54
E = 734,506.87
N = 603,461.62
R = 600.00
L = 495.10

PC STA = 31+568.58

PT STA = 31+924.95

PI STA = 31+745.12
E = 735,469.02
N = 603,743.99
R = 1,000.00
L = 356.74

SCALE :
1 = 12000 HOR
1 = 6000 VER

VPI STA = 29+000.00
VPI EL = 475.5
CURVE LEN = 221.00
RID 3.00%

VPC STA = 28+890.00
EL = 470.0

VPT STA = 29+110.00
EL = 478.63

VPC STA = 30+315.00
EL = 514.96

VPI STA = 30+700.00
VPI EL = 526.51
CURVE LEN = 770.00
RID (-) 4.00%

VPT STA = 31+085.00
EL = 511.1

VPC STA = 31+385.00
EL = 499.1

VPI STA = 31+600.00
VPI EL = 490.51
CURVE LEN = 430.00
CRV 2.80%

VPT STA = 31+815.00
EL = 499.81

VPI STA = 32+000.00
VPI EL = 510.11
CURVE LEN = 1.10
RID 3.50%

630 570 510 450 390 330 270 210 150 90

28+000 28+250 28+500 28+750 29+000 29+250 29+500 29+750 30+000 30+250 30+500 30+750 31+000 31+250 31+500 31+750 32+000 32+250 32+500

SHEET NO.	TOTAL SHEETS
6	31

MATCH LINE

MATCH LINE

PI STA = 33+317.00
E = 736,732.92
N = 604,684.96
R = 1,000.00
L = 186.40

KNOTT COUNTY
PERRY COUNTY

PC STA = 33+223.59

PT STA = 33+409.93

PC STA = 33+940.39

PT STA = 34+340.39

PI STA = 34+154.47
E = 737,485.40
N = 605,053.79
R = 600.00
L = 411.26

PI STA = 35+034.33
E = 737,862.69
N = 605,867.32
R = 600.00
L = 579.54

PC STA = 34+719.71

RT STA = 35+298.25

PC STA = 35+650.69

PT STA = 35+747.27

PI STA = 35+804.01
E = 738,670.27
N = 606,005.74
R = 1,000.00
L = 93.43

N 80°08'16" E
460.012

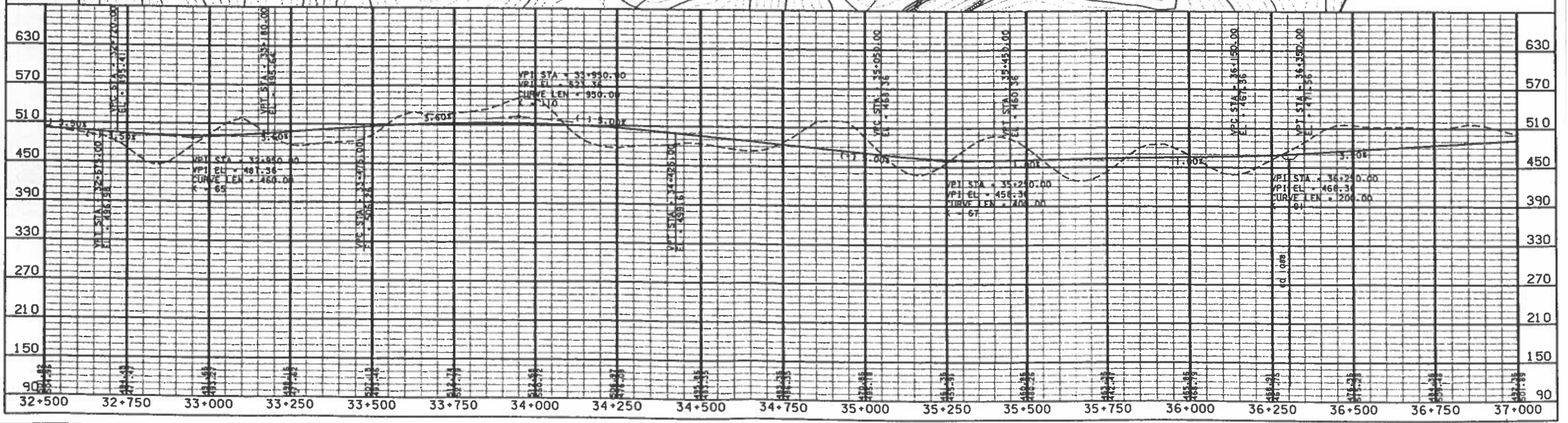
KY 1088

Kelly Fork Church

Area

Area

SCALE :
1 : 12000 HOR
1 : 6000 VER



SHEET NO.	TOTAL SHEETS
7	31

MATCH LINE

MATCH LINE

PI STA = 37+368.53
E = 740,230.02
N = 606,128.64
R = 600.00
L = 214.77

PC STA = 37+250.76

PT STA = 37+465.53

PC STA = 37+843.69

PT STA = 38+428.21

PI STA = 38+846.83
E = 741,569.48
N = 606,368.44
R = 600.00
L = 79.60

PC STA = 38+806.83

PT STA = 38+886.43

PI STA = 38+161.49
E = 740,994.26
N = 605,908.80
R = 600.00
L = 584.53

PC STA = 39+624.79

PT STA = 39+803.26

PI STA = 39+714.17
E = 742,818.61
N = 606,805.81
R = 600.00
L = 177.47

PC STA = 40+714.14

PT STA = 41+049.33

PI STA = 40+981.78
E = 743,180.21
N = 607,737.35
R = 600.00
L = 335.19

Kelly Fork Schoolhouse (abandoned)

Amb Log

SCALE :
1 = 12000 HOR
1 = 6000 VER

VPI STA = 38+350.00
VPI EL = 535.56
CURVE LEN = 540.00
K = 110
-1.10%
+1.10%

VPC STA = 38+080.00
EL = 538.82

VPT STA = 38+620.00
EL = 530.91

VPI STA = 39+450
EL = 516.16

VPI STA = 39+550
EL = 516.16

VPI STA = 39+550.00
VPI EL = 515.16
CURVE LEN = 200.00
K = 114
-1.00%
+1.00%

VPC STA = 40+700.00
EL = 526.66

VPI STA = 40+950.00
VPI EL = 529.16
CURVE LEN = 500.00
K = 114
-1.00%
+1.00%

VPT STA = 41+200.00
EL = 520.66

630 570 510 450 390 330 270 210 150 90

37+000 37+250 37+500 37+750 38+000 38+250 38+500 38+750 39+000 39+250 39+500 39+750 40+000 40+250 40+500 40+750 41+000 41+250 41+500

SHEET NO.	TOTAL SHEETS
8	31

PI STA = 41+922.37
E = 743,357.48
N = 608,670.25
R = 600.00
L = 668.80

PI STA = 42+643.57
E = 744,129.11
N = 608,882.44
R = 600.00
L = 112.77

PI STA = 43+367.32
E = 744,850.86
N = 608,940.61
R = 600.00
L = 551.75

PI STA = 44+142.88
E = 745,292.85
N = 609,528.96
R = 600.00
L = 325.15

PI STA = 45+113.75
E = 746,170.97
N = 610,061.93
R = 600.00
L = 110.98

KY 1231

KY 3391

MATCH LINE

MATCH LINE

SCALE :
1 : 12000 HOR
1 : 6000 VER

VPI STA = 42+050.00
VPI EL = 491.76

VPC STA = 42+450.00
VPI STA = 42+450.00
VPI EL = 490.76

VPI STA = 42+850.00
VPI EL = 484.91
CURVE LEN = 400.00

VPC STA = 43+050.00
VPI STA = 43+200.00
VPI EL = 512.51
CURVE LEN = 300.00

VPI STA = 43+350.00
VPI EL = 517.28

VPC STA = 44+170.00
VPI STA = 44+400.00
VPI EL = 516.31
CURVE LEN = 560.00

VPI STA = 44+610.00
VPI EL = 507.31

VPC STA = 45+000.00
VPI STA = 45+100.00
VPI EL = 490.51
CURVE LEN = 200.00

VPI STA = 45+200.00
VPI EL = 489.01

VPC STA = 45+300.00
VPI STA = 45+300.00
VPI EL = 478.51

630 570 510 450 390 330 270 210 150 90

41+500 41+750 42+000 42+250 42+500 42+750 43+000 43+250 43+500 43+750 44+000 44+250 44+500 44+750 45+000 45+250 45+500 45+750 46+000

SHEET NO.	TOTAL SHEETS
9	31

SCALE :
1 : 12000 HOR
1 : 6000 VER

MATCH LINE

MATCH LINE

KY 160

KY 899

PI STA = 46+473.84
E = 747,259.66
N = 610,877.69
R = 1,500.00
L = 119.96

PI STA = 47+684.96
E = 748,283.86
N = 611,824.22
R = 1,000.00
L = 120.92

PI STA = 49+000.00
E = 749,388.89
N = 612,356.56
R = 1,000.00
L = 1,609.92

PI STA = 50+290.38
E = 750,360.78
N = 610,951.87
R = 600.00
L = 737.07

PC STA = 46+413.83

PT STA = 46+533.79

PC STA = 47+550.08

PT STA = 49+576.01

PC STA = 49+867.25

Pigmen Branch

Watkins Branch

VPI STA = 46+100.00
VPI EL = 474.51
CURVE LEN = 100.00
K = 114
(-) 5.00%

VPT STA = 46+300.00
EL = 465.51

VPC STA = 47+190.00
EL = 409.74

(-) 5.00%

VPI STA = 47+800.00
VPI EL = 390.51
CURVE LEN = 620.00
K = 67

VPT STA = 48+110.00
EL = 403.74

4.27%

VPC STA = 48+325.00
EL = 408.65

XY 150

VPI STA = 49+600.00
VPI EL = 424.65
CURVE LEN = 750.00
K = 110
(+) 2.50%

VPT STA = 49+975.00
EL = 415.32

(+) 2.50%

VPC STA = 50+395.00
EL = 419.78

630 570 510 450 390 330 270 210 150 90

46+000 46+250 46+500 46+750 47+000 47+250 47+500 47+750 48+000 48+250 48+500 48+750 49+000 49+250 49+500 49+750 50+000 50+250 50+500

SHEET NO.	TOTAL SHEETS
10	31

KY 899

KY 1393

PI STA = 51+279.91
E = 751,410.45
N = 611,276.53
R = 600.00
L = 314.10

PI STA = 52+537.06
E = 752,843.52
N = 610,996.22
R = 600.00
L = 103.47

PI STA = 53+310.81
E = 753,357.63
N = 610,647.68
R = 600.00
L = 357.65

PI STA = 54+283.86
E = 754,323.39
N = 610,883.53
R = 600.00
L = 583.63

PI STA = 50+290.38
E = 750,360.78
N = 610,951.87
R = 600.00
L = 737.07

SCALE
1 : 12000 HOR
1 : 6000 VER

Reynolds Fork

Reynolds Fork Church

Walnut Hollow

MATCH LINE

MATCH LINE

PT STA = 50+580.00

PC STA = 51+119.17

PT STA = 51+433.27

PC STA = 52+488.27

PT STA = 52+588.27

PC STA = 53+129.77

PT STA = 53+412.87

PC STA = 53+966.63

PT STA = 54+550.26

PC STA = 54+913.21

PI STA = 50+560.00
PVI EL = 371.13
CURVE LEN = 210.00
K = 63

PVI STA = 51+275.00
PVI EL = 387.54
CURVE LEN = 200.00
K = 75

PVI STA = 52+226.00
PVI EL = 416.87
CURVE LEN = 650.00
K = 110

PVI STA = 52+815.00
PVI EL = 400.67
CURVE LEN = 470.00
K = 63

PVI STA = 53+900.00
PVI EL = 456.85
CURVE LEN = 700.00
K = 112

630 570 510 450 390 330 270 210 150 90

50+500 50+750 51+000 51+250 51+500 51+750 52+000 52+250 52+500 52+750 53+000 53+250 53+500 53+750 54+000 54+250 54+500 54+750 55+000

SHEET NO.	TOTAL SHEETS
11	31

MATCH LINE

MATCH LINE

PI STA = 55+298.83
E = 755,079.12
N = 610,132.00
R = 600.00
L = 685.47

PI STA = 57+044.03
E = 756,792.83
N = 610,776.79
R = 800.00
L = 825.57

PI STA = 58+957.52
E = 758,569.33
N = 609,978.68
R = 800.00
L = 1,380.11

PC STA = 56+714.27

PT STA = 57+539.84

PC STA = 58+023.44

SCALE :
1 = 12000 HOR.
1 = 6000 VER

VPC STA = 55+280.00
VPC EL = 453.44
VPT STA = 55+610.00
VPT EL = 457.28
VPI STA = 55+450.00
VPI EL = 431.32
CURVE LEN = 320.00
K = 63
(-) .5%
3.72%

VPC STA = 56+950.00
EL = 481.19
VPI STA = 57+450.00
EL = 498.10
VPC STA = 57+777.00
EL = 492.24
VPI STA = 57+200.00
VPI EL = 496.50
CURVE LEN = 600.00
K = 112
(+) 0.72%
3.72%
(-) 0.72%

VPI STA = 58+021.00
VPI EL = 490.54
CURVE LEN = 500.00
K = 137
(+) 5.00%

630 570 510 450 390 330 270 210 150 90

55+000 55+250 55+500 55+750 56+000 56+250 56+500 56+750 57+000 57+250 57+500 57+750 58+000 58+250 58+500 58+750 59+000 59+250 59+500

SHEET NO.	TOTAL SHEETS
12	31

PI STA = 60+175.00
E = 769,020.60
N = 611,623.63
R = 900.00
L = 810.59

PI STA = 62+168.29
E = 760,168.99
N = 613,256.68
R = 1,200.00
L = 710.48

KY 582

KY 7

MATCH LINE

MATCH LINE

RightHand Fork

Ella Lick

Buffalo Branch

Buffalo Branch

Buffalo Branch

VPI STA = 60+220.00
VPI EL = 360.89
CURVE LEN = 210.00
K = 65

VPI STA = 61+400.00
VPI EL = 359.95
CURVE LEN = 340.00
K = 114

VPI STA = 63+100.00
VPI EL = 276.90
CURVE LEN = 550.00
K = 64

SHEET NO.	TOTAL SHEETS
13	31

MATCH LINE

MATCH LINE

PI STA = 64+253.29
E = 762,136.09
N = 614,010.26
R = 2,500.00
L = 2,253.95

PI STA = 66+282.83
E = 764,024.19
N = 612,889.40
R = 600.00
L = 296.02

PI STA = 68+562.76
E = 766,302.19
N = 612,618.99
R = 750.00
L = 1,522.19

PC STA = 66+131.74

PI STA = 66+427.76

PC STA = 67+355.79

Δ = 85° 03' 20" E
326.03' H

Δ = 55° 18' 17"
324.57' H

PT STA = 65+297.15

KY 7

Fugate Br Branch

EXIST MEDIAN
BEGIN NARROW MEDIAN

KNOTT COUNTY

FLOYD COUNTY

SCALE :
1" = 1200 HOR
1" = 6000 VER

VPI STA = 65+100.00
VPI EL = 356.18
CURVE LEN = 250.00
K = 110

VPI STA = 65+900.00
VPI EL = 368.09
CURVE LEN = 240.00
K = 70

VPC STA = 65+780.00
EL = 364.08

VPT STA = 66+020.00
EL = 372.09

3.66%

1.59%

1.39%

5.00%

6.00%

630
570
510
450
390
330
270
210
150
90

64+000 64+250 64+500 64+750 65+000 65+250 65+500 65+750 66+000 66+250 66+500 66+750 67+000 67+250 67+500 67+750 68+000 68+250 68+500

SHEET NO.	TOTAL SHEETS
14	31

MATCH LINE

PI STA = 70+331.10
E = 765,334.06
N = 615,176.64
R = 750.00
L = 432.46

PC STA = 70+109.69

PT STA = 70+541.13

END NARROW MEDIAN
BEGIN WIDE MEDIAN

PI STA = 72+102.78
E = 765,695.67
N = 616,923.69
R = 800.00
L = 662.52

PC STA = 71+751.20

PT STA = 72+413.72

N 55° 08' 36" E
622.067 ft

MATCH LINE

KY 1498

Hickory Camp Branch

Lower Jacks Creek

Mabey Branch

Blue Branch

SCALE =
1 = 12000 HOR
1 = 6000 VER

VPI STA = 68+500.00
VPI EL = 496.81
CURVE LEN = 560.00
K = 102
(+) 0.50%

VPI STA = 68+780.00
EL = 493.49

VPI STA = 69+500.00
VPI EL = 493.81
CURVE LEN = 280.00
K = 111
(-) .82%

VPI STA = 69+640.00
EL = 495.09

VPI STA = 69+780.00
EL = 494.36

VPI STA = 70+500.00
EL = 484.56

VPI STA = 71+625.00
EL = 439.53

VPI STA = 71+975.00
EL = 384.00

VPI STA = 72+500.00
VPI EL = 387.08
CURVE LEN = 550.00
K = 110
(-) 0.50%

VPI STA = 72+800.00
VPI EL = 381.41
CURVE LEN = 350.00
K = 66
0.50%

VPI STA = 72+975.00
EL = 385.16

VPI STA = 73+150.00
EL = 390.91

VPI STA = 73+370.33
EL = 392.92

630 570 510 450 390 330 270 210 150 90

68+500 68+750 69+000 69+250 69+500 69+750 70+000 70+250 70+500 70+750 71+000 71+250 71+500 71+750 72+000 72+250 72+500 72+750 73+000

SHEET NO.	TOTAL SHEETS
15	31

STATION EQUATION:
73+000 BACK = 73+040.68 AHEAD

MATCH LINE

MATCH LINE

KY 122

KY 1498

KY 122

Jacks Creek

Jacks Creek

Richard Fork

Muddy Branch

Rices Branch School (Historical)

PI STA = 73+482.461
E = 766880.040
N = 617631.300
R = 1000.00
L = 406.34

PI STA = 75+412.945
E = 768014.317
N = 619200.429
R = 750.00
L = 658.65

SCALES:
1 : 12000 HOR
1 : 6000 VER

VPC STA = 73+458.00
VPC EL = 323.78

VPI STA = 74+158.00
VPI EL = 318.38

VPI STA = 74+158.00
VPI EL = 308.78
CURVE LEN = 600.00
K = 73.17

-3.00%

3.20%

0.50%

VPC STA = 75+715.00
VPC EL = 359.60

VPI STA = 75+959.00
VPI EL = 366.38
CURVE LEN = 486.00
K = 180.00

VPI STA = 76+201.00
VPI EL = 367.60

570
510
450
390
330
270
210
150
90
30

73+040.68 | 73+250 | 73+500 | 73+750 | 74+000 | 74+250 | 74+500 | 74+750 | 75+000 | 75+250 | 75+500 | 75+750 | 76+000 | 76+250 | 76+500

SHEET NO.	TOTAL SHEETS
16	31

MATCH LINE

MATCH LINE

KY 979

KY 979

PI STA = 77+137.401
E = 769780.710
N = 619318.400
R = 900.00
L = 289.66

PC STA = 76+988.17

PT STA = 77+277.83

PI STA = 78+920.718
E = 771426.080
N = 620013.360
R = 1170.00
L = 302.13

PC STA = 78+769.65

PT STA = 79+071.78

PI STA = 80+973.536
E = 773051.800
N = 621269.560
R = 820.00
L = 527.63

PC STA = 80+700.22

PT STA = 81+227.85

67°06'06"
1136.12 M

24°18'24"
1054.51 M

Stone Branch

Mayo's Fork

SCALES:
1 : 12000 HOR
1 : 6000 VER

VPC STA = 76+588.00
VPC EL = 369.53

VPT STA = 76+928.00
VPT EL = 378.18

0.50%
VPI STA = 76+758.00
VPI EL = 370.38
CURVE LEN = 340.00
K = 79.74

4.76%

VPI STA = 77+400.00
VPI EL = 444.68
CURVE LEN = 1100.00
K = 141.17

VPC STA = 77+850.00
VPC EL = 422.40

VPT STA = 78+950.00
VPT EL = 451.94

-3.03%

VPC STA = 80+400.00
VPC EL = 391.97

VPI STA = 80+520.00
VPI EL = 384.40
CURVE LEN = 600.00
K = 82.94

3.00%

VPT STA = 80+700.00
VPT EL = 391.90

630 570 510 450 390 330 270 210 150 90

76+500	76+750	77+000	77+250	77+500	77+750	78+000	78+250	78+500	78+750	79+000	79+250	79+500	79+750	80+000	80+250	80+500	80+750	81+000
369.09	371.99	381.31	393.82	405.73	417.64	428.75	435.19	438.40	436.58	430.43	422.86	415.29	407.72	400.15	392.58	384.13	381.32	388.80
384.16	387.79	432.45	416.00	468.14	469.85	435.19	400.00	422.82	370.13	443.38	459.54	410.00	380.00	460.00	460.00	350.00	459.85	526.77

SHEET NO.	TOTAL SHEETS
17	31

MATCH LINE

MATCH LINE

KY 979

Tackett Fork School

Morgarett Fork

PI STA = 80+973.536
E = 773051.800
N = 621269.560
R = 920.00
L = 527.63

PC STA = 81+422.86

PT STA = 81+750.49

PC STA = 83+373.28

PI STA = 83+831.673
E = 775228.630
N = 624171.040
R = 1000.00
L = 394.70

PT STA = 84+024.98

PI STA = 84+220.00
PI EL = 465.40
CURVE LEN = 650.00
K = 185.71

PC STA = 84+545.00
PC EL = 495.65

PIKE COUNTY
FLOYD COUNTY

SCALES:
1 in. = 2000 HOR
1 in. = 6000 VER

VPI STA = 83+020.00
VPI EL = 459.40
CURVE LEN = 500.00
K = 200.00

3.00%

0.50%

3.00%

VPC STA = 81+170.00
VPC EL = 451.90

VPT STA = 82+870.00
VPT EL = 460.65

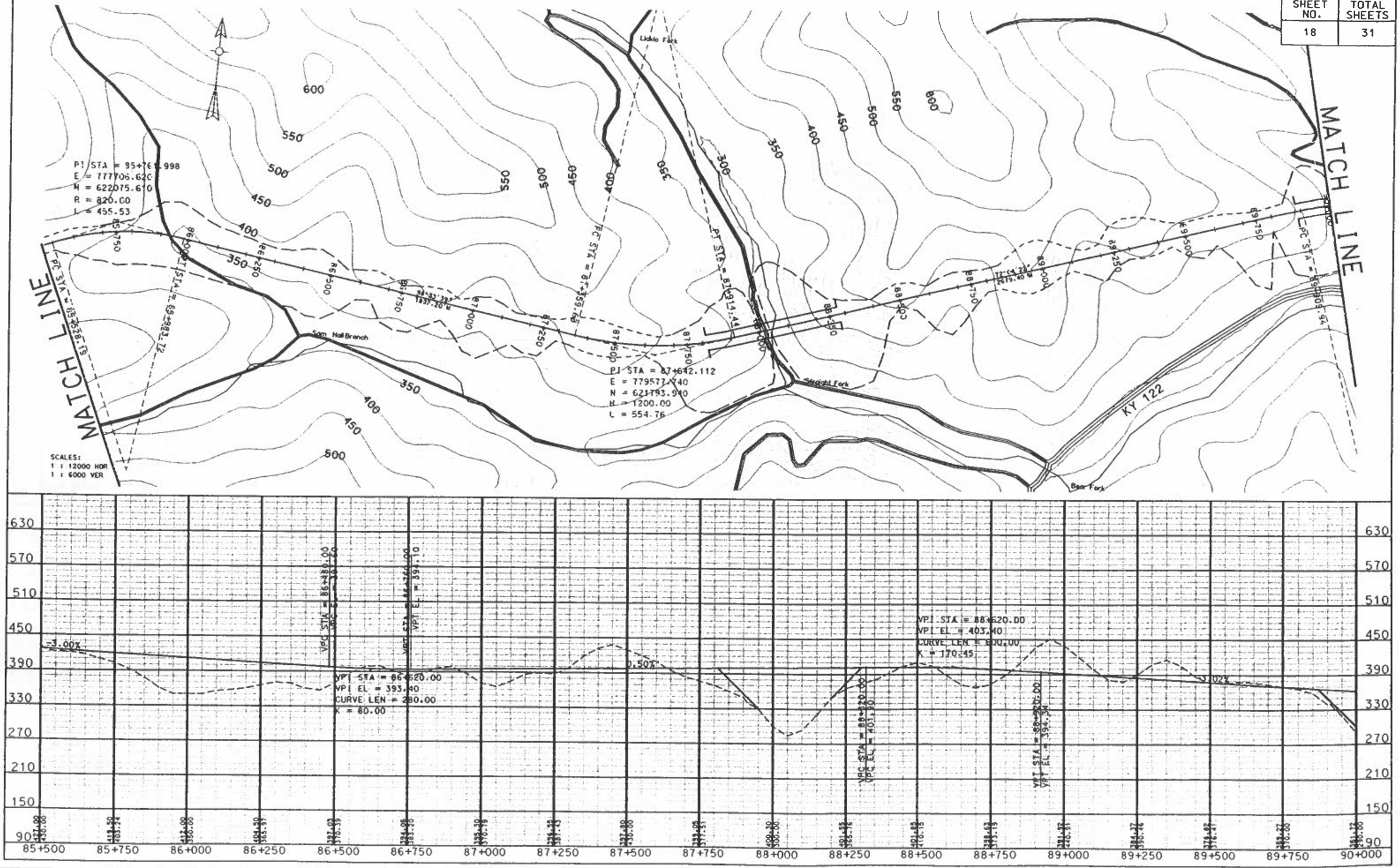
VPC STA = 83+895.00
VPC EL = 465.78

VPT STA = 84+545.00
VPT EL = 495.65

660
600
540
480
420
360
300
240
180
120

81+000 | 81+250 | 81+500 | 81+750 | 82+000 | 82+250 | 82+500 | 82+750 | 83+000 | 83+250 | 83+500 | 83+750 | 84+000 | 84+250 | 84+500 | 84+750 | 85+000 | 85+250 | 85+500

SHEET NO.	TOTAL SHEETS
18	31



SHEET NO.	TOTAL SHEETS
19	31

MATCH LINE

MATCH LINE

Groundhog Fork

Cane Fork

Sugar Camp Creek

KY 122

Beech Branch

Alsops Gate Church

US 23/119

Potter Cemetery

Stamper Fork

Yeager

Robinson Creek

PI STA = 90+311.414
E = 782127.051
N = 622618.677
R = 1200.00
L = 774.86

PI STA = 91+843.680
E = 783601.790
N = 622108.880
R = 1000.00
L = 850.61

PI STA = 93+193.975
E = 785061.210
N = 622940.190
R = 1000.00
L = 1033.97

(NOTE: CONTOUR LINES DO NOT REFLECT THE CONSTRUCTION OF US 23/119)

SCALES:
1 = 12000 HOR
1 = 6000 VER

VPC STA = 90+080.00
VPC EL = 359.31

VPT STA = 90+360.00
VPT EL = 355.78

3.02%
VPI STA = 90+220.00
VPI EL = 355.08
CURVE LEN = 280.00
K = 18.55

0.30%

VPC STA = 91+120.00
VPC EL = 359.54

VPI STA = 91+520.00
VPI EL = 361.58
CURVE LEN = 800.00
K = 177.61

VPT STA = 91+920.00
VPT EL = 345.56

-4.00%

VPC STA = 93+140.00
VPC EL = 296.97

VPI STA = 93+370.00
VPI EL = 287.50
CURVE LEN = 460.00
K = 82.08

VPT STA = 93+600.00
VPT EL = 291.18

T.607

540 480 420 360 300 240 180 120 60 0

90+000 90+250 90+500 90+750 91+000 91+250 91+500 91+750 92+000 92+250 92+500 92+750 93+000 93+250 93+500 93+750 94+000 94+250 94+500

SHEET NO.	TOTAL SHEETS
20	31

MATCH LINE

MATCH LINE

PI STA = 94+846.96
E = 786350.240
N = 622208.640
R = 1500.00
L = 1373.02

PI STA = 95+819.35
E = 787184.950
N = 622208.640
R = 1500.00
L = 1373.02

PC STA = 98+120.13

PI STA = 98+338.933
E = 789664.130
N = 623606.410
R = 650.00
L = 427.93

PI STA = 98+549.26

SCALES:
1 : 12000 HOR
1 : 6000 VER

VPC STA = 97+670.00
VPC EL = 356.30

VPI STA = 98+170.00
VPI EL = 351.10

VPT STA = 98+076.00
VPT EL = 362.70
CURVE LEN = 800.00
K = 177.78

1.60%

2.90%

94+500	94+750	95+000	95+250	95+500	95+750	96+000	96+250	96+500	96+750	97+000	97+250	97+500	97+750	98+000	98+250	98+500	98+750	99+000
322.54	309.48	313.58	314.89	331.58	335.78	337.31	335.84	324.17	301.92	345.58	342.31	333.38	337.49	338.82	336.12	330.23	342.96	335.73
309.77	310.58	310.91	316.89	316.08	332.78	337.31	335.84	324.17	301.92	350.88	342.31	331.73	356.08	356.08	341.34	208.81	356.08	341.06

540
480
420
360
300
240
180
120
60
0

SHEET NO.	TOTAL SHEETS
21	31

MATCH LINE

MATCH LINE

US 460/KY 80

US 460/KY 80

KY 3226

KY 3226

Horse Lick Creek

Taylor Branch

Sutton

Grassy Creek

SCALES:
1 : 12000 HOR
1 : 6000 VER

PI STA = 103+200.288
E = 792681.860
N = 627429.540
R = 1250.00
L = 526.74

VPC STA = 100+305.00
VPC EL = 297.89

VPT STA = 100+835.00
VPT EL = 299.48

VPI STA = 100+570.00
VPI EL = 290.20
CURVE LEN = 530.00
K = 82.81

VPC STA = 102+100.00
VPC EL = 350.75

VPT STA = 102+840.00
VPT EL = 361.95

VPI STA = 102+470.00
VPI EL = 360.20
CURVE LEN = 540.00
K = 180.00

0.502

570
510
450
390
330
270
210
150
90
30

99+000 99+250 99+500 99+750 100+000 100+250 100+500 100+750 101+000 101+250 101+500 101+750 102+000 102+250 102+500 102+750 103+000 103+250 103+500

SHEET NO.	TOTAL SHEETS
22	31

MATCH LINE

MATCH LINE

KY 1441

KY 1441

SCALES:
1 : 12000 HOR
1 : 6000 VER

VPI STA = 104+170.00
VPI EL = 368.20
CURVE LEN = 250.00
K = 178.57

VPC STA = 104+045.00
VPC EL = 367.38

VPT STA = 104+295.00
VPT EL = 367.08

VPC STA = 106+105.00
VPC EL = 350.79

VPI STA = 106+435.00
VPI EL = 354.25

VPI STA = 106+270.00
VPI EL = 349.30
CURVE LEN = 330.00
K = 84.62

VPC STA = 107+945.00
VPC EL = 399.55

0.50%

0.90%

3.00%

600
540
480
420
360
300
240
180
120
60

103+500 103+750 104+000 104+250 104+500 104+750 105+000 105+250 105+500 105+750 106+000 106+250 106+500 106+750 107+000 107+250 107+500 107+750 108+000

SHEET NO.	TOTAL SHEETS
23	31

MATCH LINE

KY 3418

PI STA = 108+737.767
E = 797587.490
N = 629996.160
R = 800.00
L = 335.62

PI STA = 110+370.850
E = 798517.620
N = 631355.430
R = 1400.00
L = 434.22

PI STA = 111+570.656
E = 798855.840
N = 632510.230
R = 850.00
L = 457.34

MATCH LINE

SCALES:
1 = 12000 HOR
1 = 6000 VER

VPI STA = 108+170.00
VPI EL = 406.30
CURVE LEN = 450.00
K = 180.00

VPT STA = 108+395.00
VPT EL = 407.45

VPC STA = 109+050.00
VPC EL = 410.76

VPI STA = 109+170.00
VPI EL = 411.30
CURVE LEN = 240.00
K = 85.68

VPT STA = 109+290.00
VPT EL = 413.26

VPC STA = 110+390.00
VPC EL = 451.37

VPI STA = 110+690.00
VPI EL = 468.08
CURVE LEN = 1000.00
K = 172.40

VPT STA = 111+390.00
VPT EL = 458.58

0.30%

3.30%

2.50%

660 600 540 480 420 360 300 240 180 120

108+000 108+250 108+500 108+750 109+000 109+250 109+500 109+750 110+000 110+250 110+500 110+750 111+000 111+250 111+500 111+750 112+000 112+250 112+500

SHEET NO.	TOTAL SHEETS
24	31

MATCH LINE

MATCH LINE

Cedar Bottom Church

KY 194

Jellicoe Creek

Jellicoe Creek

Elkhorn Creek

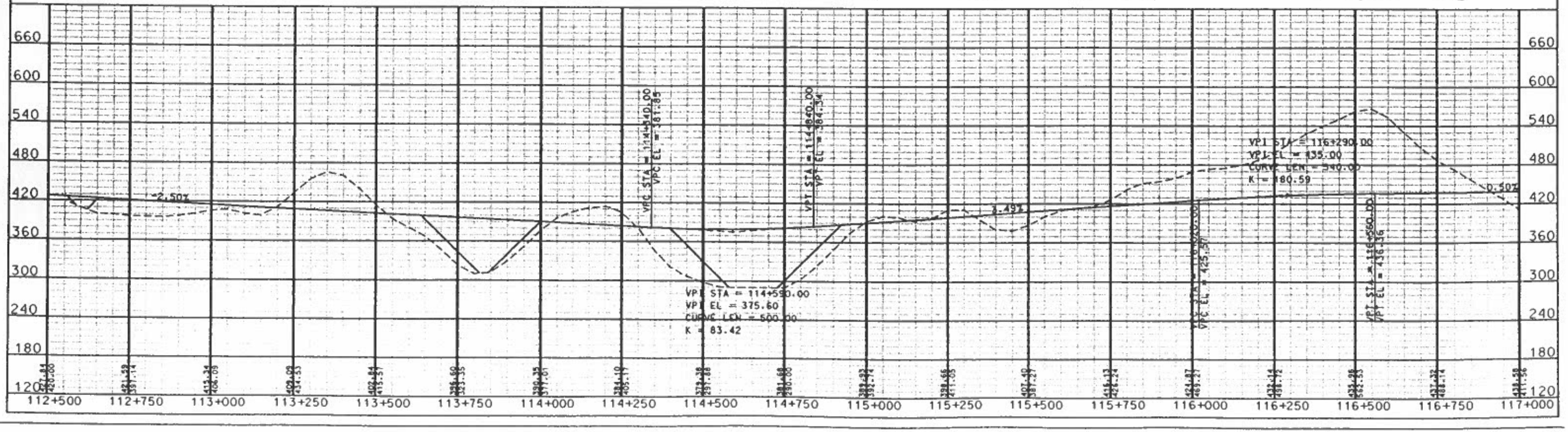
KY 632

Rattlesnake Branch

Borrell Fork

PC STA = 113+64.127
E = 800638.670
N = 634125.310
R = 1100.00
L = 504.78

SCALES:
1 = 12000 HOR
1 = 6000 VER



SHEET NO.	TOTAL SHEETS
25	31

PI STA = 117+520.291
E = 803947.290
N = 637441.671
R = 950.00
L = 855.83

PI STA = 119+519.255
E = 803930.047
N = 637830.486
R = 920.00
L = 277.56

MATCH LINE

MATCH LINE

SCALES:
1 : 12000 HOR
1 : 6000 VER

VPC STA = 117+460.00
VPC EL = 440.90

VPT STA = 117+620.00
VPT EL = 443.50

VPI STA = 117+640.00
VPI EL = 441.30
CURVE LEN = 160.00
K = 80.21

0.50%

2.50%

VPI STA = 119+290.00
VPI EL = 485.02
CURVE LEN = 550.00
K = 183.49

VPC STA = 119+015.00
VPC EL = 474.15

VPT STA = 119+565.00
VPT EL = 480.65

0.50%

VPC STA = 120+090.00
VPC EL = 481.03

VPI STA = 120+315.00
VPI EL = 479.90
CURVE LEN = 450.00
K = 187.15

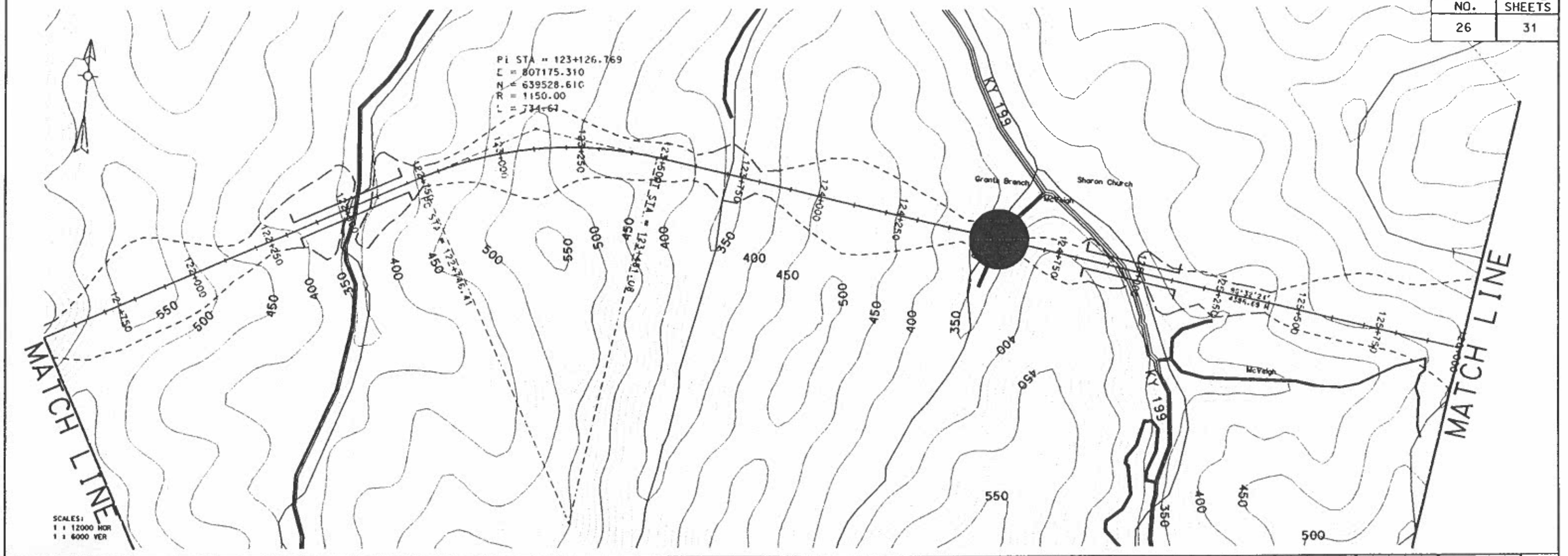
VPT STA = 120+540.00
VPT EL = 475.57

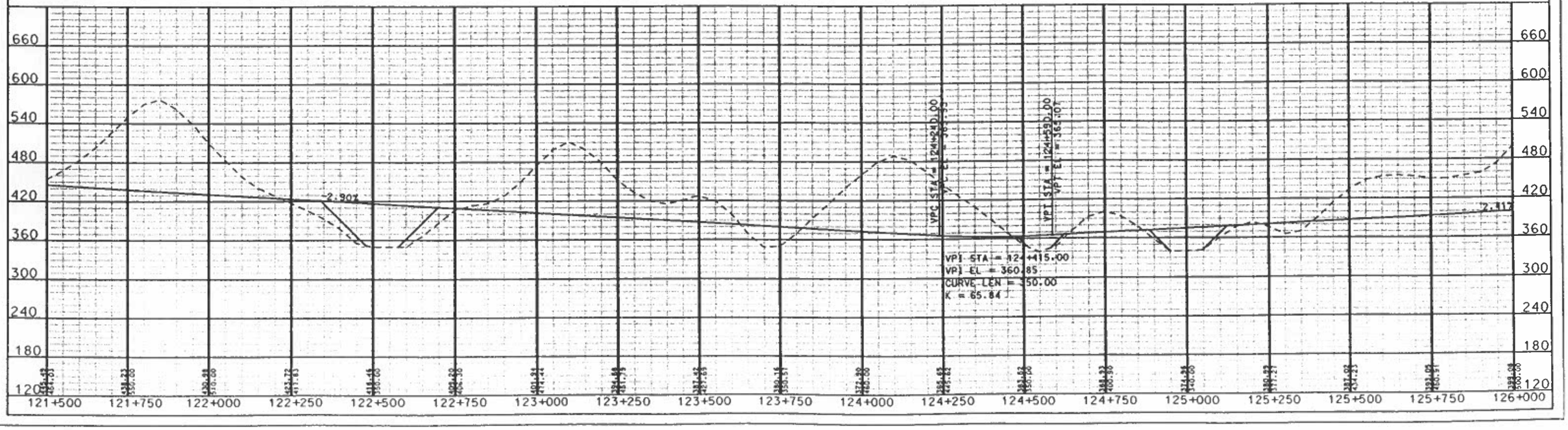
2.50%

690
630
570
510
450
390
330
270
210
150

117+000 117+250 117+500 117+750 118+000 118+250 118+500 118+750 119+000 119+250 119+500 119+750 120+000 120+250 120+500 120+750 121+000 121+250 121+500

SHEET NO.	TOTAL SHEETS
26	31





SHEET NO.	TOTAL SHEETS
27	31

MATCH LINE

MATCH LINE

KY 1056

KY 1056

KY 3419

Cox Knob

Rockhouse Branch

Jeff Fork

PI STA = 129+511.580
E = 813151.712
N = 640937.572
R = 1050.00
L = 171.49

PI STA = 127+487.410
E = 811513.362
N = 638877.178
R = 850.00
L = 751.09

SCALES:
1 = 12000 HOR
1 = 6000 VER

VPI STA = 127+915.00
VPI EL = 415.29
CURVE LEN = 830.00
K = 179.98

VPI STA = 128+564.00
VPI EL = 431.00
CURVE LEN = 150.00
K = 86.26

VPI STA = 129+379.00
VPI EL = 411.83
CURVE LEN = 630.00
K = 157.50

2.41%

-2.20%

0.50%

4.50%

630 570 510 450 390 330 270 210 150 90

126+000 126+250 126+500 126+750 127+000 127+250 127+500 127+750 128+000 128+250 128+500 128+750 129+000 129+250 129+500 129+750 130+000 130+250 130+500

SHEET NO.	TOTAL SHEETS
28	31

MATCH LINE

MATCH LINE

KY 1056

KY 1056

KY 319

KY 319

Blackberry Church

Spring Branch

Blackberry School

Spring Branch

Stafford Branch

Stafford Branch

Fork

PI STA = 133+893.727
E = 815349.130
N = 643272.520
R = 850.00
L = 526.52

PI STA = 132+619.835
E = 815630.280
N = 642002.100
R = 950.00
L = 715.96

SCALES:
1 : 12000 HOR
1 : 1200 VER

VPC STA = 130+644.00
VPC EL = 378.75

VPI STA = 130+764.00
VPI EL = 372.00

VPT STA = 130+884.00
VPT EL = 371.25

-4.50%

-0.50%

VPC STA = 131+869.00
VPC EL = 366.38

VPI STA = 132+014.00
VPI EL = 365.75
CURVE LEN = 250.00
K = 64.10

VPT STA = 132+159.00
VPT EL = 370.00

3.40%

VPC STA = 132+575.00
VPC EL = 390.91

VPI STA = 133+264.00
VPI EL = 408.25
CURVE LEN = 1020.00
K = 464.52

VPT STA = 133+584.97
VPT EL = 398.97

2.80%

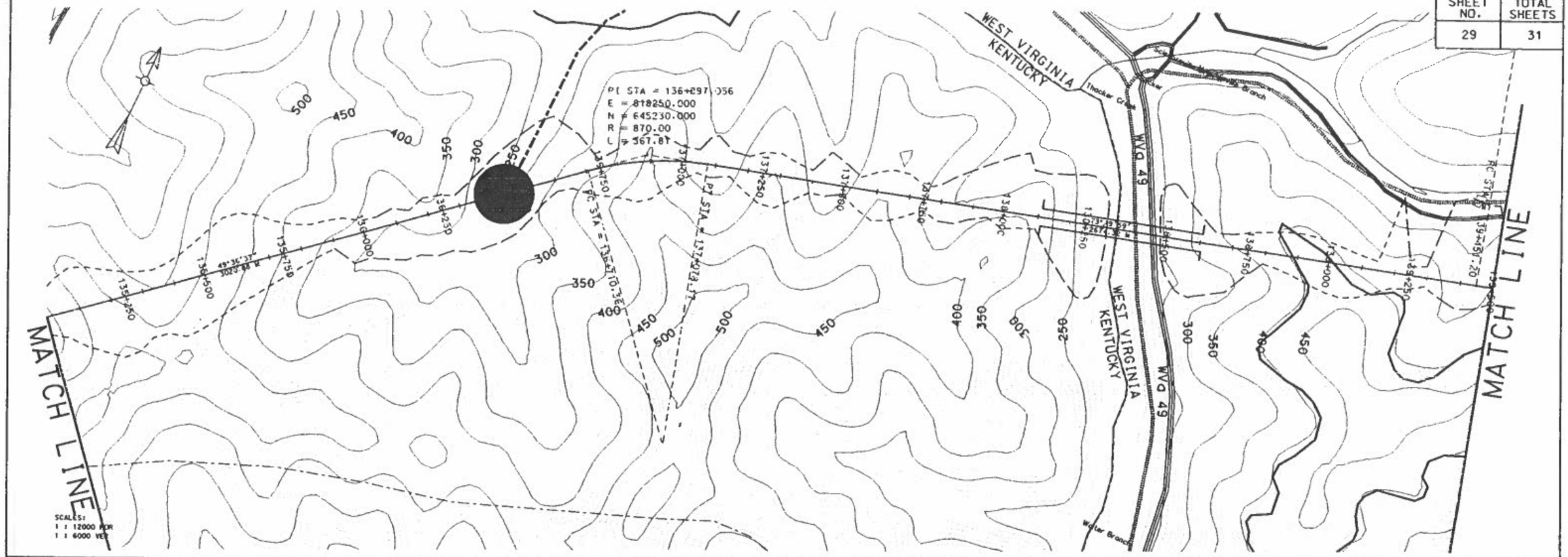
PC STA

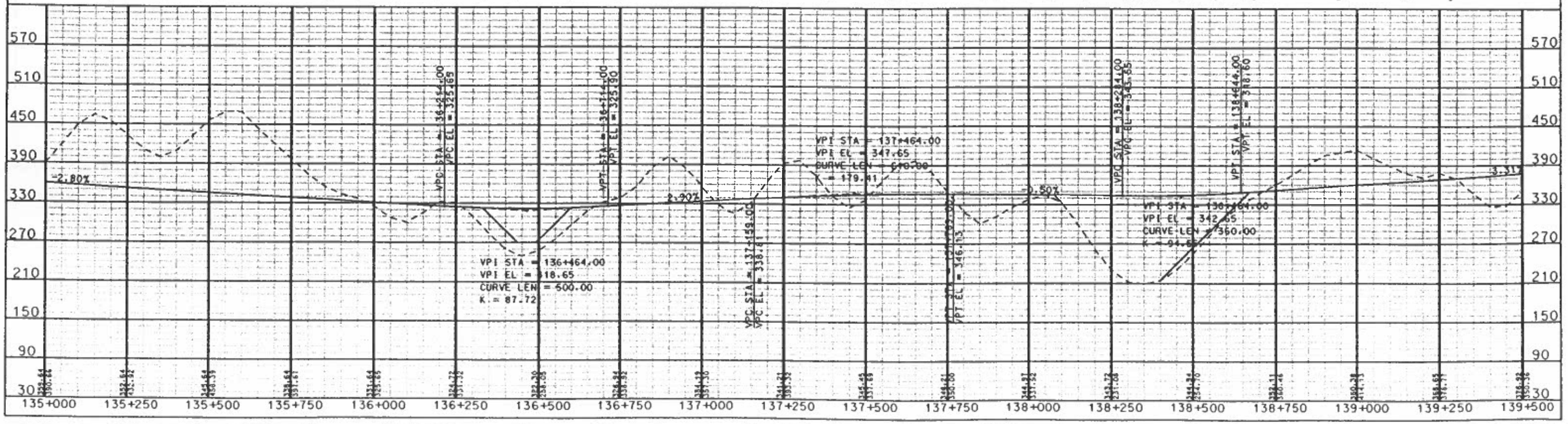
PT STA

600
540
480
420
360
300
240
180
120
60

130+500 130+750 131+000 131+250 131+500 131+750 132+000 132+250 132+500 132+750 133+000 133+250 133+500 133+750 134+000 134+250 134+500 134+750 135+000

SHEET NO.	TOTAL SHEETS
29	31





SHEET NO.	TOTAL SHEETS
30	31

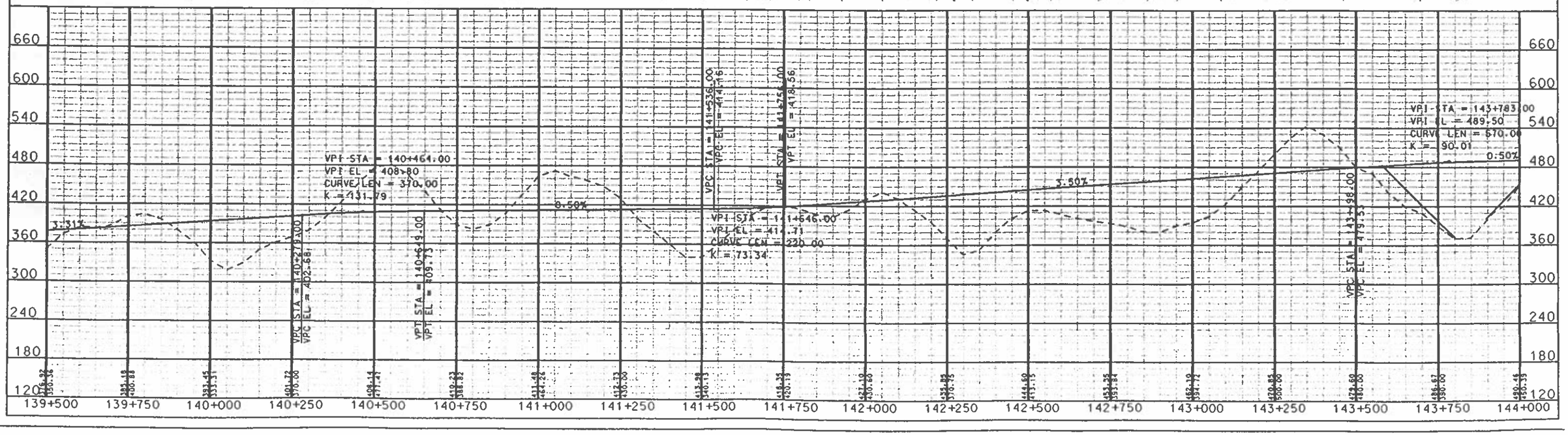
MATCH LINE

MATCH LINE

PI STA = 139+569.795
E = 620818.660
N = 645974.930
R = 980.00
L = 228.15

PI STA = 142+249.449
E = 623155.067
N = 647295.861
R = 350.00
L = 386.07

SCALES:
1 : 12000 HOR.
1 : 6000 VER.



SHEET NO.	TOTAL SHEETS
31	31

MATCH LINE

PI STA = 144+282.39
E = 824309.512
N = 548978.441
R = 850.00
L = 659.18

PI STA = 144+606.77

Newton

Cynthia Branch

Double Camp Fork

Cherie Cemetery

Elkhorn Fork

(NOTE: CONTOUR LINES DO NOT REFLECT STRIP MINED AREA.)

APPROXIMATE LOCATION OF PROPOSED I-73

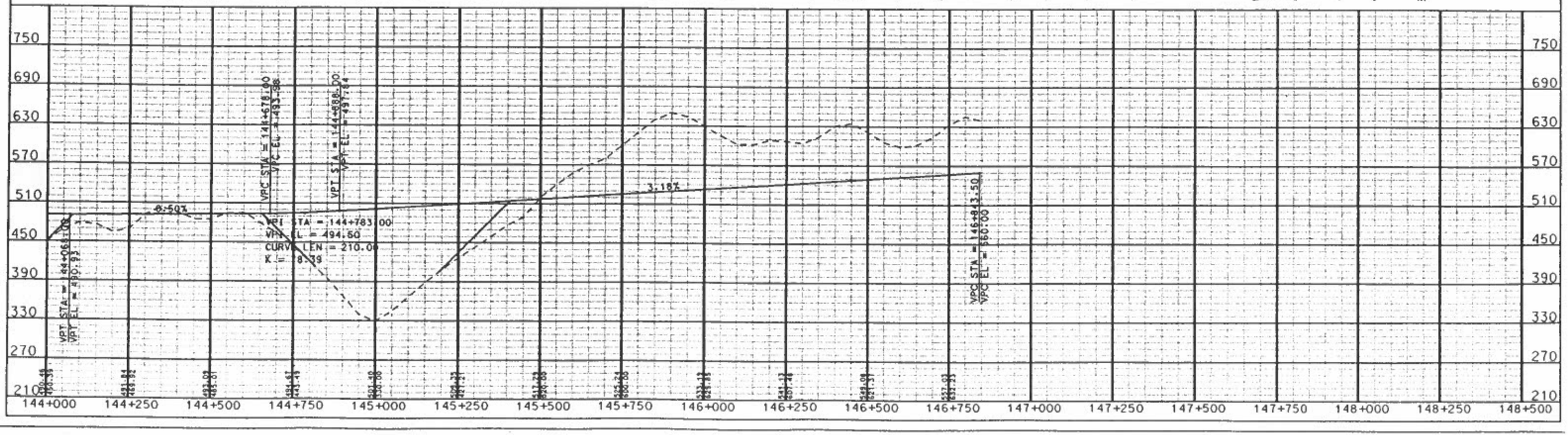
ECP = 146+343.47
E = 823769.51
N = 651523.22

INTERCHANGE WITH PROPOSED I-73

Meadow Branch

US 52

SCALES:
H : 12000 HOR
V : 6000 VER



SOUTHERN KENTUCKY CORRIDOR (I-66) LOCATION STUDY DESIGN CRITERIA

I-66 DESIGN CRITERIA	
Other design criteria are listed below.	
1. Level of service Mainline, Ramps Ramp/Crossroad Intersections	 C C desirable D minimum
2. Design Speed Main Roadway Ramps Diamond and Outer Loop Directional Collector-Distributor Roadways Design Vehicle	 110 km/hr - 70 mph 60 km/h minimum 50 km/h minimum 80 km/h minimum 100 km/h WB 19
3. Sight Distance a) Stopping Sight Distance [1] Main Roadway 110 km/h Ramps 50 km/h Design Speed 60 km/h Design Speed 80 km/h Design Speed b) Decision Sight Distance [1] Main Roadway 110 km/h Ramps 50 km/h Design Speed 60 km/h Design Speed 80 km/h Design Speed [1] Assumptions: Height of driver's eye: Height of object – Stopping: Height of object – Passing:	 246 m desirable 180 m minimum 63 m desirable 58 m minimum 85 m desirable 75 m minimum 140 m desirable 113 m minimum 435 m desirable 335 m minimum 200 m desirable 145 m minimum 235 m desirable 175 m minimum 315 m desirable 230 m minimum 1070 mm 150 mm 1300 mm
4. Horizontal Alignment a) Minimum Radius [2] Main Roadway Ramps 50 km/h Design Speed 60 km/h Design Speed 80 km/h Design Speed b) Minimum Length of Curves c) Minimum Tangent Between Curves d) Maximum Superelevation Main Roadway Ramps [2] Where barriers are constructed, shoulder widths should be checked to verify that required sight distances are provided.	 1000 m desirable (e max 8%) 500 m minimum (e max 8%) 75 m 115 m 210 m 8% 8%
5. New Structures a) Shoulder Widths Main Roadway (2 lane pavement) Ramps (1 lane pavement) Right side Left side b) Horizontal Clearances c) Vertical Clearances Mainline under Crossroads	 3.6 m 2.4 m 1.8 m (structures on curve to have adequate lateral clearance for sight distance) 9.0 m; R > 900 m 13.5 m; R = 450 m and as determined by warrants 5.0 m

6. Vertical Alignment a) Maximum Grades Main Roadway Ramps b) Minimum Length of Vertical Curves [3] Main Roadway Crest Sag Ramps 50 km/h Design Speed Crest Sag 60 km/h Design Speed Crest Sag 80 km/h Design Speed Crest Sag [3] L=K*A, where A=Algebraic difference in grades.	 ± 5.0 % (mountainous terrain) ± 4.0 % desirable ± 6.0 % absolute K = 151 K = 62 K = 10 K = 12 K = 18 K = 18 K = 49 K = 32
Mainline over Crossroads Railroads	 5.0 m 7.0 m
7. Cross Sectional Elements a) Pavement Widths Main Roadway (2 lanes) Ramps (1 lane) 50 km/h 60 km/h 80 km/h b) Shoulder Widths Main Roadway (18 m depressed median) Right Shoulder Left Shoulder Main Roadway (Barrier median) Right Shoulder Left Shoulder Ramps Right Shoulder Left Shoulder c) Cross-slopes Pavement For 2 lanes For additional lanes Shoulders d) Sideslopes from Shoulder Berm Foreslopes Ditch Bottom Backslopes [4] Based on controlling radius	 7.2 m 5.4 m [4] 4.8 m [4] 4.8 m [4] 4.2 m w/guardrail, 3.6 m w/o guardrail 1.8 m 3.6 m 4.2 m 2.4 m 1.8 m 2.0 % 3.0 % 4.0 % minimum 1:6 desirable within clear zone 1:4 maximum within clear zone; desirable elsewhere 1:2 absolute maximum See typical sections 1:2 for heights < 5.4 m 1:1 for heights > 5.4 m
8. Median Width a) Depressed Median b) Barrier Median	 18 m - 60' 9.21 m - 30'
9. Roadway Safety	The evaluation of lateral clear zones and roadside safety shall be in accordance with the AASHTO "Roadside Design Guide, 1996" or latest updates and supplements.
10. Access Control	Fully controlled access
11. Acceleration/Deceleration Lengths	Acceleration tapers (for entrance ramps) and deceleration tapers (for exit ramps) shall be in accordance with AASHTO.

Kentucky River AREA DEVELOPMENT DISTRICT

917 PERRY PARK ROAD • HAZARD, KENTUCKY 41701 • PHONE 606/436-3158

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Judge

VICE-CHAIRMAN
Frank Noble
Mayor

TREASURER
Steve Turner

SECRETARY
Onzie Sizemore
Judge

PARLIAMENTARIAN
Jack Howard
Mayor

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Executive Director
Paul E. Hall

E-mail: kradd@mis.net
FAX NUMBER 606-436-2144
TDD NUMBER 1-800-247-2510
(Hearing impaired)

Mr. Thomas Layman
American Consulting Engineers
400 East Vine Street, Suite 211
Lexington, Kentucky 40507-1577

Dear Tom,

In response to your request for input on the preliminary alignments for I-66 in Knott, and Perry Counties. It is our opinion, based on the maps and your information that the Southern route would be the most desirable in our area. This route is more sparsely populated than the Northern route. Therefore, relocation costs would be reduced.

The Southern route will also open up some areas that are currently remote. This combined with the use of previously mined land, and lower relocation costs make the Southern route the most logical choice for us at this time.

Please keep us advised of the development of this project. If we can be of any further assistance, please feel free to call anytime.

Sincerely,

Jeffrey S. Coots,
Transportation Planner

The following comments were faxed to the Southern Kentucky Corridor (I-66) Study Team on May 15, 1997 by the Big Sandy Area Development District Transportation Staff.

Pike County, Kentucky

Recommended for route of proposed I-66 (Southern Kentucky Corridor)

1. By entering Pike County from the east just south of McCarr-Nampa, I-66 would provided tourists quick access to the Hatfield-McCoy Feud Tour Sites, which are presently being developed by Pike County through a $100,000 ISTEA grant. At least five historic feud sites are within a few miles of the intersection of KY 1056 and KY 319 at Ransom. An exit from I-66 in this vicinity would provide quick access to Blackberry Creek and historic Matewan, West Virginia, site of the Matewan Massacre and the Hatfield-McCoy Feud.
2. An exit where the interstate crosses KY 199 just south of the Runyon School would provide access to the Grants Branch Recreation Area, a 22-acre lake and 200-acre recreational park being developed by Pike County Fiscal Court, in cooperation with Stone Mining Company. This would be a nice rest stop for people traveling I-66. An exit here would also provide a short connector route to US 119 at Huddy via KY 199.
3. An exit where the interstate crosses near the intersection of KY 194 and KY 632 at Kimper would provide quick access to the Grapevine-Phyllis area, includjng the Grapevine Boat Ramp and Recreational Area of Fishtrap Lake. It would also provide another connector route to (new) US 119 at Meta via KY 194.
4. There should be an exit where I-66 crosses KY 3418 to provide access to an area that was left isolated by the construction of Fishtrap Dam in the 1960s.
5. At least one exit should be provided to Fishtrap Lake via US 460 near Millard-Nelse-Justiceville. This exit would also serve Breaks Interstate Park and the Elkhorn City area. Another exit to access Fishtrap Lake could be provided via KY 1441 (Pompey).
6. I-66 should cross US 23 and 119 near Yeager-Robinson Creek, where new US 460 will intersect with US 23 and the proposed US 23 Pikeville Bypass would begin. This would tie several major highways together at this point and provide quick access to Pikeville and Jenkins via US 23 and 119, and access to the Breaks Interstate Park via new US 460.
7. There should be an exit where I-66 crosses KY 122 or KY 1469 to provide the Indian Creek-Long Fork-Virgie communities access to the interstate.

This alignment would provide access to the existing and planned major four-lane highways in Pike County (US 23, 119 and 460), as well as providing access to some of the county's major tourism attractions (Hatfield-McCoy Feud Sites; Fishtrap Lake, Trail, and Wildlife Management Area; Breaks Interstate Park; and the Grants Branch Recreation Area).

As I-66 is designed, it would be economically beneficial to concentrate larger fill areas near interstate exits in order to utilize them for industrial parks. Real estate which is suitable for industrial development is rare in the region and by planning the construction of the interstate to maximize the developable flat land available, the taxpayers will receive the maximum benefit in return for their investment.

G\WP\1970145\I-66(HAZ)