PROJECT PLANNING REPORT

GEORGETOWN BY-PASS
SCOTT COUNTY, KENTUCKY

RURAL:
000RS 05382 001;
FSP 105 7284 004D
URBAN:
0000M 07609 001;
FSP 105 7284 005D

PREPARED FOR

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING

GRW Engineers, Inc.
[redacted]

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THIS DOCUMENT PREPARED PURSUANT TO FEDERAL HIGHWAY ADMINISTRATION PROJECT HPR-PL(21) PART 1 TRANSPORTATION PLANNING, VOLUME 6, CHAPTER 9

PREPARED FOR

KENTUCKY TRANSPORTATION CABINET
DEPARTMENT OF HIGHWAYS
DIVISION OF PLANNING
PROJECT ENGINEERING SECTION
DOP COORDINATOR-ROY LAUGHLIN

PREPARED BY

GRW ENGINEERS, INC.
501 CORPORATE DR. LEXINGTON, KY. 40503
PROJECT MANAGER, WILLIAM O. LABUDE

SEPTEMBER 1986

KENTUCKY TRANSPORTATION CABINET
DIVISION OF PLANNING
PROJECT PLANNING REPORT EXECUTIVE SUMMARY SHEET

PROJECT ID NUMBER FSP 105 7284 005D
FSP 105 7284 004D
000RS 05382 001

PROJECT ENGINEER Luther Hargis

FEDERAL PROJECT NUMBER 0000M 07609 001

DATE 10/2/85
Revised 9/86

LOCATION INFORMATION

COUNTY	COUNTY NO	DISTRICT HWY	DISTRICT ADD	ROUTE NO	ROUTE NAME
Scott		7	Blue-grass	US 62	Georgetown By-Pass

CITY: Georgetown

PROJECT DESCRIPTION: Southern By-Pass around Georgetown, Ky.

HWY SYSTEMS STATE	HWY SYSTEMS FED	FUNCT CLASS	PROJECT LENGTH	MILEPOINTS
SP	FAP	Rural Minor Arterial	5.5 Miles	N/A

EXISTING CONDITIONS

AREA TYPE RURAL OR URBAN	OPERATING SPEED	NO OF LANES	PAVEMENT WIDTH	SHLDR WIDTH	DITCH WIDTH	MEDIAN WIDTH AND TYPE
N/A*	N/A	N/A	N/A	N/A	N/A	N/A

ADEQUACY RATING	LEVEL OF SERVICE	ACCIDENT RATE/STATEWIDE AVG	MAINT RESPONSIBILITY	ACCESS CONTROL
N/A	N/A	N/A		N/A

TRAFFIC

EXISTING YEAR 1985

See Attachment "C"

PROJECTED DESIGN YEAR 2007

See Attachment "C"

DESIGN CRITERIA

DESIGN SPEED	NO OF LANES	PAVEMENT WIDTH	SHLDR WIDTH	DITCH WIDTH AND SLOPE
60 MPH	4	48'	12"	18'@6:1
60 MPH	2	24'	12"	18'@6:1

MEDIAN WIDTH AND TYPE	MIN BRIDGE WIDTHS	DESIGN YR LEVEL OF SERVICE	MAINT RESPONSIBILITY	ACCESS CONTROL
14' - Flushed	86'	L.O.S. = "C"	State	Partial
N/A	N/A	L.O.S. = "C"	State	Partial

ALTERNATIVES CONSIDERED

ALTERNATIVES CONSIDERED (SEE EXHIBIT IMMEDIATELY FOLLOWING THIS SHEET)

See Exhibit No.'s 7 and 7-A

PREFERRED ALTERNATIVE

PREFERRED ALTERNATE

Alternative No. 2-B from US 460 W to US 62 W
Alternative No. 2 from US 62 W to US 25 S
Alternative No. 1 from US 25 S to US 460 E

COST ESTIMATES, BASE YEAR 1985

LENGTH	5.5	mi.
P.E.	$ 1,000,000	+
R/W	2,500,000	∓
UTIL.	750,000	
CONST.	13,750,000	+
TOTAL	$18,000,000	—

ADDITIONAL REMARKS

* This project is on new alignment across open farmland adjacent to the city. The existing conditions are those of the existing street network, as described under Subsection: Existing Transportation Network.

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SECTION I

PURPOSE AND NEED

SECTION I

PURPOSE AND NEED

A. Project Background

This project has a previous history dating back almost fifteen (15) years. In the early 1970's this project was proposed to serve a major industry to be located in the Industrial Park. At that time the proposed location was from US 62 East (Cynthiana Road) to US 25 through what is now Showalter Drive, Exhibit No. 7-A. Project studies at that time did not substantiate this project, partially due to the unknown effect that the construction of the I-75 - Ironworks Pike Interchange would have on this project.

In 1978 and 1979, the Georgetown-Scott County community, through a citizens advisory board, participated with the Kentucky Department of Transportation in a Transportation Planning Study of the Georgetown area. The implementation of the by-pass around the southern side of the city was the priority project in this study.

In 1979 the Georgetown-Scott County community updated their comprehensive land use plan. This plan was based on the fact that the by-pass would be implemented and would form the southern half of an eventual circumferential beltline route around Georgetown. Although extensive changes in land use were adopted north of Georgetown, a 1985 update of the comprehensive plan retained the southern by-pass as presented herein. The Planning Commission has kept and continues to keep a corridor open for this project by prohibiting development in the corridor.

There was a local misconception that because Georgetown had participated in the 1978-79 Transportation Planning Study, that the by-pass would automatically be included into the Kentucky Department of Transportation schedules for implementation. In 1984, after several years of inaction on this project, the Georgetown City Council and Scott County Fiscal Court jointly engaged a consultant to prepare a Needs Study for this project. As a result of this study, and local leadership, this project was included in the Six Year Plan and was funded.

B. Purpose of the Proposed Action

The proposed Federal action is the approval of location and design for the construction, on new alignment, of a highway by-pass around the southern side of Georgetown in Scott County, Kentucky. This by-pass will provide the additional highway capacity to meet the existing and future travel demand in this area.

The proposed action will provide for the construction on new alignment of a partial control of access route around the southern side of Georgetown, Kentucky. About 5.5 miles in length, it would begin at the present intersection of US 62 East (Cynthiana Road) with US 460 East (Paris Road),

extend southerly across Elkhorn Creek and Lemons Mill Road, pass through a partially developed industrial park near the eastern perimenter, extend westward across the Southern Railroad tracks to US 25 South near the Etter Lane intersection, continue northwesterly to US 62 West (Midway-Paynes Depot Road), and then in a northwesterly direction to its western terminus at US 460 West (Frankfort Road).

The purpose of this report is to summarize the need for the proposed route, document the selection of a preferred corridor and to determine the type and extent of transportation improvements within the preferred corridor. This report will assimilate all available input, both public and technical, necessary to formulate a conceptual design such that this project can advance into the design and construction phases.

C. Need

1. Previous Studies and Reports

For effective comprehensive planning to take place in an urban area such as Georgetown, planning for transportation must properly complement other interacting elements in the overall planning process. Recognizing these relationships, several prior planning documents were used to insure a coordinated planning effort. Those documents used were as follows:

- "Land Resources Policies Manual for Bluegrass Area Development District" prepared by the Bluegrass Area Development District.
- "Bluegrass Economic Adjustment Action Plan" prepared by the Bluegrass Area Development District.
- "Transportation Facilities Inventory" prepared by the Bluegrass Area Development District.
- "Major Thoroughfare Plan: Georgetown Urban Planning Area" prepared by the Georgetown Planning Commission.
- "1977 Kentucky Directory of Manufacturers" prepared by the Kentucky Department of Commerce.
- "Kentucky Population Forecasts: 1975-2010" prepared by the Kentucky Department of Transportation.
- "Transportation Plan - Highway Element; Georgetown, Kentucky Urban Area Transportation Study" prepared by the Division of Urban and Regional Planning, Kentucky Department of Transportation, dated March, 1979.
- "The 1979 Comprehensive Plan for Georgetown-Scott County, Kentucky" by the Joint Planning Commission, the Comprehensive Plan Advisory Committee, and G. Reynolds Watkins Consulting Engineers.
- "Evaluation of Needs Report for the Georgetown By-Pass" prepared by a joint effort of the Scott County Fiscal Court, the Georgetown City Government and GRW Engineers, Inc., dated February, 1984.

2. Summary of Needs

Detailed examination of the need for this project is contained in the above referenced "Evaluation of Needs Report for the Georgetown

By-Pass." The need for this project is summarized from that report as listed below:

- Provides an alternate route around the Georgetown Central Business District for through traffic.
- Provides access to existing industrial area.
- Provides new economic development opportunities.
- Serves recent commercial development on US 25 South and elsewhere.
- Links two (2) of three (3) major commercial areas of the city.
- Provides for the orderly growth and development of the city.
- Consistant with local proposed land use.
- Provides a connector between I-75 North and I-64 West.
- Serves residential development that has been built in the fringe of the city in recent years.
- Serves partially developed industrial area that currently has poor access.
- Gets trucks and through traffic out of existing residential neighborhoods.
- Reduces congestion in existing traffic network and in existing neighborhoods.
- Serves the bulk of existing or proposed employment, which lies along the route of the by-pass.
- Provides access to both I-75 and I-64.
- Allows future development at minimal cost for infrastructure.
- Serves a growing population.
- Provides better access to the proposed airport by quicker entry-exit from Georgetown.
- Provides for more efficient city services including fire, police, schools, ambulance service, etc.
- Provides additional time to make improvements in the existing transportation network.
- Provides for northern entry-exit from the Horse Park and provision of supplies for campers.
- Relieves pressure on historic buildings and areas within Georgetown, particularly their conversion to commercial use.
- Provides access to the new hospital.

Additionally, this facility provides access and alternative routing for employees and suppliers of the new Toyota Motor Corporation facility.

SECTION II

AFFECTED ENVIRONMENT

SECTION III

ALTERNATIVE EVALUATION

SECTION III

ALTERNATIVE EVALUATION

A. Geometric Design Criteria

1. Design Standards

Classification - Rural Arterial
Design Speed - 60 M.P.H.
Access Control - Partial - by Ordinance Scott County Planning and Zoning
Type Terrain - Rolling
Pavement Width - 4 - 12' Lanes (US 25 South to US 460/62 East)
Median - 14' Flush
Pavement Width - 2 - 12' Lanes (US 460 West to US 25 South) initial with 4 - 12' lanes and 14' flush median ultimate
Pavement Slope - 1/4" per foot
Pavement Surface - Bituminous and Concrete Alternatives
Shoulder Width - 12', 10' Paved
Shoulder Type - Paved
Shoulder Slope - 1/2" per foot
Ditch Width - 18'
Ditch Slope - 6H:IV
Cut Slopes - 2H:IV Earth; 1/2H:IV Rock
Fill Slopes - 2H:IV Min 6:1H:IV Desirable See 2 below for details
Clear Zone - 30' from edge of traveled lane
Maximum Horizontal Curve - 4^{o} 45'
Sharpest Curve Used - 2^{o}
Maximum Grade - 4%
Steepest Grade Used - 3.95%
Stopping Sight Distance (S.S.D.) - 525' min., 650' desirable
Non-Passing Sight Distance (N.P.S.D.) - 525' min., 650' desirable
Intersection Sight Distance - 700'
Superelevation - E(MAX.) = 0.08 Ft./Ft.
Erosion Control - Yes
Right-of-Way - Fenced

2. Typical Section

The typical section for the eastern half of this project from US 25 South to US 460/62 East consist of two twelve (12') foot lanes in each direction. A fourteen (14') foot flush median provides space for left turn lanes where needed. Ten (10') foot paved shoulders will be provided outside the driving lanes. A thirty (30') foot clear zone from the edge of pavement is provided with 6H:IV slopes through both cut and fill sections. Slopes will be designed based on results from the geotechnical investigations. A ten (10') foot bench is anticipated through rock cut sections. 4H:IV slopes will be used in fills up to ten (10') feet.

The western half of this project from US 460 West to US 25 South is proposed as two lane initial construction with four lane grading. The initial two lanes are proposed in the center of the median as it improves sight distance in the horizontal curves, provides for greater pavement radii and maintenance of traffic would be less of a problem during construction of the ultimate pavement. The lanes are proposed to be designed and constructed off of the four lane centerline. The template will be graded on a two percent (2%) slope away from the pavement. This is considered an adequate slope for surface drainage and also provides for daylighting the subgrade of the initial lanes on the left and right for base drainage.

B. Alternatives

1. Formulation of Reasonable Alternatives

This project has been in the comprehensive land use plan since 1970 and was expanded in the 1979 comprehensive land use plan. This project was also the top ranked project in the 1978-79 Urban Area Transportation Study. Combined with this documentation and the public input that went into them, general limits for this project were defined.

I-75 was considered the eastern limit for this project as was Cane Run Creek to the south. Adjacent to the city, existing development was considered to be the interior limit for alternatives. This included the Johnson Controls plant, Georgetown Tool and Manufacturing Co., the Mt. Vernon Subdivision behind Washington Square, the new hospital and physicians office building, Kroger, Wal-Mart, Marshall Field and the extension of Indiana Hills subdivision to US 62 West (Midway-Paynes Depot Road), Exhibits 5A, 5B and 5C. Additionally, a subdivision on Etter Lane was considered to be a project constraint. Within these general constraints, build alternatives were formulated to reflect differences in terrain, environmental features, property, cost, community and farm disruption, existing and planned development, among other factors.

Specific items considered in the formulation of reasonable alternatives are as follows:

- Avoidance of property on the National Register of Historic Places.
- Consistency with the local comprehensive land use plan.
- Minimization of cross road reconstruction.
- Minimization of situations requiring detours.
- Provision of a safe facility.
- Minimization of costs.
- Minimizing impacts on farmland.
- Minimizing relocation of residents and business.
- Providing for future streets shown in the comprehensive plan.
- Maximization of earthwork material from within the right-of-way.

- Minimizing landlocked or poorly divided land.

Subsection B: Description of Alternatives also elaborates on the reason and rationale for formulation of specific alternatives.

2. Logical Termini

Due to comments from the Early Public Scoping Meeting (E.P.S.M.), a re-examination of the project termini was made. The eastern terminus at the US 460 E - US 62 E intersection is considered to be the logical eastern terminus for this project. Not only is it compatible to the existing road network in this area, but it also provides for future continuation of the northern beltline. US 62 E (Cynthiana Road) is proposed for reconstruction to serve the new Toyota facility. Reconstruction will be to similar standards as proposed for this project. A slight alignment shift for this project may be necessary at the US 460/62 E (Paris-Cynthiana Roads) intersection to provide a continuous and coordinated alignment through this area.

The western termini is not as well defined. The 1978-79 Transportation Plan terminated at US 62 West (Midway-Paynes Depot Road). The 1979 Comprehensive Plan incorporated the by-pass from the 1978-79 Transportation Plan, but continued the by-pass as a beltline around the city. Examination of the logical termini since that time has indicated that US 460 W (Frankfort Road) should be the western terminus of this facility, with possible extension to the north by the local community when desired.

Several factors indicate that US 460 W (Frankfort Road) is the logical western terminus for this facility. Primarily, construction of the by-pass to US 62 West (Midway-Paynes Depot Road) will increase traffic on US 62 West to US 460 W such that this existing segment of the roadway will be unable to accommodate the projected traffic volumes at any reasonable level of service. This segment of roadway is approximately one-half (1/2) mile in length and is on a horizontal tangent, but the vertical alignment is rolling. Sight distances, particularly on the crest vertical curves, are well below minimum design standards for this type of facility. Additionally there are only two (2') foot to three (3') foot existing shoulders, the pavement width is only eighteen (18') feet for two lanes, and the existing entrances will violate the access spacing criteria. Level of service analysis of the existing facility carrying the design year traffic yields a Level of Service E, while analysis of a reconstructed facililty that meets all criteria yielded a Level of Service of C, Attachment D.

It is important to note that the segment of by-pass between US 62 W and US 460 W will serve a large portion of northern and western Scott County and some portions of Franklin and Owen Counties. Lexington is approximately twelve (12) miles to the south and employment, services and shopping are located there. This segment will allow traffic on US 460 W (Frankfort Road) and US 227 N (Stamping Ground Road) to take the

by-pass to US 25 S, then to Lexington. There will be some by-pass effect of Georgetown for traffic using US 460 and US 227, though traffic analysis indicates this to be marginal. Though not contained herein, cost-benefit analysis shows that reconstruction of this segment is justified.

3. Description of Alternatives

a. Do Nothing Alternative

This alternative has been considered but is not thought to be feasible. For lack of action in the past ten to fifteen years, this alternative is currently in effect. The adverse effects of this alternative are easily identified as the existing conditions in the city. These are illustrated by the low level of service in the city, including congestion, accidents, low speeds and stoppages in the existing traffic network. Through traffic and trucks on residential streets is also an accurate indication of the results of this option. These conditions are expected to get worse under the "Do Nothing" alternative. This alternative does not meet the goals and objectives of the community.

b. Public Transit Alternative

Previous studies of public transit in the Georgetown area indicate that this option is not a feasible alternative to construction of the by-pass.

c. Alternative 1

Alternative 1, shown on Exhibits 7 and 8, begins at the US 460 East, US 62 East intersection. It then proceeds south across open terrain, part of which is now being used as a flea market. It is almost perpendicular to the stream as it crosses Elkhorn Creek, and is on the side of a hill as it proceeds southward to East Main Street. From East Main Street to Lemons Mill Road, this alternative is to the west of a drainage swale. From Lemons Mill road to the Southern Railroad, this alternative is on Industrial Park property, parallel and adjacent to the east property line. From the crossing over the Southern Railroad, this alternative proceeds westward, just skirting a subdivision behind Washington Square shopping center, and also passing just south of the new hospital and physicians park as it approaches US 25 S. This alternative is north of a subdivision on Etter Lane and south of the Kroger and Wal-Mart as it proceeds westward from US 25 S. Just south of Marshall Field, this alternative proceeds northwesterly to US 62 across open farmland. At US 62 this alternative generally follows the existing US 62 (Midway-Paynes Depot Road) in a northeasterly direction and terminates with a new intersection at US 460 West (Frankfort Road).

d. Alternative 2

Alternative 2, shown on Exhibits 7 and 8, begins at the US 460 East, US 62 East intersection and proceeds southerly across open land to Elkhorn Creek. The crossing over Elkhorn Creek is skewed and the hill just south of Elkhorn Creek is approached directly, rather than to the side as in Alternative 1. This alternative is east of the drainage swale between East Main Street and Lemons Mill Road and then crosses several open but very productive farms before merging with Alternative 1 in the southern part of the Industrial Park. From this junction Alternative 2 follows Alternative 1 to US 62 West (Midway-Paynes Depot Road). From US 62 West (Midway-Paynes Depot Road) this alternative follows the remnants of an old road or railroad, in a northwesterly direction to US 460 West (Frankfort Road) near the US 460 West, US 227 North intersection. Further investigations and considerations lead to two variations of this basic corridor at the western terminus of this project, Alternatives 2-A and 2-B. In this area Alternative 2 was relabeled as Alternative 2C to provide more distinction between these alternative termini. Each of these alternative termini are discussed below.

e. Alternative 2-A

Alternative 2-A, Exhibits 7 and 8, ends at US 460 West (Frankfort Road) approximately four thousand (4,000') feet west of the US 460/62 W intersection and one hundred (100') feet west of the Ward Hall property line. Sight distance is excellent to the east on US 460 W (Frankfort Road), but is limited to the west. Sight distance to the west is just below the required minimum of five hundred (500') feet. A horizontal and vertical curve to the west on US 460 limits sight distance. Reconstruction of this area to improve the sight distance will likely be complex as a stone fence on the north side has historic significance, while the house to the south, the J.N. Moreland Bungalow, is eligible for listing on the National Register of Historic Places. Some reconstruction of US 460 W (Frankfort Road) would be necessary to provide a left turn onto the by-pass. Ward Hall, listed on the National Register of Historic Places, is on the south side of US 460 W (Frankfort Road) and the stone fence on the north side is also eligible for such listing.

From US 460 W (Frankfort Road), Alternative 2-A proceeds southward around the corner of the Ward Hall property, thence southeasterly, where it is parallel to but just north of an old road, to US 62 West (Midway-Paynes Depot Road) where it ties to and follows Alternative 2 to the project terminus at the US 460/62 E (Paris-Cynthiana Roads) intersection.

The purpose for introduction of this alternative is that it was originally probably the most compatible with the local land use plans, though all alternatives are somewhat compatible. A recent update of the Comprehensive Plan has proposed moving the proposed beltline farther to the west in this area.

f. Alternative 2-B

Alternative 2-B, Exhibits 7 and 8, ends on US 460 West (Frankfort Road) approximately five thousand (5,000') feet west of the US 460/62 W intersection and five hundred (500') feet west of the J.N. Moreland Bungalow. Sight distance is acceptable to the west but rolling grades and a horizontal curve in front of the J.N. Moreland Bungalow somewhat limits sight distance to the east. Crossroad reconstruction will be confined to south of the existing road so as not to impact the historic stone fence just north of the pavement. From the proposed intersection at US 460 W (Frankfort Road), this alternative curves to the southeast, where it is parallel to, but just north of an old road. This alternative then parallels the old road to the by-pass/US 62 W intersection where it becomes Alternative 2, which proceeds around the southern side of Georgetown to the US 460/62 E (Paris-Cynthiana Roads) intersection.

g. Alternative 2-C

Alternative 2-C, Exhibits 7 and 8, ends approximately eight hundred feet (800') east of the existing US 227 N/US 460 W (Frankfort-Stamping Ground Roads) intersection and curves to the right in a manner as not to impact the stone fence, eligible for listing on the National Register of Historic Places, on the north side of the existing road in this area. This alternative is parallel to, but just north of an old road to the by-pass/US 62 W intersection where it becomes Alternative 2, which proceeds around the southern side of Georgetown to the US 460/62 E (Paris-Cynthiana Roads) intersection. West of US 62 W, Alternative 2-C is the same as Alternative 2.

Alternative 2-C west of US 62 W (Midway-Paynes Depot Road) was introduced for its favorable handling of traffic in this area. All traffic approaching Georgetown from the west is directed onto the by-pass. Any traffic desiring to go into downtown Georgetown must get off the by-pass and take existing routes into downtown. This effectively keeps through traffic out of downtown Georgetown and reduces congestion. This has always been a primary goal of the by-pass. Additionally, traffic volumes will be reduced on the substandard entrance routes into Georgetown, with a positive impact on safety. Alternative 2-C was also introduced as an attempt to provide a method of tying the by-pass into US 460 W (Frankfort Road) without disturbing the stone fence approximately five (5) to ten (10') feet off the pavement through this area.

A horizontal curve was used to tie the tangent of the by-pass to a tangent of the existing road, US 460 W (Frankfort Road). The by-pass would be transitioned to the old road over the length of the horizontal curve without disturbing the stone fence. This required carrying the existing roadway section several feet before applying the shoulder transitions from the existing to the proposed. This indicated either non-standard shoulder transitions or substantial impacts to the historic stone fence. Both were ultimately deemed unacceptable.

A new tie of US 460 W (Frankfort Road) to the by-pass was proposed for Alternative 2-C. The tangent in front of Ward Hall is continued across the property of the J.N. Moreland Bungalow, then curved southward till its intersection with the by-pass. This allows correction of a dangerous curve, which has a history of numerous and severe accidents, in front of the J.N. Moreland Bungalow. Safety in this area would be substantially improved. Right-of-way would have to be acquired from the J.N. Moreland Bungalow, eligible for listing of the National Register of Historic Places.

This alternative also provides for continuation of the beltline into the northwest quadrant of the city. However, a tee intersection would be necessary to do so and this concept conflicts with the updated Comprehensive Plan which is continuous in carrying this facility to the north.

h. Alternative 3

Alternative 3, shown on Exhibits 7 and 8, follows Alternative 2 to East Main Street, then curves southwesterly to Lemons Mill Road and then generally follows a property line between two farms to the Southern Railroad, where the terrain is somewhat favorable for a crossing over the railroad. From the Southern Railroad, this alternative proceeds southwesterly across farm and horse farm land to a US 25 S crossing just south of a group of houses along US 25 S. From US 25 S this alternative curves northwesterly crossing another horse farm and training operation just east of Etter Lane. From Etter Lane this alternative proceeds northwesterly across open farmland to the curve on US 460. The primary purpose for the introduction of this alternative was to provide an alternative crossing of US 25 S.

i. Alternatives 4, 5 and 6

Other alternative corridors, Exhibit No. 7-A, were contemplated but were not considered feasible enough for an in-depth investigation. Alternative 4 was the original by-pass corridor proposed in the early 1970's. This corridor connects to and includes what is now Showalter Drive. Showalter Drives is now developed on both sides with approximately sixty (60) residential

units. In addition to the fact that access spacing criteria could not be met, inadequate space was available for the necessary four lanes. Additionally, development of the south of Showalter Drive would not be as well served.

Corridor 5, just north of Corridor 4, was also contemplated. This corridor was attractive because the area west of US 25 S is undeveloped. However, to the east is a cemetary, with historic origins, that would have to be crossed. This was not considered feasible or desirable.

Corridor 6 is a by-pass north of Georgetown. While this corridor does provide a by-pass effect, it does not meet the needs stated under Section I: Purpose and Need of this report. Primarily it does not serve the growing south side of Georgetown and would provide only a very limited economic development effect.

C. Engineering Considerations

1. Level of Service and Capacity Analysis

a. General

This section will examine the traffic characteristics of the proposed Georgetown By-Pass, specifically capacity and level of service. The methodology used is specified in Chapters 7, 8, 9 and 10 of the Highway Capacity Manual/Special Report 209/Special Report 209; dated December 1985. Traffic volume projections for the Year 2007 were provided by the Kentucky Transportation Cabinet (Attachment C). Capacity is defined as the maximum hourly rate at which vehicles can reasonably be expected to traverse a point or uniform section of a lane or roadway during a given time period under prevailing roadway, traffic and control conditions. Level of service (L.O.S.) is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. These operational conditions include such factors as speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. L.O.S. Rating A represents the best operating conditions while L.O.S. Rating F represents the worst. L.O.S. Rating C and above generally indicates satisfactory performance.

Capacity and L.O.S. analyses were performed on the five major intersections along the by-pass and roadway sections connecting them. The analysis locations are listed below and are also shown on Exhibit 14.

Table 1. Traffic Analysis Locations

DESCRIPTION	ROADWAY	INTERSECTION
BYPASS @ U.S. 460 E		I1
BYPASS	R1	
BYPASS @ LEMONS MILL		I2
BYPASS	R2	
BYPASS @ U.S. 25 S		I3
BYPASS	R3	
BYPASS @ U.S.62 W		I4
BYPASS	R4	
BYPASS @ U.S. 460 W		I5

b. Intersections

Capacity and level of service results for the five by-pass intersections are shwon in the following table. Acceptable ranges for the resulting values are as follows:

Volume/capacity ratios (v/c).....0.05 to 0.95
Level of Service (L.O.S.).....A to C

Calculations supporting these results are shown in Attachment.

Table 2 - Intersection Capacity Analysis Results

DIRECTION	MVMT.	I1 V/C	I1 L.O.S	I2 V/C	I2 L.O.S	I3 V/C	I3 L.O.S	I4 V/C	I4 L.O.S	I5 V/C	I5
ROAD NAME		U.S. 460 E.		LEMONS MILL ROAD		GEORGETOWN BYPASS		U.S. 62 S.		U.S. 460 W.	
	LT.	0.63	C	N/A	C	0.00	C	N/A	N/A	N/A	N/A
EAST	TH.	0.77	C	0.29	C	0.69	C	N/A	N/A	N/A	A
	RT.	N/A	C	N/A	B	N/A	C	N/A	N/A	N/A	A
	LT.	0.64	C	N/A	C	0.76	C	N/A	D	N/A	A
WEST	TH.	0.57	C	0.08	C	0.60	B	N/A	N/A	N/A	A
	RT.	N/A	C	0.45	C	N/A	B	N/A	A	N/A	N/A
ROAD NAME		GEORGETOWN BYPASS		GEORGETOWN BYPASS		U.S. 25 S.		GEORGETOWN BYPASS		GEORGETOWN BYPASS	
	LT.	0.59	C	0.36	B	0.00	C	N/A	A	N/A	E
NORTH	TH.	0.74	C	0.58	B	0.70	C	N/A	A	N/A	N/A
	RT.	N/A	C	N/A	B	N/A	C	N/A	N/A	N/A	A
	LT.	0.01	C	N/A	C	0.76	C	N/A	N/A	N/A	N/A
SOUTH	TH.	0.74	C	0.89	C	0.38	B	N/A	A	N/A	N/A
	RT.	N/A	C	N/A	C	N/A	B	N/A	A	N/A	N/A
CONTROL DEVICE		TRAFFIC SIGNAL		TRAFFIC SIGNAL		TRAFFIC SIGNAL		STOP SIGNS		STOP SIGNS	

Three (3) intersections required signalization to provide for an adequate level of service through the intersections. However, this is based on traffic projections for the design year, 2007. Initial traffic may not require such signalization. In particular, the intersection at Lemons Mill Road and the by-pass is not recommended for initial signalization. Traffic at this intersection will be highly dependant on development of the adjacent Industrial Park. Therefore, it is recommended to delay signalization at this intersection until sufficient traffic develops to warrant the signalization. The intersections at the by-pass - US 25 S intersection and the by-pass - US 460 E intersection are recommended for initial signalization due to the higher initial traffic anticipated and the greater complexity of these intersections.

Signalization was also considered for two (2) other intersections, the by-pass - US 62 W intersection and the by-pass - US 460 W intersection. In both cases, the level of service for the left

turn lane was below a desirable, though still acceptable level of service. A level of service of D for the left turn lane onto the by-pass from US 62 W was deemed acceptable. A level of service of E for the left turn from the by-pass onto US 460 W is at the minimum acceptable level. It may well be that this intersection will have to be signalized at some time during the design life of this facility. As there is some possibility that this facility will be extended northward by local efforts, it is recommended to delay signalization until warranted.

c. Roadway

Level of service (L.O.S.) results for the four by-pass roadway sections are shown in the table below. Traffic and roadway characteristics required corresponding, standard volume/capacity ratios to be assumed for each level of service calculation. The acceptable range for L.O.S. on these sections is L.O.S. A to C. Calculations supporting these results are shown in Attachment D.

Table 3. Level of Service Results

DESIGN ITEMS	R1 U.S. 460 E to LEMONS MILL	R2 LEMONS MILL to U.S. 25 S	R3 U.S. 25 S to U.S. 62 W	R4 U.S. 62 W to U.S. 460 W
DESIGN SPEED	60	60	60	60
NO. LANES	4	4	2	2
L.O.S.	B	C	C	C

2. Maintenance of Traffic

Maintenance of traffic is anticipated to be relatively routine for this project since this is a new facility across open terrain. However, this project does include six (6) at-grade intersections and potentially thirty-five hundred (3,500') feet of two lane reconstruction. In general, most at grade intersections will be tied to the existing pavement elevations, when possible. Pavement widening and pavement overlays will then be used in such a manner that traffic can be maintained during construction. This approach is anticipated to be valid for the by-pass and US 62 E - US 460 E intersection, and the by-pass and East Main Street intersection.

The tie of US 62 W to the by-pass and US 460 W to the by-pass is on new alignment. The area where this new alignment ties to the existing alignment will be handled with a pavement overlay as described above.

No maintenance of traffic problems are anticipated at the by-pass and US 25 S intersection. US 25 S is currently in design for reconstruction. Coordination during the design phase will provide an intersection condition such that the by-pass can be tied to US 25 S without any further disruption. The pavement cross slope on US 25 S will have to be matched to the grade of the by-pass at the location of the proposed intersection. Pavement transitions will then be required on US 25 S near the proposed intersection to transition back to the normal pavement cross slopes of US 25 S. Drainage design on US 25 S should reflect the crossing of the by-pass.

Some problems are anticipated with maintenance of traffic on Lemons Mill Road due to the depth of the mainline cut as proposed in this area. Lemons Mill Road has a connection to US 25 S approximately three and one-half (3-1/2) miles south of this proposed intersection and as Lemons Mill Road is not densely populated, it is recommended to close Lemons Mill Road the minimal amount of time necessary to reconstruct the necessary amount of crossroad and proposed intersection.

Maintenance of traffic was a major consideration in the development of a concept for Alternative 1 of the by-pass in the US 62 W area. Spacing criteria for entrances could not be met on the existing alignment. Additionally a detour would be required for the full length of this reconstruction, destroying the agricultural value of the soils within the detour construction limits. The proposed solution was to parallel existing US 62 W such that the existing roadway is used for maintenance of traffic during construction. The existing roadway would then be turned into a frontage road. This will allow continued access to existing and proposed development while maintaining entrance spacing criteria on the by-pass in this area. This will also prevent this section of the by-pass from becoming congested as this area continues to develop. Two entrances are proposed to the by-pass in this area. One of these entrances will connect to Pocahontas Trail, such that this street will be continuous from US 25 S to US 62 W. This connection has been long anticipated by the Planning Commission and right-of-way for this connection has been reserved, but actual connection is not planned until the by-pass is opened between US 25 S to US 62 W, such that Pochontas Trail is not used as a through street in the interium. The other entrance will be located where terrain is conducive to such a connection and such that access spacing criteria is met. Other alternatives will be across open terrain and will present no maintenance of traffic problems.

3. Initial and Ultimate Construction

The Level of Service Analysis indicated that four lanes should be provided from US 25 S to US 460 E, while only two lanes are needed from US 460 W to US 25 S. Traffic projections do show that an additional

two lanes will be needed from US 460 W to US 25 S just beyond the design year for this project. Accordingly, it is recommended that right-of-way be acquired for four lanes on the two lane segment of this project.

Grading for the additional two lanes initially instead of waiting until needed is generally an economic consideration. In some cases, it can be shown that it is cheaper to grade now rather than later. In the case of the Georgetown By-Pass the appropriate considerations are:

- Grading now will avoid benching fills later, which requires more total grading when considering the entire project.
- Grading the additional two lanes now will reduce the total spent on the drainage system. Two lane grading will require removal of headwalls on one side later.
- Grading now will reduce the total spent on engineering design.
- Different grades are likely to be chosen dependent on whether two lane or four lane grading is anticipated. Once a grade is built, it is highly unlikely that it will ever be changed. If two (2) lanes are grades initially and balanced, it is unlikely the ultimate earthwork will be balanced.
- Ditches, including channel lining, will have to be redone on one side if grading is not done now.
- Future grading will require redoing seeding and protection and will increase the total cost of this item.
- Initial paving will be centered on the construction centerline with the ultimate pavement consisting of widening on both sides.

4. Pavement Design

A preliminary pavement design is presented as follows. Equivalent Axle Loadings for the year 2007 were provided by the Kentucky Transportation Cabinet (Attachment C). Roadway segments are the same as was used for the Level of Service analysis, Exhibit 14. A CBR of five (5) was assumed in determining a pavement design.

A pavement structure thickness was determined for each roadway segment, using method outlined in UKTRP-81-17 "Design Guide for Bituminous Concrete Pavement Structures." In accordance with normal engineering practice, an approximate pavement composition of one-third (1/3) asphaltic concrete to two-thirds (2/3) dense graded aggregate was selected. A thickness for each roadway segment was then determined using the chart entitled "Thickness Design Curves for Pavement Structures Having 33 Percent Asphaltic Concrete Thickness of the Total Pavement Thickness," Exhibit 15. Results are summarized in the Table 4 below.

Table 4. Pavement Design Summary

ROADWAY SECTION	E.A.L.	THICKNESS
R1	1,889,900	22.0"
R2	2,303,300	22.5"
R3	3,233,900	22.8"
R4	2,732,800	23.2"

A uniform pavement thickness of twenty-four (24") inches was chosen such that it satisfied the requirements for each roadway segment. A proposed pavement design is shown on the Typical Section, Exhibit No. 6. Full depth shoulders are proposed and consist of five (5") inches of asphaltic concrete and nineteen (19") inches of dense graded aggregate. Perforated pipe is proposed at the pavement edge, both at the median and at the outside edge of pavement for four (4) lane segments. Perforated pipe is proposed at each edge of pavement for two (2) lane segments.

D. Cost Estimates

Construction cost estimates are contained in Attachment A. Estimated right-of-way requirements are contained in Attachment B.

E. Potential Problem Areas

Originally avoiding Ward Hall, eligible for listing on the National Register of Historic Places, was a problem. However, this was resolved as described in Subsection: Identification of Preferred Alternative.

At the date of this report, there are only two unresolved issues. It is unclear whether residents of the Mt. Vernon subdivision, just east of US 25 (Lexington Road), would want or accept a fifteen (15') foot high noise control barrier adjacent to the by-pass. This would be discussed at the public hearing that will be held. The significance of an archaeological site 15Sc134, near the eastern terminus of this project is undetermined but will be addressed prior to the construction of this project.

This project will require a Corps of Engineers permit under Section 404 of the Clean Water Act of 1972. Water quality standards will be in compliance with Section 401 of the Clean Water Act (Public Law 95-217).

Application for water quality certification should be made to the Commonwealth of Kentucky, Department for Natural Resources and Environmental Protection, Division of Water.

F. Potential System Changes

This project involves rerouting US 62, US 460 and US 227 around the southern side of Georgetown utilizing the by-pass. Signing on the by-pass will indicate that the by-pass is now the designated route for motorist using US 62, US 460 and US 227. However, traffic projections do show that most motorist on US 460 may initially prefer to continue to use the existing route through downtown as it is substantially shorter in length. It is anticipated that as time passes there will be an expanding use of the southern by-pass as downtown congestion increases and as through motorist loose their familiarity with the downtown route.

G. Potential Funding Sources

This proposed project is being advanced under the auspices of Title 23 and Title 42 of the United Stated Code of Federal Regulations.

Funding for this project between US 460 West and US 25 South is seventy-five (75%) percent federal and twenty-five (25%) percent state funds. Federal funds will be administered through the Federal Highway Administration. State funds will be used from US 25 South to US 460 East.

SECTION IV

COMMENTS AND COORDINATION

SECTION IV

COMMENTS AND COORDINATION

A. Local Support

This project has immense local support. This document and other project documentation is due, in large part, to the persistance of local officials and local citizen efforts. Specific examples of local support are described herein while documentation of local support is contained at the end of each section.

The Planning Commission has long been a leading advocate of this project because of the direct relationship between this facility and the land use goals and objectives of the community. In fact, the 1979 Comprehensive Plan was developed with the assumption that at some point the by-pass would be built. As described in Section I: Purpose and Need, this project was originally proposed in the early 1970's. Since that time, the Planning Commission has demonstrated their support of this project by keeping a corridor open by prohibiting any development within the corridor. Additionally, the Chairman of the Planning Commission, the Planning Commission Attorney, the Planning Commission Advisor and at least one Planning Commission member spoke in favor of this project at the Early Public Scoping Meeting. The Planning Commission has been extremely cooperative and helpful in determination and selection of Alternative Corridors and Alternative Alignments. The Planning Commission has also been extremely helpful in determining available property for right-of-way acquisition and also instrumental in relaying public comment to the appropriate parties.

Probably the strongest indication of public support for this project is the fact that the local community has been willing to appropriate local funds on behalf of this project. After the 1978-79 Transportation Plan and 1979 Comprehensive Plan, there was no progress on this project. In order to get this project moving, the community, through a joint effort by the Georgetown City Council and the Scott County Fiscal Court, funded a Needs Study, such that the justification for this project would be brought to the attention of the appropriate levels of government.

This project was strongly supported by the 1979 Transportation Plan and was the top ranked project from that study. The extensive public participation in that study by local citizens, as described under item B, Public Participation of this section, illustrates the strong local support that this project has.

Another demonstration of the immense local support for this project was made at the Early Public Scoping Meeting held March 14, 1985. There was excellent public turnout for this project with well over one hundred (100) people in attendance. There were several endorsements of both the project in general and the Alternative 1 Corridor, including those by the chairman of the Planning Commission, the Planning Commission Advisor and the chairman of Georgetown-Scott County Industrial Commission. Other citizens also

expressed support as contained in the "Minutes of the Early Public Scoping Meeting for Georgetown By-Pass, Scott County, Kentucky," as contained in item B, Public Participation of this section. In particular, items 1, 2, 16, 17, 20 and 26 are supportive of this project. No one at the meeting expressed any opposition to this project. However, approximately three (3) people did object to particular alternative corridors. Only two (2) of these properties are in the Preferred Alternative 1 Corridor. In each case, objection was to loss of their property rather than opposition to the project.

The City Attorney's Office has been particularly active in support of this project. This has included contact with property owners to determine acceptable alignments and to determine what right-of-way that may be available. The Property Valuation Accessor's (P.V.A.) office has been extremely helpful as well as the County Clerk's office. The City Engineer has provided needed information on a timely basis. Utility companies have been extremely cooperative as well as other units of government not listed herein.

There are many local written endorsements of this project as contained in Section IV: Comments and Coordination. Among these are Resolution No. 84 R003 by the City Council of Georgetown, an endorsement by David H. Ashley, Chairman, Georgetown-Scott County Industrial Commission, endorsement by Tom E. Benberg, Vice President for Administration and Treasurer of Georgetown College, endorsement by Glenn A. Smith, Administrator, Scott General Hospital, endorsement by Eddie R. Chesser, Jr., Chief of Police and an endorsement by Richard Covington, Chief, Georgetown Fire Department.

84 R003

A RESOLUTION SUPPORTING [illegible]
CONSTRUCTION OF A BY PASS [illegible] DEVELOPMENT
ROAD CONNECTING US 25 SOUTH [illegible] EAST

BE IT NOW RESOLVED BY THE CITY COUNCIL OF GEORGETOWN, KENTUCKY, AS FOLLOWS:

WHEREAS, a by-pass [illegible] industrial development road has long been needed for the City, said road serving the area in the southern part of the City and running from US 460 east to US 62 on the west, and;

WHEREAS, such a road as above mentioned and described has existed in the Transportation Plan and the Comprehensive Plan, both documents having been adopted and supported by this Council, and;

WHEREAS, development on US 25 south and increased traffic in general has made traffic on US [illegible] difficult, and with the construction and operation of the new hospital and commercial development located [illegible] will greatly increase traffic congestion in that area, and;

WHEREAS, the Council realizes the need to support not only existing industry but further that the need to develop new and expanded industry in the City is essential to the continued well being and growth of the City of Georgetown and that the road as proposed would greatly facilitate truck and commercial traffic to existing industry and would open up the development not only of the Georgetown Industrial Park, but other areas which might be served by the road;

[illegible] industrial development road [illegible] to US 1[illegible] east, this Council respectfully requests that the State Department of Transportation, the Department of Commerce, and the office of the Governor consider carefully the merits of the proposed road, and that it receive the necessary funding for design and construction.

WHEREUPON, the foregoing Resolution was passed and approved this 16th day of February, 1984.

CHARLES LENAHAN, MAYOR

ATTEST:

LUCILLE POLLETT, CLERK

City of Georgetown

GEORGETOWN, KENTUCKY

February 14, 1984

GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

Attn: Mr. Lyle Wolf

Re: City of Georgetown: Proposed Industrial Development--
By-pass Road

Dear Mr. Wolf:

As Chairman of the Georgetown-Scott County Industrial Commission, and on behalf of the Commission, we wish to express to you as agents and engineers for the City, the support of the Commission for the proposed industrial development--by-pass road.

The road is critical to the continued growth and development of Georgetown and Scott County. The Georgetown Industrial Park located on Lemons Mill Road in the City will not develop and expand to its fullest potential until such time as a road accessing the Park is developed. There are presently two occupants in the Park, Georgetown Manufacturing Company, and Celtite, Inc. It is difficult for heavy truck traffic to service this area due to the narrowness of Lemons Mill Road, and the general inaccessibility of the Park. The Commission, City officials, and Chamber of Commerce officers, receive almost weekly inquiries from industries interested in locating in the Park. These industries express their concern over the lack of adequate access to this area.

From a traffic flow point of view, the access--by-pass road is needed to make readily accessible existing industries such as Hoover Universal and Johnson Controls, and to alleviate therefrom a great deal of shift change traffic from US 25 South and Lemons Mill Road. Additionally, such a by-pass would take heavy truck traffic off Main Street, South Broadway, and Military Streets, those streets being the most frequently used by truck traffic to serve existing industrial and commercial users. Finally, the increased activities resulting from development on US 25 South of the Kroger-Walmart complex and the construction of the new Hospital Corporation of America hospital will, of course, substantially increase traffic congestion on US 25.

In short, and in closing, the economic well being of the City of Georgetown and Scott County over the future hinges largely on

this project. The Industrial Commission urges adoption of the plan and construction of the road by the State Department of Transportation utilizing whatever funding sources may become available.

Yours very truly,

David H. Ashley, Chairman
Georgetown-Scott County
Industrial Commission

DHA:jbw

GEORGETOWN COLLEGE
Office of Vice President
for Administration and Treasurer

February 6, 1984

The Honorable Charles Sutton
County Judge
Court House
Georgetown, KY 40324

RE: Need for Industrial Connector Road

Dear Mr. Sutton:

On behalf of the Georgetown College community, I am writing to request that the heavy tractor trailer trucks be re-routed from their current use of city streets, particularly Military Street, to an appropriate new industrial connector road.

As you may know, the college community involves approximately 1,300 students and 267 employees. These people have to use the streets adjacent to the college campus, including Military Street. We continue to be concerned about the safety hazard created by heavy truck traffic in the vicinity of the campus. It is our hope that any engineering/ construction studies that are conducted would address the matter of how this safety hazard could be relieved.

It is my understanding that the development of an industrial connector road would not prohibit nor make difficult those necessary truck deliveries to Georgetown College nor give rise to an increase in local taxes.

Let us thank you in advance for any assistance you can give us.

Sincerely yours,

Tom E. Benberg, Vice President
for Administration & Treasurer

rs

John Graves Ford Memorial Hospital
427 WEST MAIN STREET
GEORGETOWN, KENTUCKY 40324
PHONE 502-863-2141

February 8, 1984

Mr. William O. Labude, P.E.,L.S.
Principal Transportation Engineer
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

Re: Georgetown Bypass

Dear Mr. Labude:

As I indicated to you last week, the support of the Georgetown Bypass Project holds high priority with the hospital, especially with our move to the new Scott General Hospital on Lexington Road which will occur on March 20, 1984.

We believe the bypass is vital to the continued, orderly growth of business and industry in and around Georgetown. This would allow our industrial park to expand with greater flexibility and relieve much of the traffic congestion we now experience.

The location of our new hospital on U.S. 25 South places us on the heaviest traveled artery leading to and from Georgetown. This will greatly complicate access to the hospital for physicians, ambulances, other emergency vehicles and personnel where minutes, and sometimes seconds, often make the difference between life and death for our patients. The bypass will ease the traffic problem and provide much improved access to the new hospital for patients and emergency personnel.

Further, construction of a 4-man physicians' office building adjacent to the new hospital is now underway and will open this Spring and others will be added in the near future. Access to these facilities will also be greatly enhanced by construction of the bypass.

Please let us know if we can assist further with implementation of the bypass project.

Sincerely yours,

Glenn A. Smith
Administrator

GAS:ka

City of Georgetown

GEORGETOWN, KENTUCKY

February 14, 1984

GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

Attn: Mr. Lyle Wolf

Re: City of Georgetown: Proposed Industrial Development-By-pass Road

Dear Mr. Wolf:

As Chief of Police of the City of Georgetown I am writing to you to express my support and that of our department for the proposed by-pass road. It is my opinion that this road will greatly alleviate much of the traffic congestion which now exists on the Lexington Road--US 25 South. This congestion will be greatly increased with the full development and completion of the Kroger-Walmart complex and the new hospital.

Shift change traffic from existing industries and peak retail and commercial traffic now make US 25 virtually impassable at peak traffic hours, mainly late afternoon. Emergency vehicles such as police and fire apparatus have an extremely difficult time getting through the area from Hiawatha Trail to Etter Lane. The proposed by-pass road not only would give an alternate route for existing traffic, but would also greatly alleviate the problem encountered by emergency vehicles.

Yours very truly,

Eddie Chesser

Eddie R. Chesser, Jr.
Chief of Police

EBC:jbw

City of Georgetown

February 14, 1984

GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

Attn: Mr. Lyle Wolf

Re: City of Georgetown: Proposed Industrial Development
By-pass Road

Dear Mr. Wolf:

I wish to express to you, as Chief of the City of Georgetown Fire Department, the departments support for the proposed by-pass road.

Congestion on US 25 South at peak traffic periods makes it virtually impossible to get emergency equipment through this area. With the opening of the new hospital it is essential that we have some access to the hospital for not only fire apparatus, but primarily for emergency medical vehicles.

The congestion on US 25 may make passage for emergency vehicles to the new hospital almost impossible. By taking some of the traffic flow from US 25 which the by-pass would do, the situation would be alleviated. Additionally, the by-pass would give emergency apparatus an additional route to the hospital which in our opinion is absolutely essential.

Yours very truly,

Richard Covington

Richard Covington, Chief
Georgetown Fire Department

RC:jbw

THE GRAPHIC
FEBRUARY 2, 1984

City, county get together on local by-pass project

Long-running hopes for a highway bypass connecting U.S. 25 South to U.S. 460 East and U.S. 62 East may be a step closer to reality now as the city and county governments pool their efforts by hiring a consultant for the project.

Georgetown City Council is expected tonight to approve the hiring of G.R.W., a Lexington-based engineering firm which has done consultant work for both industry and government, to help put together a project package to present to the state in order to receive funding.

Scott Fiscal Court approved the hiring of G.R.W. as a project consultant at its regular session Monday morning. The company's fee of [illegible] is expected to be split between the city and county governments.

The bypass project has been in the city's comprehensive plan since 1974, but thus far efforts of both the city and county to secure funding have been fruitless.

Mayor Charles Lenahan has met with County Judge-Executive Charlie Sutton on several occasions to discuss the project. The pair recently decided to suggest to the city council and the court the hiring of one consultant to deal with the job of putting together a bypass package rather than having either city or county create a permanent job for that purpose.

In November, the city council gave preliminary approval to a plan to employ an administrative assistant for the mayor with the principal purpose of securing state aid in relieving traffic problems on U.S. 25 South. The council later had second thoughts about the matter, however, and voted to table the proposed ordinance creating the position.

"Hiring a consultant to do the work rather than creating any type of permanent position will be cost efficient and will get the same job done," Sutton said. "We have always been in constant touch with the state on the matter and the bypass has been a priority for a number of years. But the traffic problem and the need of industry are getting to be critical concerns. We need to move. Now."

Sutton said the city and county considered G.R.W. as a consultant on the project because the firm employs Dr. William Quayles, whose work with the 1974 comprehensive plan is admired by local government officials.

Sutton, Lenahan, County Judicial Assistant Robert Ward, City Attorney David Ashley and Planning Commission Chairman Dr. Robert Snyder met last week in Lexington with representatives of G.R.W. Sutton said that suggestions and proposals of the firm convinced Lenahan and himself to recommend G.R.W. to the court and the council.

"The bypass is a must," Lenahan said. "It's needed for the industrial park. And the traffic situation is bad enough on Lexington Road now; you can imagine what it will be like when the new hospital starts operating there and Wal-Mart and other stores open up.

"Georgetown and Scott County are growing. When you take a representative from a new industry to see the (Lemons Mill Road) industrial park, all they ask is if Clayton Avenue is the only access road to U.S. 25 South. Right now, it is. Those trucks travel through residential sections, which neither the residents nor the industry care for much. A bypass would solve that problem."

Lenahan said several businesses have already expressed an interest in locating on the south side of the city, as well as at the industrial park.

Any plan designed by G.R.W. would be submitted to the court and city council before it is sent to the state for consideration, Sutton said. "But there's no doubt that traffic problems are going to persist and even intensify in that area," he added. "We need to move on getting something together, and do it soon."

B. Public Participation

1. General

In recent years more citizens have become aware of a need to have a voice in decision-making processes during the formulation of plans for public projects. The planning process for Georgetown was no exception. The desire to have a more direct and active role in transportation planning was quite evident.

State and federal governments are continually seeking ways to develop more meaningful public participation. There is no consensus on how public participation can best be accomplished. The concept and philosophy of public participation in transportation planning are still being refined and improved in light of past mistakes and new techniques.

Public participation has been defined as an open process in which the rights of the community to be informed, to influence and to obtain a response from government are reflected and in which a representative cross section of affected citizens interact with appointed and elected officials on issues of transportation. The participants in the process identify and examine all reasonable alternatives and their consequences to assist the appropriate decision-makers in choosing the course that they feel will best serve the needs and objectives of the total community.

Citizens are not empowered to make final decisions concerning public courses of action. These are prerogatives of the elected officals and their authorized representatives. The citizen does, however, have ultimate power through the ballot box to replace the elected official, which places the responsibility on the official to keep in close touch with his constituents.

2. 1978-79 Transportation Plan

A Georgetown Citizens Transportation Advisory Committee was organized at an early stage in the planning process for this study. Committee members, composed of interested citizens of various backgrounds, representing a wide range of interest groups within the community, were selected by the Mayor and County Judge. The committee membership was also open to any interested citizen who was not selected but wanted to serve. Several more members were added by this method. The Citizens Transportation Advisory Committee was responsible for providing the local input into the transportation planning process for Georgetown and was given an opportunity to express its views on a variety of alternatives and factors considered throughout the transportation planning process including:

- Formulation of transportation goals and objectives to guide the planning process.
- Establishment of problems and needs of the urban area.

- Formulation of future land uses and socioeconomic forecasts.
- Development and evaluation of transportation system recommendations.
- Selection of a recommended urban area transportation plan.
- Establishment of priorities for implementing the plan.

In a series of meetings, the committee reviewed current and recommended future land use, population and employment estimates. Once these basic planning parameters had been established, the committee identified problems and needs it felt were important to the future of Georgetown. Recommendations for highway improvements were developed and presented to the committee. These proposals evolved from the discussion of traffic problem areas and were finalized after discussion of various alternative solutions. These proposals were evaluated by the committee in a manner that recorded how the group as a whole felt about each proposal and how the established goals were met.

In the early meetings with the Citizens Transportation Advisory Committee, it soon became apparent that any transportation plan to be developed would have to study the feasibility of a by-pass route around the southern side of Georgetown. The conclusion of this study was that the by-pass was the top ranked transportation need of the community.

Committee members felt that the proposals presented met the objectives of the study. The committee recommended them for inclusion in the Transportation Plan, where the recommendations were subsequently considered by the Georgetown City Council, Scott County Fiscal Court and the Kentucky Department of Transportation for implementation.

All committee meetings were open to the public and press releases announcing the meetings were sent to the local newspapers.

It was with this extensive public participation that the by-pass was considered and formally adopted by the community.

3. 1979 Comprehensive Plan

The public had another opportunity to participate in the development of this facility during the formulation of the 1979 Comprehensive Plan. This plan adopted the by-pass proposal from the 1978-79 Transportation Plan. Public participation for the Comprehensive Plan is summarized hereinafter to illustrate such public participation in adopting the by-pass into the land use plan.

An Advisory Committee provided guidance and determined the plan recommendations throughout the preparation of the Comprehensive Plan. The committee was appointed jointly by the Mayor and the County Judge Executive. The committee consisted of twenty-one (21) members and four (4) ex-officio members from diverse segments of the community.

Seventeen (17) official meetings were held during the planning process, mostly by the Advisory Committee, but also included meetings held with the Planning Commission and Fiscal Court. The committee met in all-day sessions on two occasions, while all the others were evening meetings.

The Advisory Committee reviewed and discussed all sections of the Comprehensive Plan, as well as other material, including:

- Reports from representatives of all the agencies in the community, as well as from the Bluegrass ADD.
- All existing conditions and projections.
- The environmental conditions and constraints.
- The objectives, principles and standards.
- The community needs, plans and proposals.
- The implementation proposals.
- The environmental and historic assessments.

At its June 28, 1979 meeting, the Advisory Committee reviewed the entire Comprehensive Plan and recommended it, including the recommendation for implementation of the by-pass, to the Georgetown-Scott County Joint Planning Commission for their consideration and adoption.

The Joint Planning Commission held its public hearing for the Comprehensive Plan on Tuesday, July 3, 1979, and the Plan was adopted at the Commission meeting of July 12, 1979.

4. Early Public Scoping Meeting

An Early Public Scoping Meeting (E.P.S.M.) was held on Thursday, March 14, 1986, at 7:30 p.m. at the Southern Elementary School located on Fairfax Way in Georgetown. The purpose of the meeting was to gain information such that all possible alternatives were developed, to give the public some idea of the scope of the project and to solicit any public comments and input regarding this project.

Alternative corridors for this project and for this meeting were developed by GRW Engineers in collaboration with local public officials, Kentucky Department of Transportation personnel and from feedback from the Evaluation of Needs Report for this project. Comments from the public meeting were instrumental in recommending a preferred corridor. Among those comments were the following:

- The corridor should be compatible with local planning efforts.
- The corridor should parallel and be inside of the property line of the Industrial Park on Lemons Mill Road.
- The corridor should cross US 25 S near Etter Lane rather than being farther out.
- The Alternative 2 corridor is unacceptable between Lemons Mill Road and East Main Street because of the impacts on farmland in this area.
- The preferred corridor should generally follow existing US 62 W to US 460 W, rather than open up additional land west of US 62 W.

- As the Alternative 1 Corridor satisfied these major conditions, the public preferred the Alternative 1 corridor. Several people endorsed the Alternative 1 corridor, none opposed this corridor.

There was an excellent turnout for this meeting of both local officials and the public at large. Well over one hundred (100) persons were in attendance. Minutes of this meeting are contained herein.

After this meeting the consultant made further studies indicating no unusual constraints. The Alternative 2-A corridor was modified at the western terminus to be more compatible with the local land use plan. The consultant recommended the Alternative 1 corridor to the Kentucky Department of Transportation at the Interdisciplinary Team Meeting of April 9, 1985. The Department unanimously agreed and indicated that additional study should be given to the western terminus. Mapping approval for the Alternative 1 corridor was given and authorization was given to proceed with preliminary design. Additional considerations lead to a choice of a different alternative west of US 62 W (Midway-Paynes Depot Road). This is discussed and documented in Subsection: Identification of Preferred Alternative.

The public was informed that the Alternative 1 Corridor had been selected through a news release to the local newspaper by local public officials.

The public will have an additional opportunity to comment on preliminary design in 1986 at a public hearing.

5. 1986 Update of the Comprehensive Plan

As a result of the location of the Toyota facility in Scott County and as a part of ongoing planning efforts, the community engaged in an update to the 1979 Comprehensive Plan. Public meetings were held on December 30, 1985 and January 3, 6 and 9 of 1986. These were open meetings in which the public comment was solicited. These land use meetings included the southern by-pass, which has been in the previous plans.

Probably due to consideration of the Toyota facility, very few comments were made about the southern by-pass. One citizen commented that the southern by-pass does a good job in containing development to the south and in preserving a green belt between Georgetown and Fayette County. Another citizen expressed concern that he didn't want to see the by-pass become congested like the northern half of New Circle Road in Lexington. Limitations of entrances were recommended. Another citizen pointed out an alignment shift on his property that he thought would be advantageous. Implementation of the southern by-pass was adopted along with the other land use proposals. Exhibit 10 shows the current land use plan.

6. Summary

There has been extensive public participation in the development of this project. This includes the 1978-79 Transportation Plan, the 1979 Comprehensive Plan, the Early Public Scoping Meeting, the 1986 Update of the Comprehensive Plan and will include a public hearing when preliminary plans have been developed.

NOTICE OF PUBLIC MEETING

The Kentucky Department of Highways has scheduled a meeting with interested citizens and groups, public agencies and local officials to discuss the proposed Georgetown Bypass.

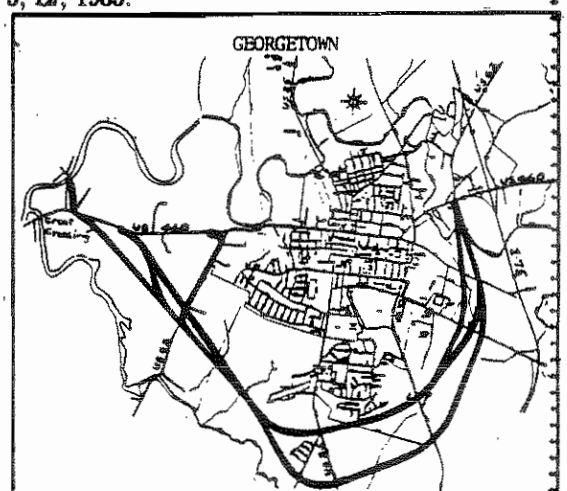
Department of Highways engineers hope to gain information which will aid them in developing all possible alternatives for the proposed project. These alternatives and their effects will be assessed in a project report and environmental impact assessment for the project.

This meeting will be held in the Southern Elementary School Cafeteria on Thursday, March 14, 1985 at 7:30 p.m.

All interested citizens are urged to participate and provide comments either by attending the meeting or by visiting or writing the following:

R.A. Johnson
Chief District Engineer
Kentucky Transportation Cabinet
Department of Highways District No. 7
P.O. Box 11127
Lexington, Kentucky 40512-1127

Published in the Georgetown News & Times March 5, 12, 1985.



Alternative Locations for Georgetown Bypass

FLOYD G. POORE
SECRETARY

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

MARTHA LAYNE COLLINS
GOVERNOR

DISTRICT ONE
Ky. Dam Road
P. O. Box 3010
Paducah, KY 42001

DISTRICT TWO
1840 North Main
Drawer D
Madisonville, KY 42431

DISTRICT THREE
Morgantown Road
P. O. Box 599
Bowling Green, KY 42101

DISTRICT FOUR
East Dixie
P. O. Box 309
Elizabethtown, KY 42701

DISTRICT FIVE
977 Phillips Lane
P. O. Box 37090
Louisville, KY 40233

DISTRICT SIX
Buttermilk & I-75
P. O. Box 17130
Covington, KY 41017

DISTRICT SEVEN
763 New Circle Rd., N.W.
P. O. Box 11127
Lexington, KY 40512

DISTRICT EIGHT
U. S. 27
P. O. Box 780
Somerset, KY 42501

DISTRICT NINE
Elizaville Road
P. O. Box 347
Flemingsburg, KY 41041

DISTRICT TEN
Highway 15
P. O. Box 621
Jackson, KY 41339

DISTRICT ELEVEN
Railroad Avenue
P. O. Box 250
Manchester, KY 40962

DISTRICT TWELVE
North Mayo Trail
P. O. Box 2466
Pikeville, KY 41501

March 1, 1985

RE: Scott County
Georgetown Bypass

Dear

The Kentucky Department of Highways has scheduled a public meeting on the subject project for Thursday, March 14, 1985, at 7:30 p.m., at the Southern Elementary School located on Fairfax Way in Georgetown.

At this meeting, Department of Highway's engineers hope to gain information which will aid them in developing all possible alternatives for the proposed project.

You or your representative are cordially invited to attend this meeting. If you are unable to attend, any written input you may wish to provide would be appreciated. If you are aware of other persons or agencies who would be interested in this meeting, please pass this information along to them.

Sincerely,

R. A. Johnson (by WHW)

R.. A. Johnson
Chief District Engineer
District Seven

RAJ/ALP/WHW/ejh

MINUTES
OF
EARLY PUBLIC SCOPING MEETING
FOR
GEORGETOWN BY-PASS
SCOTT COUNTY

000RS 05382 001;
FSP 105 7284 004D
0000M 07609 001;
FSP 105 7284 005D

As Prepared By

GRW ENGINEERS, INC.
801 Corporate Drive
Lexington, KY 40503
606/223-3999

An Early Public Scoping Meeting (E.P.S.M.) was held, after public notice in the local newspaper, at 7:30 P.M. on Thursday, March 14, 1985 at the Southern Elementary School in Georgetown, KY. The building was opened at 6:30 P.M. and personnel was available to discuss the project prior to the meeting.

A.L. Perkins, Assistant District Engineer for Preconstruction, opened the meeting and introduced the following persons in attendance:

R.E. Johnson, Chief District Engineer
Clint Sullivan, District Engineer
Willie Whitamore, Planning Engineer
John Sacksetter, Central Office, Division of Design
Roy Laughlin, Central Office, Division of Planning
William O. Labude, GRW Engineers, Inc.
Luther Hargis, GRW Engineers, Inc.

There were approximately 110 persons present.

Mr. Perkins explained that the purpose of the meeting was to inform the public of the proposed action, discuss the By-Pass as proposed and to solicit and receive public comment regarding the same.

Mr. Perkins then turned the meeting over to Mr. Roy Laughlin, who was the moderator for the meeting. Mr. Laughlin explained what an Early Public Scoping Meeting (E.P.S.M.) was and that it is more informal than a public hearing.

Mr. Laughlin discussed funding for the project and the fact that Federal Aid Secondary and Federal Aid Urban Systems funds are anticipated for this project. Basically, eighty per cent (80%) of the funds will come from the Federal Highway Administration (F.H.W.A.) and will be matched with twenty per cent (20%) state funds.

Possible target dates were then discussed. The Project Planning Report, an engineering document, is scheduled for completion in July of 1985. A draft Environmental Assessment (E.A.) is scheduled for completion in October of 1985. It was explained that the E.A. would be available for local review and comment when it has cleared the F.H.W.A. A formal public hearing, in all probability, will be held during the local review and comment period, possibly in December of 1985. Copies of the E.A. will be available both locally and at the District Office in Lexington. It was also stated that the public would have an opportunity to review and comment on the Planning and Environmental documents.

Local input and comments of the Planning and Environmental documents and comments from the public hearing will be considered and addressed in a document known as a Finding Of No Significant Impact (F.O.N.S.I.). Approval of the F.O.N.S.I. by the F.H.W.A. indicates that federal funds may be used by Kentucky to advance this project into construction. The F.O.N.S.I.

is anticipated in March, 1986 and F.H.W.A. would hopefully give location approval in May of 1986. Based on the dates as discussed above and subject to availability of federal aid funds, a construction contract would possibly be awarded in late 1987 or early 1988 and run through 1990.

This project, as in the Six-Year Plan, is to construct a By-Pass from US 460 (Paris Road) to US 25S (Lexington Road). Right-of-way would be bought from US 25S (Lexington Road) to US 62W (Midway Road). Additionally, the impacts of extending the By-Pass to US 460W (Frankfort Road) would be studied to satisfy federal requirements regarding logical termini for a federal aid project.

Elements of the Planning and Environmental phases were then listed as follows:

- Documentation of need for the project.
- Existing and projected traffic usage.
- Accident patterns on existing roads.
- Alternative locations for a new road.
- Costs (construction, right-of-way, utility, maintenance of traffic).
- Level of service.
- Impacts on people, business, non-profit organizations.
- Existing and planned development.
- Air quality.
- Noise pollution.
- Acquatic and terrestial ecology.
- Historic and archaeological resources.
- Coordination of local, state and federal agencies with expertise or jurisdiction in any of the above areas.

The design phase was discussed including drawing up construction, right-of-way, utility and maintenance of traffic plans. Upon completion of design, right-of-way would be appraised, bought and utilities relocated. Completion of these items allows the construction phase to proceed.

Mr. Laughlin emphasized that information presented was preliminary, subject to change, and that lines shown on mapping were study alternatives. The public was informed that the aerial photography display would be available for inspection at the District No. 7 Office in Lexington.

Mr. Laughlin gave a brief history of this project, including the 1979 update of the Georgetown Transportation plan. It was explained that this plan was developed in cooperation with a local citizens advisory committee and that the number one priority was the Georgetown By-Pass. In 1984, the City of Georgetown and Scott County engaged GRW Engineers, Inc. to prepare a Needs Study for this project. As a result of local leadership, this project was placed in the Six Year Plan and funded. Mr. Laughlin then asked Luther Hargis of GRW Engineers, to explain the project in detail.

Mr. Hargis reviewed his association with this project, starting with the 1984 Needs Study. Discussion was given to development of alternatives. Criteria discussed were terrain, property and exiting development. A review of the project limits was made. These included I-75 to the east and Cane Run Creek to the south as outer limits. Inner limits included Johnson Controls, the subdivision behind Washington Square, the new hospital, Krogers, Wal-Mart, and Marshall Field. A subdivision on Etter Lane was considered as a control. A statement was made that the closer to the city the better and more useful the road is to the community, as long as impacts were minimized. Analysis was then given to crossing US 25 between Etter Lane and the hospital and that the sole purpose for introduction of Alternative 3, the blue alignment on the display, was to reflect the fact that if the By-Pass did not cross at US 25, then Alternative 3 was the next logical location to cross US 25.

Discussion was then given to the project termini and the fact that there seemed to be a consensus on the logical eastern termini at US 62 (Cynthiana Road). It was also discussed that the western terminus was not as logical and that was the reason for such diversity in alternatives at the western termini.

Terrain was discussed as the difference between Alternatives 1 and 2 between East Main Street and Lemons Mill Road. The location of Alternative 1 in crossing the Southern Railroad was due to staying on the high ground so as to more easily provide the required clearance over the railroad. The rational of taking advantage of terrain between US 62W and US 460W was discussed for Alterantive 2. Reduction of fill size was given as partial rational for developing other alternatives close to Ward Hall. Mention was made of conflict with the airport and the fact that the By-Pass would be below the surface of the airport, indicating that there was no conflict.

Explanation was then given to property, the fact that property maps had been compiled, alternatives had been developed considering the impacts on property, and that if possible, alternatives ran down the property lines. It was recognized that if a road does go through someone's property, it is a hardship to that person.

The floor was then returned to Roy Laughlin who opened the floor for discussion:

1. Roy Laughlin recognized Dr. Robert Snyder, chairman of the Planning and Zoning Commission. Dr. Snyder thanked the engineering staff for coming out for the meeting and the hard work that had gone into

the project. Dr. Snyder did point out that the Planning Commission had worked for this project for over fifteen (15) years, had planned for a By-Pass in all of their documents and that Alternative 1, the red alternative on the display, was the Planning Commissions concept of a By-Pass. Dr. Snyder went on to say that the primary purpose of the By-Pass was to serve the Industrial Park, and that Alternative 1 best suited this purpose. Access to the Industrial Park has been the main problem since inception of the park in 1962. For over 15 years the Planning and Zoning Commission has protected a corridor for this purpose, by prohibiting development of housing, factories and other structures in the Alternative 1 (red) corridor. Additionally, Dr. Snyder pointed out that for approximately ten (10) years, the Planning Commission had a commitment to residents of Indian Hills to provide access from Indian Hills, just off US 62W, to US 25 and that Alternative 1 (red) satisfies this commitment. This would take through traffic out of the existing residential neighborhoods. Dr. Snyder expressed disappointment that construction was not immediately planned from US 25 to US 62W, but indicated his willingness to accept the project as presently contemplated. He again expressed his support for the project and stated that he felt there was unified public support for this project. He also pointed out that with the down turn in the revenue sharing program, the tobacco program, and other governmental programs, that the community needed to build a new economic base, which this project will contribute directly to by serving the Industrial Park. He felt the community needed to be looking ahead for jobs for its citizens through light industry that could be attracted to the park. He also felt that they had an attractive park with nice buildings and that the By-Pass could contribute to its growth. He concluded his remarks by saying "we think this is a fine project".

2. A citizen asked if there was anything local residents could do to influence the schedule on this project, such that construction could be expedited and speeded. Mr. Laughlin indicated that the schedules as previously discussed would be a record short time for a federal aid project. Mr. Laughlin also indicated, based on his previous experience, that construction is more likely to be later than discussed. It was also stated that the department is doing everything possible to expedite this project.

3. Linda Glass asked what kind of access would be provided and for a definition of the type of access anticipated. Roy Laughlin indicated this project will be limited access. Access will be provided, at grade, at all public roads and streets and at other intermediate access points, based on a spacing distance of 1,600'.

4. A citizen asked about the intersection of Etter Lane, US 25 and the By-Pass. Mr. Perkins replied that intersection improvements would be studied in the design phase, particularly if the By-Pass crosses real close to Etter Lane. There will be access from US 25 to the By-Pass.

5. Mr. Russ Johnson pointed out that all intersections will be at grade.

6. A citizen asked if there would be business allowed on this road. Mr. Laughlin replied yes, as long as they used the public access points or otherwise did not violate access criteria. Mr. Perkins pointed out that development would have to go before the local Planning and Zoning board. In some cases, frontage roads may be required.

7. Mr. Drake expressed concern that the By-Pass cuts his farm property in two parts, separating his cattle from water. He asked if it would be possible to move cattle under the bridge over Elkhorn Creek. Mr. Perkins pointed out that this is normally addressed in the design and right-of-way phases, but in other projects such access for cattle has been provided.

8. Fred Neuville asked how wide of a strip of land this project would require and how much prime land would this project take, as approximately eighty per cent (80%) of the land in the corridor is prime farm land. Mr. Laughlin estimated right-of-way as 150' to 200' wide.

9. Mr. Russ Johnson asked about the typical section for this project and whether it would be two or four lane. Mr. Laughlin explained that it depended on detailed traffic and level of service analysis. However, Mr. Laughlin thought, based on preliminary information, that this project would be four lane from US 25 to US 460E, US 62E, (Paris-Cynthiana Roads). From US 25 South to US 62W (Midway Road) and on to US 460W (Frankfort Road) a two lane facility or a two lane initially on four lane right-of-way was discussed. It was pointed out that from US 25 South to the west is not currently anticipated for construction. The consultant, GRW Engineers, Inc., is to study this area and make recommendations as to the number of lane required.

10. Mr. Laughlin was asked to elaborate on the federal requirement regarding extension of this project to logical termini, in this case to US 460 West (Frankfort Road). The citizen asking this question had served on the last comprehensive land use plan committee and that committee had discussed this issue in depth at that time. Public sentiment, at that time, was very strong against crossing US 62 (Midway Road) and opening up that land for any reason. This citizen also asked if the comprehensive plan was consulted in developing alternatives in this area. Mr. Laughlin and Mr. Hargis answered that the comprehensive plan had been consulted. Mr. Laughlin referred to 23 CFR, Part 771 promulgated by F.H.W.A. This regulation requires logical termini for these types of projects. There could be some question raised whether US 62 West (Midway Road) is a logical terminus, and whether US 460 West (Frankfort Road) is a more logical terminus. Additionally, Ward Hall is on

the National Register of Historic Places and K.D.O.T. wanted to address the impacts that might occur to Ward Hall if this project is built into this area. Alternatives to US 460W (Frankfort Road) were developed to satisfy federal requirements. Mr. Hargis explained that the local comprehensive plan is unclear in the area west of US 62 (Midway Road) and that it was difficult to read the map in the comprehensive plan. Mr. Hargis explained that the plan shows a circle around Georgetown and that utilizing existing US 62 may be somewhat to the inside of the route shown on the plan. Dr. Snyder explained that the planning commission anticipated stopping at US 62W (Midway Road) at the time the plan was made. However, the comprehensive plan is up for an update this year. He also explained the original plan was to go up US 62 to keep the circle pulled in tight around Georgetown and keep the circle reasonably small.

11. A citizen asked about the likelihood of continuing west beyond US 25. Mr. Laughlin explained that construction was not funded, but they anticipated buying right-of-way. This indicates that construction is likely someday. Mr. Russ Johnson pointed out that the state has to repay federal funds for right-of-way if construction is not initiated in seven (7) years.

12. Mr. Laughlin indicated to Mr. Drake that he did not know anything about the continuation of the road around the north side of Georgetown.

13. Mr. Hargis replied to a question that Alternative 3, the blue on the display, was approximately one-half (1/2) mile further out from Alternatives 1 and 2 in the vicinity of US 25.

14. Lindsey Buchanon asked if there would be a lot of trucks on this road. Mr. Laughlin replied yes there would be a mix of both. He also asked what would happen to businesses downtown after traffic is rerouted. Mr. Laughlin replied that we would be studying the impact on existing businesses in the socioeconomic studies of the Environmental Report. A citizen stated that the original thinking was to eliminate truck traffic downtown and in residential neighborhoods. Mr. Hargis pointed out that it was a safety consideration to get trucks off residential streets.

15. Mr. Laughlin commented that there were no expressions of preference between the alternatives. He did comment that they were all within a traffic corridor. He then solicited the citizens for preferences and reasons for those preferences.

16. Dr. Snyder then spoke in favor of Alternative 1, the red alternative on the display. It is in the corridor that the Planning and Zoning Commission has been working on for fifteen (15) years and provided the least damage to farms in the area. Another citizen remarked that Alternative 1 is compatible with the comprehensive

plan. Mr. Laughlin emphasized that all work is in cooperation with the local planning agency. Another citizen endorsed Alternative 1 because it would help the situation where traffic is backing up on US 25, sometimes even to Etter Lane. Mr. Hargis pointed out that this situation was given consideration in development of the 1984 Needs Report and that the By-Pass would alleviate the congested condition.

17. Steve Mooney, planner with the Planning Commission, then spoke. Mr. Mooney preferred Alternative 1 (red) for a variety of reasons stated in the comprehensive plan. It provides for relief of traffic congestion on US 25 and Main Street, strengthens the community's ability to attract industry, complete development of the industrial park, and gets industrial traffic off the local road network. He realized that it was located on prime agricultural soils, but that it was also in the Urban Service Area. As part of the comprehensive planning process, it is proposed to consume some prime agricultural land in a logical, continguous expansion of Georgetown, necessarily so to keep it from sprawling further out and consuming even more prime agricultural land. It was also pointed out that the community can provide water, sewer, logical street extensions and accommodate future development for Alternative 1 (red). Alternative 1 (red) does provide for better long term development of Georgetown.

18. Mr. Laughlin stated that the impacts of prime farmland would be studied. Due to its appropriate 6.5 mile length and the fact that it will require more than 50 acres of right-of-way, this would be required by federal regulation. This project will fall under the purview of House Bill 34, enacted by the 1984 General Assembly. This requires projects over 50 acres that utilize state monies to go before a committee which makes a recommendation to the Governor. In this case, the transportation benefits will be weighed against the loss of farmland. In a broad interpretation, this law defines farmland as anything not under roof, pavement, or water. This is the first environmental legislation enacted by the state that relates to transportation.

19. Mr. Laughlin responded to a citizen that the state builds and maintains fence.

20. Dave Ashley, city attorney, then spoke in favor of Alternative 1 (red). Dave Ashley pointed out that Alternative 1 was the least disruptive. Mr. Ashley did not know of any relocation that would be required by Alternative 1. This project is an economic development tool, in addition to improving traffic flow. It also provides safety by getting trucks out of existing neighborhoods and provides improved access for emergency vehicles. This project is a great asset and is most productive to the community in terms of economic

development. Alternative 1 is also the most efficient in terms of traffic flow. Mr. Laughlin pointed out that it was the consultants job to address and quantity the benefits derived from this project in the various studies.

21. A citizen pointed out that although Alternatives 1, 2, 2A and 3 have been discussed, there is a multitude of possible alternatives. Mr. Hargis agreed and pointed out this was the reason for labeling junctions on the handouts.

22. A citizen asked for elaboration of alternatives in the east and commented that Alternative 3 (blue) has less utility to the community because it was further out. A further comment was that except for Alternative 3, there wasn't that much difference in alternatives. Mr. Hargis explained that the differences between Alternatives 1 and 2 on the east side of town was due to property and terrain and that there is more disruption to property with Alternative 2 in this area.

23. A citizen asked if cost were important. Mr. Laughlin assured him that cost was very important. A further question was whether the state could afford this project. Mr. Laughlin pointed out that this project had already been funded, that monies have been identified for this project, including both federal and state funds.

24. A citizen pointed out that US 62 (Midway Road) is referred to locally as Paynes Depot Road.

25. Mr. Hargis then solicited the audience for any known environmental features in the area, including historic or archaeological sites, including family plot cemeteries.

26. Dr. Snyder pointed out that Alternative 2 cut across three (3) very fine productive farms between the Southern Railroad and East Main Street. He went on to point out that the By-Pass should touch the Industrial Park as shown in Alternative 1 (red).

27. A citizen asked if this project would take traffic off US 25. Mr. Laughlin replied it was undetermined at this time, that traffic analysis were underway. It was speculated that it would take traffic off South US 25, but numbers are not yet available. He also stated that the Planning-Environmental documents would show how much traffic would be taken off US 25S.

28. Mr. Laughlin again solicited the audience for questions, comments and suggestions. Mr. Laughlin commented that it was a good turnout and that the audience had been very helpful. The audience was reminded that the aerial display was going to the District No. 7 Office in Lexington and Kentucky Department of Transportation personnel were available to discuss this project.

The meeting was adjourned at 9:15 P.M. since there were no more questions. Kentucky Department of Transportation personnel and the consultant stayed until 10:15 P.M. answering questions.

ENDORSEMENT: March 28, 1985

This document has been reviewed and is approved as written with the following exceptions: Item 18 should read in part as follows: "Mr. Laughlin stated that the impacts of prime farmland would be studied as required by federal regulation. Due to its appropriate (sic) 6.5 mile length and the fact that it will require more than 50 acres of right of way the project will fall under the purview of House Bill ..."

R. W. B. Laughlin

R. W. B. Laughlin, Manager
Project Engineering Section
Division of Planning

cc: A. L. Perkins
John Sackstyder
Floyd Hughes
Luther Hargis, GRW Inc.

C. Interagency Coordination

Interagency coordination on this project is nearly complete. This project has been through the A-95 review process. As a result of that process, response has been received from:

- Bluegrass Area Development District
- Kentucky State Clearing House
- Kentucky Heritage Council
- Department of Anthropology
- Kentucky Natural Resources and Environmental Protection Cabinet
- Kentucky Department of Labor
- Division of Conservation

Additionally the following agencies have been contacted:

- U.S. Army, Corps of Engineers
- Southern Railway System
- Federal Aviation Administration
- Georgetown-Scott County Airport Board
- Kentucky Office of Aeronautics and Riverport Development
- Kentucky Nature Preserve
- State Archeologist
- Soil Conservation Service

To date, all response has been routine with no unusual problems encountered. All comments will be resolved to the satisfaction of the agency involved.

D. Environmental Coordination

Environmental base studies, including historic, archaeological, ecological, socioeconomic, water quality, noise and air analysis, have now been completed and approved. Comments regarding these studies have generally been resolved by resubmission of reports. In some cases resolution of comments has been by letters and are contained in the Appendix of the Environmental Impact Statement (E.I.S.) for this project.

KENTUCKY HERITAGE COUNCIL
The State Historic Preservation Office

April 24, 1986

Mr. G.F. Hughes, Jr., Director
Division of Environmental Analysis
Transportation Cabinet
Frankfort, Kentucky 40622

Re: "A Cultural Resource Assessment of the Alternatives for the Proposed Georgetown Bypass Scott County, Kentucky" by Donald E. Janzen.

Dear Mr. Hughes:

The State Historic Preservation Officer has received for review and comment the above referenced archaeological report. During the course of his investigation of the project area the author recorded five archaeological sites (15Sc134, 15Sc135, 15Sc136, 15Sc137 and 15Sc141) and revisited three previously recorded sites (15Sc74, 15Sc76 and 15Sc80). The author concluded that sites 15Sc135-137, 15Sc141, 15Sc74, 15Sc76 and 15Sc80 were not eligible for listing in the National Register of Historic Places and warranted no further investigations.

For site 15Sc134, the author recommends further investigation to determine the National Register eligibility of this archaeological site. He recommends that after the flea market has closed, the gravel on the roads be graded into a pile and the project area plowed. He then recommends that a controlled surface collection be made and that, based upon the results of this investigation, recommendations be made concerning the need for additional archaeological work at 15Sc134.

I concur with the findings and recommendations presented in this report. If you have any questions, feel free to contact David Pollack of my staff at (502) 564-7005.

Sincerely,

David L. Morgan

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

DLM/fdh

12th Floor, Capital Plaza Tower Frankfort, Kentucky 40601 Telephone (502) 564-7005

KENTUCKY HERITAGE COUNCIL
The State Historic Preservation Office

October 15, 1985

Mr. G. F. Hughes, Director
Division of Environmental Analysis
Transportation Cabinet
Frankfort, Kentucky 40601

Re: "A Cultural Resource Assessment of Three Alignments for the Proposed Georgetown Bypass, Scott County, Kentucky, Part I" by Donald E. Janzen

Dear Mr. Hughes:

The State Historic Preservation Officer has received for review and approval the above referenced archaeological report. During the course of the survey the author revisited three archaeological sites (15SC74, 15SC76 and 15SC80) and recorded six additional archaeological sites (15SC134-137, SC-G2, and SC-G3). The author concluded that sites 15SC74. 15SC76, 15SC80 and 15SC136 were not eligible for listing in the National Register of Historic Places and that they warranted no further work. The significance of sites 15SC134, 15SC135, 15SC137, SC-G2 and SC-G3 could not be determined and further investigation of these sites was recommended.

For Site 15SC134 the author recommends that it be plowed and a controlled surface collection made. For the remaining sites (15SC135, 15SC137, SC-G2 and SC-G3), the author recommends that they be re-examined after the crops have been harvested.

Although I am in agreement with these recommendations I do have the following comments:

1) Surface collections of all the sites should be systematic and involve a controlled collection of at least 25% of each site.

2) If SC-G2 and SC-G3 turn out to be one site then only one site form should be completed. Otherwise, two individual site forms must be completed regardless of the density of cultural materials observed and/or recovered.

With regard to the report in general, I would like to see a map illustrating cultivated and pasture areas. In my opinion, given the author's policy of not shovel testing cultivated areas, coupled with poor ground visibility,

12th Floor, Capital Plaza Tower Frankfort, Kentucky 40601 Telephone (502) 564-7005

all cultivated areas must be resurveyed after the crops are harvested.

The Division of Environmental Analysis is not an appropriate curatoral facility. All materials collected during the survey, as well as field notes, photographs, site forms and a copy of the report must be curated at one of the state's regional universities.

Sincerely,

David L. Morgan

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

DLM/rm

cc: Donald E. Janzen

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

MEMORANDUM

TO: A. L. Perkins
TEBM for Preconstruction
District 7

FROM: G. F. Hughes, Jr., Director
Division of Environmental Analysis

DATE: September 25, 1985

SUBJECT: Scott County: Georgetown Bypass
Archaeological Reconnaissance Survey

This office has reviewed the subject Report and offer the following comments for future reports:

1. The project description should include the proposed right of way width and the project map should have the alternates proposed identified and labeled and the preferred alternate indicated.

2. The Method Section should contain a description of laboratory methods.

3. The general location of shovel test areas should be identified on a map or reference exhibit.

4. This office does not curate material. It is the responsibility of the consultant to arrange for appropriate curation with an approved repository.

Please advise the consultant of these issues. We are forwarding the report to the SHPO for concurrence and will advise him that artifact curation will be at an approved institution.

DWL/ab

cc: B. S. Siria
J. L. Mettille
D. W. Lambert

FLOYD G. POORE
SECRETARY

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET

MARTHA LAYNE COLLINS
GOVERNOR

April 18, 1985

GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

SUBJECT: Scott County
Georgetown By-Pass
Item No. 7-075.0

Gentlemen:

Per your request at the recent IDTM for the subject project, transmitted is a copy of the A-95 Review.

Sincerely yours,

John B. Sacksteder

John B. Sacksteder
Design Engineer Chief

JBS:mlp

Attachment

cc: Roy Laughlin w/a
A. L. Perkins w/a

OMB Approval No. 29-R0218

FEDERAL ASSISTANCE

2. APPLICANT'S APPLICATION	a. NUMBER KT4-111	3. STATE APPLICATION IDENTIFIER	a. NUMBER KY840508-516
	b. DATE Year month day 19 84 5 7		b. DATE ASSIGNED Year month day 19

1. TYPE OF ACTION (Mark appropriate box)
- ☐ PREAPPLICATION
- ☐ APPLICATION
- ☒ NOTIFICATION OF INTENT (Opt.)
- ☐ REPORT OF FEDERAL ACTION

Leave Blank

4. LEGAL APPLICANT/RECIPIENT

a. Applicant Name	Kentucky Department of Highways
b. Organization Unit	Division of Design
c. Street/P.O. Box	State Office Building
d. City	Frankfort
e. County	Franklin
f. State	Kentucky
g. ZIP Code	40622
h. Contact Person (Name & telephone No.)	Thomas A. Scott (502) 564-2932

5. FEDERAL EMPLOYER IDENTIFICATION NO.
61-0600 439 W

6. PROGRAM (From Federal Catalog)
a. NUMBER 20.205
b. TITLE Highway Research, Planning, & Construction

7. TITLE AND DESCRIPTION OF APPLICANT'S PROJECT (Site Map Attached)

Scott County KT4-111

US 62, Southern Bypass of Georgetown. Initial 2-lanes on new location from US 25 south to US 62 east. Phase 1 also includes design for section from US 62 west to US 25 south.

8. TYPE OF APPLICANT/RECIPIENT
A–State; B–Interstate; C–Substate District; D–County; E–City; F–School District; G–Special Purpose District; K–Community Action Agency; I–Higher Educational Institution; J–Indian Tribe; K–Other (Specify):
Enter appropriate letter: A

9. TYPE OF ASSISTANCE
A–Basic Grant; B–Supplemental Grant; C–Loan; D–Insurance; E–Other
Enter appropriate letter(s): A

10. AREA OF PROJECT IMPACT (Names of cities, counties, States, etc.)
Scott County

11. ESTIMATED NUMBER OF PERSONS BENEFITING
Road Users

12. TYPE OF APPLICATION
A–New; B–Renewal; C–Revision; D–Continuation; E–Augmentation
Enter appropriate letter: A

13. PROPOSED FUNDING		14. CONGRESSIONAL DISTRICTS OF:	
a. FEDERAL	$ 7,050,000 .00	a. APPLICANT 6	b. PROJECT 6
b. APPLICANT	2,350,000 .00		
c. STATE	.00	16. PROJECT START DATE Year month day 19 84 7 2	17. PROJECT DURATION To completion.
d. LOCAL	.00		
e. OTHER	.00	18. ESTIMATED DATE TO BE SUBMITTED TO FEDERAL AGENCY ▶ Year month day 19 84 7 2	
f. TOTAL	$ 9,400,000 .00		

15. TYPE OF CHANGE (For 11c or 11e)
A–Increase Dollars; B–Decrease Dollars; C–Increase Duration; D–Decrease Duration; E–Cancellation; F–Other (Specify):
Enter appropriate letter(s):

19. EXISTING FEDERAL IDENTIFICATION NUMBER
NA

20. FEDERAL AGENCY TO RECEIVE REQUEST (Name, City, State, ZIP code)
U.S.D.O.T., Federal Highway Administration, Frankfort, KY 40602-0536

21. REMARKS ADDED
☐ Yes ☒ No

22. THE APPLICANT CERTIFIES THAT ▶
a. To the best of my knowledge and belief, data in this preapplication/application are true and correct, the document has been duly authorized by the governing body of the applicant and the applicant will comply with the attached assurances if the assistance is approved.

b. If required by OMB Circular A-95 this application was submitted, pursuant to instructions thereon, to appropriate clearinghouses and all responses are attached:

	No response	Response attached
(1) Kentucky State Clearinghouse	☐	☐
(2)	☐	☐
(3)	☐	☐

23. CERTIFYING REPRESENTATIVE
a. TYPED NAME AND TITLE: Thomas A. Scott, P.E.
b. SIGNATURE: Thomas A. Scott
c. DATE SIGNED Year month day: 19 84 5 7

24. AGENCY NAME
U.S. Department of Transportation

25. APPLICATION RECEIVED Year month day 19

26. ORGANIZATIONAL UNIT
Federal Highway Administration

27. ADMINISTRATIVE OFFICE
Kentucky Division Office

28. FEDERAL APPLICATION IDENTIFICATION

29. ADDRESS
330 W. Broadway, P.O. Box 536, Frankfort, KY 40602-0536

30. FEDERAL GRANT IDENTIFICATION

31. ACTION TAKEN
- ☐ a. AWARDED
- ☐ b. REJECTED
- ☐ c. RETURNED FOR AMENDMENT
- ☐ d. DEFERRED
- ☐ e. WITHDRAWN

32. FUNDING	
a. FEDERAL	$ .00
b. APPLICANT	.00
c. STATE	.00
d. LOCAL	.00
e. OTHER	.00
f. TOTAL	$ .00

33. ACTION DATE ▶ Year month day 19

34. STARTING DATE Year month day 19

35. CONTACT FOR ADDITIONAL INFORMATION (Name and telephone number)
Paul H. Doss
T. R. Pilling
(502) 227-7321

36. ENDING DATE Year month day 19

37. REMARKS ADDED
☐ Yes ☐ No

38. FEDERAL AGENCY A-95 ACTION
a. In taking above action, any comments received from clearinghouses were considered. If agency response is due under provisions of Part I, OMB Circular A-95, it has been or is being made.

b. FEDERAL AGENCY A-95 OFFICIAL (Name and telephone no.)
Same

STANDARD FORM 424 PAGE 1 (10-75)

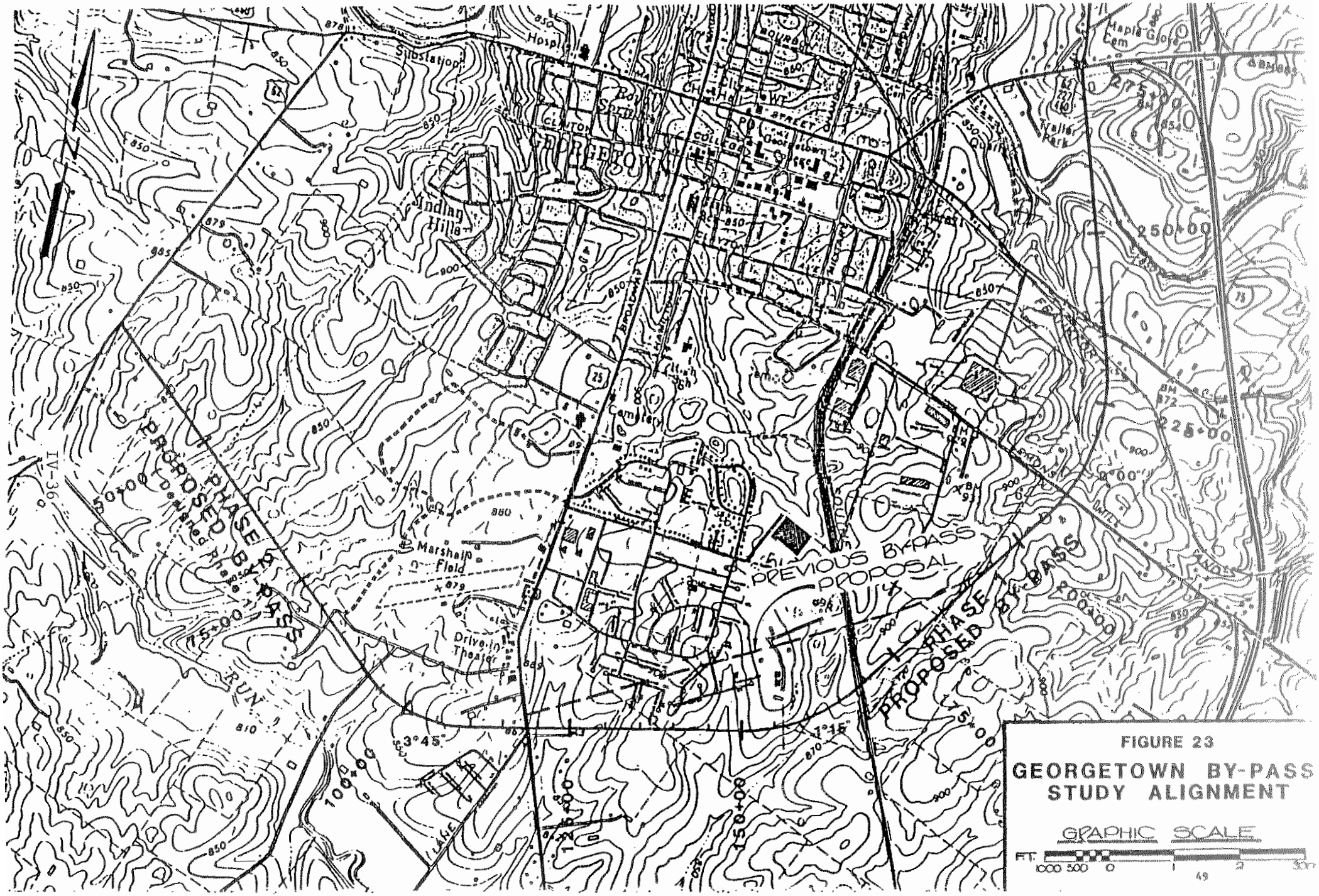


FIGURE 23

GEORGETOWN BY-PASS
STUDY ALIGNMENT

JUN 14 1984

M RTHA LAYNE COLLINS
Governor

OFFICE OF THE GOVERNOR
DEPARTMENT OF LOCAL GOVERNMENT
FRANKFORT, KENTUCKY 40601

RICHARD D. COLE
Commissioner

June 13, 1984

Mr. Thomas A. Scott
Department of Highways
Division of Design
State Office Building
Frankfort, Kentucky 40622

Dear Mr. Scott:

RE: KT4-111 Scott County CFDA #20.205 SAI #KY840508-516

The Kentucky State Clearinghouse, which has been officially designated as the Commonwealth's "Single Point of Contact" (SPOC) pursuant to Presidential Executive Order 12372, has completed its evaluation of the above referenced proposal. The clearinghouse review of this proposal indicates there are no identifiable conflicts with any State or local plan, goal, or objective. Therefore, the State Clearinghouse recommends this project be approved for assistance by the cognizant federal agency.

Although the primary function of the State Single Point of Contact is to coordinate the State and local evaluation of your proposal, the Kentucky State Clearinghouse also utilizes this process to apprise the applicant of statutory and regulatory requirements or other types of information which could prove to be useful in the event the project is approved for assistance. Information of this nature, if any, concerning this particular proposal will be attached to this correspondence.

You should now continue with the application process prescribed by the appropriate funding agency. This process may include a detailed review by State agencies who have authority over specific types of projects.

This letter signifies only that the project has been processed through the State Single Point of Contact. It is neither a commitment of funds from this agency or any other state or federal agency.

If you have any questions regarding this letter, please feel free to contact my office at (502) 564-2382.

Sincerely,

Bob Leonard

Bob Leonard, Manager
Kentucky State Clearinghouse

cc: Bluegrass ADD

ATTACHMENTS

CAPITAL PLAZA TOWER
(502) 564-2382

IN-27

The Kentucky Heritage Council has made the following advisory comments pertaining to State Application Identifier KY840508-516.

An archaeological survey should be conducted by a professional archaeologist to determine if a site eligible for listing in the National Register of Historic Places will be affected by the proposed project. Where a given project area or portions thereof have been disturbed by prior construction, the applicant may file documentation of that disturbance with the State Historic Preservation Officer and request an opinion concerning the need of an archaeological survey. Also the applicant must insure compliance with the Advisory Council's Regulations for the Protection of Historic and Cultural Properties (36 CFR, Pt. 800) pursuant to the National Historic Preservation Act of 1966, National Environmental Policy Act of 1969, and Executive Order 11593.

The applicant should be aware this agency has conducted a comprehensive historic site survey of Scott County. If you desire this information, please contact the Kentucky Hertiage Council.

The Department of Anthropology has made the following advisory comment pertaining to State Application Identifier KY840508-516.

Assess impact on culture resources in compliance with Federal laws and Regs.

The Kentucky Natural Resources and Environmental Protection Cabinet, Division of Water, has made the following advisory comment pertaining to State Application Identifier KY840508-516.

Water Quality certification from the Division of Water for the proposed project may be required by the U.S. Corps of Engineers before construction can begin. If a floodplain is involved, prior approval must be obtained from the Division before construction can begin.

The Department of Labor made the following advisory comments pertaining to State Application Identifier KY840508-516.

It will be necessary for the Public Authority to notify the Department of Labor in writing and ascertain the applicable prevailing wage scale before advertising this project for bids.

Charlotte E. Baldwin
Secretary

Martha Layne Collins
Governor

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR NATURAL RESOURCES
DIVISION OF CONSERVATION
FRANKFORT, KENTUCKY 40601

May 14, 1984

M E M O R A N D U M

TO: A-95 Coordinator
Office of The Secretary

FROM: Kenneth J. Bates, Soil Scientist Supervisor
Division of Conservation

SUBJECT: Comments on A-95 Agency Response
Project Number: KY 840508-516

The Division of Conservation has reviewed the proposed highway by-pass in Scott County and would like to make the following comments regarding our concerns.

This Division's primary concern is with the permanent conversion of prime agricultural lands in this state to non-agricultural uses.

In recent studies it has been shown that Kentucky is losing approximately 250 acres of farmland to non-agricultural uses each day. The acknowledgement of this information and of the ultimate consequences it could have on the Commonwealth urged the 1982 General Assembly to pass KRS 262.850 which is known as the "Agricultural District and Conservation Act". In part the statute states:

> It is the policy of the state to conserve, protect and to encourage development and improvement of its agricultural lands for the production of food and other agricultural products. It is also the policy of this state to conserve and protect the agricultural land base as a valuable natural resource which is both fragile and finite. The pressure imposed by urban expansion, transportation systems, water impoundments, surface mining of mineral resources, utility rights-of-way and industrial development has continually reduced the land resource base necessary to sufficiently produce food and fiber for our future needs. It is the purpose of this section to provide a means by which agricultural land may be protected and enhanced as a viable segment of the state's economy and as an important resource.

More recently the 1984 General Assembly passed House Bill 34. This bill establishes an inter-agency committee to advise the Governor on state projects that may contribute to the permanent conversion of agricultural land.

It is obvious that Kentucky is committed to conserving this vital natural resource. Therefore, this division discourages this type of construction which not only has impacts from initial construction but also opens larger areas of agricultural land to uncontrolled suburban sprawl.

Little concern has been shown over the widespread conversion of these prime agricultural lands to other uses, particularly when other lands are available that may be as suited for this type of construction. The soils in the vicinity of this project are prime agricultural land and it is our contention that this is a consideration to be weighed heavily in this application.

The division would also like to point out that soil erosion and sediment production is the number one non-point source water pollutant in the state; therefore, any land disturbing activities connected with this development should be carefully planned to limit this source of pollution. A pamphlet, "Keeping Soil In Its Place", and a manual, "Best Management Practices for Construction Activities", have been published that address potential problems of erosion and sedimentation during construction. These publications are available through the local conservation district office or from the Division of Conservation.

A few conservation practices which contribute to efficient construction while minimizing soil erosion and sedimentation are listed below.

1. The removal of the vegetation on the site should not be done more than 15 days prior to grading unless juscification for need can be shown for earlier removal. When vegetation is to be removed, the method shall be one that will minimize the erosive effects from the removal. Construction activities shall be contained to the smallest area of land for the shortest amount of time which leaves the soil void of vegetation and subject to increased erosion hazard. Land disturbing activities should be planned to coincide with periods of minimum rainfall.

2. Stockpiling topsoil during grading and site development can later be used in the establishment of permanent vegetation and in landscaping. Locate stockpiled material far enough from streams or drainageways so that if erosion occurs, it will not become a source for off-site sediment damage. If stockpiled material is to be left exposed through the winter season or left exposed for more than 60 to 90 days a mulch or other protective covering should be applied to the stockpiled soil.

3. Maintaining existing vegetation (grasses, shrubs, and trees) where possible provides mature vegetation and helps in controlling erosion on the development site. Construction activities should not encroach on any natural watercourses, drainageways, or constructed channels. Crossing or disturbing live stream channels should be avoided whenever possible.

4. Any excavated materials should not be deposited or stored in or along any river or stream where the material can be washed away by high water or storm runoff, without proper protection.

5. Soil erosion will be a very important problem to deal with during and after construction of the site. All areas that are graded or left void of vegetation and not to be built on within 60 days need to have temporary vegetation established immediately following the surface disturbing activity. After final construction is completed a permanent vegetation needs to be established by fertilizing, seeding, and mulching all disturbed areas.

6. Areas which continuously receive heavy traffic that disturbs or removes the soil's protective cover need to be maintained and if these areas continue to show signs of erosion then bark chips or rock riprapping may need to be used to replace the lost vegetative cover and protect against future erosion.

7. Sediment traps, sediment detention basins, temporary and permanent diversions, grass waterways, and other conservation practices may need to be used to control other erosion problems which might arise.

The Division of Conservation suggests that the applicant contact the local conservation district, the county office of the Soil Conservation Service or this division should any additional assistance be required in the planning phase of the project or the development and maintenance of sediment and erosion control practices.

DEPARTMENT OF THE ARMY
LOUISVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 59
LOUISVILLE, KENTUCKY 40201-0059

May 30, 1985

ORLOP-FS

Mr. Luther Hargis
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

Dear Mr. Hargis:

This is in response to your letter of 20 May 1985, concerning a highway by-pass around the city of Georgetown, in Scott County, Kentucky. We have reviewed the information you submitted in order to determine whether a Department of the Army (DA) permit would be required under the provisions of Section 404 of the Clean Water Act.

The placement of dredged or fill material below the Ordinary High Water (OHW) elevation of any water of the United States must be authorized under Section 404. However, "minor road crossings" are already authorized under 33 CFR 330.5(a)(14), provided the structures are bridged or culverted to allow for expected high flows. Our regulations define a minor road crossing as one in which less than 200 cubic yards of fill material is discharged below the OHW elevation of the stream and which consists of a single complete crossing over a non-tidal waterbody. We also require compliance with the enclosed Special Conditions. If the above-mentioned criteria are met, an individual DA permit would not be required for this project.

Please note that this authorization does not cover the placing of fill into a wetland. If the discharge of dredged or fill material into a wetland area is required in association with construction of this bridge project, then this authorization is not valid, and an individual permit would be required.

If you have any questions, please contact us by writing to the above address, ATTN: ORLOP-FS, or by calling Mr. Frank DeGott at (502) 582-5452.

Sincerely,

William F. Christman
Chief, Regulatory Branch

Enclosure

Southern Railway System

Assistant Vice President - M W & S

Atlanta, Georgia 30303

H.B. CUNDIFF
CHIEF ENGINEER BRIDGES

99 SPRING STREET, S.W.
TEL: (404) 529-1408

May 27, 1985 rhh/w

In reply, please refer to file:
117-18037 RHH

GEORGETOWN, KENTUCKY - Study for proposed Georgetown By-Pass
Project 000RS 05382 001; FSP 105 7284 004D,
0000M 07609 001; FSP 105 782 005D, GRW No. 1406.

Mr. Roy Laughlin
Division of Planning
Transportation Cabinet
Kentucky Department of Highways
419 Ann Street
Frankfort, KY 40601

Dear Mr. Laughlin:

Please refer to Mr. Luther Hargis' letter, received in this office on April 9, requesting our review and comments on the Agency Coordination Document for the above project.

We have no objections to the proposed bypass construction and the necessary overhead crossing of the Railroad. At this time, we have no preference for any of the alternate routes presently being considered.

Our concurrence on this study proposal is based on the assumption that the overhead bridge will be designed and constructed in accordance with our usual requirements, including the 26 ft. vertical clearance required on our trackage between Cincinnati and Atlanta.

Yours very truly,

Chief Engineer Bridges

Cy: Mr. Luther Hargis, P.E.L.S.
Project Engineer
GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

U.S. Department
of Transportation
Federal Aviation
Administration

Southern Region

P. O. Box 20636
Atlanta, Georgia 30320

April 11, 1985

Mr. Luther Hargis, P.E.
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

Ref: Georgetown By-Pass

Dear Mr. Hargis:

The Federal Aviation Administration (FAA) has reviewed the Agency Coordination Document for the Georgetown By-Pass, and since no aviation facilities appear to be impacted, has no comments to offer.

The document did mention, however, that a new Master Plan is being prepared for Marshall Field, the airport which serves the local area. We would recommend that airport access be made a critical element of any local or area wide transportation plans.

Thank you for giving the FAA the opportunity to comment on the project.

Sincerely,

for Robert T. Francis, II
Manager, Program Evaluation
and International Staff

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
KENTUCKY NATURE PRESERVES COMMISSION
407 BROADWAY
FRANKFORT, KENTUCKY 40601
(502) 564-2886

February 12, 1985

Ms. Lettie Heer
Heer, Inc.
Environmental and Planning Specialists
1343 Prather Road
Lexington, Kentucky 40502

Dear Ms. Heer:

This letter is in response to your request for environmental review of the following Kentucky Department of Transportation projects:

Boone County - US 127
Boyle/Garrard Counties - KY 34
Campbell County - US 27
Cloverport/Hawesville Bypass
Franklin County - US 127
Grant/Pendleton Counties - KY 22
Greenup County - KY 693
Jefferson County - KY 1819
McCreary County - 2279
McLean County - KY 85
Scott County-Georgetown Bypass
Warren County-Bowling Green Bypass

We have examined our Natural Heritage Data Base for the areas specified to determine if any of Kentucky's rare elements of natural diversity and/or sensitive environmental areas are known to occur in the vicinity of the projects.

The enclosed summary sheet indicates the identity, location, and Kentucky status for species of plants and/or animals reported from the vicinity of the projects that are listed for monitoring by the Endangered Species Committee of the Kentucky Academy of Science and the Kentucky Nature Preserves Commission (Branson et al. 1981, Trans. Ky. Acad. Sci. 42(3-4):77-89). Also included are known sensitive environmental areas and natural communities located in the vicinity of the projects. Please note that our review indicated that many of the proposed projects were determined not to deleteriously affect any known sensitive species or areas.

ELEMENT OCCURRENCES OF SPECIES MONITORED BY THE KENTUCKY NATURE PRESERVES COMMISSION AND LOCATED IN THE PROJECT AREA

Project Name	Species	Location	Status
Campbell County US 27	Floerkea proserpinacoides (False Mermaid)	38° 59' 18" 84° 26' 58"	State Threatened
Cloverport/Hawesville Bypass	Cloverport Rockhouse	Old-growth Forest/Archeological Site	
	Dodecatheon frenchii (French's Shooting Star)	37° 47' 08" 86° 37' 12"	Under Status Review for Federal Listing
		37° 49' 5" 86° 39' 05"	
	Hydrastis canadensis (Golden Seal)	37° 52' 10" 86° 41' 23"	Special Concern
	Sedum telephiodes (Live Forever)	37° 52' 16" 86° 41' 34"	Special Concern
Franklin County US 127	Arabis perstellata var. perstellata (Rock Cress)	38° 10' 06" 84° 52' 16"	Under Status Review for Federal Listing
	Lesquerella globosa (Bladder-pod)	38° 06' 40" 84° 54' 51"	Under Status Review for Federal Listing
Grant/Pendleton County KY 22	Percina oxyrhyncha (Sharpnose darter)	38° 40' 46" 84° 19' 48"	Undetermined Status

McCreary County KY 2279	Etheostoma sagitta (Arrow Darter)	36° 39' 55" 84° 29' 35"	State Threatened
	Parnassia grandifolia (Ginger-leaved Grass of Parnassus)	36° 43' 37" 84° 27' 54"	State Endangered
	Platanthera cristata (Crested Fringed Orchid)	36° 39' 55" 84° 26' 33"	State Endangered
		36° 40' 50" 84° 26' 32"	State Endangered
	Polygala polygama (Purple Milkwort)	36° 43' 14" 84° 29' 31"	State Endangered
	Ophisaurus attenuatus (Slender Glass Lizard)	36° 43' 25" 84° 26' 25"	Undetermined Status
Warren County-Bowling Green Bypass	Cyprogenia stegaria (a mussel)	37° 01' 11" 86° 26' 51"	State Threatened
	Epioblasma rangiana (a mussel)	37° 01' 11" 86° 26' 51"	State Endangered
	Percina macrocephala (Longhead darter)	37° 00' 44" 86° 25' 09"	State Threatened
	Percina (Odontopholis) sp. (Blackfin darter)	37° 00' 44" 86° 25' 09"	Special Concern
	Phenacobius uranops (Stargazing minnow)	37° 00' 44" 86° 25' 09"	Special Concern

An Invoice for the foregoing environmental review service is enclosed. Because of your experience with and understanding of our costs for environmental review services, we will bypass signing a formal Agreement.

We hope you will support our efforts to protect and preserve Kentucky's natural heritage. Please contact us if we can be of further assistance.

Sincerely,

Richard R. Hannan
Director

RRH/BDA/jbs
Enclosures

COMMONWEALTH OF KENTUCKY
DEPARTMENT OF FISH & WILDLIFE RESOURCES
CARL E. KAYS, COMMISSIONER

PHONE 564-3400

March 14, 1985

Ms. Lettie Heer
Heer, Inc.
1039 Goodwin Drive
Lexington, Kentucky 40505

RE: Request for Information Concerning Various Highway Projects in Kentucky.

Dear Ms. Heer:

Members of my staff have reviewed the list of proposed highway projects referenced in your letter of 28 January 1985. Accordingly, we offer the following comments concerning each project.

A general set of guidelines that we feel would provide appropriate data collection methods to allow an adequate assessment of the potential impacts of each project is enclosed. Lists of rare and endangered species (either federally listed or recognized as high interest species by the Endangered Species Committee of the Kentucky Academy of Science) found in the counties for each of the proposed projects are as follows:

Franklin County - US 127

Arabis pratensis - Snail - state threatened
Neohelix trilineata - Snail - state threatened
Poocetes gramineus - Vesper sparrow - state threatened
Arabis perstellata var. *perstellata* - Rock cress - state endangered (candidate for federal listing)
Arenaria fontinalis - Water stitchwort - state threatened (candidate for federal listing)
Floerkea proserpinacoides - False mermaid - state threatened
Hydrastis canadensis - Goldenseal - state special concern
Lesquerella globosa - Bladder pod - state threatened (candidate for federal listing)

Campbell County - US 27

Ardea herodias - Great blue heron - state undetermined status
Chondestes grammacus - Lark sparrow - state threatened
Clonophis kirtlandi - Kirtland's snake - state endangered
Epioblasma flexuosa - Freshwater mussel - state endangered
Hybopsis x-punctata - Gravel chub - state undetermined status
Iridoprocne bicolor - Tree swallow - state special concern
Lampsilis orbiculata - Freshwater mussel - federally endangered
Percopsis omiscomaycus - Trout-perch - state special concern
Plethodon cinereus - Redback salamander - state special concern
Polyodon spathula - Paddlefish - state special concern
Pooecetes gramineus - Vesper sparrow - state threatened
Spilogale putorius - Spotted skunk - state special concern
Floerkea proserpinacoides - False mermaid - state threatened
Hydrastis canadensis - Golden seal - state special concern
Oenothera triloba - Sundrops - state threatened
Panax quinquefolium - Ginseng - state threatened
Synandra hispidula - Synandra - candidate for federal listing

Boyle County - KY 34

Ammodramus henslowii - Henslow's sparrow - state threatened
Dendroica kirtlandii - Kirtland's warbler - federally endangered
Eumeces anthracinus - Northern coal skink - state threatened
Falco peregrinus - Peregrine falcon - federally endangered
Nyctanassa violacea - Yellow-crowned night heron - state special concern
Percina macrocephala - Longhead darter - state threatened
Hydratis canadensis - Golden seal - state special concern
Synandra hispidula - Synandra - candidate for federal listing

Scott County - Georgetown By-pass

Villosa fabalis - Freshwater mussel - state endangered
Lesquerella globosa - Bladded-pod - candidate for federal listing

Breckinridge County - By-pass

Amblyopsis spelaea - Northern cavefish - state special concern
Ichthyomyzon castaneus - Chestnut lamprey - state special concern
Ictiobus niger - Black buffalo - state undetermined status
Iridoprocne bicolor - Tree swallow - state special concern
Lithasia obovata - Snail - state special concern
Microsorex hoyi - Thompson's pygmy shrew - state threatened
Myotis keeni - Keen's bat - state undetermined status
Myotis leibii - Small-footed Myotis - state undetermined status

If you should need any further information or if we can be of any further assistance, please feel free to write or call our Environmental Section at (502) 564-5448.

Thank you very much.

Sincerely,

Carl E. Kays
Commissioner

CEK/DES/kh

cc: Peter W. Pfeiffer, Director, Division of Fisheries
Edwin F. Crowell, Assistant Director, Division of Fisheries
Bill Graves, Director, Division of Wildlife
Lauren E. Schaaf, Assistant Director, Division of Wildlife
Bill Blackburn, KY DOT
Environmental Section Files

United States Department of the Interior
FISH AND WILDLIFE SERVICE
ENDANGERED SPECIES FIELD STATION
100 OTIS STREET, ROOM 224
ASHEVILLE, NORTH CAROLINA 28801

April 9, 1985

Ms. Lettie Heer
Heer Incorporated
1039 Goodwin Drive
Lexington, KY 40505

Re: 4-2-85-265

Dear Ms. Heer:

We have reviewed the Georgetown Bypass in Scott County, Kentucky, as requested by letter of March 4, 1985, received March 11, 1985.

Based on our records, it is out belief that there are no federally listed or proposed Endangered or Threatened plant or animal species in the impact area of the project, and that the requirements of Section 7(c) of the Endangered Species Act of 1973, as amended, (Act) are fulfilled. Although we have no records of listed and proposed Endangered and Threatened species in the impact area of the project, there are species which, although not now listed or officially proposed for listing as Endangered or Threatened, are under status review (SR) by the Service and may be listed at some time in the future. Status review species are not legally protected under the Endangered Species Act, and the biological assessment requirements pursuant to Section 7(c) of the Act do not apply to them. However, we would appreciate any efforts you might make to avoid adversely impacting them. The following species under status review may occur within the project area:

PLANTS
Short's bladderpod - Lesquerella globosa

In view of this, we believe that the requirements of Section 7 of the Act have been satisfied. However, obligations under Section 7 of the Act must be reconsidered if (1) new information reveals impacts of this identified action that may affect listed species or Critical Habitat in a manner not previously considered, (2) this action is subsequently modified in a manner which was not considered in this review, or (3) a new species is listed or Critical Habitat determined that may be affected by the identified action.

Sincerely yours,

Warren T. Parker
Field Supervisor

CC:

Mr. Wayne Davis, Kentucky Department of Fish and Wildlife Resources, Frankfort, KY
Director, Kentucky Nature Preserves Commission, Frankfort, KY
Field Supervisor, ES, FWS, Cookeville, TN
Secretary, Kentucky Transportation Cabinet, Frankfort, KY 40622
Division Administrator, Federal Highway Administration, P. O. Box 536, Frankfort, KY 40601

To National Register

County sites nominated

The outbuildings and gardens of Ward Hall and Main Street west from Water Street are this year's nomination to the United States Department of the Interior National Park Service's National Register of Historic Places.

According to Scott County Historian Ann Bevins, who compiled data for the nominations, the West Main Street block includes 22 private dwellings, one of which is the former telephone exchange, now owned by Betty Gillespie, was originally intended for commercial use and the John Graves Ford Memorial Hospital building.

The Ward Hall sites include what was the formal garden, reportedly in the process of being restored, as well as a former slavehouse and other storage facilities. Also the Victorian-styled barn on the Ward Hall Farm is included in the nomination.

Nominations were submitted to the parks service during early May.

May also is National Historic Preservation Month.

A confirmation on the nominations, if accepted, could be by early fall.

From: Georgetown News and Times 5/21/85

Helen

United States Department of the Interior

NATIONAL PARK SERVICE
P.O. BOX 37127
WASHINGTON, D.C. 20013-7127

IN REPLY REFER TO:

RECEIVED
SEP 9 1985
KY. HERITAGE COUNCIL

AUG 30 1985

The Director of the National Park Service is pleased to inform you that the following properties have been entered in the National Register of Historic Places beginning August 18, 1985 and ending August 24, 1985. For further information call (202) 343-9552.

STATE, County, Vicinity, Property, Address, (Date Listed)

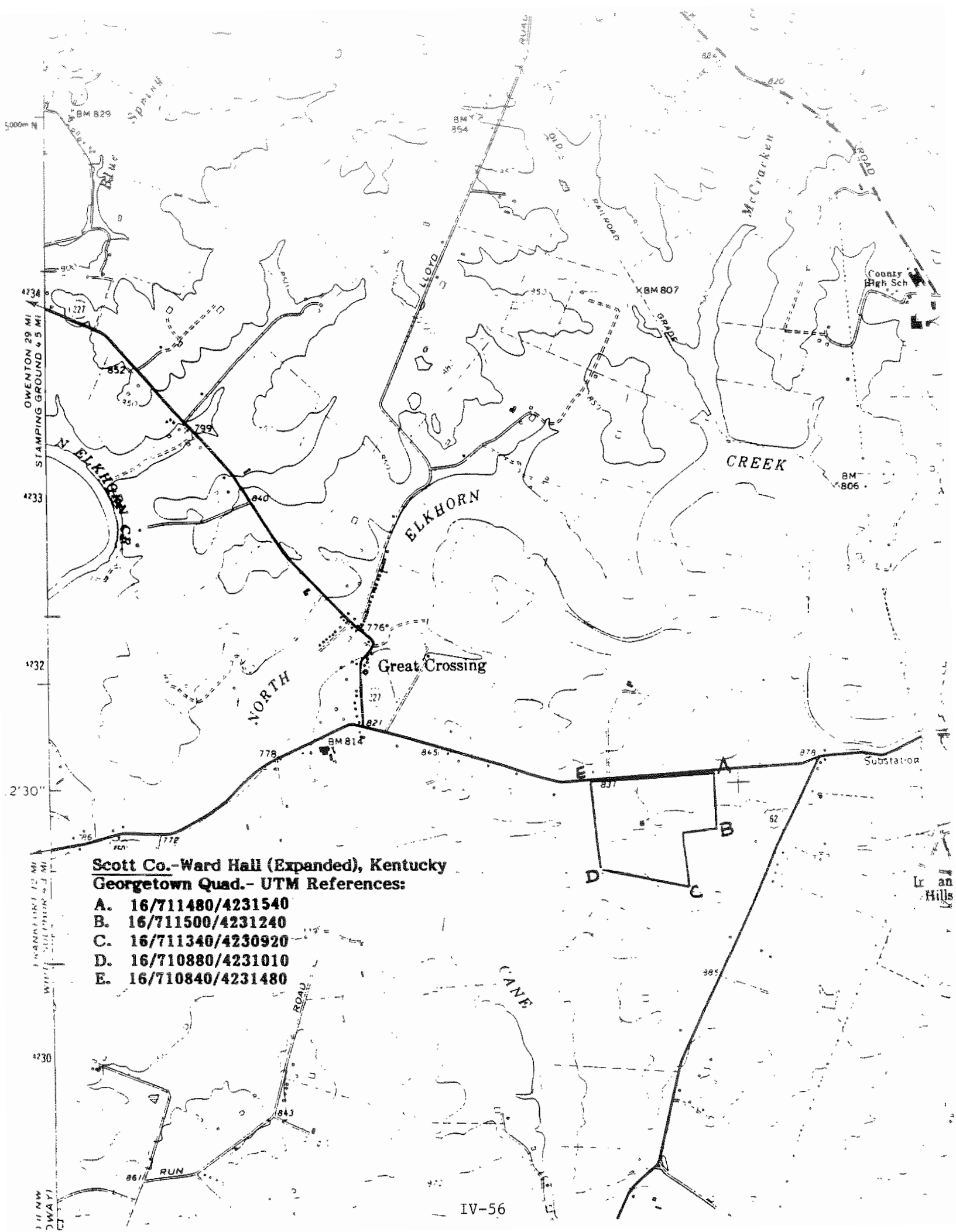
CONNECTICUT, Hartford County, South Windsor, Elmore Houses, 78 and 87 Long Hill Rd. (08/23/85)
CONNECTICUT, Hartford County, Windsor, Bissell Tavern-Bissell's Stage House, 1022 Palisado Ave. (08/23/85)
CONNECTICUT, Hartford County, Windsor, Mills, Elijah, House, 45 Deerfield Rd. (08/23/85)
CONNECTICUT, Middlesex County, Essex, Hill's Academy, 22 Prospect St. (08/23/85)
CONNECTICUT, Middlesex County, Essex, Pratt House, 19 West Ave. (08/23/85)
CONNECTICUT, Middlesex County, Middlesex, Old Middletown High School, Pearl and Court Sts. (08/23/85)
CONNECTICUT, Middlesex County, Old Saybrook, Whittlesey, Ambrose, House, 14 Main St. (08/23/85)
CONNECTICUT, New Haven County, Ansonia, Ansonia Library, 53 South Cliff St. (08/23/85)
CONNECTICUT, New London County, Jewett, Wilson, John, House, 11 Ashland St. (08/23/85)

* KENTUCKY, Scott County, Georgetown vicinity, Ward Hall (Boundary Increase), 1782 Frankfort Pike (08/23/85) *

MINNESOTA, Douglas County, Alexandria, Alexandria Public Library, 7th Ave. W. and Fillmore St. (08/23/85)
MINNESOTA, Douglas County, Alexandria, Cowing, Thomas F., House, 316 Jefferson St. (08/23/85)
MINNESOTA, Douglas County, Alexandria, Douglas County Courthouse, 320 7th Ave. W. (08/23/85)
MINNESOTA, Douglas County, Alexandria, Ward, Noah P., House, 422 7th Ave. W. (08/23/85)
MINNESOTA, Grant County, Barrett, Roosevelt Hall, Hawkins Ave. (08/23/85)
MINNESOTA, Lac qui Parle County, Madison, Madison Carnegie Library, 401 Sixth Ave. (08/23/85)
MINNESOTA, Lac qui Parle County, Madison, Madison City Hall, 404 Sixth Ave. (08/23/85)
MINNESOTA, Traverse County, Wheaton, Chicago, Milwaukee, and St. Paul Depot, Broadway Ave. and Front St. (08/23/85)

NEBRASKA, Douglas County, Omaha, Center School, 1730 S. 11th St. (08/23/85)
NEBRASKA, Douglas County, Omaha, Kennedy Building, 1517 Jackson St. (08/23/85)
NEBRASKA, Lancaster County, Lincoln, Hayward School, 1215 N. 9th St. (08/23/85)
NEBRASKA, Saline County, Dorchester vicinity, Z.C.B.J. Rad Tabor No. 74, R.F.D. (08/23/85)

OHIO, Ashtabula County, Ashtabula, West Fifth Street Bridge, SR 531 over Ashtabula River (08/23/85)
OHIO, Auglaize Coutny, Wapakoneta, First Presbyterian Church of Wapakoneta, 106 W. Main St. (08/23/85)
OHIO, Guernsey County, Cambridge vicinity, National Road, Center Township Rd. 650 (08/23/85)
OHIO, Ottawa County, Middle Bass Island, Middle Bass Club Historic District, Grape and Grove Aves. (08/23/85)


Great Crossing
NORTH ELKHORN CREEK
N ELKHORN CR
LLOYD
McCracken
ROAD
RAILROAD
GRADE
County High Sch
BM 807
BM 806
BM 814
BM 829
OWENTON 29 MI
STAMPING GROUND 4.5 MI
Substation
A
B
C
D
E
Scott Co.-Ward Hall (Expanded), Kentucky
Georgetown Quad.- UTM References:
A. 16/711480/4231540
B. 16/711500/4231240
C. 16/711340/4230920
D. 16/710880/4231010
E. 16/710840/4231480

9. Major Bibliographical References

Bevins, Ann Bolton. The Ward and Johnson Families of Central Kentucky and the Lower Mississippi Valley. Georgetown: Ward Hall Press, 1984.

Coffman, Anne Payne, "Big Crossing Station," The Filson Club Quarterly, Louisville, January, 1931 (v.5,# 1).

Continued, Continuation Sheet # 5

10. Geographical Data

Acreage of nominated property 77

Quadrangle name Georgetown **Quadrangle scale** 1:24,000

UMT References

	Zone	Easting	Northing
A	16	711480	4231540
B	16	711500	4231240
C	16	711340	4230920
D	16	710880	4231010
E	16	710840	4231480
F			
G			
H			

Verbal boundary description and justification Beginning on U.S. 460 2,000 feet west of intersection of U.S. 460 and U.S. 62, follow U.S. 460 west for 2,200 feet, turn slightly east of south and proceed along fence 1,600 feet as indicated on U.S.G.S. Georgetown map, turn southwest and proceed along another fence line as indicated on map 1,500 feet, turn northwest and (continuation sheet 5,#2)

List all states and counties for properties overlapping state or county boundaries

state	NA	**code**	**county**		**code**
state		**code**	**county**		**code**

11. Form Prepared By

name/title Ann Bolton Bevins

organization Kentucky Heritage Council **date** May 1, 1985

street & number 12th Floor, Capital Plaza Tower **telephone** (502)564-7005

city or town Frankfort **state** Kentucky

12. State Historic Preservation Officer Certification

The evaluated significance of this property within the state is:

X national ___ state ___ local

As the designated State Historic Preservation Officer for the National Historic Preservation Act of 1966 (Public Law 89-665), I hereby nominate this property for inclusion in the National Register and certify that it has been evaluated according to the criteria and procedures set forth by the National Park Service.

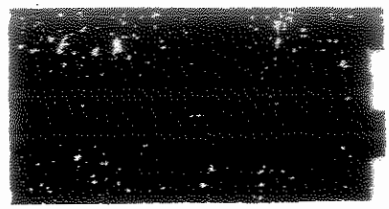
State Historic Preservation Officer signature David L. Morgan

title STATE HISTORIC PRESERVATION OFFICER **date** June 26 1985

[redacted]

Attest: [redacted] date

Chief of Registration



Crawford, Byron, "Lonely Landmark: Architectural Showpiece Is Steps Away from the Beaten Highway," The Courier-Journal, Louisville, Kentucky, August 27,1982.

Erwin, John S. Like Some Green Laurel. Baton Rouge:Louisiana State University Press,1981.

Gaines, B.O. A History of Scott County. Georgetown:1904, reprinted by Frye Printing Company, Georgetown, in 1961, II,151.

Johnson, Henry Viley. "Memoirs," MS. Scott County Public Library,Georgetown, Kentucky.

Lancaster, Clay. Ante Bellum Houses of the Bluegrass. Lexington: University of Kentucky Press, 1961, 96.

Newcomb, Rexford. Architecture in Old Kentucky. Urbana , Illinois: University of Illinois Press, 1953,140,141.

McCain, William D. and Charlotte Capers (eds.). Memoirs of Henry T. Ires: Papers of the Washington County Historical Society, 1910 to 1915. Jackson, Mississippi: Mississippi Department of Archives and Historical Society, 1954.

Perrin, W.H. (ed.) History of Bourbon, Scott, Harrison and Nicholas Counties, Kentucky. Chicago: O.L. Baskin, 1882,605.

Scott County deed books.

"Ward Hall Mansion Identified With Roadside Historical Marker," The Graphic, Georgetown, Kentucky, August 4, 1983.

White, Mary Linn, "Recalling Past Glory." The Cincinnati Post, August 6,1923.

Other information from Frances Susong Jenkins and Bill Scott.

Continuation, Item # 10, boundary justification

continue for 1,000 feet, make 90° turn and proceed for 1,000 feet in an easterly directio , make 90°turn north and proceed for 1,000 feet to point of beginning. These boundaries follow boundary and fence lines as delineated on the U.S.G.S. map and include that part of the 150-acre farm which contains all buildings and landscape features connected with historic Ward Hall.

H. POWELL & Company, Inc.

SITE PLANNING / HISTORIC PRESERVATION / PARK DESIGN

April 30, 1985

Robert Polsgrove
Kentucky Heritage Council
Capitol Plaza Towers
Frankfort, Ky. 40601

Dear Bob:

In working on the cultural analysis for the South Georgetown Bypass, we have encountered an inconsistency in the information for the National Register nomination of the Stone-Grant House (Sc-G 87). The area drawn on the USGS map accompanying the nomination shows a boundary of 6 acres, but the acreage is listed as nine acres.

The boundary as drawn does not conform to fence lines or other natural features. The boundary location on the east side is critical in the design of the highway alignment for crossing North Elkhorn Creek.

We need your help in resolving the boundary. If the larger figure takes precedence, please advise us as to where it should be located.

Enclosed are copies of an aerial map of the area at one inch equals four hundred feet with the boundary and copies of the map from the National Register nomination. We look forward to hearing from you.

Yours truly,

Helen Powell

cc: Luther Hargis: GRW Engineers

SUITE 201 2230 IDLE HOUR CENTER LEXINGTON, KENTUCKY 40502 (606) 266-5351

MEMBER AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

KENTUCKY HERITAGE COUNCIL
The State Historic Preservation Office

May 9, 1985

Ms. Helen Powell
H. Powell and Company, Inc.
2230 Idle Hour Center, Suite 201
Lexington, Kentucky 40502

RE: **South Georgetown By-pass**

Dear Ms. Powell:

In regard to the boundary of the Stone Grant House (SG-G-87) the area included in the National Register boundary is the area defined by the quadrilateral on the U.S.G.S. map. The area included may be less than the "nine acre" estimate found in the nomination. The map is authoritative.

Please let us know if you need additional clarification on this.

Sincerely,

Robert M Polsgrove

Robert M. Polsgrove
Historic Sites Program Manager
Kentucky Heritage Council

RMP:bsc

12th Floor, Capital Plaza Tower Frankfort, Kentucky 40601 Telephone (502) 564-7005

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

February 12, 1986

Mr. Bill Labude, P.E.
GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

Dear Mr. Labude:

We have reviewed the cultural-historic report for the Georgetown Bypass and find the following issues need clarification.

We agree that Site H, the dry laid stone fence, between 227 and KY 62 is historic. However, we have questions as to its eligibility as an individual entity. If criterion A is applied, then more research is needed to support the association of the fence with the Johnson family. It appears from the research that much of the land (east of Johnsons Station) was given to General John Payne as early as 1787. Therefore, although Johnson owned it originally, the fence was probably constructed during the Payne family occupation.

Secondly, and more importantly, if this section of stone fence is one of the best examples of its type (under criterion C) in Scott County, then evidence supporting this fact needs to be provided. Statements made within the text such as "The Ford-Waller Farm, containing the General John Payne House, has allowed sections of the fence to deteriorate . . ." and "The Bevins farm . . . contains rebuilt sections of the wall . . ." indicate that this element has been altered and allowed to fall into disrepair. Since Scott County has a well documented abundance of historic resources and contributing appurtenances (such as fences), documentation supporting the writer's determination is essential.

Also, if the same fence is to be determined to meet the National Register criteria, then specific boundaries need to be set.

In making determinations of effect, the word "potential" is ineffective. The proposed action will have either "an adverse effect" or "no adverse effect" depending upon the character of the action. If the project involves the removal of portions of the wall, then these would be an "adverse effect."

If you have any questions concerning these comments, please do not hesitate to contact this office.

Sincerely,

G. F. Hughes, Jr., Director
Division of Environmental Analysis

JCH/ab
cc: D. E. Smith
G. F. Hughes, Jr.
D. W. Lambert
J. L. Mettille
J. C. Henderson

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

August 1, 1985 WL 8-5-85

Mr. Bill Labude
GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

Dear Mr. Labude:

SUBJECT: Scott County: Georgetown Bypass
Cultural Resource Survey

We have reviewed the subject report and find it to be a very well researched and written report, however, the key issues which must be addressed by this agency are not adequately covered. It is not the role of the Historian to judge the "acceptability" of the alternates. Rather, the Historian must make evaluations of each alignment giving the factual and judgemental data on National Register eligibility, the alignments relationship to the site and a statement of effect, if any, on the site. For example, on page 27 of the report, the statement is made that, ". . . Alternative 1 is only acceptable, historically, if it does not intrude on the boundary of the Stone-Grant House (ScG 87)." However, it is obvious from examination of Figure 2 that Alignment 1 does indeed pass within the boundaries of ScG 87. Therefore, rather than judge it unacceptable, the historian must determine to what degree the site would be affected (i.e., no effect, no adverse effect, or adverse effect) by the construction of this alignment. The Historian should further indicate whether Section 106 and Section 4(f) procedures would be applicable and if so to which sites. Under Alternative 2 it is stated that it would be acceptable because it does not intrude on the boundaries of any site on the National Register, however, a project doesn't need to intrude on a site to affect it. Therefore, a statement of absence of effect must also be made. These general remarks are applicable for all of the Alternatives.

Please revise accordingly, the Conclusion section of the report, pages 26-29, and resubmit it to this office. If there are any questions, please advise.

Very truly yours,

G. T. Hughes, Jr., Director
Division of Environmental Analysis

DWL/ab

cc: B. S. Siria
D. W. Lambert
A. L. Perkins
R. W. B. Laughlin

LESLIE DAWSON
SECRETARY

40622

June 18, 1986

Mr. William O. Labude
GRW Engineers, Inc.
801 Corporate Drive
Lexington, KY 40503

Dear Mr. Labude:

SUBJECT: Scott County: Georgetown Bypass
Historic Resource Report - SHPO Review

Attached for your use and inclusion in the DEIS is a copy of the SHPO's correspondence on the subject project. Please see that this information is reflected in the EIS.

Very truly yours,

G. F. Hughes, Jr., Director
Division of Environmental Analysis

DWL/ab

Attachments

cc: D. E. Smith
D. W. Lambert w/a
J. L. Mettille w/a

KENTUCKY HERITAGE COUNCIL
The State Historic Preservation Office

June 12, 1986

Mr. G. F. Hughes, Jr., Director
Division of Environmental Analysis
Trnasportation Cabinet
Frankfort KY 40622

Re: "A Cultural Resource Survey of the Georgetown Bypass, Scott County, Kentucky" by Helen Powell

Dear Mr. Hughes:

We have completed our review of the above referenced historic structures report. I concur that the J N. Moreland Bungalow, the Mosby-Tilford-Webb house and the stone fence along the north side of U.S. 460 (site H) are eligible for listing in the National Register of Historic Places. I am enclosing Concensus Determination of Eligibility forms that you should have Federal Highways sign and return to this office at their earliest convenience.

In general, I agree with the author's findings and recommendations. However, in my opinion, Alternative 2-A will have an adverse effect on Ward Hall if land from within its National Register boundaries is required for construction of the bypass.

The following list indicates the various alternatives and their potential effects to properties listed in or eligible for listing in the National Register of Historic Places.

(continued)

12th Floor, Capital Plaza Tower Frankfort, Kentucky 40601 Telephone (502) 564-7005

Alternate 1	No Effect	Mosby-Tilford-Webb House Stone-Grant House Thorn House Ward Hall
	Adverse Effect	Stone Wall (Site H)
Alternate 1A	No Effect	Ward Hall
	Adverse Effect	Stone Wall (Site H)
Alternate 2	No Effect	Mosby-Tilford-Webb House Stone Grant House Thorn House J. N. Moreland Bungalow Stone Wall (Site H)
	Adverse Effect	Ward Hall
Alternate 2A	No Effect	Stone Grant House Mosby-Tilford-Webb House Thorn HOuse Ward Hall J. N. Moreland Bungalow Stone Wall (Site H)
Alternate 2B	No Effect	Mosby-Tilford-Webb House Stone Grant House Thorn House Ward Hall J. N. Moreland Bungalow Stone Wall (Site H)
Alternate 2C	No Effect	Mosby-Tilford-Webb House Stone Grant House Thorn House Ward Hall Stone Wall (Site H)
	Adverse Effect	J. N. Moreland Bungalow
Alternate 3	No Effect	Mosby-Tilford-Webb House Stone-Grant House Thorn House
	Adverse Effect	Ward Hall J. N. Moreland Bungalow Stone Wall (Site H)

For your information I am enclosing herewith a copy of the discussion concerning the possible location of Robert Johnson's station (this is from a draft report on Historic stations prepared by Nancy O'Malley). Should extension of the bypass go near this site or Johnson's Mill, these localities should be investigated by a professional archaeologist.

If you have any questions, feel free to contact David Pollack of my staff at (502) 564-7005.

Sincerely,

David L. Morgan

David L. Morgan, Director
Kentucky Heritage Council and
State Historic Preservation Officer

DLM/rm

Enclosures (CDOEs +)

Although a few stones from the station are said to remain, an intensive search for them in the area was without result (Figure IV-83). The house remains were supposedly east of the bridge which exists as an abutment, it having been replaced by a new bridge to the north. Station remains may have been destroyed during the course of road realignment and bridge construction.

Robert Johnson's Station

Robert Johnson is one of the most famous pioneers in Scott County since he not only founded the town of Great Crossing but preempted huge acreages of land which he sold to other incoming settlers. He also served as one of the original trustees for Transylvania Seminary from 1783 to 1795 and helped to constitute the Great Crossing Baptist Church in 1785 (Meyer 1932).

Robert Johnson (also popularly called Robin) came to Kentucky with his brother Cave in 1779. Eventually, four more of his siblings, Nancy, Hannah, Elizabeth and Sally, were to join in the emigration movement to Kentucky. Robert and Cave overtook the Bryant family at Cumberland Ford and accompanied them to Boonesborough then to the North Elkhorn where they helped build Bryant's Station. Upon its completion, Robert took his wife, Jemima Suggett Johnson and their children, Betsy, James, William and Sally, to the Beargrass Stations but returned in 1781 to Bryant's Station (Staples 1933:308-309; 1934:251-257).

They lived at Bryant's for nearly two years. In 1782, they were residing in the station when it was besieged. History records that Jemima Johnson led the women of the station to fetch water while the enemy waited in ambush. By this time, Richard M. Johnson, later a Vice President of the United States, had been born. Six more children followed him.

In the fall of 1783, Robert Johnson began the construction of his stockaded station on a 2000-acre tract where the Alanantowamiowee Trail crossed the North Elkhorn (Jillson 1934; Perrin 1882). He was assigned this tract by Patrick Henry who had had a survey entered in 1774 (Virginia Survey Book 1, p. 9). Robert was helped by Ben Guthrie and probably others in building the station. The family stayed in Bryant's Station until Robert's station was finished. Station occupants included, with their families, Robert Johnson, Robert Bradley, Ben Guthrie, William Shortridge, John Suckett, David "Hearn" Herndon, Thomas Herndon, Henry Herndon (a single man), Widow Herndon, Julius Gibbs, Jimmy Sterrett and Stephen Lowry. Sterrett and Lowry had lived around Ruddell's and Harrison's Station in present Harrison County until they were both abandoned in 1780 and 1784, respectively. Guthrie and Henry Herndon brought the Sterrett and Lowry families to the station in the summer of 1784. The others came before Christmas of 1783. Johnson also owned slaves who lived at the station. The Guthries made one crop and then moved out in 1785 but other families stayed for two years. Additional families settled in the station in 1785-1786. Johnson's overseer, Edmund Roe, lived at the station from 1784 to 1787 or 1788. He later oversaw Johnson's salt-making venture at one of the salt licks, but it broke up when he was killed (Draper mss. 11CC253-257).

Improvements around the station were initiated early. A horse-powered hand mill was first used but was replaced in 1784 by a water mill. Unfortunately, a spring freshet washed it away before any milling was done.

The station was attacked at least once by Indians. Johnson's slaves were picking blackberries near the fort when the Indians came. One slave was taken, then struck on the head and left for dead. He was only stunned and made it back to the fort.

The reported location of the station is near a copious spring which emanates from the steep slope northwest of the ridge on which a modern house now stands. Traditionally, the station location has always been placed on the site of the existing house (Figure IV-86). Bevins (1981:7) reported that the house presently standing on the site may have contained log portions of the station; however, subsequent examination of the house by an architectural historian tends to discount this possibility (Ann Bevins 1983: personal communication). The house site has one serious disadvantage as a station location. In spite of its commanding location on a prominent hill, the depth of the soil on the ridgetop is very shallow. In areas, the limestone formation is exposed at the ground surface. Such a setting would not be conducive to setting stockade posts either in individual holes or in a trench. A somewhat more suitable area is a lower ridge west of the house. A few large pieces of limestone were observed in this area but no artifacts were found. This location would also have been more convenient to the spring.

A third possibility is in a level area northeast of the house; however, it is somewhat distant to the spring. It was obscured by dense grass sod and evidence of archaeological remains could not be observed.

The station reverted to a family residence within about five years of its establishment. Robert Johnson lived at the station until 1815. His wife had died in 1814 and is buried in the Johnson family cemetery behind the Baptist Church. Robert remarried in 1815 to 17-year-old Jemima or Fanny Bledsoe after having moved to Gallatin County. He died within a few months after his second marriage and was buried in the family cemetery beside his first wife.

Anthony Lindsay's Station

Anthony Lindsay's Station is mentioned by Perrin (1882) as being in the Stamping Ground Precinct along a major road. It was established in 1790. Lindsay originally settled in the Forks of Elkhorn area in 1787 (Bevins 1981:41) and built his station in 1790. It reportedly consisted of three cabins stockaded together, with room for stock. The Lindsay cemetery was established nearby. Hardesty (Draper 11CC169-171) relates that the station was besieged by Indians for two or three days.

The site is marked by a Kentucky Historical Society plaque. It is located on Hy. 227 on a ridge east of LeCompte's Run about two miles northwest of Stamping Ground (Figure IV-87). No Virginia grant was

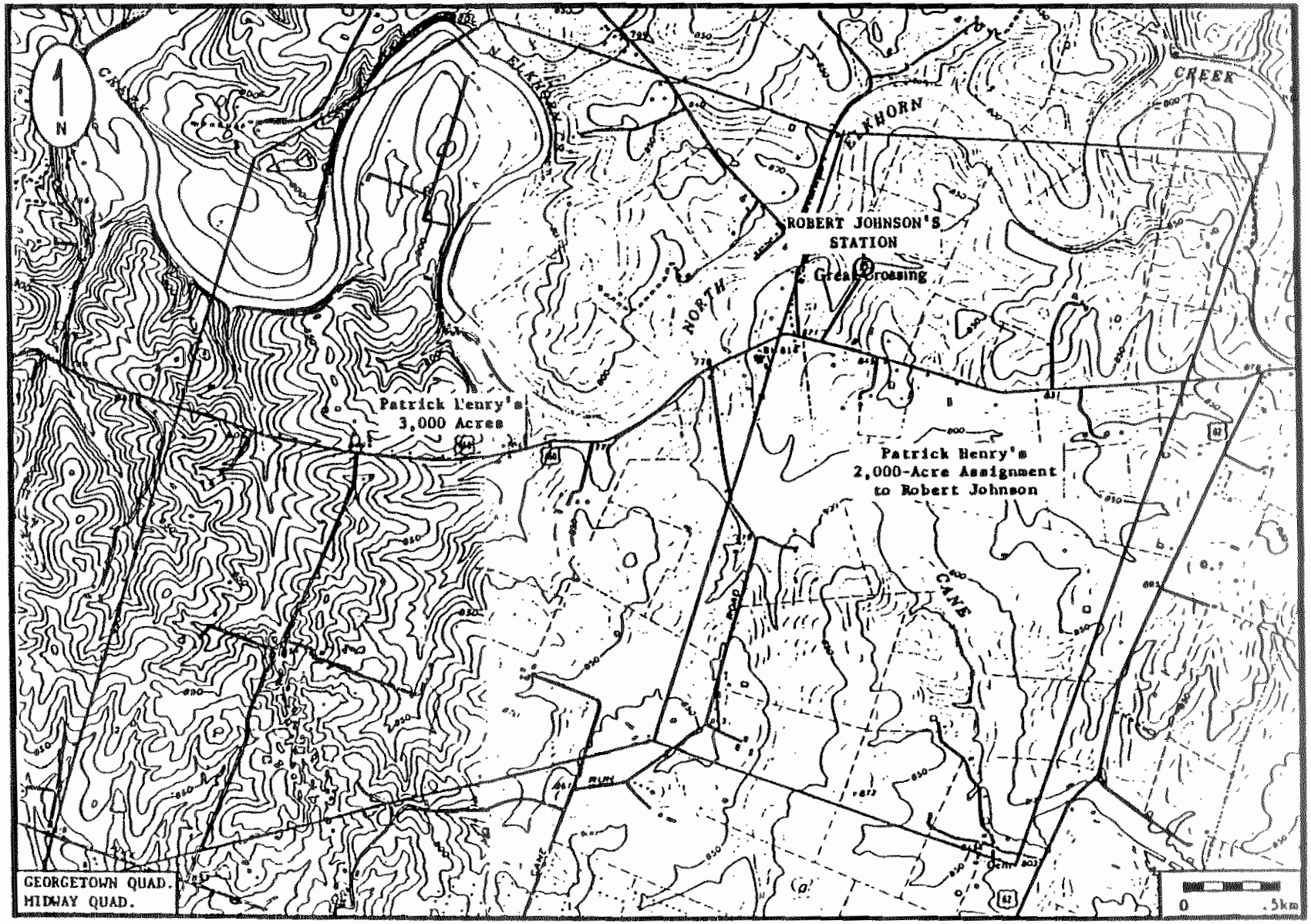


Figure IV-86. Robert Johnson's station, Scott County.

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT KENTUCKY 40622

C. LESLIE DARNOR
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

MEMORANDUM

TO: A. L. Perkins, TEBM
For Preconstruction
District 7

FROM: G. F. Hughes, Jr., Director
Division of Environmental Analysis

DATE: December 3, 1985

SUBJECT: Georgetown Bypass Socio-Economic Analysis

Our staff has reviewed the subject analysis and has the following comments. It will not be necessary to resubmit the report; however, these comments should be addressed in the project EA:

1. Alternate discussion needs to be reorganized, as 6 options were studied - 4 Build Alternates, a Modify Existing Alternate, and a No Build Alternate.

2. Land Use discussion should include land use maps if available and an indication of land use trends.

3. Impact of Bypass on businesses and commercial establishments in Georgetown could be discussed under one separate heading rather than dispersed throughout the report. Discussion on page 18 is good for bypass impact. What businesses will benefit from bypass? be adversely affected?

4. Land use impacts should be discussed under a separate heading.

5. Accessibility Impact discussion should include some of the information presented on page 11 and also include impact upon emergency services.

6. What type of families will be displaced? Are any relocation problems anticipated?

7. A discussion of FPPA coordination and findings should be presented under Agricultural Impacts. The "reason for selection" on Form 1006 is good information so the Form should be referred to.

8. Report contains an excellent summary and discussion.

If you have any questions concerning these comments, please contact John L. Mettille, Jr., of this office.

JLM/ab

cc: D. W. Lambert
J. L. Mettille

FARMLAND CONVERSION IMPACT RATING

(To be completed by Federal Agency)	Date Of Land Evaluation Request
Name Of Project: Georgetown Bypass	Federal Agency Involved: Federal Highway Adminstratic
Proposed Land Use: Proposed 4-lane highway	County And State: Scott KY
PART II (To be completed by SCS)	Date Request Received By SCS: 9-17-85

Does the site contain prime, unique, statewide or local important farmland? Yes ☐ No ☐
(If no, the FPPA does not apply – do not complete additional parts of this form.)

Acres Irrigated: 0 | Average Farm Size: 160

Major Crop(s): Corn, Tobacco & Soybeans	Farmable Land In Govt. Jurisdiction: Acres: 101,355 % 55.9	Amount Of Farmland As Defined in FPPA: Acres: 99,370 % 54.8
Name Of Land Evaluation System Used: LE	Name Of Local Site Assessment System:	Date Land Evaluation Returned By SCS: 10-21-85

PART III (To be completed by Federal Agency)	Alternative Site Rating: Site A 1	Site B 2	Site C 2A	Site D 3
A. Total Acres To Be Converted Directly				
B. Total Acres To Be Converted Indirectly				
C. Total Acres In Site	128.11	139.70	130.09	153.3
PART IV (To be completed by SCS) Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	120	136	125	144
B. Total Acres Statewide And Local Important Farmland	8.1	3.7	5	8
C. Percentage Of Farmland In County Or Local Govt. Unit To Be Converted	.12	.13	.12	.14
D. Percentage Of Farmland In Govt. Jurisdiction With Same Or Higher Relative Value	22.05	22.05	22.05	22.5
PART V (To be completed by SCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)	98	98	98	98

PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))	Maximum Points				
1. Area In Nonurban Use	15	3	5	5	10
2. Perimeter In Nonurban Use	10	5	8	8	10
3. Percent Of Site Being Farmed	20	20	20	20	20
4. Protection Provided By State And Local Government	20	20	20	20	20
5. Distance From Urban Builtup Area	0	0	0	0	0
6. Distance To Urban Support Services	0	0	0	0	0
7. Size Of Present Farm Unit Compared To Average	10	8	9	9	10
8. Creation Of Nonfarmable Farmland	25	10	12	12	15
9. Availability Of Farm Support Services	5	5	5	5	5
10. On-Farm Investments	20	15	15	15	20
11. Effects Of Conversion On Farm Support Services	25	0	0	0	5
12. Compatibility With Existing Agricultural Use	10	5	4	4	3
TOTAL SITE ASSESSMENT POINTS	160	91	98	98	118
PART VII (To be completed by Federal Agency)					
Relative Value Of Farmland (From Part V)	100	98	98	98	98
Total Site Assessment (From Part VI above or a local site assessment)	160	91	98	98	118
TOTAL POINTS (Total of above 2 lines)	260	189	196	196	216

Site Selected: Alternate 1 | Date Of Selection: 10/31/85 | Was A Local Site Assessment Used? Yes ☐ No ☒

Reason For Selection:

The alternates for the proposed by-pass are located in an area of prime agricultural value. One of the main purposes of the project is to use the road to contain or direct urban growth so as to protect the land to the south and west (horse farms). Alternate #1 is the closest to existing development and divides the fewest farms; #2 and #2a follow #1 except to the west they each cut existing large farms. Alternate #3 is located on horse farms and could cause major disruption of certain farms; it would also encourage farm land between the bypass and the urban area to be elimina

(See Instructions on reverse side)

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

MEMORANDUM

TO: A. L. Perkins
TEBM for Preconstruction
District 7

FROM: G. F. Hughes, Jr., Director
Division of Environmental Analysis

DATE: October 28, 1985

SUBJECT: Scott County
Georgetown Bypass
Water Quality Report

Following are comments from my staff on the subject report:

1. There is a water-supply intake for Georgetown downstream from the North Fork Elkhorn Creek crossing. Will the project have any adverse effect on drinking water quality or will it increase the cost of water treatment during and/or after construction?

2. It appears from looking at topographic maps that there are sinkholes in the area which may be crossed or will receive runoff from the project. Therefore, a field survey of the area to locate sinks should be made. A discussion of the impact of the project on these sinks and groundwater should be discussed, including any impact on Royal Spring. Mitigation measures to help protect the sinks should also be discussed.

If there are any questions regarding these comments, please feel free to call.

SPR/ab

cc: D. W. Lambert
R. D. Dutton

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

November 12, 1985

Ms. Lettie Heer
Heer, Inc.
1039 Goodwin Drive
Lexington, KY 40505

Dear Ms. Heer:

SUBJECT: Ecological Assessment for
Georgetown Bypass, Scott County

Members of my biological staff have reviewed the EA for the subject project and offer the following comments.

Comments concerning the water supply intake and sinkholes made in the memo dated October 28, 1985, to A. L. Perkins still apply.

Efforts to avoid the relict savannah as a borrow, waste or staging area should be pursued. Has the soil been disturbed in this community? Is there any tree regeneration?

The corn snakes observed in the fencerow are considered species of special concern in Kentucky by the Kentucky Nature Preserves Commission, Kentucky Department of Fish and Wildlife Resources, and the Kentucky Academy of Sciences. Were the specimens kept? If so, they should be taken to an expert for verification (John MacGregor or Burt Monroe, U of L). If these are verified as Elaphe guttata this is a record out of the known range and their specific habitat should be avoided if possible. Is it possible that they are young, brightly patterned Elaphe obsoleta?

Very truly yours,

G. F. Hughes, Jr., Director
Division of Environmental Analysis

HDB/ab

cc: R. D. Dutton
D. W. Lambert
W. E. Blackburn

INTER-OFFICE MEMO

TC 10-200
Rev. 6/85

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

MEMO TO: A. L. Perkins, Engineering Branch Manager
for Preconstruction
District 7

FROM: G. F. Hughes, Jr., Director
Division of Environmental Analysis

DATE: April 9, 1986

SUBJECT: Air Quality Analysis
Georgetown Bypass
Scott County

We have reviewed the subject project prepared by Kenvirons, Inc. and find that the analysis is acceptable in form and content. A copy of the report is being forwarded to the Division of Air Pollution Control for their review. Upon approval of the report by the Division of Air Pollution Control, please include a copy of the complete report along with the approval letter in the appendix section of the EIS.

COD/dc

cc: G. F. Hughes, Jr.
R. D. Dutton
D. W. Lambert

INTER-OFFICE MEMO

TC 0200
REV. 6/85

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

MEMO TO: A. L. Perkins, Engineering Branch Manager
for Preconstruction
District 7

FROM: G. F. Hughes, Jr., Director
Division of Environmental Analysis

DATE: February 19, 1986

SUBJECT: Air Quality Analysis
Georgetown Bypass
Scott County

We have reviewed the subject project prepared by Kenvirons, Inc. and find that the following revision needs to be made before the report can be forwarded to the Division of Air Pollution Control.

1) Page 14: Paragraph 2 of the section dealing with pollutant emissions states that hydrocarbons and nitrogen oxides will increase for the future alternates when compared to existing levels. However, Table 4 on page 15 indicates that levels of hydrocarbons and nitrogen oxides decrease from existing levels for the 2007 No-Build alternate. Additionally, hydrocarbon levels for 2007-Alternate 2 decrease slightly from existing levels. Revisions in this section should reflect the changes shown in Table 4.

COD/dc

cc: G. F. Hughes, Jr.
R. D. Dutton
D. W. Lambert

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

May 27, 1986

Mr. William O. Labude, P.E., L.S.
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

SUBJECT: Air Quality Analysis
Georgetown Bypass
Scott County
Item 7-75.01, 75.02

Dear Mr. Labude:

Attached is the approval letter from the Division of Air Pollution Control for the subject project. This letter along with a copy of the analysis is to be included within the EIS.

Sincerely,

G. F. Hughes, Jr., Director
Division of Environmental Analysis

COD/dc
Attachment

cc: D. E. Smith
D. W. Lambert
R. D. Dutton

CHARLOTTE E. BALDWIN
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
FORT BOONE PLAZA
18 REILLY ROAD
FRANKFORT, KENTUCKY 40601

April 23, 1986

Mr. G. F. Hughes, Jr., Director
Division of Environmental Analysis, C-1
419 Ann Street
Frankfort, Kentucky 40601

Dear Mr. Hughes:

We have reviewed the air quality analysis for the construction of the Georgetown Bypass, located on the south side of Georgetown in Scott County. We have found both the analysis and the project to be consistent with Kentucky's State Implementation Plan.

Thank you for the opportunity to review this project. If you have any questions, please call Amarjit Sidhu at (502) 564-3382, ext. 340.

Sincerely,

for Hisham M. Sa'aid, Assistant Director
Division of Air Pollution Control

HMS/AJS/tkf

cc: Roger B. McCann
William S. Coakley
Amarjit Sidhu

INTER-OFFICE MEMO

TC 10-200
Rev 6/85

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

L. LESLIE DAWSON
SECRETARY

MARTHA LAYNE COLLINS
GOVERNOR

MEMO TO: A. L. Perkins, Transportation Engineering
Branch Manager for Preconstruction
District 7

FROM: G. F. Hughes, Jr., Director
Division of Environmental Analysis

DATE: January 30, 1986

SUBJECT: Scott County
Georgetown Bypass
Noise Analysis

We have reviewed the information prepared by Kenvirons, Inc., attached to your January 24 memo concerning a noise barrier adjacent to the Mt. Vernon subdivision. Based upon these preliminary calculations, the barrier does seem to be feasible from the standpoint of cost-effectiveness. The Environmental Assessment should therefore reflect the likelihood of barrier construction pending modifications to final plans and acceptance by the affected residents.

If you have any questions, please contact my office.

RDD/dc

cc: D. W. Lambert
B. C. Adkins

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

December 30, 1985

Mr. Luther Hargis, P.E., L.S.
Project Engineer
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

SUBJECT: Noise Analysis
Georgetown Bypass
Scott County

Dear Mr. Hargis:

The subject analysis prepared by Kenvirons, Inc. is approved contingent upon the following clarification:

If there appears to be some likelihood that a noise barrier will be included in the project (as stated on page 16 of the analysis), the economic feasibility or cost effectiveness of the barrier should be determined by means of KYTC's noise abatement policy. Please include this factor for receptors 3, 4, and 5 in the final report.

If you have questions regarding these comments, please contact my office.

Sincerely,

G. F. Hughes, Jr., Director
Division of Environmental Analysis

RDD/dc

cc: A. L. Perkins
D. W. Lambert
B. C. Adkins

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

MARTHA LAYNE COLLINS
GOVERNOR

November 13, 1985

Mr. Luther Hargis, P.E., L.S.
Project Engineer
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

SUBJECT: Noise Analysis
Georgetown Bypass
Scott County

Dear Mr. Hargis:

Following are comments from my staff on the subject report prepared by Kenvirons, Incorporated:

1) Discussion of noise impacts and possible abatement strategies are clear and well stated but should be taken a step further. Based upon the discussion in the report, it appears that noise reductions of 2.9 dB at receptor 4, 5.0 dB at receptor 5, and 3.4 dB in the vicinity of receptors 6 and 7 are the optimum values obtainable with noise barriers. The Department, along with FHWA, consider noise reductions in this range unacceptable from a cost-effectiveness standpoint. However, barrier heights of 12-15 feet are generally considered before this determination can be made.

KYTC has developed a noise abatement policy based on severity of impact, number of people affected, barrier cost, and noise level increase for use in all noise abatement considerations. A copy is attached. The cost-effectiveness should ultimately

be determined by means of this policy in a calculation normally expressed in $/dBA reduction/person/dBA noise increase.

A determination should also be stated in the analysis regarding the likelihood of noise abatement at sites 3, 4, 5, 6, and 7.

2) If field measurements were taken at a receptor site, these measurements should be used for the existing noise levels in Table 3.

If you have questions regarding these comments, please contact my office.

Sincerely,

G. F. Hughes, Jr., Director
Division of Environmental Analysis

RDD/dc
Attachment

cc: A. L. Perkins
D. W. Lambert
B. C. Adkins

SECTION V

CONCLUSIONS

SECTION V

CONCLUSIONS

A. Summary

In-depth investigation has led to the following conclusions. Complete discussion leading to these conclusions is contained elsewhere in this report.

1. This facility is needed and justified.

2. There has been extensive public participation in development of this project.

3. There is strong public support for this facility.

4. The extension of the by-pass from US 62 W to US 460 W is justified.

5. No significant adverse affects (environmental or otherwise) are anticipated.

6. There is no conflict with airport clear zones.

7. This facility should be planned and built until eventually it will close the beltline route around Georgetown.

8. Four lane right-of-way should be acquired for the two lane segment of this project.

9. Grading should be constructed for four (4) lanes ultimate for the two (2) lane segments of this project.

10. Lemons Mill Road should be closed for a minimum amount of time necessary for construction.

B. Identification of Preferred Alternative

A "preferred alternative" has been identified, but not selected. All alternatives are under consideration and a decision will only be made after the public hearing transcript and comments on the draft Environmental Impact Statement have been evaluated. Final selection will not be made until the results from the circulation of the Environmental Impact Statement have been fully evaluated.

The preferred alternative is a combination of several build alternatives and consist of Alternative 2-B from US 460 W (Frankfort Road) to US 62 (Midway-Paynes Depot Road), Alternative 2 from US 62 W (Midway-Paynes Depot Road) to US 25 (Lexington Road) and Alternative 1 from US 25 S (Lexington Road) to US 460/62 E (Paris-Cynthiana Roads).

A discussion of the relevant issues considered in identifying a preferred alternative is as follows:

1. US 460 West (Frankfort Road) to US 62 West (Midway-Paynes Depot Road)

The western terminus of this project has been much discussed since the inception of a by-pass around the southern side of the city. The 1978-79 transportation plan terminated the by-pass at US 62 W (Midway-Paynes Depot Road) while the 1979 Comprehensive Plan continued the by-pass as a circumferential beltline around the city. In-depth investigation has indicated that the western terminus of this project should be US 460 W (Frankfort Road). Complete discussion is contained in Subsection: Logical Termini.

Two (2) major items have affected alignments in this area; historic resources and land use planning. Ward Hall is on the National Register of Historic Places. The historic boundary for this property was recently enlarged from fifteen (15) to eighty (80) acres. Also in this area is the J.N. Moreland bungalow, which is eligible for listing on the National Register of Historic Places. The historic boundary for this property has not been formally established. The General John Payne House, listed on the National Register, is north of US 460 W (Frankfort Road) near Ward Hall. There is also a stone fence just north of US 460 W (Frankfort Road) which is also eligible for listing on the Historic Register. A complete discussion of the stone fence's historic significance is contained in Subsection: Historic Resources. Additional information is contained in the Environmental Impact Statement (E.I.S.) for this project. Also important is the compatibility with the existing land use plan. Updates of the existing land use plan have proposed expansion to the north and west of the existing land use plan.

Expansion of the Ward Hall historic boundary in 1985 ruled out the corridor shown in the 1979 Comprehensive Plan as it crossed this new historic boundary, breeched the stone fence north of US 460 W (Frankfort Road) and came disruptively close to the Victorian barn adjacent to Ward Hall. This corridor ran up the property line between the Bevins and Ford-Waller farms north of US 460 W (Frankfort Road) and impacts to the General John Payne house were anticipated. Realignment of the corridor was necessarily to the east (inside) or to the west (outside) of Ward Hall.

Alternative 1, to the east (inside) of Ward Hall, closely parallels the existing US 62 W roadway (Midway-Paynes Depot Road). Alternative 1 misses the new historic boundary of Ward Hall, but heads to the original corridor, the Bevins/Ford-Waller property line, as quickly as possible. Alternatives to the east (inside) were initially favored as the public had a preference to utilize existing US 62 W (Midway-Paynes Depot Road) and the dangerous US 460/62 W intersection at Wilsons Grocery could be corrected as a result of the by-pass construction.

Alignments to the east (inside) were generally shorter and less expensive, and no conflicts with properties on the Historic Register were originally anticipated. However, further investigation by H. Powell & Co. determined that the entire stone fence north of US 460 W (Frankfort Road) was eligible for the Historic Register and other historic sites lie within the path of potential alignments to the north. Reports of old mill sites on the Elkhorn, north of US 460 W (Frankfort Road), were also anticipated to create alignment problems for local interests in projecting this facility north. Unfavorable terrain was also a problem for some of the possible alternatives in projecting the by-pass to the north. Additionally, alternatives to the east (inside) of Ward Hall were only marginally compatible with the 1979 land use plan. The 1985-86 update to the comprehensive plan proposes moving the by-pass to the west of Ward Hall. Alternatives to the east of Ward Hall are no longer compatible with the updated comprehensive plan. Superimposition of the by-pass and beltline onto the major arterials of the area creates a spoke and rim pattern that is very common among other cities of the region. Alternative 1 breaks the rim pattern and has the effect of running up a spoke.

At least three (3) alternatives were then investigated to the west (outside) of Ward Hall. According to the 1986 Comprehensive Plan Update, the community will have to accommodate growth and development to the north and west. Two (2) of these alternatives, 2-A and 2-B, are to the north and west of the original corridor in the vicinity of Ward Hall.

Alternative 2A parallels the western Ward Hall property line. This alternative is not on the Ward Hall property but is physically the closest of any of the alternatives to Ward Hall. This alternative requires breaching the stone fence and also comes disruptively close to the General John Payne house, which is on the Historic Register, in projecting this facility to the north. Sight distance to the west of US 460 W (Frankfort Road) is limited and so is the potential for improving the road because the property to the south, the J.N. Moreland Bungalow, is eligible for listing on the National Register of Historic Places. A stone wall to the north also has historic significance. The provision of a left turning lane on US 460 W (Frankfort Road) also faces the same problems, historic property to the south and a stone wall of historic significance to the north. Extensive work on the US 460 crossroad would include substantial impacts on the stone fence. Right-of-way would be required and there would be adverse impacts to properties on or eligible for the Historic Register, Section 4(f) and 106 procedures would apply.

Alternative 2-B was the only alternative west (outside) of Ward Hall that had no effect on historic resources. A required turning lane on US 460 W (Frankfort Road) will be added to the south of the existing pavement. There will be no effect on the stone fence to the north. This alternative is to the north and west of the original corridor and is the same location shown on the 1986 Comprehensive Plan Update, Exhibit 10. This alternative maximizes the amount of developable land

created and is well poised for local interest in extending this facility to the north, as both property and terrain are favorable. Alternative 2-B intersects US 460 W (Frankfort Road) in the location where the historic stone fence is in its worst shape. Alternative 2-B would be acceptable under statutory requirements requiring minimization of impacts to historic resources when this facility is extended northward. There is no impact to this resource due to this project.

A third (3rd) alternative to the west (outside) of Ward Hall, Alternative 2-C, was also considered. Alternative 2-C is the same as the Alternative 2 Corridor, as shown on Exhibit 7 of the Project Planning Report. This alternative was initially considered when investigating alternative corridors, but was longer and more expensive than the other alternatives investigated. This alternative was reconsidered because of desirable traffic characteristics and because it did not necessarily impact the stone fence north of US 460 W (Frankfort Road), which is eligible for inclusion on the Historic Register. However, further investigation indicated either non-standard shoulder transitions or extensive work along US 460 W (Frankfort Road) with substantial impacts on the stone fence would be required. Neither were desirable or acceptable. The new US 460 W (Frankfort Road) crossroad tie added to the total length and was becoming excessively long and expensive compared to other alternatives. This alternative did not solve a high hazard intersection at the US 227-US 460 W (Frankfort-Stamping Ground Roads) intersection. Though a connection could be made to the northern beltline, this alternative implied changes in the transportation network and the land use plan. Right-of-way acquisition from properties eligible for listing on the National Register of Historic Places would be required. Section 106 and 4(f) documentation would be required at the by-pass tie to the existing US 460 W (Frankfort Road) and on the crossroad tie at the J.N. Moreland Bungalow. As there are other feasible and prudent alternatives, acceptability under Section 4(f) of the 1966 Department of Transportation Act is unlikely. This alternative requires more right-of-way than other alternatives and more properties are involved.

Once the advantages of going to the west (outside) of Ward Hall were examined, the identification of a preferred alignment was obvious. Both Alternatives 2-A and 2-C had adverse effects on historic resources while Alternative 2-B did not. Alternative 2-B was also compatible with the current land use plan. Accordingly and considering all other relevant factors, Alternative 2-B was identified as the preferred alternative in this area.

2. US 62 West (Midway-Paynes Depot Road) to US 25 South (Lexington Road)

There are two basic routes through this area, Alternatives 2 and 3. Alternative 1 is also the same as Alternative 2 in this area. Alternative 2 parallels an old road through this area, while Alternative 3 is somewhat to the north, Exhibits 7 and 8.

Alternative 2 is the most compatible with the Comprehensive Plan in this area and is the location from the 1978 Transportation Plan. Alternative 2 creates slightly more developable land within the by-pass. Alternative 3 is slightly shorter and less expensive. In some cases, the drainage areas for Alternative 3 will be slightly smaller and may allow use of the next smaller pipe size. Alternative 2 is the most compatible with the current Comprehensive Plan. Alternative 2 is also the most compatible to alternatives to the west (outside) of Ward Hall. West of US 62 W (Midway-Paynes Depot Road), Alternative 3 crosses the Ward Hall Historic Boundary and would be unacceptable.

An additional consideration is that most of Alternative 2 between US 25 S (Lexington Road) and US 460 W (Frankfort Road) is parallel to, but does not disturb, an old road that dates back to the early to mid 1800's. This feature, still identifiable on aerial photographs and on the ground, provides a focus for this project that is very hard to ignore and provides a reason and rational for the selection of one (1) alternative, though variations exist at the western terminus. This old road was a transportation corridor that, surprisingly, is still valid today. Farms were divided and property was split along this old road. Reintroduction as a transportation corridor probably has less impact than introduction of a random alignment across undivided farmland.

Accordingly and considering all other relevant factors, Alternative 2 was identified as the preferred alternative in this area.

3. US 25 South (Lexington Road) to US 460/62 East (Paris-Cynthiana Roads)

There are three (3) alternatives through this area, Alternatives 1, 2 and 3. Alternative 1 is compatible with the current Comprehensive Plan and the 1978-79 Transportation Plan. This alternative minimizes impact to farmland, minimizes the impact on the property owners affected and has excellent public support. This alternative maximizes the use of property that the city has a direct interest in. Additionally, this alternative has the least length, lowest construction and right-of-way costs (Attachment A) and the impact to the property owners is not ancitipated to be as severe as the other alternatives. This alternative is the closest to the city, provides the best access to the Industrial Park and would benefit the community the most.

For the most part, Alternative 2 is similar to Alternative 1. Near the eastern terminus Alternative 2 impacts on more property owners and farms of greater agricultural value. There is greater skew to the bridge over Elkhorn Creek, increasing the length and cost. It is anticipated that fill material will be somewhat limited and that Alternative 2 would provide more excavation out of the hill south of Elkhorn Creek. However, this material is not close to where it is most needed, which is the embankments adjacent to the Southern Railroad.

The primary purpose in the formulation of this alternative was to reflect the fact that if US 25 S is not crossed as shown and described under Alternatives 1 and 2, this location is the next most logical place to cross US 25 S. Additionally, this alternative has more favorable terrain in crossing the Southern Railroad. However, this alternative has several disadvantages. It is the further most alternative from the city, has the longest length and; therefore, greatest cost (Attachment A) for alternatives of common termini, impacts more severely on farmland and is the least useful in meeting the demands of traffic and the community. This alternative impacts directly onto and requires right-of-way from Ward Hall, has the least public support of any of the alternatives, and does not provide the accessibility that the other alternatives do. This alternative conflicts with the Comprehensive Plan and would disrupt ongoing planning efforts, particularly the provision of a green belt between Fayette County and Georgetown.

Alternative 1 is recommended as the preferred alternative in this area for the reasons just described.

C. Access

Provision of access points has drawn considerable interest locally. There is a decided preference locally to limit entrances to avoid congestion and to avoid the encouragement of development outside of the by-pass. Federal and state regulations that govern access for this type of facility provide for a minimum spacing of six hundred (600') feet in urban areas and twelve hundred (1200') feet in rural areas. As long as these standards are met, neither the federal or state government can prohibit the addition of other entrances. Local standards for access point spacing for this type of facility are much greater than the minimums required by federal and state regulations. Local policy is to keep entrances to an absolute minimum and as far apart as possible to assist in the movement of traffic. Through state and local cooperation, the Georgetown-Scott County Planning and Zoning Commission assumed the responsibility of providing a method of limiting entrances. Through planning and zoning ordinances, the commission has the ability control development, including roads, adjacent to the by-pass.

At 7:30 p.m. E.S.T. on Thursday, March 13, 1985, the commission held a public meeting concerning access points. Public notice was given via local newspapers. This meeting drew a large local crowd and the meeting had to be moved from the Georgetown city hall chambers to the county courthouse because of the overflow crowd. Intersections and entrances as determined by a joint effort of the planning commission, the state transportation cabinet, and the engineering consultant were presented to those present.

Six access points are at grade intersections at the following existing roads:

- US 460 West (Frankfort Pike)
- US 62 West (Midway-Paynes Depot Road)

- US 25 South (Lexington Road)
- Lemons Mill Road
- East Main Street
- US 460 East (Paris Pike)

Any property split by the by-pass and without other entrances is effectively landlocked and has to be purchased by the state unless access is provided to the by-pass. Seven other entrances provide access to farms and other landlocked areas. These entrances will be farm type entrances and generally be a single lane of crushed stone to a gate in the right-of-way fence. These access points are described as follows:

- A point 3,200 feet north of US 62 W (Midway-Paynes Depot Road) and 2,200 feet south of US 460 W (Frankfort Pike)
- A location 1,800 feet southeast of US 62 W (Midway-Paynes Depot Road)
- A location 4,200 feet northwest of US 25 S (Lexington Road)
- A point 1,200 feet west of US 25 South (Lexington Road)
- A point located at Fairfax Way extended, 1,200 feet east of US 25 S (Lexington Road)
- A location 5,200 feet southwest of Lemons Mill Road and 3,900 feet east of US 25 S (Lexington Road)
- A point 2,200 feet south of Paris Pike and 1,600 feet north of East Main Street

Combined with at grade intersections, access points are spaced at the following intervals from US 460 W (Frankfort Road) to the east: 2,200', 3,200', 1,800', 3,400', 3,000', 1,200', 1,200', 2,750', 5,200', 2,500', 1,600', and 2,200'. These spacings are well beyond the minimum required spacings of 600' in urban areas and 1,200' in rural areas.

Minor adjustments based on terrain may be necessary in final design. In all cases, access will be provided to both sides of the by-pass. In addition to facilitating current farming operations, this will prevent any future access from being staggered. Access points on opposite sides of the by-pass will be directly opposite each other. The location of farm entrances were picked to also coincide with future street intersections shown in the current comprehensive plan. Under current regulations, land outside the by-pass may be developed into five (5) acre tracts. There is a potential that these farm entrances may ultimately serve such developments.

As far as access in concerned, the southern by-pass will resemble Man-O-War Boulevard in Lexington, Kentucky. Intersections will be at grade and widely spaced. However, the by-pass will have paved shoulders, rather than curbs.

Substantial discussion was given to providing access to the Mt. Vernon Subdivision. Hoover Universal traffic, including trucks, must travel residential streets to major routes. There has also been a longstanding commitment to the residents of Mt. Vernon for an access

point to the by-pass. Three access points, Fairfax Way Extended, Hudson Drive and Showalter Drive Extended, were originally proposed to provide alternative routes and to avoid concentrating traffic on any one street or entrance. Hudson Drive was listed in the Comprehensive Plan as an access point, but was deleted at this meeting because of concern over the amount of traffic, particularly industrial, that could be channeled onto this residential street. This was not an unaminous decision and at least one commission member and a local builder favored the Hudson Drive connection. Current by-pass design does not preclude future connection, provided that it is endorsed locally. Two (2) access points will serve the Mt. Vernon area; Fairfax Way Extended and Showalter Extended. Showalter Extended would tie to the by-pass, just east of the Mt. Vernon subdivision on the Bringardner property. This access point will provide access to Hoover Universal without crossing developed residential areas. This access point will also serve the undeveloped property north of the by-pass and between the Mt. Vernon Subdivision and the Southern Railroad. This access point may also serve portions of the Mt. Vernon subdivision near Hoover Universal, somewhat relieving both Showalter Drive and US 25 S (Lexington Road). Showalter Drive Extended is anticipated to be built by developers although some other assistance may be required. Local sentiment favors completing this street as soon as possible. Access will also be provided at Fairfax Way Extended. Although Fairfax Way is a collector street, it is not suitable to serve industrial traffic from Hoover Universal. Local sentiment favors completing Showalter Drive Extended before Fairfax Way Extended. There has been a speeding problem on Fairfax Way and other streets in the Mt. Vernon subdivision. Some local consideration has been given to posting additional intersections with stop signs to control speeding.

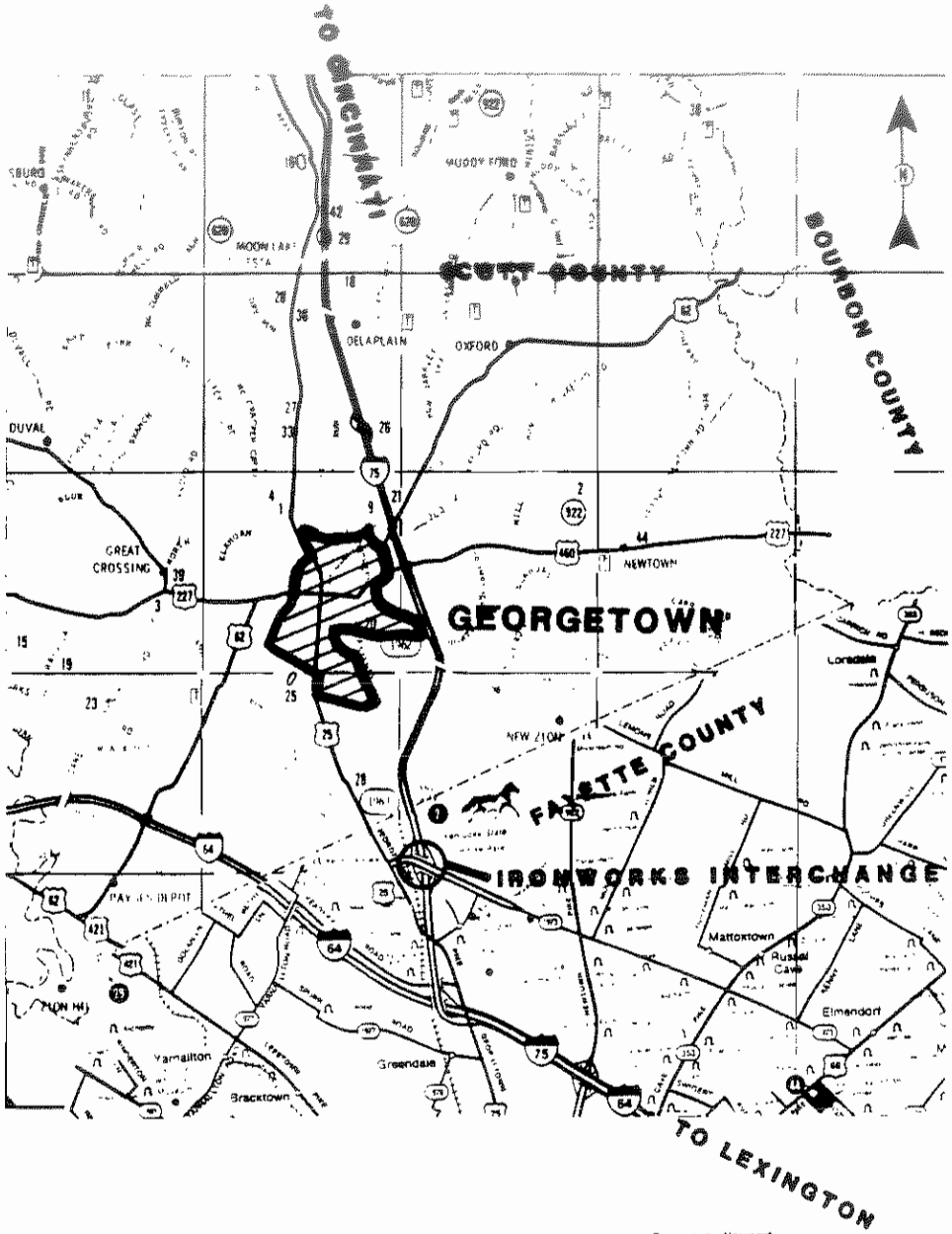
Access points, as described herein, were codified into an ordinance and approved by the Georgetown-Scott County Planning and Zoning Commission. On the recommendation of the Planning and Zoning Commission, both Scott Fiscal Court and the Georgetown City Council approved the proposed intersections and entrances. There will be a procedure to add entrances, but such entrances would have to be consistant with the local comprehensive land use plan, go through public hearing procedures, and have the approvals of the planning and zoning commission, fiscal court and the city council. Such entrances would also have to meet minimum state and federal spacing criteria.

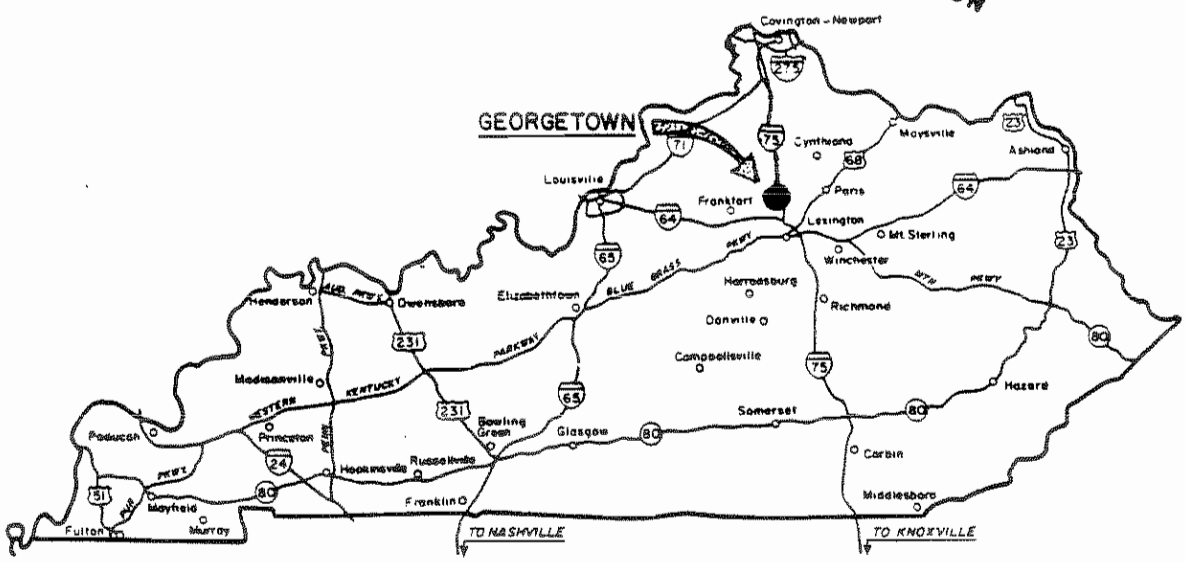
In addition to discussion of entrances, there were other comments that pertained to the by-pass. There was discussion given to providing a service road between the by-pass and the entrances to Mt. Vernon subdivision. Discussion was also given to the need to continue the by-pass into the northwest quadrant of the city. Traffic from the proposed Toyota facility will likely cause congestion downtown at Main and Broadway Streets. There were also comments that the community doesn't want a facility like the northern part of New Circle Road in Lexington which has become congested with numerous entrances.

Since the March 13, 1985 meeting, one additional entrance has been approved. This entrance is approximately six hundred (600') feet south of the US 460 E/62 E (Paris-Cynthiana Road) intersection. This entrance is only on the west side of the by-pass and is intended to serve commercial property at the intersection. This allows for relieving traffic congestion near this intersection.

SECTION VI

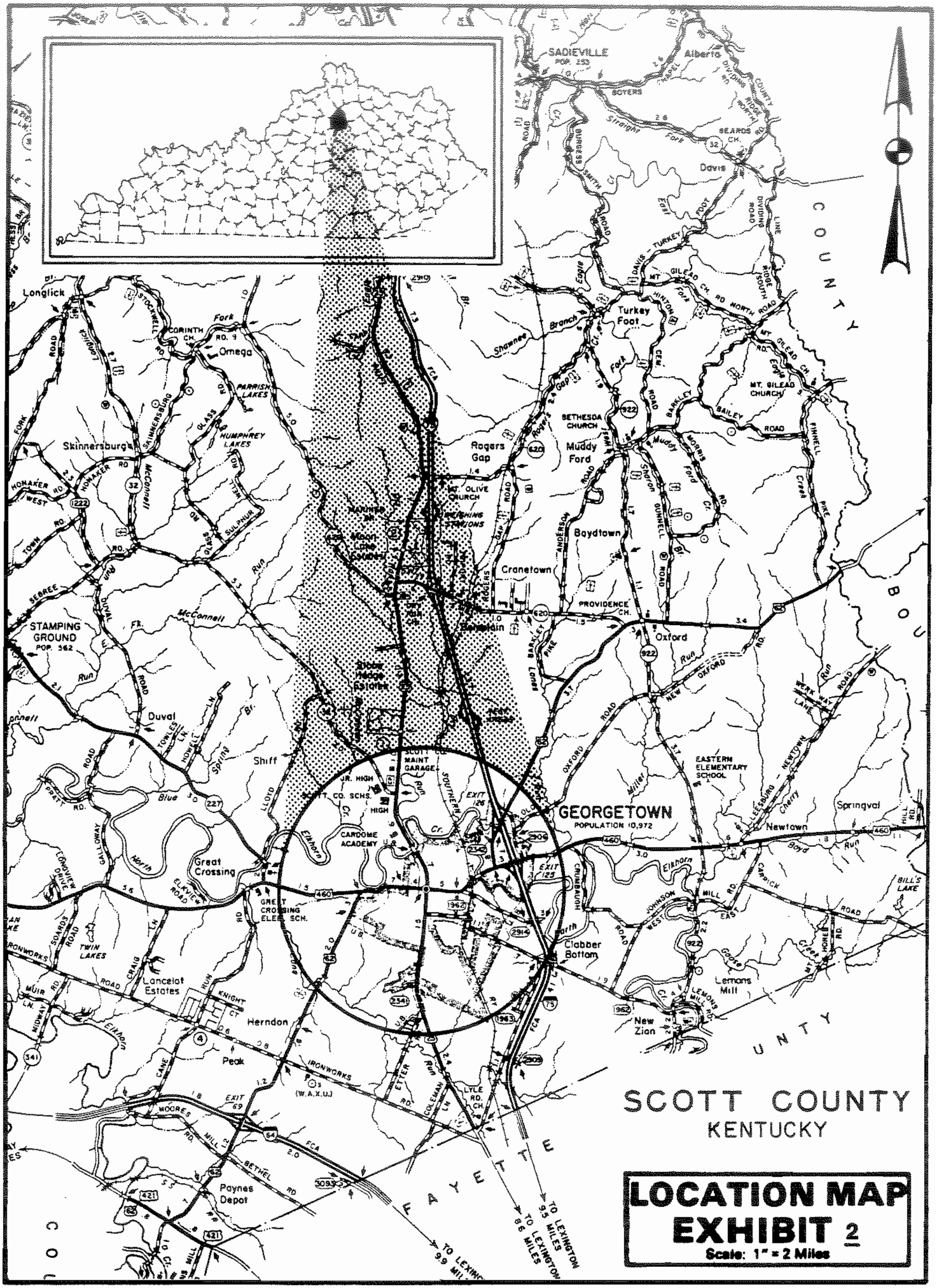
EXHIBITS

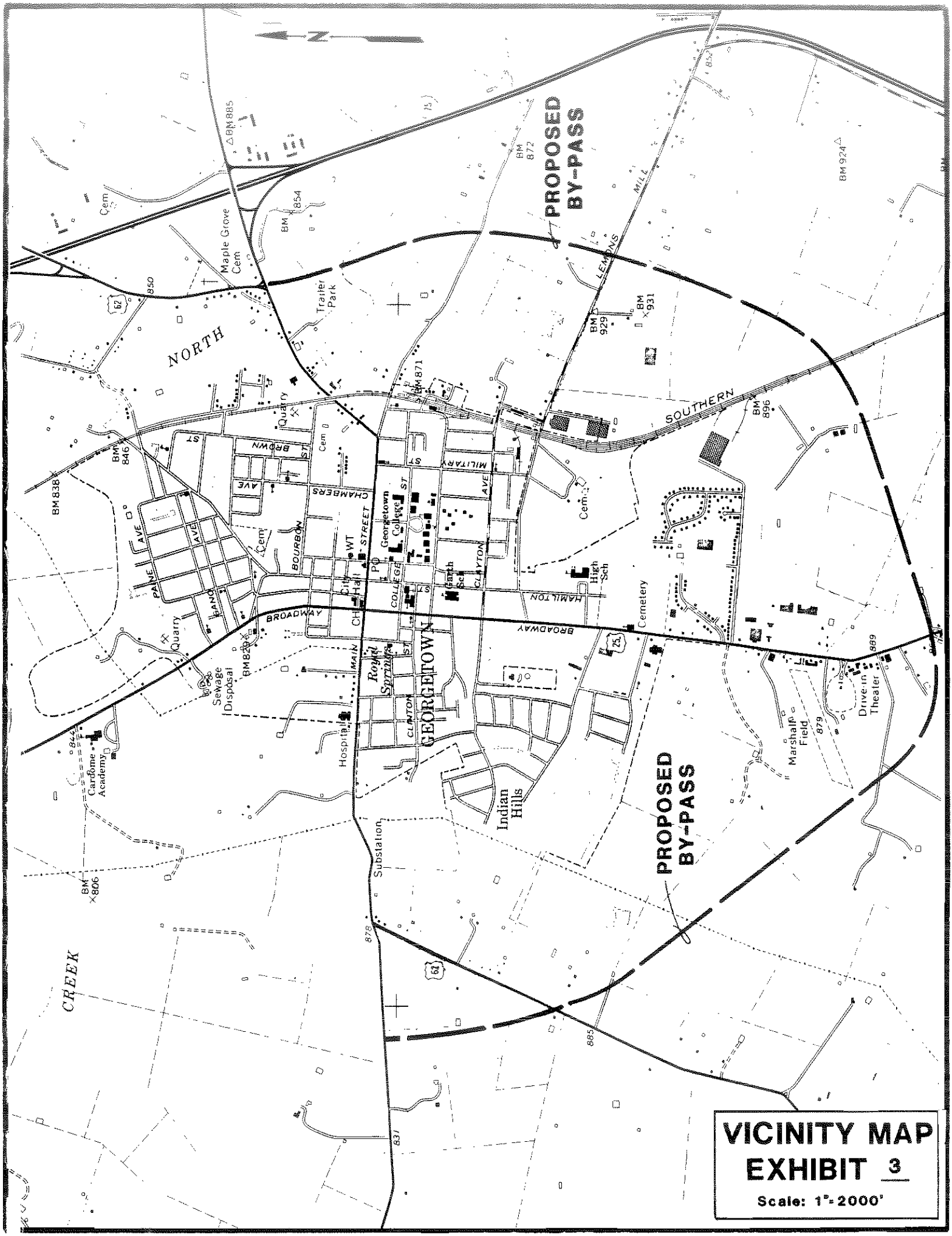




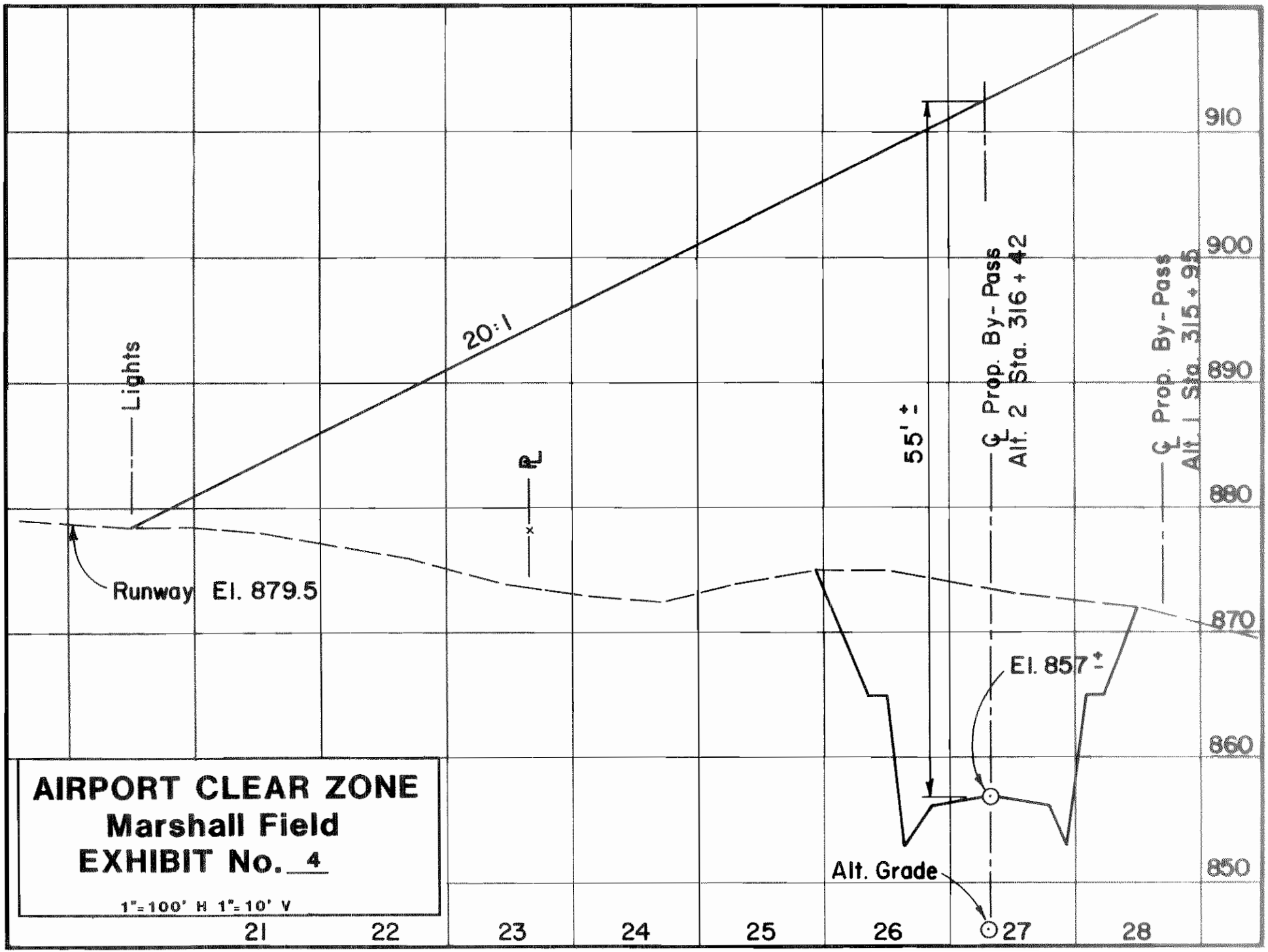
AREA MAPS
EXHIBIT 1

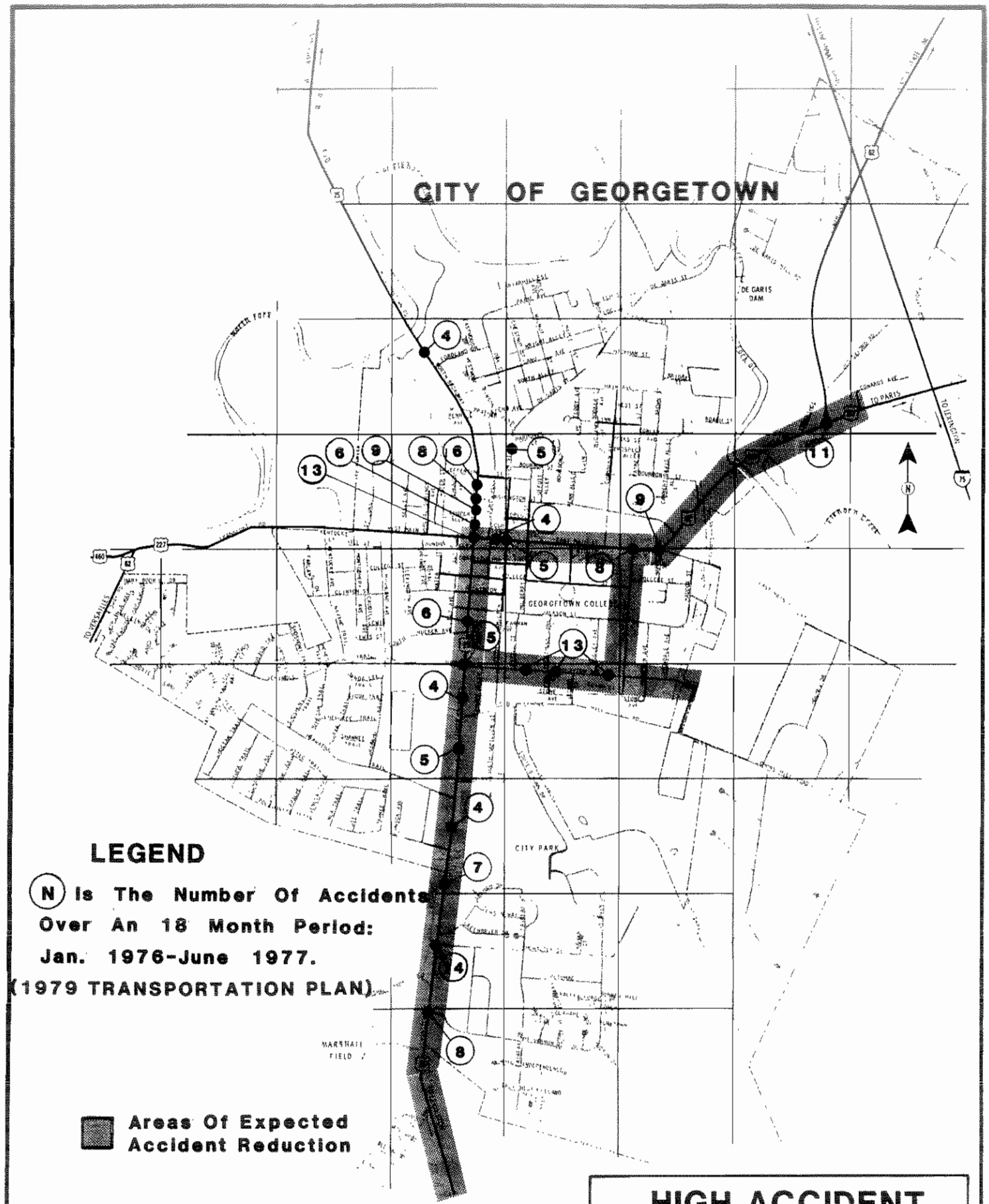
No Scale


SCOTT COUNTY
KENTUCKY
LOCATION MAP
EXHIBIT 2
Scale: 1" = 2 Miles
GEORGETOWN
POPULATION 10,972
SADIEVILLE
Alberta
Davis
Turkey Foot
Longlick
Omega
Skinnersburg
Rogers Gap
Muddy Ford
Boydtown
Cranetown
Oxford
STAMPING GROUND
POP. 362
Duval
Shiff
Great Crossing
Springval
Newtown
Clabber Bottom
Lemons Mill
New Zion
Herndon
Peak
Lancelot Estates
Paynes Depot
FAYETTE
COUNTY
BOURBON
CARDOME ACADEMY
SCOTT CO. SCHS.
EASTERN ELEMENTARY SCHOOL
TO LEXINGTON



VICINITY MAP
EXHIBIT 3
Scale: 1"=2000'


20:1
Lights
Runway El. 879.5
55' ±
℄ Prop. By-Pass
Alt. 2 Sta. 316+42
℄ Prop. By-Pass
Alt. 1 Sta. 315+95
El. 857 ±
Alt. Grade
910
900
890
880
870
860
850
21
22
23
24
25
26
27
28
AIRPORT CLEAR ZONE
Marshall Field
EXHIBIT No. 4
1"=100' H 1"=10' V



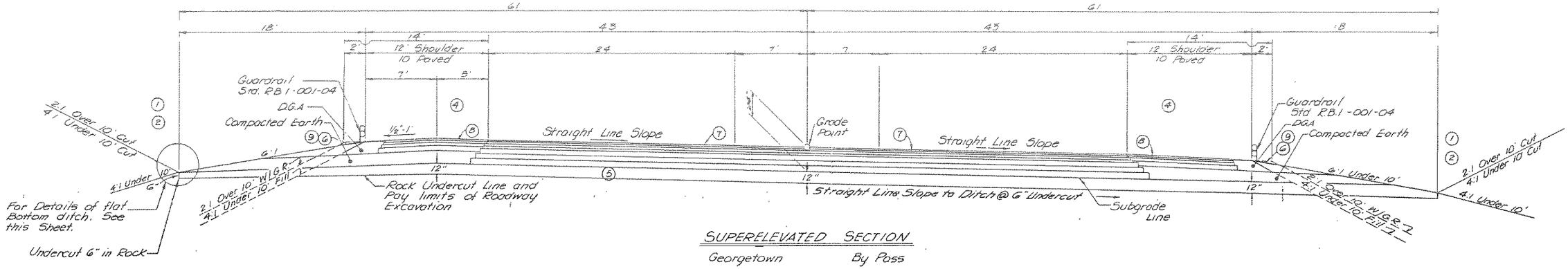
HIGH ACCIDENT LOCATIONS EXHIBIT 5

No Scale

COUNTY OF	FISCAL YEAR	SHEET NO.
SCOTT	86	

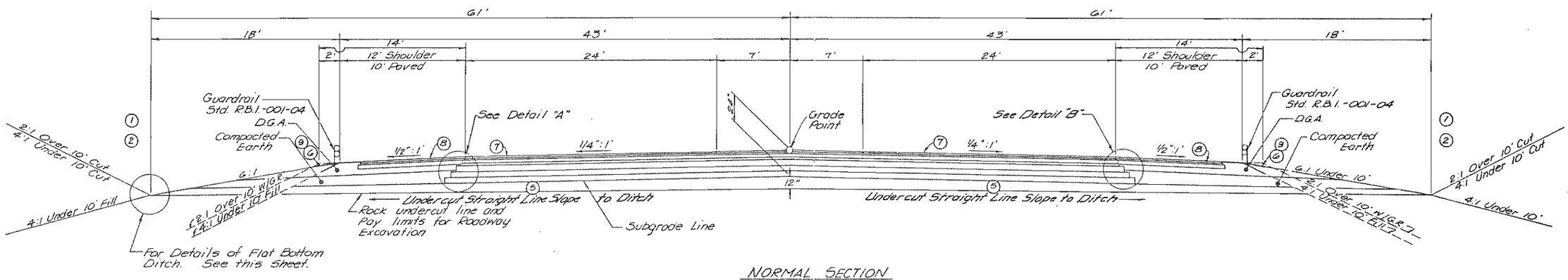
TYPICAL SECTIONS

Scale 1" = 5'



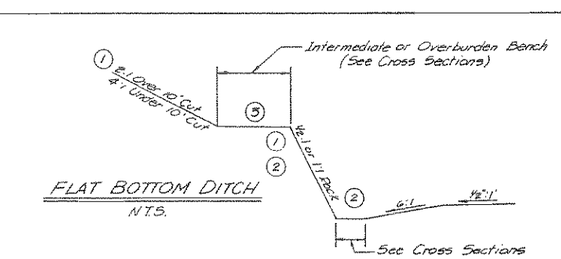
SUPERELEVATED SECTION

Georgetown By Pass



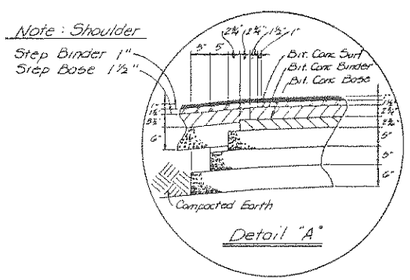
NORMAL SECTION

Georgetown By Pass
Sta. 351+00 to Sta. 504+00



FLAT BOTTOM DITCH

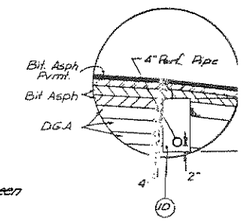
N.T.S.



Detail "A"

NOTES:

1. For Rock Slopes See Cross Sections.
2. See Cross Sections for Slopes Outside the limits of the Shoulders.
3. 10' Overburden Bench Typical for Rock Cuts Over 10' No Overburden will be used for Rock Cuts less than 10'.
4. Superelevated Shoulder to be Constructed to Superelevated except at no time will the slope be flatter than the slope indicated for normal Section.
5. Backfill Material to conform to applicable Specifications in 1985 Sta. Specs. and all Current Revisions.
6. Seal from outside edge of Paved Shoulder a Point two feet down the Ditch or Fill Slopes.
7. New Construction: Bituminous Concrete Pavement Using
   Approx. 21½" Base 16" Compacted depth DGA Base (6"+5"+5" Courses)
   5½" Compacted depth Bit. Conc Base (2¾" + 2¾" Courses)
   Approx. 1½" Binder: 1½" Compacted Depth Bit. Conc. Binder.
   Approx. 1" Surface: 1" Compacted Depth Bit. Concrete Surfaces.
   Tack Coat: 0.80 lbs/S.Y. Bit. Tack Coat Between each Course (Applied as Directed).
8. New Construction: Bituminous Concrete Shoulder Using
   Approx. 9½" Base: 6" Compacted Depth D.G.A. Base
   3½" Compacted Depth Bit. Conc. Base.
   Approx. 1½" Binder: 1½" Compacted Depth Bit. Concrete Binder.
   Approx. 1" Surface: 1" Compacted Depth Bit. Concrete Surface
   Tack Coat: 0.80 lbs./S.Y. Bit. Tack Coat. Between each Course (Applied as Directed).
9. Bituminous Seal Coat: 2.40 lbs/S.Y. (Seal Coat). 20 lbs./S.Y. Crushed Aggregate Size No. 8 or 9M. 2.40 lbs/S.Y. (Seal Coat) 20 lbs./S.Y. Crushed Aggregate Size No. 8 or 9M.
10. Backfill Material shall conform to all applicable Specifications in the 1985 Standard Specifications and all Current Revisions.



Pipe Underdrain C

N.T.S.

Detail "B"

PROPOSED

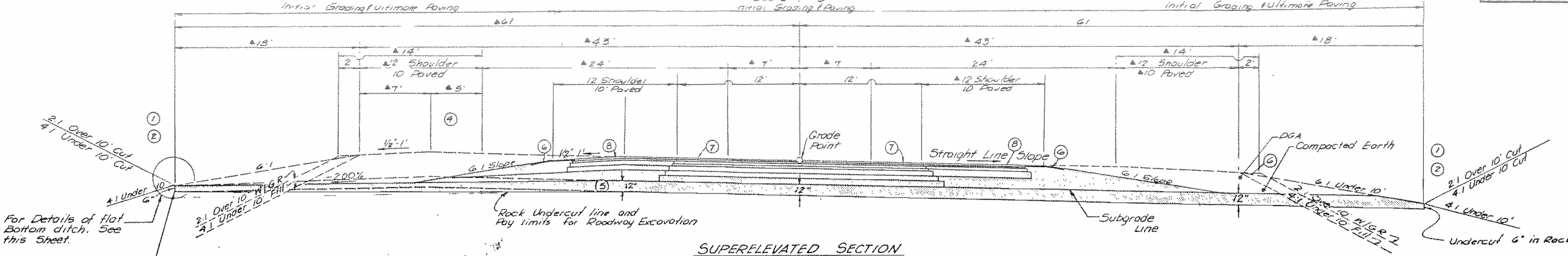
TYPICAL SECTIO

EXHIBIT 6-A

NOT TO SCALE

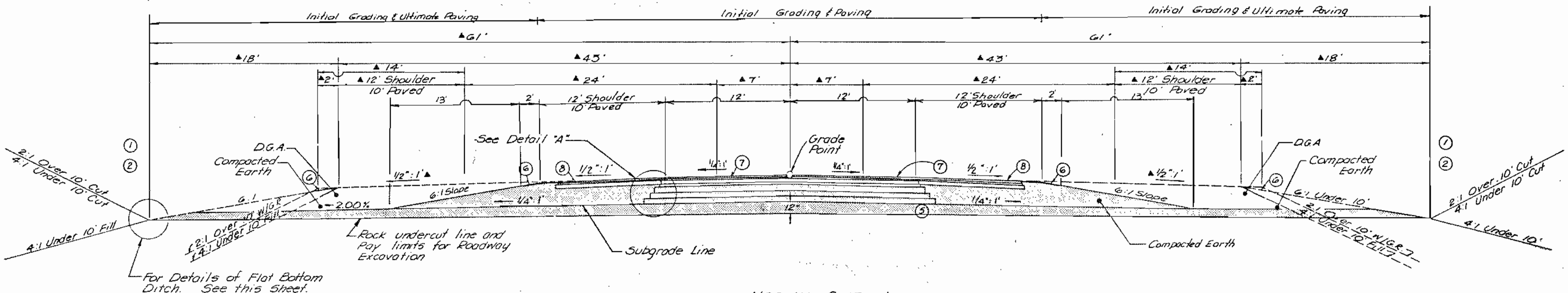
TYPICAL SECTIONS "B"

Scale 1" = 5'



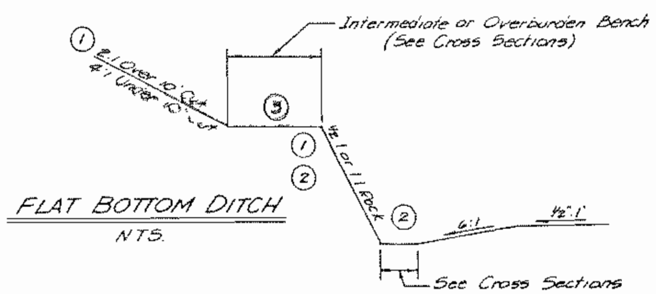
SUPERELEVATED SECTION

Georgetown By Pass



NORMAL SECTION

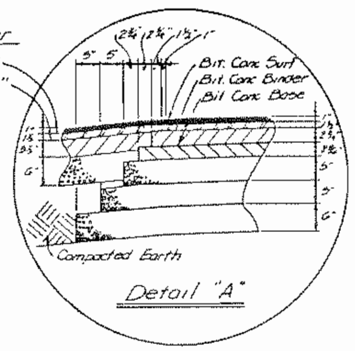
Georgetown By Pass
Sta. 200+00 to Sta. 351+00



FLAT BOTTOM DITCH

NTS.

Note: Shoulder
Step Binder 1"
Step Base 1½"



Detail "A"

Rev 7-10-86 D.B.W

NOTES:

① For Rock Slopes See Cross Sections.

② See Cross Sections for Slopes Outside the limits of the Shoulders.

③ 15' Overburden Bench Typical for Rock Cuts Over 10' No Overburden will be used for Rock Cuts less than 10'.

④ Superelevated Shoulder to be Constructed to Superelevated except at no time will the slope be flatter than the slope indicated for normal section.

⑤ Backfill Material to conform to applicable Specifications in 1985 Std. Specs. and all Current Revisions.

⑥ Seal from outside edge of Paved Shoulder a Point two feet down the Ditch or Fill Slopes.

⑦ New Construction Bituminous Concrete Pavement Using
Approx. 21½" Base: 16" Compacted depth D.G.A. Base (6"+5"+5" Courses)
5½" Compacted depth Bit. Conc. Base (2¾" + 2¾" Courses)
Approx 1½" Binder: 1½" Compacted Depth Bit. Conc. Binder.
Approx. 1" Surface: 1" Compacted Depth Bit. Concrete Surfaces.
Tack Coat: 0.80 lbs/S.Y. Bit. Tack Coat Between each Course (Applied as Directed).

⑧ New Construction: Bituminous Concrete Shoulder Using
Approx. 9½" Base: 6" Compacted Depth D.G.A. Base
3½" Compacted Depth Bit Conc. Base.
Approx 1½" Binder: 1½" Compacted Depth Bit. Concrete Binder
Approx. 1" Surface: 1" Compacted Depth Bit. Concrete Surface.
Tack Coat: 0.80 lbs./S.Y. Bit. Tack Coat. Between each Course (Applied as Directed)

⑨ Bituminous Seal Coat 2.40 lbs/S.Y. (Seal Coat). 20 lbs/S.Y. Crushed Aggregate Size No 8 or 9M.
2.40 lbs/S.Y. (Seal Coat)
20 lbs./S.Y. Crushed Aggregate Size No 8 or 9M

▨ Initial Grading & Paving

▲ Initial Grading & Ultimate Paving

PROPOSED

TYPICAL SECTIC
EXHIBIT 6-B

NOT TO SCALE

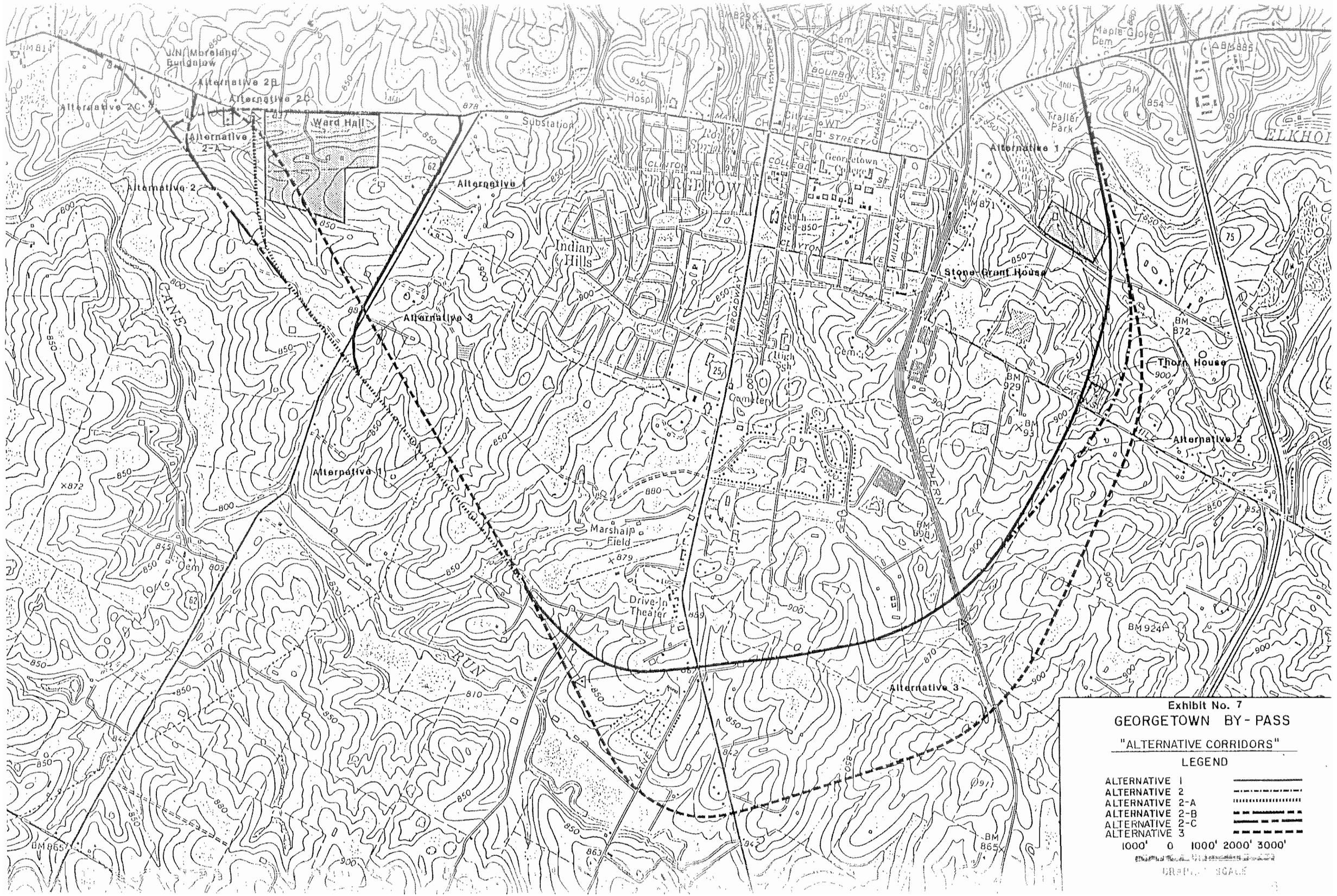


Exhibit No. 7

GEORGETOWN BY-PASS

"ALTERNATIVE CORRIDORS"

LEGEND

ALTERNATIVE 1
ALTERNATIVE 2
ALTERNATIVE 2-A
ALTERNATIVE 2-B
ALTERNATIVE 2-C
ALTERNATIVE 3

1000' 0 1000' 2000' 3000'

GRAPHIC SCALE

Exhibit No. 7-A

GEORGETOWN BY-PASS

Additional Alternative Corridors

Scale: 1"=2000'

INDIAN HILLS SUBDIVISION

SEMINOLE TRAIL

WN CITY LIMITS

Match Line Exhibit No. 8-B

U.S. 62

WARD HALL

LISTED ON NATIONAL REGISTER OF HISTORIC PLACES

NOTE: Corridors shown are approximately 1800' wide, 900' on each side of the line shown.

Exhibit No. 8-A
Georgetown By-Pass
"Alternative Corridors"
Legend

Alternative 1 — Alternative 2-A

Alternative 2 — Alternative 3

SCALE 1"- 400'

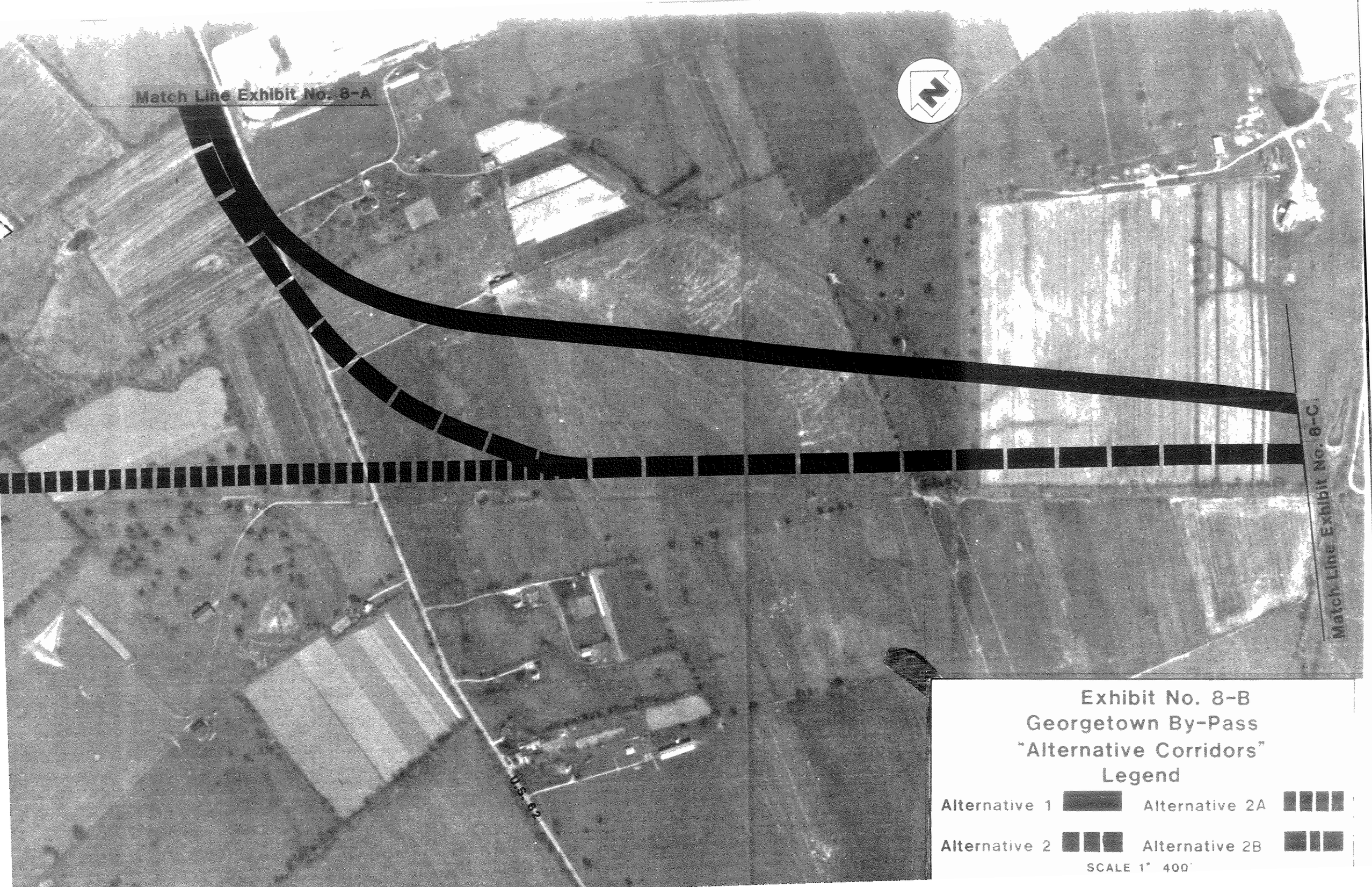


Exhibit No. 8-B
Georgetown By-Pass
"Alternative Corridors"
Legend

Alternative 1 — Alternative 2A

Alternative 2 — Alternative 2B

SCALE 1" 400'

Exhibit No. 8-C
Georgetown By-Pass
"Alternative Corridors"
Legend

Alternative 1 ■■■■ Alternative 2 ■■■

SCALE 1" = 400'

VI - 12

GEORGETOWN COMMUNITY HOSPITAL

PHYSICIANS PARK

WAL-MART

KROGERS

U.S. 25

MARSHALL FIELD (TO BE RELOCATED)

Y LIMITS

15 Sc 136

15 Sc 135

ETTER LANE

Match Line

Exhibit No. 8-D

U.S. 25

INDUSTRIAL PARK

Match Line Exhibit No. 8-E

HUDSON DRIVE

15 Sc 74

15 Sc 76

GEORGETOWN CITY LIMITS

GEORGETOWN CITY LIMITS

SOUTHERN R.R.

Exhibit No. 8-D
Georgetown By-Pass
"Alternative Corridors"
Legend

Alternative 1 ▬▬ Alternative 2 ▬▬

SCALE 1" = 400'

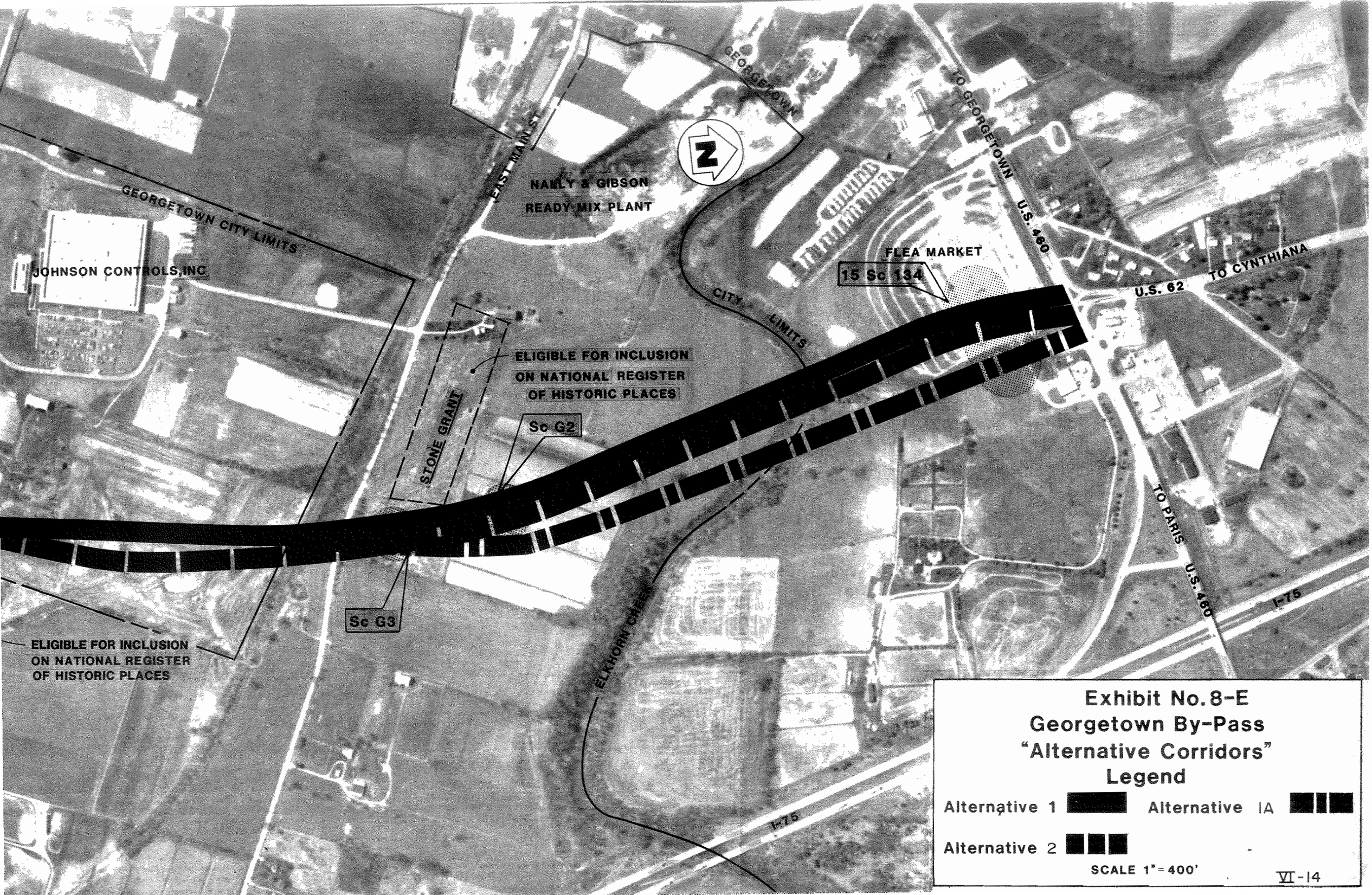


Exhibit No. 8-E
Georgetown By-Pass
"Alternative Corridors"
Legend

Alternative 1 — Alternative 1A

Alternative 2

SCALE 1" = 400'

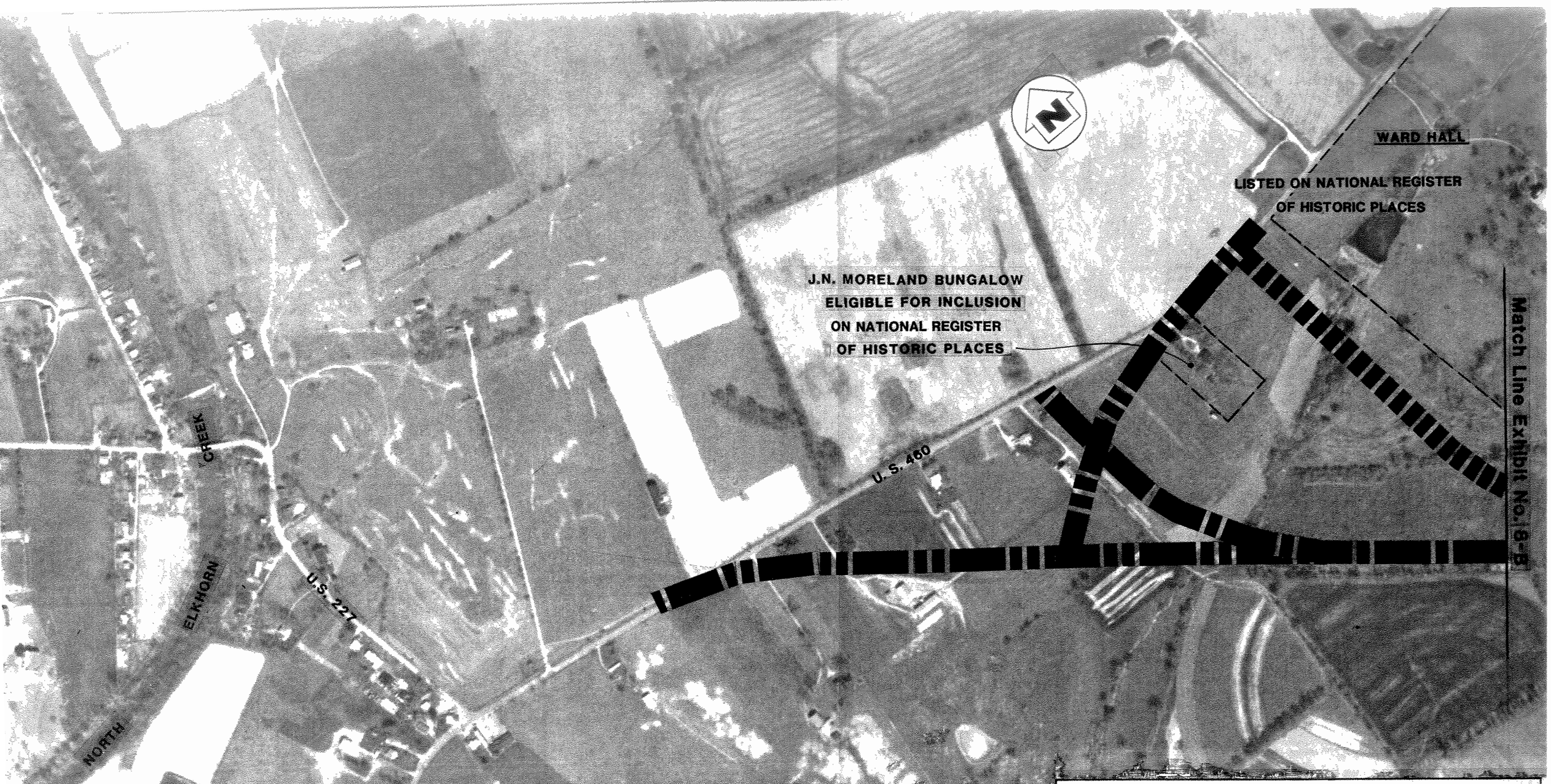


Exhibit No. 8-F
Georgetown By-Pass
"Alternative Corridors"
Legend

Alternative 2A ■■■ Alternative 2C ■■■

Alternative 2B ■■■

SCALE 1" = 400'

SECTION VII

ATTACHMENTS

ATTACHMENT A

ESTIMATED CONSTRUCTION COSTS

FOR

ALTERNATIVE CORRIDORS

ESTIMATED "CONSTRUCTION COSTS"
FOR ALTERNATIVE CORRIDORS
GEORGETOWN BY-PASS
RURAL 000RS 05382 001; FSP 105 7284 004D
URBAN 0000M 07609 001; FSP 105 7284 005D

Alt. No.	Total
1	29,100' = 5.51 Mi. $13,6000,000
2	32,700' = 6.19 Mi. $13,800,000
2-A	30,400' = 5.76 Mi. $14,000,000
2-B	29,790' = 5.64 Mi. $13,750,000
2-C	32,135' = 6.09 Mi. $14,250,000
3	34,800' = 6.59 Mi. $15,500,000

Notes:

1. From US 62 E - 460 E to US 25 S was estimated as four lanes. From US 25 S to US 460 W was estimated as two lanes.

2. Cross roads were estimated as follows:

US 360 E - US 62 E	- 1,500'	- $	525,000
Main Street	- 1,200'	-	240,000
Lemons Mill	- 1,200'	-	240,000
US 25 & Etter Lane	- 2,000'	-	700,000
US 62	- 2,000'	-	700,000
TOTALS	- 7,900'	-	$2,405,000 = 1.5 Mi.

3. Bridges were estimated as follows:

   Ekhorn Creek - 92'± x 220'± @ $55/S.F. = $1,000,000±
   Southern Railroad - 92'± x 160'± @ $55/S.F. = $800,000±

4. Construction costs are estimated at $350/L.F. for two lane, $550/L.F. for four lane and $225/L.F. for two lane reconstruction. Bridges and cross roads costs are included as appropriate into the totals above.

ATTACHMENT B

ESTIMATED RIGHT-OF-WAY REQUIREMENTS

FOR

ALTERNATIVE CORRIDORS

ESTIMATED RIGHT-OF-WAY REQUIREMENTS
FOR ALTERNATIVE CORRIDORS
GEORGETOWN BY-PASS
RURAL 000RS 05382 001; FSP 105 7284 004D
URBAN 0000M 07609 001; FSP 105 7284 005D

Number of Parcels Affected:

Alt. No.	US 62 - 460 E to US 25 S	US 25 S to US 62 E	US 62 W to US 460 W	Project Total
1	12	9	3	24
2	15	8	6	29
2-A	15	8	2	25
2-B	15	8	2	25
2-C	15	8	7	30
3	14	8	5	27

Right-of-Way Area Required (Acres):

Alt. No.	US 62 - 460 E to US 25 S	US 25 S to US 62 W	US 62 W to US 460 W	Project Total
1	75	45	11	131
2	79	45	36	160
2-A	79	45	18	142
2-B	79	45	18	142
2-C	79	45	29	153
3	87	57	17	161

Notes:

1. All acquisitions are anticipated at this time as Partial Takings.

2. No commercial relocation is anticipated. However, one residence at Etter Lane and US 25 will have to be acquired.

3. Figures include right-of-way for cross roads.

4. A 200' right-of-way is anticipated for four lane ultimate construction. A 150' right-of-way is anticipated for two lane construction. Existing right-of-way is estimated as 50', unless better information was available.

5. The City of Georgetown has an interest in 2 parcels on Alternative 1 and an interest in 1 parcel on Alternatives 2 and 2A.

6. Right-of-way requirements for a particular corridor are dependant on the specific alternative alignment within that corridor. Figures shown above are approximate only and are based on the best information available.

ATTACHMENT C

TRAFFIC DATA

FOR

ALTERNATIVE CORRIDORS

C. LESLIE DAWSON
SECRETARY
AND
COMMISSIONER OF HIGHWAYS

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

MARTHA LAYNE COLLINS
GOVERNOR

July 17, 1985

Mr. Luther Hargis
GRW Engineers, Inc.
801 Corporate Drive
Lexington, Kentucky 40503

SUBJECT: Scott County
Georgetown Bypass

Dear Luther:

Attached are various traffic data and EAL calculations for the above subject project.

If you have any questions regarding this transmission, please contact me.

Sincerely,

R. W. B. Laughlin, Manager
Project Engineering Section
Division of Planning

RWBL:ch

Attachment

cc: A. L. Perkins
John Sacksteder

INTER-OFFICE MEMO

TC 10-200
X4

C. Leslie Dawson
XXXXXXXXXXX
SECRETARY

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

MARTHA LAYNE COLLINS
GOVERNOR

MEMO TO: Roy Laughlin, Manager
Project Engineering Section

FROM: Dudley Shryock
Traffic Survey and Analysis Section

DATE: June 27, 1985

SUBJECT: Scott County
Proposed Georgetown Bypass - Alternate 1
Traffic Estimates

On the section of the proposed bypass from US 460 (West of Georgetown) extending southeast to US 25, 11% trucks are estimated in the ADT, and 7% trucks in the DHV.

On the eastern half of the proposed bypass, 8% trucks are estimated in the ADT, and 5% in the DHV. Copies of the EAL calculations are attached.

Future traffic volume estimates and vehicle turning movement diagrams at five intersections have been furnished by the Division of Mass Transportation. Copies of these are also attached.

DLE:JC:pgh
Attachment

cc: W. J. Stutzenberger

EQUIVALENT AXLE LOADS
FOR
ALTERNATIVE CORRIDOR NO. 1
GEORGETOWN BY-PASS
SCOTT COUNTY, KENTUCKY

Description:	From US 460 West of Georgetown, extending south on existing US 62 approximately one-half (1/2) mile. E.A.L. = 1,889,900 per lane of way lane roadway
Description:	From US 62 W, approximately one-half (1/2) mile south of US 460 W (West of Georgetown), extending southeast to US 25 near Etter Lane E.A.L. = 2,303,300 per lane of two-way two-lane roadway
Description:	From US 25 S near Etter Lane extending northwest to Lemons Mill Road E.A.L. = 3,233,900 per lane of two-way four-lane roadway
Description:	From Lemons Mill Road extending north to US 460 E at US 62 E E.A.L. = 2,732,800 per lane of two-way four-lane road

NOTE: The above data is taken from calculations transmitted to GRW from the Kentucky Transportation Cabinet, Traffic Survey and Analysis Section, dated June 27, 1985.

TURNING MOVEMENT DIAGRAM

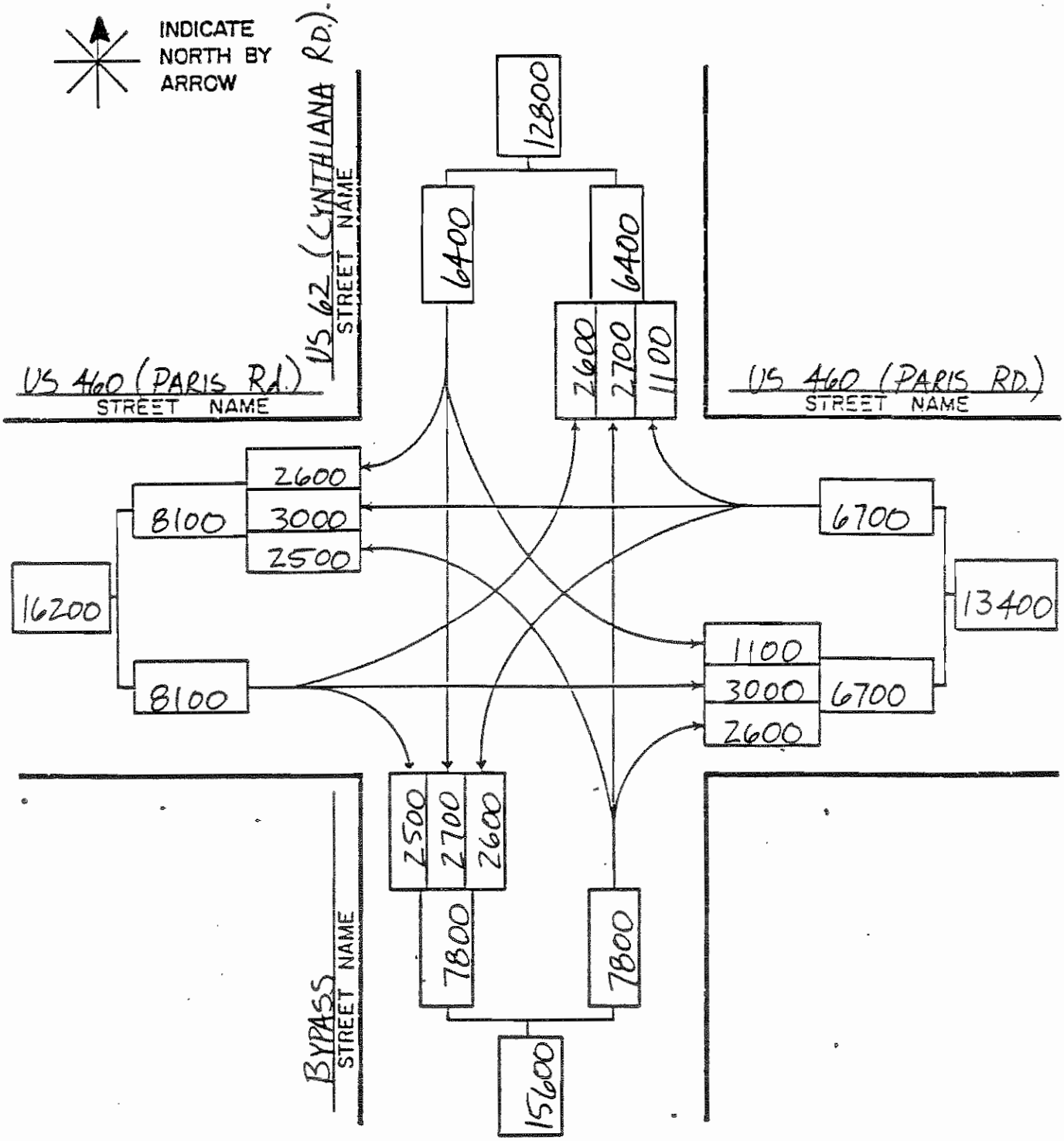
DATE 4/30/85

BY CRS

YEAR 2007

PERIOD ADT

LOCATION GEORGETOWN - SCOTT COUNTY
PROPOSED GEORGETOWN BYPASS AND
US 460 (PARIS ROAD)



TURNING MOVEMENT DIAGRAM

PAGE 7 OF 5

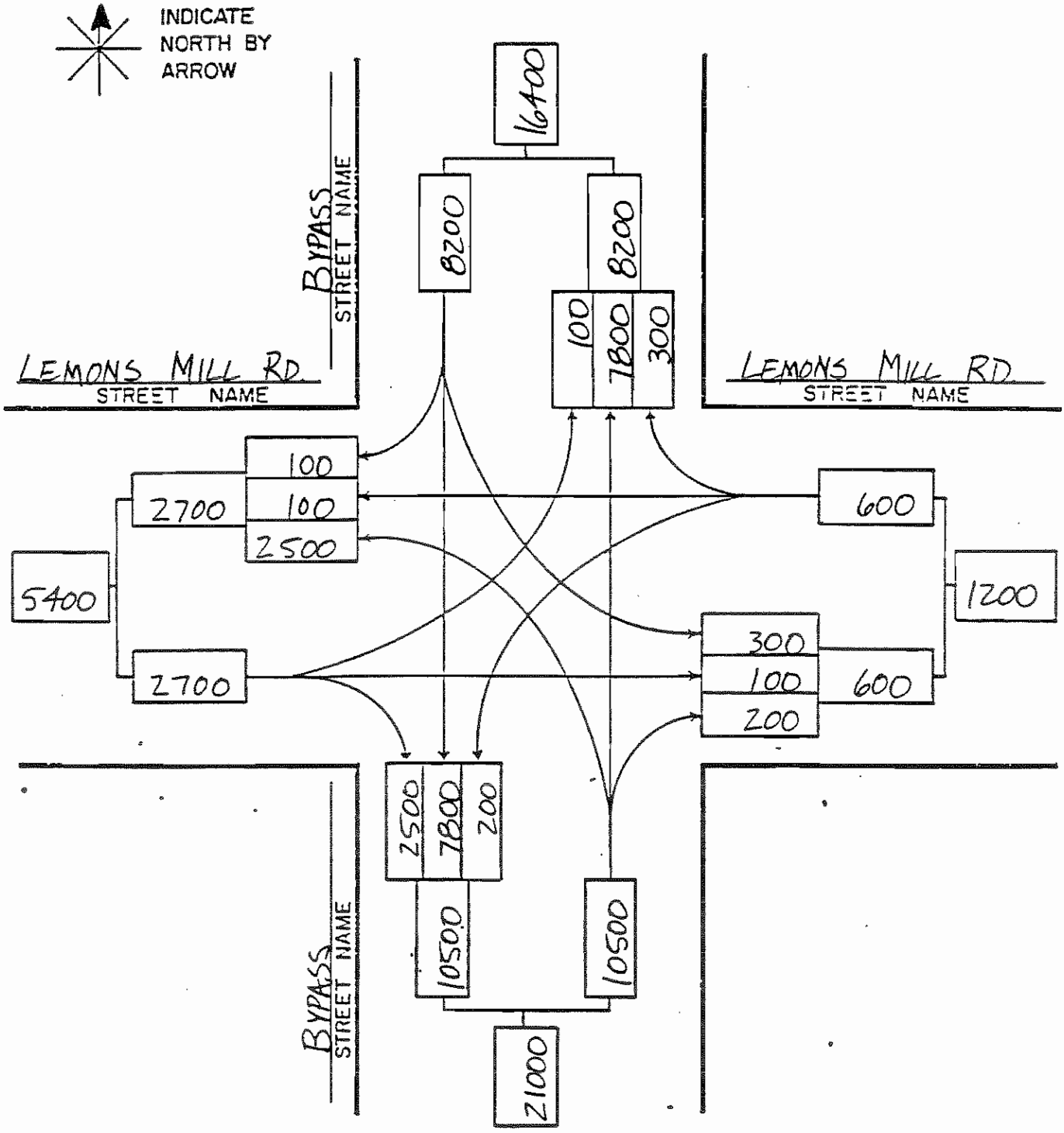
DATE 4/30/85

BY CS

YEAR 2007

PERIOD ADT

LOCATION GEORGETOWN - SCOTT COUNTY
PROPOSED GEORGETOWN BYPASS AND
LEMONS MILL ROAD



TURNING MOVEMENT DIAGRAM

PAGE 3 OF 5

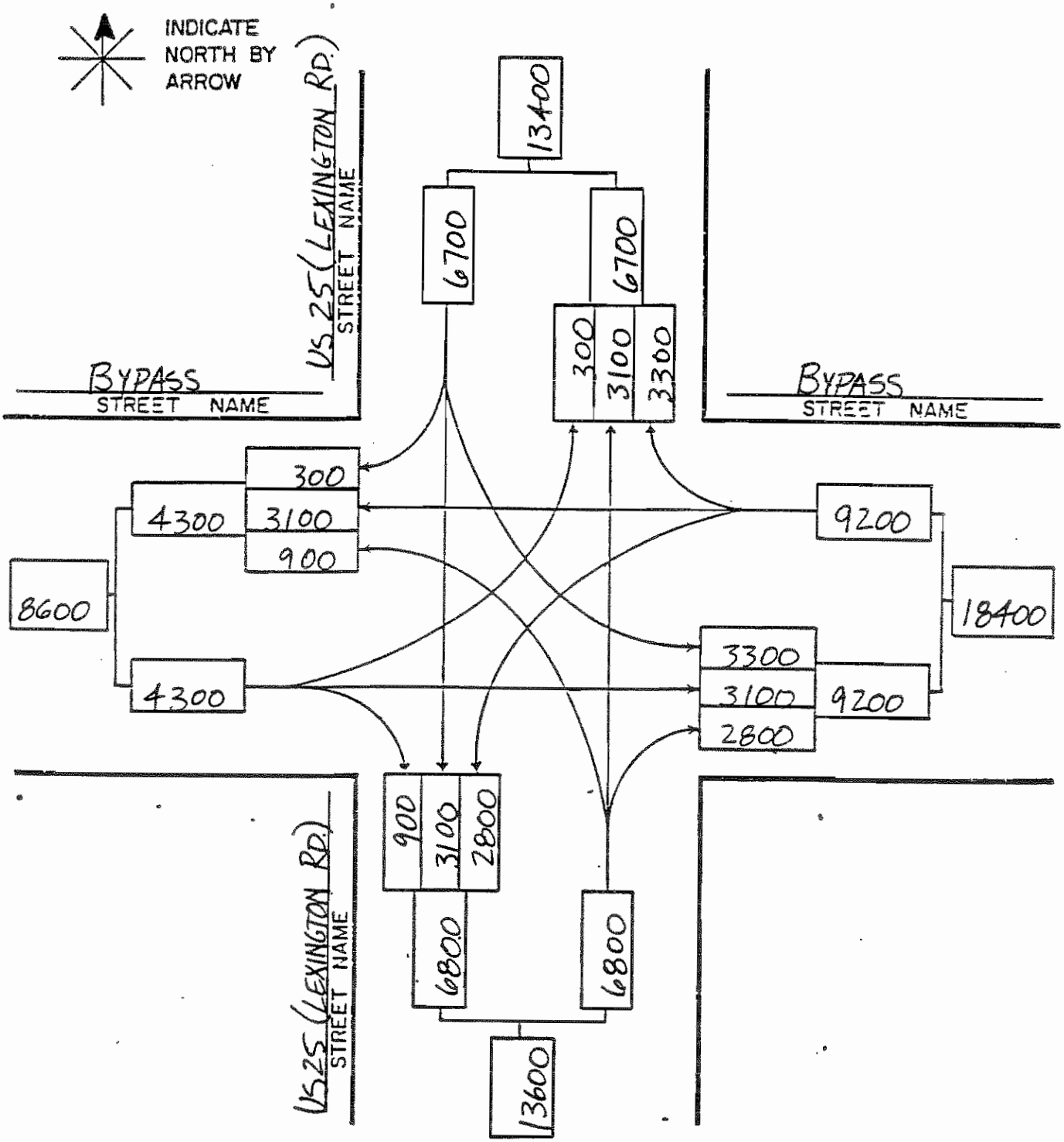
DATE 4/30/85

BY CRS

YEAR 2007

PERIOD ADT

LOCATION GEORGETOWN - SCOTT COUNTY
PROPOSED GEORGETOWN BYPASS AND
US 25 (LEXINGTON ROAD)



TURNING MOVEMENT DIAGRAM

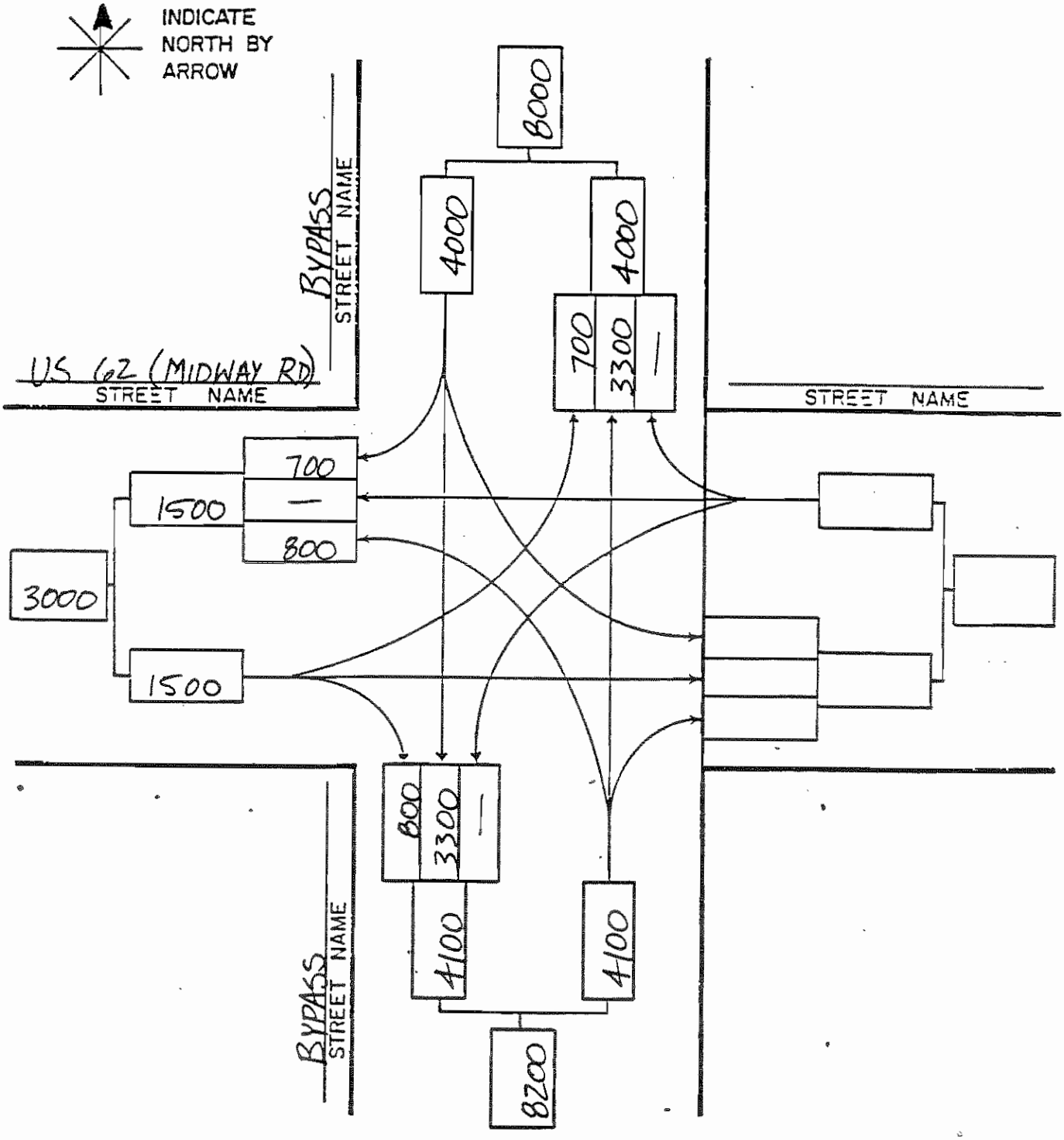
DATE 4/30/85

BY CRS

YEAR 2007

PERIOD ADT

LOCATION GEORGETOWN - SCOTT COUNTY
PROPOSED GEORGETOWN BYPASS AND
US 62 (MIDWAY ROAD)



TURNING MOVEMENT DIAGRAM

PAGE 5 OF 5

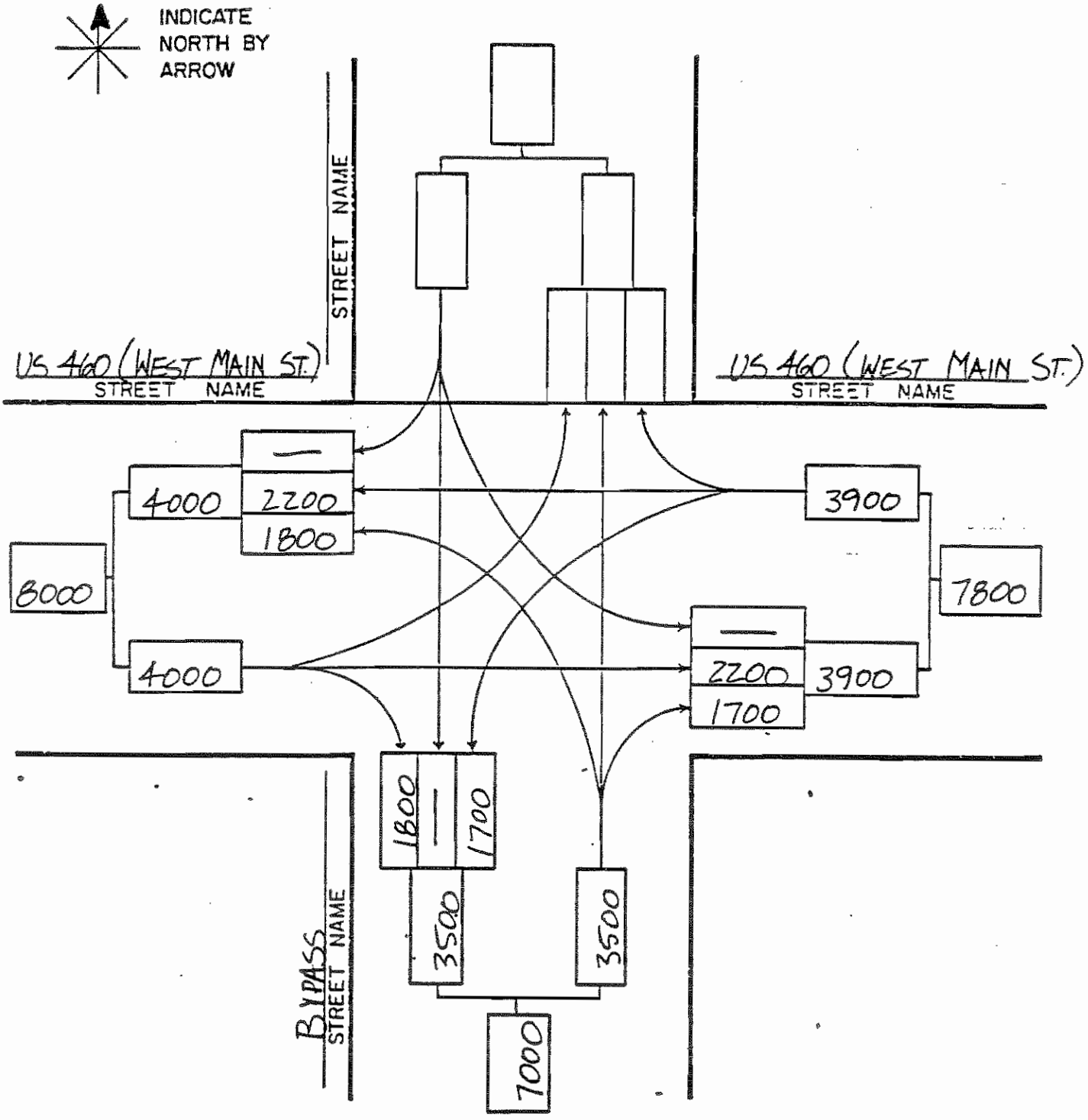
DATE 4/30/85

BY CLS

YEAR 2007

PERIOD ADT

LOCATION GEORGETOWN - SCOTT COUNTY
PROPOSED GEORGETOWN BYPASS AND
US 460 (WEST MAIN STREET)



C-2

INTER-OFFICE MEMO

TC 10-200
1-84

FLOYD G. POORE
SECRETARY

COMMONWEALTH OF KENTUCKY
TRANSPORTATION CABINET
FRANKFORT, KENTUCKY 40622

MARTHA LAYNE COLLINS
GOVERNOR

MEMO TO: Don Ecton, Director
Division of Planning

FROM: David E. Smith, Director
Division of Mass Transportation

DATE: April 24, 1985

SUBJECT: Georgetown Bypass - Scott County
Traffic Estimates

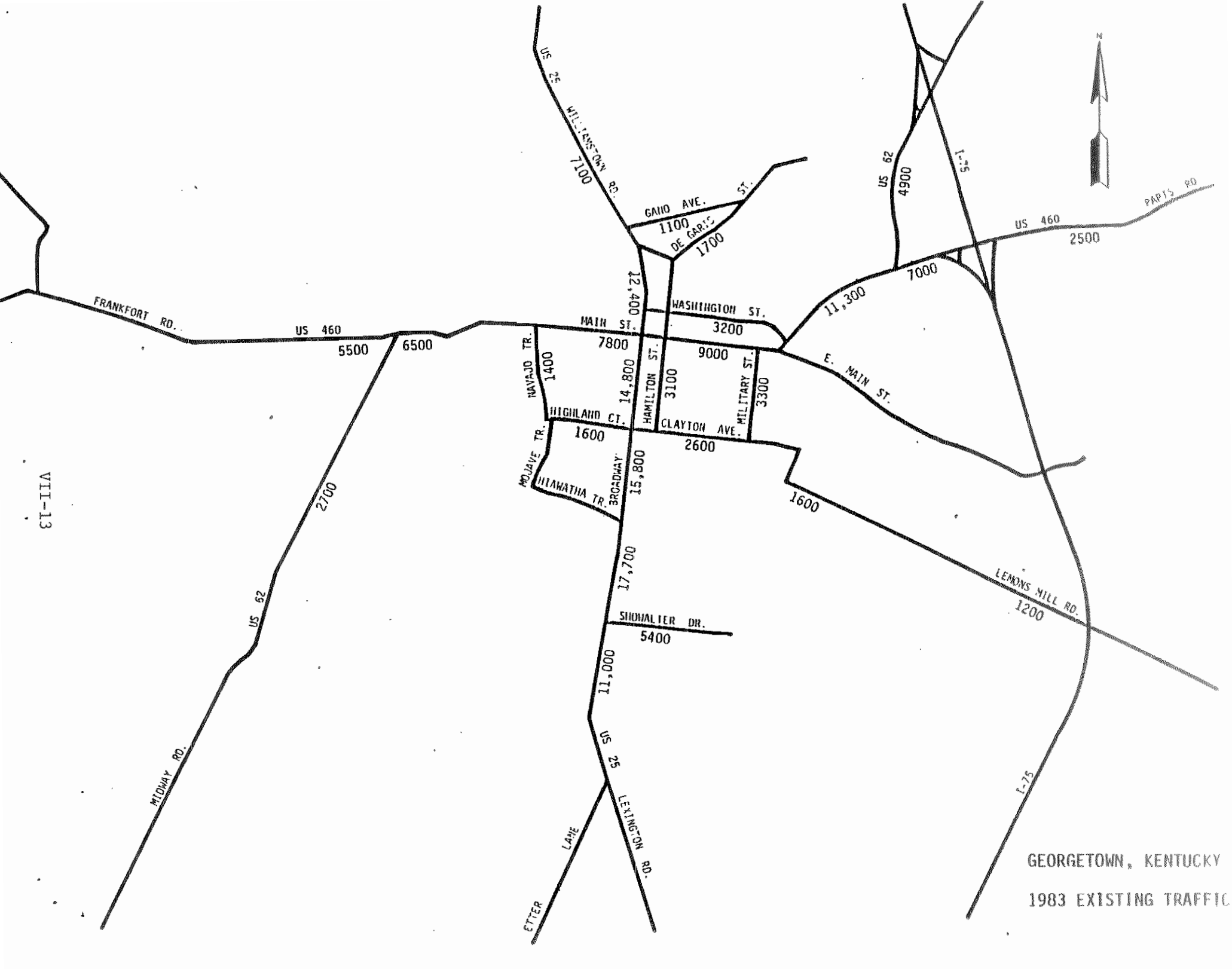
Attached are existing (1983) traffic counts and projected traffic for Georgetown which you requested in your November 19, 1984 memo. Included are traffic estimates for four alternatives of the Georgetown Bypass and the effect each alternate has on residual traffic. Hourly volumes can be estimated by applying a factor of 10% to the ADT volumes and directional hourly volumes should be split approximately 55/45.

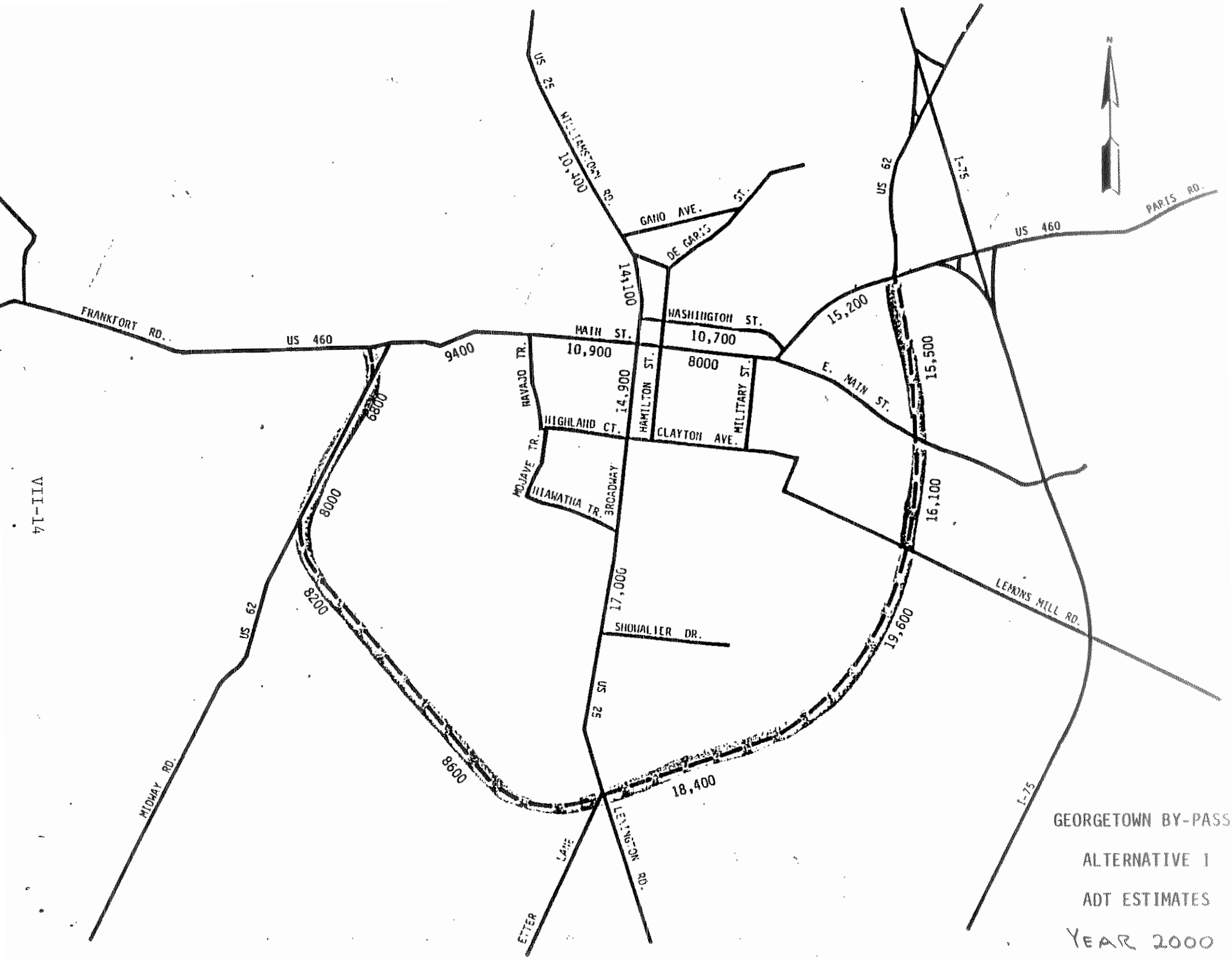
Traffic estimates for the Bypass were developed using a computer travel model from the 1979 Georgetown Transportation Plan. The model forecasted traffic for the year 2000 based on 1979 population and employment growth expectations. When comparing the latest population projections to the ones used in the Transportation Plan, it is clear that population is not expected to grow as quickly as shown in the plan. Therefore, we recommend year 2000 traffic assigned by the model be used for design year (2007) traffic estimates.

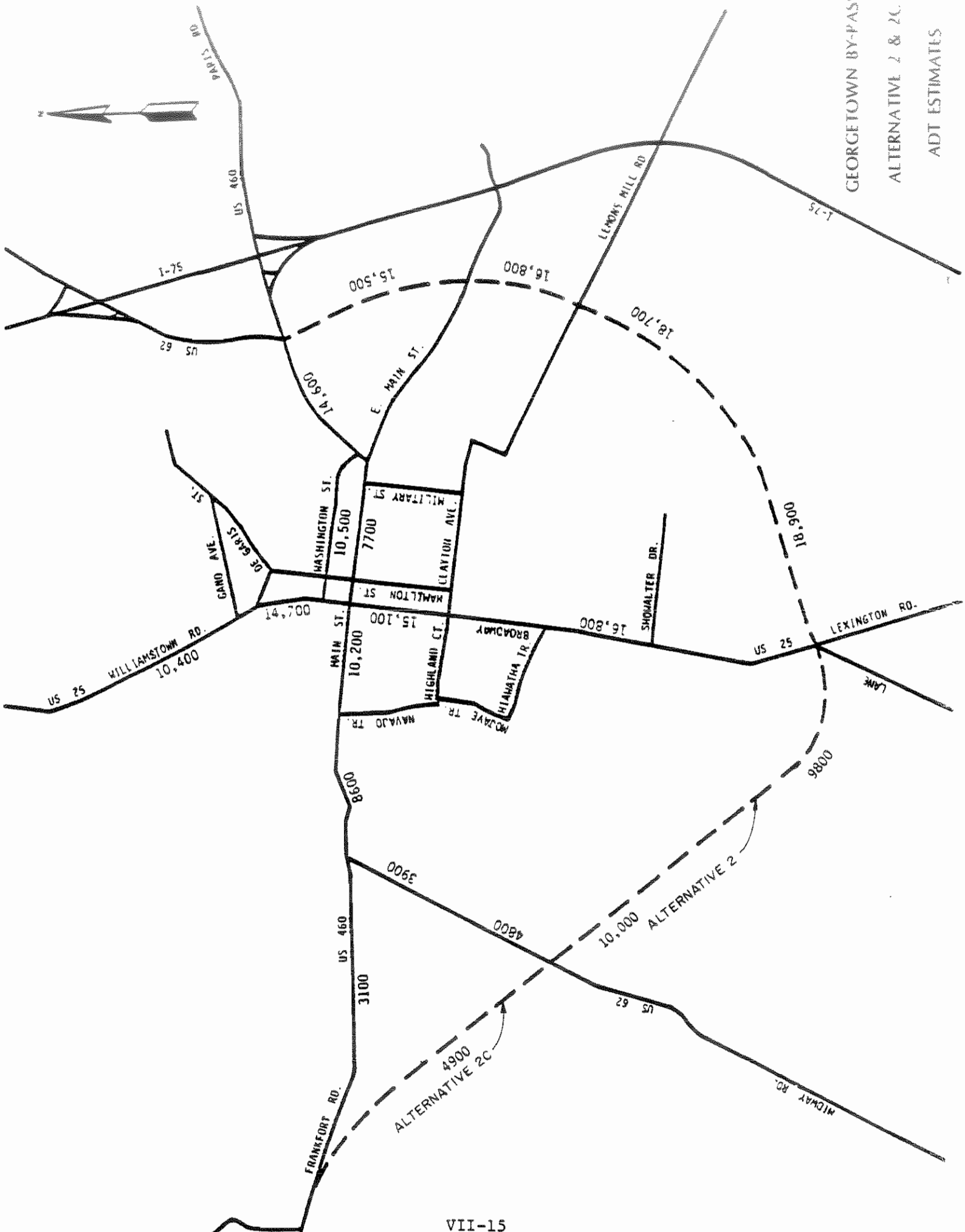
CS:drc

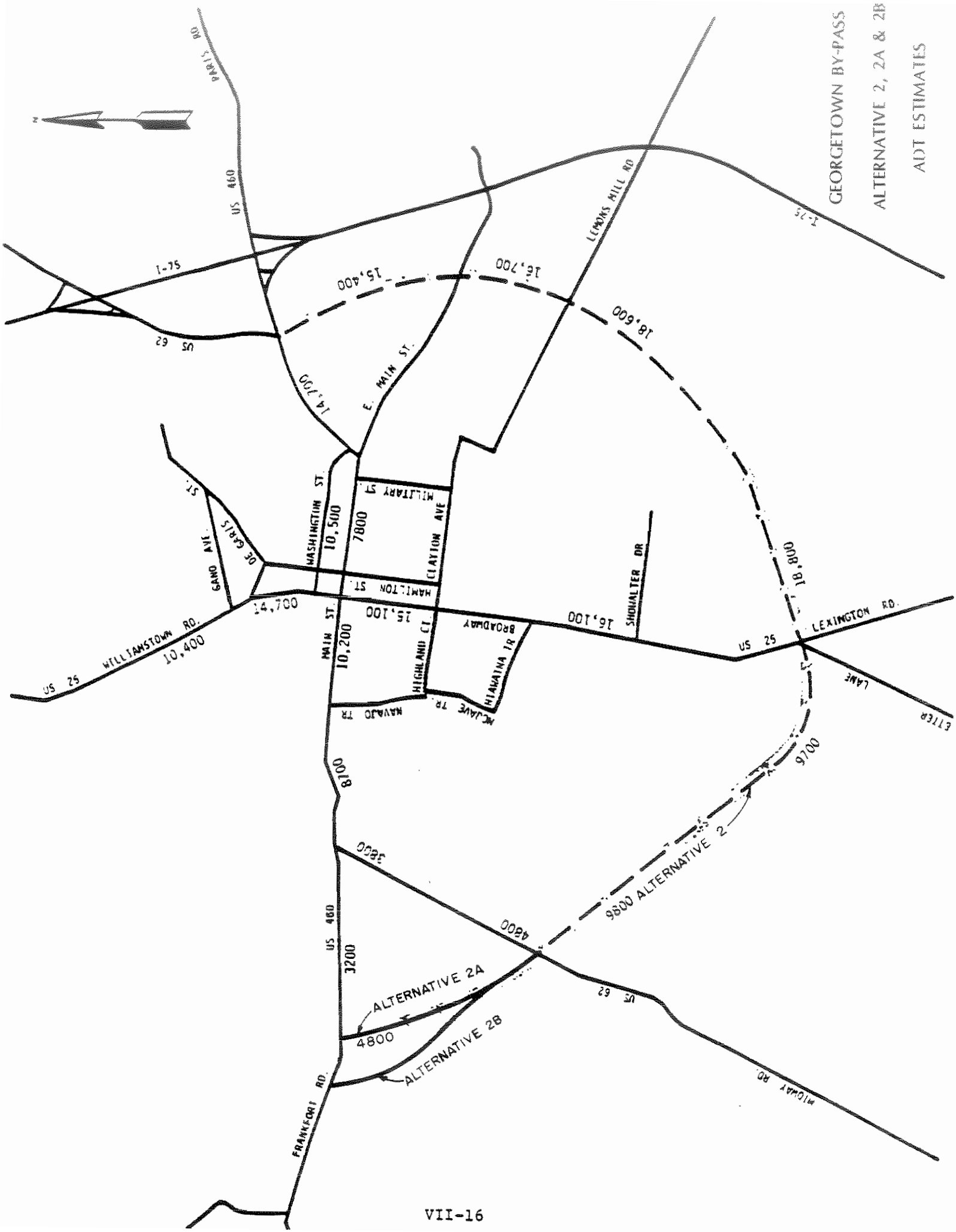
Attachments

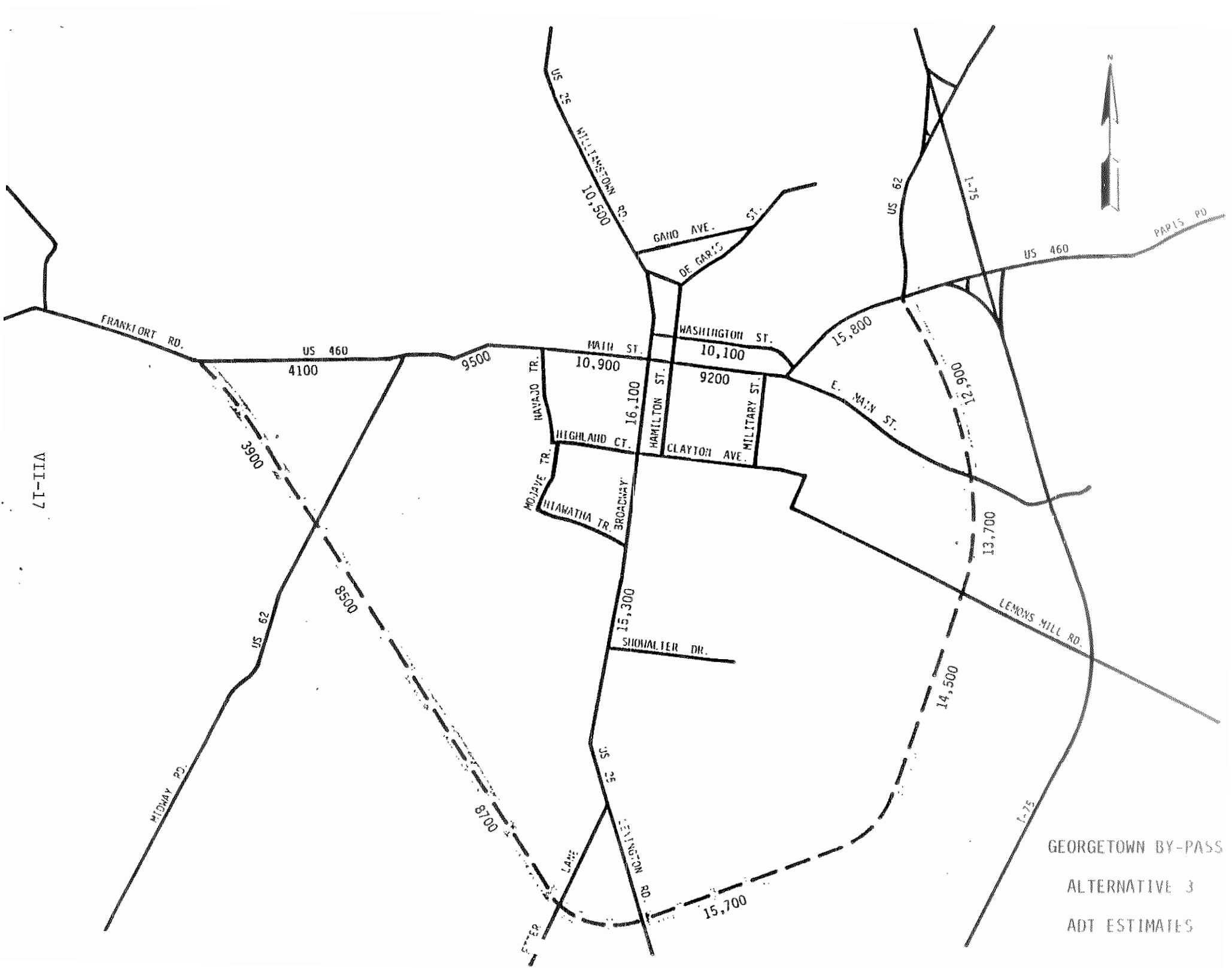
cc: A. L. Perkins


US 25 WILLIAMSTOWN RD.
7100
GAIO AVE.
1100
DE GARIS ST.
1700
12,400
US 62
4900
I-75
US 460
2500
PARIS RD
7000
11,300
WASHINGTON ST.
3200
FRANKFORT RD.
US 460
5500
6500
MAIN ST.
7800
9000
E. MAIN ST.
NAVAJO TR.
1400
14,800
HAMILTON ST.
3100
MILITARY ST.
3300
HIGHLAND CT.
1600
CLAYTON AVE.
2600
MOJAVE TR.
HIAWATHA TR.
BROADWAY
15,800
1600
2700
17,700
LEMONS MILL RD.
1200
SHAWNEE DR.
5400
US 62
11,000
US 25
LEXINGTON RD.
MIDWAY RD.
LANE
CUTTER
I-75
N
GEORGETOWN, KENTUCKY
1983 EXISTING TRAFFIC


US 25 WILLIAMSTOWN RD.
10,400
GANO AVE.
ST.
DE GARIS
14100
US 62
I-75
PARIS RD.
US 460
FRANKFORT RD.
US 460
9400
MAIN ST.
10,900
WASHINGTON ST.
10,700
15,200
15,500
E. MAIN ST.
8000
NAVAJO TR.
HIGHLAND CT.
14,900
HAMILTON ST.
MILITARY ST.
CLAYTON AVE.
MOJAVE TR.
WAWATHA TR.
BROADWAY
8800
8000
16,100
LEMONS MILL RD.
8200
17,000
SHOVALIER DR.
US 62
19,600
52
8600
18,400
MIDWAY RD.
LANE
LEXINGTON RD.
I-75
ETTER
GEORGETOWN BY-PASS
ALTERNATIVE 1
ADT ESTIMATES
YEAR 2000


GEORGETOWN BY-PASS
ALTERNATIVE 2 & 2C
ADT ESTIMATES
PARIS RD.
US 460
I-75
LEMONS MILL RD
US 62
E. MAIN ST.
14,600
15,500
16,800
18,700
18,900
WASHINGTON ST.
10,500
7700
MILITARY ST.
CLAYTON AVE.
DE GARIS ST.
CANO AVE.
HAMILTON ST.
14,700
15,100
16,800
SHOMALTER DR.
BROADWAY
HIGHLAND CT.
HIAWATHA TR.
MOJAVE TR.
NAVAJO TR.
MAIN ST.
10,200
WILLIAMSTOWN RD.
US 25
10,400
LEXINGTON RD.
LANE
8600
9800
3900
4800
10,000
ALTERNATIVE 2
US 460
3100
US 62
4900
ALTERNATIVE 2C
FRANKFORT RD.
MIDWAY RD.


GEORGETOWN BY-PASS
ALTERNATIVE 2, 2A & 2B
ADT ESTIMATES
I-75
US 460
LEMONS MILL RD
I-75
I-75
US 62
15,400
16,700
18,600
E. MAIN ST.
14,700
WASHINGTON ST.
10,500
7800
MILITARY ST.
CLAYTON AVE
HAMILTON ST.
GANO AVE
DE GAULS ST.
SHOWALTER DR
18,800
14,700
15,100
16,100
BROADWAY
MAIN ST.
10,200
HIGHLAND CT.
HIAWATHA TR
NAVAJO TR
McJAVE TR
US 25
LEXINGTON RD.
WILLIAMSTOWN RD.
10,400
US 25
LANE
ETTER
8700
9700
9800
9800 ALTERNATIVE 2
4800
US 460
3200
ALTERNATIVE 2A
4800
ALTERNATIVE 2B
US 62
FRANKFORT RD.
MOWAY RD.


US 25 WILLIAMSTOWN RD.
10,500
GAIO AVE.
DE GARIS ST.
US 62
I-75
US 460
PARIS PD
FRANKFORT RD.
US 460
4100
9500
MAIN ST.
10,900
WASHINGTON ST.
10,100
15,800
12,900
E. MAIN ST.
NAVAJO TR.
16,100
HAMILTON ST.
9200
MILITARY ST.
HIGHLAND CT.
CLAYTON AVE.
MOJAVE TR.
BROADWAY
HIAWATHA TR.
3900
13,700
LEMONS MILL RD.
8500
15,300
SHOWALTER DR.
US 62
MIDWAY PD.
14,500
US 25
8700
LANE
LEXINGTON RD.
15,700
I-75
GEORGETOWN BY-PASS
ALTERNATIVE 3
ADT ESTIMATES

ATTACHMENT D

LEVEL OF SERVICE AND CAPACITY ANALYSIS

FOR THE ALTERNATIVE 1 CORRIDOR

CALCULATIONS

CAPACITY ANALYSIS GEORGETOWN BY-PASS

Existing "Roadway Segment 4," Exhibit 14

1. Description: A segment of two-lane highway now called US 62 W (Midway-Paynes Depot Rd.) has the following characteristics:

   a. Roadway - 40+ mph design speed, 9' lanes, 2' shoulder: limited sight distance, terrain ± 3%, 50% no passing, length = 3,000'

   b. Traffic - 55/45 directional split, 7% trucks

$SF = 2{,}800 \times (V/C)_{L.O.S.} \times f_d \times f_w \times f_{HV}$

Where $f_{HV} = 1 \div [1 + P_T(E_T - 1) + P_R(E_R - 1) + P_B(E_B - 1)]$

Known Values:

$(V/C)_C = 0.34$ (L.O.S. C,D,E) $E_T = 5.0$

$(V/C)_D = 0.50$ $P_T = 7\%$

$(V/C)_E = 0.92$ (L.O.S. C) fw = 0.57 9' lanes, 2' shoulder

$f_d = 0.97$ (55/45) (L.O.S. D,E) fw = 0.70

Then: $f_{HV} = 1 \div [1 + 0.07(5.0-1)] = 0.78$

$SF_C = 2{,}800 \times (0.34) \times (0.97) \times (0.57) \times (0.78) = 410$ vph

$SF_D = 2{,}800 \times (0.50) \times (0.97) \times (0.70) \times (0.78) = 741$ vph

$SF_E = 2{,}800 \times (0.92) \times (0.97) \times (0.70) \times (0.78) = 1364$ vph

AADT for this segment in the year 2007 is predicted to be 8000 vehicles
DHV = (0.1) (8000) = 800 vph

As 800 vph is less than 1364 vph and greater than 741 vph or 410 vph, this highway section is projected to operate at level of service E in year 2007

CAPACITY ANALYSIS GEORGETOWN BY-PASS

Proposed "Roadway Segment 4", Exhibit 14

1. Description: A segment of two-lane highway is expected to have the following characteristics:

   a. Roadway - 60 mph design speed, 12' lanes, full shoulders ($\geq$ 6') level terrain (< 3% grade), 20% no passing zones, length = 3200'

   b. Traffic - 55/45 directional split, 7% truck

$$SF_{(L.O.S.)} = 2{,}800 \times (V/C)_{(L.O.S.)} \times f_d \times f_w \times f_{HV}$$

Where $f_{HV} = 1 \div [1 + P_T (E_T - 1) + P_R (E_R - 1) + P_B (E_B - 1)]$

Known values:

$(V/C)_C = 0.39$ (20% no pass, level terrain)

$E_T = 2.2$ (level terrain, L.O.S. B, C)

$(V/C)_B = 0.24$ (20% no pass, level terrain)

$P_T = 0.07$ (Given)

$f_d = 0.97$ (55/45 split)

$(V/C)_E = 1.00$

$f_w = 1.00$ (12' lanes, $\geq$ 6' shoulders)

* $E_T = 2.0$ for L.O.S.(E)

Then:

$$f_{HV} = 1 \div [1 + 0.07 (2.2 - 1)] = 1 \div [1 + 0.0840] = 0.9225$$

$$SF_{(B)} = 2{,}800 \times (0.24) \times (0.97) \times (1.00) \times (0.9225) = 601 \text{ vph}$$

$$SF_{(C)} = 2{,}800 \times (0.39) \times (0.97) \times (1.00) \times (0.9225) = 977 \text{ vph}$$

$$SF_{(E)} = 2{,}800 \times (1.00) \times (0.97) \times (1.00) \times (0.9346)^* = 2{,}538 \text{ vph}$$

AADT for this segment for the year 2007 is projected to be 8000 vehicles

$$DHV = (0.10) (8000) = 800 \text{ vph}$$

As 800 vph is less than 2538 vph and 977 vph and greater than 601 vph, this highway section is projected to operate within or above level of service "C" thru the year 2007

CAPACITY ANALYSIS GEORGETOWN BY-PASS

Proposed "Roadway Segment 3," Exhibit 14

1. Description: A segment of two-lane highway is expected to have the following characteristics:

   a. Roadway: 60-mph design speed, 12' lanes, full shoulders ($\geq$6') level terrain (< 3%), 5% no passing zones, length = 9,600'

   b. Traffic: 55/45 direction split, 7% trucks

$$SF_{(L.O.S.)} = 2{,}800 \times (V/C)_{(L.O.S.)} \times f_d \times f_w \times f_{HV}$$

Where $f_{HV} = 1 \div [1 + P_T (E_T - 1) + P_R (E_R - 1) + P_B (E_B - 1)]$

Known values:

$(V/C)_B = 0.27$ (0% pass, level terrain)

$(V/C)_C = 0.43$ (0% pass, level terrain)

$(V/C)_E = 1.00$ (0% pass, level terrain)

$f_d = 0.97$ (55/45 split)

$f_w = 1.00$ (12' lanes, $\geq$ 6' shoulders)

$E_T = 2.2$ (level terrain, L.O.S. (B, C))

$P_T = 0.07$

* $E_T = 2.0$ for L.O.S.(E)

Then:

$$f_{HV} = 1 \div [1 + 0.07 (2.2 - 1)] = 1 \div [1 + 0.0840] = 0.9225$$

$$SF_{(B)} = 2{,}800 \times (0.27) \times (0.97) \times (1.00) \times (0.9225) = 676 \text{vph}$$

$$SF_{(C)} = 2{,}800 \times (0.43) \times (0.97) \times (1.00) \times (0.9225) = 1{,}077 \text{ vph}$$

$$SF_{(E)} = 2{,}800 \times (1.00) \times (0.97) \times (1.00) \times (0.9346)^* = 2{,}538 \text{ vph}$$

AADT for this segment is projected to be 8600 vehicles in the year 2007

$$DHV = (0.10) (8600) = 860 \text{ vph}$$

As 860 vph is less than 2538 vph or 1077 vph and is greater than 676 vph, this section of highway is projected to operate within or above level of Service "C" thru the year 2007

CAPACITY ANALYSIS GEORGETOWN BY-PASS

Proposed "Roadway Segment 2," Exhibit 14

1. Description: A segment of divided, four lane highway is expected to have the following caharacteristics:

   a. Roadway - 60 mph design speed, 12' lanes, full shoulders ($\geq$ 6'), level terrain (< 3%), (N/A) % no passing zones, length = 9,100'

   b. Traffic - 55/45 directional split, 5% trucks

$SF_{(L.O.S.)} = MSF_{(L.O.S.)} \times N \times f_w \times f_{HV} \times f_E \times f_p$

Where $f_{HV} = 1 \div [1 + P_T (E_T - 1) + P_R (E_R - 1) + P_B (E_B - 1)]$

Known values:

$MSF_{(B)} = 1{,}000$ (60 mph design)

$MSF_{(C)} = 1{,}300$ (60 mph design)

$MSF_{(E)} = 2{,}000$ (60 mph design)

$N = 2$ (one direction only)

$f_w = 1.00$

$E_T = 1.7$ (level terrain)

$P_T = 5\%$

$f_E = 0.90$ (divided, surburban)

$f_p = 1.00$ (regular users)

Then:

$f_{HV} = 1 \div [1 + 0.05 (1.7 - 1)] = 1 \div [1+0.0350] = 0.9662$

$SF_{(B)} = 1000 \times (2) \times (1.00) \times (0.9662) \times (0.90) \times (1.00) = 1{,}739$ vph

$SF_{(C)} = 1{,}300 \times (2) \times (1.00) \times (0.9662) \times (0.90) \times (1.00) = 2{,}261$ vph

$SF_{(E)} = 2{,}000 \times (2) \times (1.00) \times (0.9662) \times (0.90) \times (1.00) = 3{,}478$ vph

AADT for this segment for the year 2007 is projected to be 19600 vehicles

DHV = (0.10) (19600) = 1,960 vph

As 1960 vph is less than 3478 vph or 2261 vph and is greater than 1739 vph, this highway section is projected to operate within or above level of Service "C" thru the year 2007

CAPACITY ANALYSIS GEORGETOWN BY-PASS

Proposed "Roadway Segment 1," Exhibit 14

1. Description: A segment of suburban, four-lane highway is expected to have the following characteristics:

   a. Roadway - 60 mph design speed, 12' lanes, full shoulders ($\geq$ 6') level terrain (< 3%), (N/A) % passing zones, length = 6,200'

   b. 55/45 directional split, 5% trucks

$$SF_{(L.O.S.)} = MSF_{(L.O.S.)} \times N \times f_w \times f_{HV} \times f_E \times f_p$$

Where $f_{HV} = 1 \div [1 + P_T (E_T - 1) + P_R (E_R - 1) + P_B (E_B - 1)]$

Known Values:

$MSF_{(B)} = 1{,}000$ (60 mph)

$MSF_{(C)} = 1{,}300$ (60 mph)

$MSF_{(E)} = 2{,}000$ (60 mph)

$N = 2$ (one direction)

$f_w = 1$

$E_T = 1.7$ (level terrain)

$P_T = 0.05$

$f_E = 0.90$ (divided, suburban)

$f_p = 1.00$ (regular users)

Then:

$$f_{HV} = 1 \div [1 + 0.05 (1.7 - 1)] = 1 \div [1 + 0.0350] = 0.9662$$

$$SF_{(B)} = 1{,}000 \times (2) \times (1.00) \times (0.9662) \times (0.90) \times (1.00) = 1{,}739 \text{ vph}$$

$$SF_{(C)} = 1{,}300 \times (2) \times (1.00) \times (0.9662) \times (0.90) \times (1.00) = 2{,}261 \text{ vph}$$

$$SF_{(E)} = 2{,}000 \times (2) \times (1.00) \times (0.9662) \times (0.90) \times (1.00) = 3{,}478 \text{ vph}$$

AADT for this segment for the year 2007 is projected to be 16,100

DHV = (0.10) (16100) = 1,610 vph

As 1610 vph is less than 3478 vph, 2261 vph, or 1739 vph, this highway segment is projected to operate within or above level of Service "B" thru the year 2007

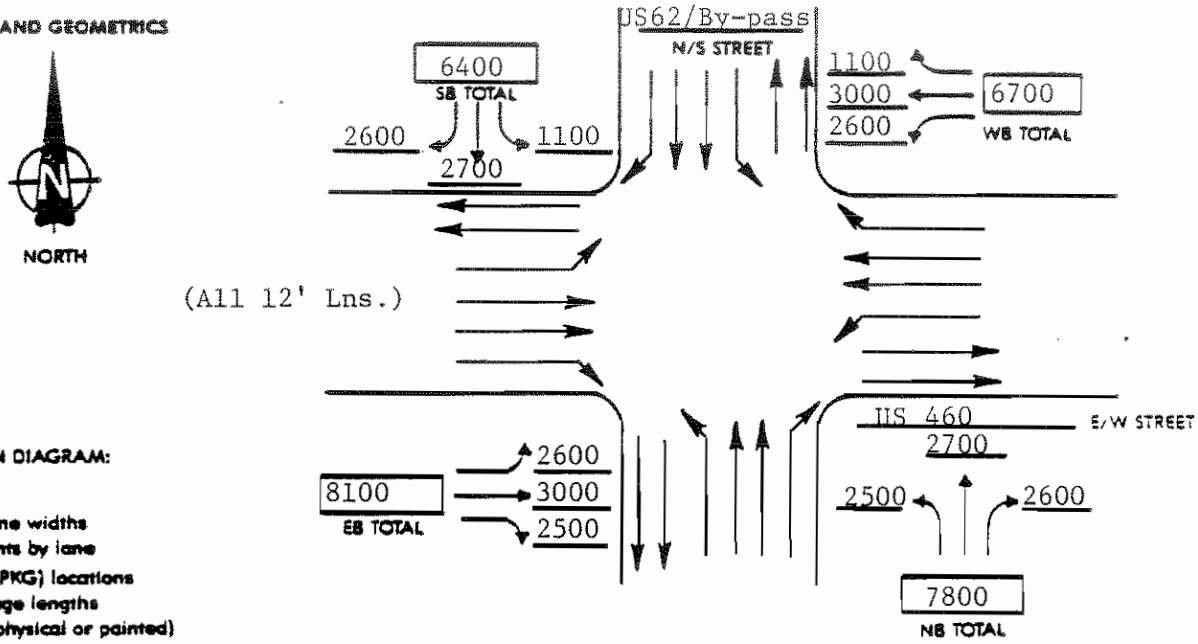
INPUT WORKSHEET

INTERSECTION: Intersection 1, Exhibit 14 DATE: 9/24/85

ANALYST: R.W. TIME PERIOD ANALYZED: _____ AREA TYPE: ☐ CBD ☒ OTHER

PROJECT NO: 000M 07609 001; FSP 105 7284 005D CITY/STATE: Georgetown, Ky.

VOLUME AND GEOMETRICS



IDENTIFY IN DIAGRAM:

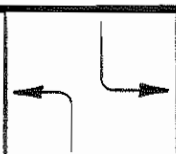
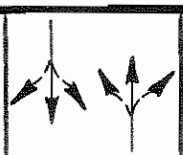
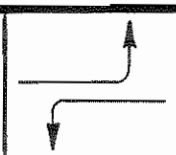
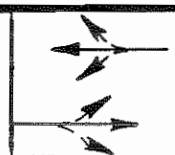
1. Volumes
2. Lanes, lane widths
3. Movements by lane
4. Parking (PKG) locations
5. Bay storage lengths
6. Islands (physical or painted)

TRAFFIC AND ROADWAY CONDITIONS

APPROACH	GRADE (%)	% HV	ADJ. PKG. LANE Y or N	ADJ. PKG. LANE N_m	BUSES (N_B)	PHF	CONF. PEDS. (peds/hr)	PEDESTRIAN BUTTON Y or N	PEDESTRIAN BUTTON MIN. TIMING	ARR. TYPE
EB	0	8	N	N/A	N/A	0.9	--	N	--	3
WB	0	8	N	N/A	N/A	0.9	--	N	---	3
NB	0	8	N	N/A	N/A	0.9	--	N		3
SB	0	8	N	N/A	N/A	0.9	--	N		3

GRADE: + up, − down
HV: veh. with more than 4 wheels
N_m: pkg. maneuvers/hr.
N_B: buses stopping/hr.
PHF: peak hour factor
CONF. PEDS: Conflicting peds./hr.
MIN. TIMING: min. green for pedestrian crossing
ARR. TYPE: Type 1-5

PHASING

DIAGRAM								
TIMING	G= 12 sec Y+R= 3	G= 12 sec Y+R= 3	G= 12 sec. Y+R= 3	G= 12 sec Y+R= 3	G= Y+R=	G= Y+R=	G= Y+R=	G= Y+R=
Protimed or Actuated	P	P	P	P				

Protected turns — Permissive turns — Pedestrian — Cycle Length 60 Secs.

[illegible]
[illegible]

VOLUME ADJUSTMENT WORKSHEET

DIR	MVMT.	MVMT. VOLUME	PEAK HR. FACTOR	FLOW RATE	LANE GROUP	FLOWRATE LN GROUP	NO. LANES	LN. UTIL. FACTOR	ADJ. FLOW
	LT.	260	0.9	288.8888	LT.	289	1	1	289
EAST	TH.	300	0.9	333.3333	TH./RT.	611	3	1.1	672.1
	RT.	250	0.9	277.7777	N/A	0	0	0.95	0
	LT.	260	0.9	288.8888	LT.	289	1	1	289
WEST	TH.	300	0.9	333.3333	TH./RT.	455	3	1.1	500.5
	RT.	110	0.9	122.2222	N/A	1	0	0.95	0.95
	LT.	250	0.9	277.7777	LT.	278	1	1	278
NORTH	TH.	270	0.9	300	TH./RT.	589	3	1.1	647.9
	RT.	260	0.9	288.8888	N/A	1	0	0.95	0.95
	LT.	110	0.9	122.2222	LT.	122	1	1	122
SOUTH	TH.	270	0.9	300	TH./RT.	589	3	1.1	647.9
	RT.	260	0.9	288.8888	N/A	1	0	0.95	0.95

GREEN>	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	
TIME>	t = 11	t = 13	t = 11	t = 13			(seconds)

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

SATURATION FLOW ADJUSTMENT WORKSHEET

DIR	LN. GROUP MVMTS.	IDEAL SAT. FLOW	NO. LANES	ADJ. WIDTH	ADJ. VEH. HEAVY	ADJ. GRADE	ADJ. PARKING	ADJ. BUS BLOCKAGE	ADJ. AREA	ADJ. RT. TURN	ADJ. LT. TURN	ADJ. SAT. FLOWRATE
L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
EAST	TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
WEST	TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
NORTH	TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
SOUTH	TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CAPACITY ANALYSIS WORKSHEET

?20 = PERMISSIVE REDUCTION

DIR	LN. GROUP MVMTS.	ADJ. FLOW	ADJ. SAT. FLOWRATE	FLOW RATIO	GREEN RATIO	LN. GROUP CAPACITY	v/c RATIO
L	LT.	169	1477.44	0.114387	0.18	265.9392	0.635483
EAST	TH./RT.	672.1	3965.76	0.169475	0.22	872.4672	0.770344
R	N/A	0	0	ERR		0	ERR
L	LT.	169	1477.44	0.114387	0.18	265.9392	0.635483
WEST	TH./RT.	500.5	3965.76	0.126205	0.22	872.4672	0.573660
R	N/A	0.95	0	ERR		0	ERR
L	LT.	158	1477.44	0.106941	0.18	265.9392	0.594120
NORTH	TH./RT.	647.9	3965.76	0.163373	0.22	872.4672	0.742606
R	N/A	0.95	0	ERR		0	ERR
L	LT.	2	1477.44	0.001353	0.18	265.9392	0.007520
SOUTH	TH./RT.	647.9	3965.76	0.163373	0.22	872.4672	0.742606
R	N/A	0.95	0	ERR		0	ERR

60 = CYCLE LENGTH 0.554177 = CRITICAL FLOW RATIO SUMMATION

12 = LOSS TIME PER CYCLE 0.692722 = CRITICAL v/c RATIO

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

LEVEL OF SERVICE WORKSHEET

DIR	LN. GROUP MVMTS.	v/c RATIO	GREEN RATIO	CYCLE LENGTH	DELAY 1	LN. GROUP CAPACITY	DELAY 2	PROGR. FACTOR	LN. GROUP DELAY	L.O.S.	APPROACH DELAY	APPROACH L.O.S.
EAST	L LT.	0.635483	0.18	60	17.31085	265.9392	3.432612	1	20.74347	C		
	TH./RT.	0.770344	0.22	60	16.70212	872.4672	2.970519	1	19.67264	C	19.92279	C
	R N/A	ERR	0	60	ERR	0	ERR	1	ERR			
WEST	L LT.	0.635483	0.18	60	17.31085	265.9392	3.432612	1	20.74347	C		
	TH./RT.	0.573660	0.22	60	15.87503	872.4672	0.692539	1	16.56757	C	17.54309	C
	R N/A	ERR	0	60	ERR	0	ERR	1	ERR			
NORTH	L LT.	0.594120	0.18	60	17.16653	265.9392	2.557037	1	19.72357	C		
	TH./RT.	0.742606	0.22	60	16.58030	872.4672	2.405997	1	18.98629	C	19.15853	C
	R N/A	ERR	0	60	ERR	0	ERR	1	ERR			
SOUTH	L LT.	0.007520	0.18	60	15.35150	265.9392	0.000002	1	15.35150	C		
	TH./RT.	0.742606	0.22	60	16.58030	872.4672	2.405997	1	18.98629	C	18.13718	C
	R N/A	ERR	0	60	ERR	0	ERR	1	ERR			

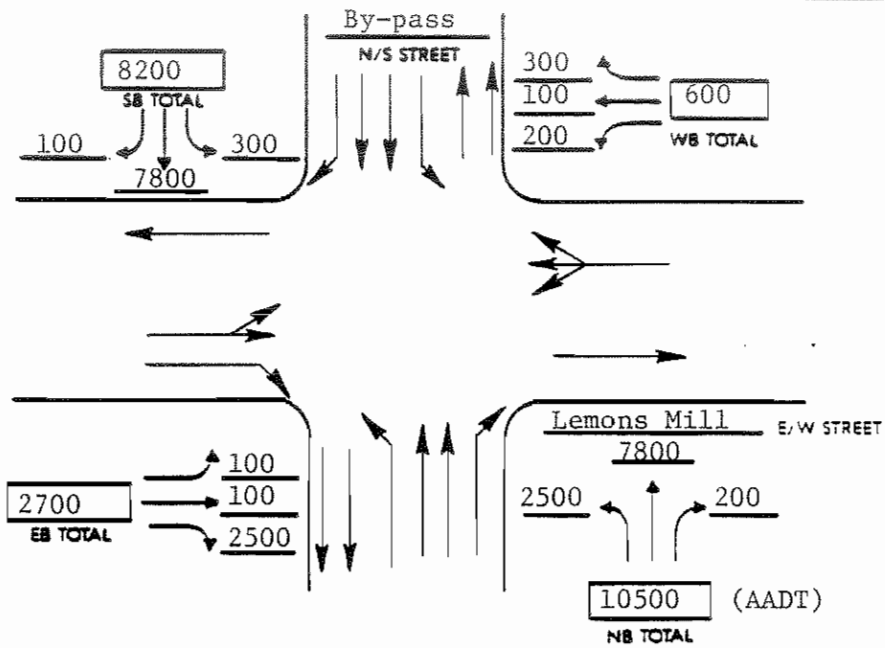
INPUT WORKSHEET

INTERSECTION: Intersection 2, Exhibit 14 DATE: 9/24/85

ANALYST: R.W. TIME PERIOD ANALYZED: _____ AREA TYPE: ☐ CBD ☒ OTHER

PROJECT NO: 0000M 07609 001 CITY/STATE: Georgetown, Ky.
FSP 105 7284 005D

VOLUME AND GEOMETRICS



IDENTIFY IN DIAGRAM:

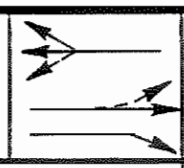
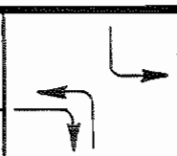
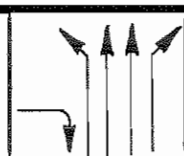
1. Volumes
2. Lanes, lane widths
3. Movements by lane
4. Parking (PKG) locations
5. Bay storage lengths
6. Islands (physical or painted)

TRAFFIC AND ROADWAY CONDITIONS

APPROACH	GRADE (%)	% HV	ADJ. PKG. LANE		BUSES (N_b)	PHF	CONF. PEDS. (peds/hr)	PEDESTRIAN BUTTON		ARR. TYPE
			Y or N	N_m				Y or N	MIN. TIMING	
EB	0	5	N		--	0.9	--	N		3
WB	0	5	N		--	0.9	--	N		3
NB	0	5	N		--	0.9	--	N		3
SB	0	5	N		--	0.9	--	N		3

GRADE: + up, − down
HV: veh. with more than 4 wheels
N_m: pkg. maneuvers/hr.
N_b: buses stopping/hr.
PHF: peak hour factor
CONF. PEDS: Conflicting peds./hr.
MIN. TIMING: min. green for pedestrian crossing
ARR. TYPE: Type 1-5

PHASING

DIAGRAM								
TIMING	G= 10 Y+R=	G= 7 Y+R=	G= 11 Y+R=	G= 20 Y+R=	G= Y+R=	G= Y+R=	G= Y+R=	G= Y+R=
Protected or Actuated	P	P	P	P				

Protected turns | Permissive turns | Pedestrian | Cycle Length 60 Secs.

G-TOWN INT (2)
BYPASS

VOLUME ADJUSTMENT WORKSHEET

DIR	MVMT.	MVMT. VOLUME	PEAK HR. FACTOR	FLOW RATE	LN. GRP. MVMTS.	FLOWRATE LN. GROUP	NO. LANES	LN. UTIL. FACTOR	ADJ. FLOW
	LT.	250	0.9	277.7777	LT.	278	1	1	278
NORTH	TH.	780	0.9	866.6666	TH./RT.	889	2	1.05	933.45
	RT.	20	0.9	22.22222	N/A	0	0	0.95	0
	LT.	30	0.9	33.33333	LT.	33	1	1	33
SOUTH	TH.	780	0.9	866.6666	TH./RT.	878	2	1.05	921.9
	RT.	10	0.9	11.11111	N/A	0	0	0.95	0
	LT.	20	0.9	22.22222	N/A	0	0	0.95	0
WEST	TH.	10	0.9	11.11111	ALL	67	1	1	67
	RT.	30	0.9	33.33333	N/A	0	0	0.95	0
	LT.	10	0.9	11.11111	N/A	0	0	0.95	0
EAST	TH.	10	0.9	11.11111	LT./TH.	22	1	1	22
	RT.	250	0.9	277.7777	RT.	278	1	1	278

GREEN>	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6	
TIME>	t = 10	t = 7	t = 11	t = 20			(seconds)

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

SATURATION FLOW ADJUSTMENT WORKSHEET

DIR	LN. GROUP MVMTS.	IDEAL SAT. FLOW	NO. LANES	ADJ. WIDTH	ADJ. VEH. HEAVY	ADJ. GRADE	ADJ. PARKING	ADJ. BUS BLOCKAGE	ADJ. AREA	ADJ. RT. TURN	ADJ. LT. TURN	ADJ. SAT. FLOWRATE
L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
.ORTH	TH./RT.	1800	2	1	0.96	1	1	1	0.9	1	1	3110.4
R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
;OUTH	TH./RT.	1800	2	1	0.96	1	1	1	0.9	1	1	3110.4
R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
L	N/A	1800	0	1	0.96	1	1	1	0.9	1	0.95	0
WEST	ALL	1800	1	1	0.96	1	1	1	0.9	0.89	1	1384.128
R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
L	N/A	1800	0	1	0.96	1	1	1	0.9	1	0.95	0
EAST	LT./TH.	1800	1	1	0.96	1	1	1	0.9	1	1	1555.2
R	RT.	1800	1	1	0.96	1	1	1	0.9	0.85	1	1321.92

(XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CAPACITY ANALYSIS WORKSHEET

120 = PERMISSIVE REDUCTION

DIR	LN. GROUP MVMTS.	ADJ. FLOW	ADJ. SAT. FLOWRATE	FLOW RATIO	GREEN RATIO	LN. GROUP CAPACITY	v/c RATIO
L	LT.	158	1477.44	0.106941	0.3	443.232	0.356472
NORTH	TH./RT.	933.45	3110.4	0.300106	0.52	1617.408	0.577127
R	N/A	0	0	ERR		0	ERR
L	LT.	0	1477.44	0	0.12	177.2928	0
SOUTH	TH./RT.	921.9	3110.4	0.296392	0.33	1026.432	0.898159
R	N/A	0	0	ERR		0	ERR
L	N/A	0	0	ERR	0	0	ERR
WEST	ALL	67	1384.128	0.048405	0.17	235.3017	0.284740
R	N/A	0	0	ERR		0	ERR
L	N/A	0	0	ERR	0	0	ERR
EAST	LT./TH.	22	1555.2	0.014146	0.17	264.384	0.083212
R	RT.	278	1321.92	0.210300	0.47	621.3024	0.447447

60 = CYCLE LENGTH 0.665753 = CRITICAL FLOW RATIO SUMMATION

12 = LOSS TIME PER CYCLE 0.832192 = CRITICAL v/c RATIO

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

LEVEL OF SERVICE WORKSHEET

DIR	LN. GROUP MVMTS.	v/c RATIO	GREEN RATIO	CYCLE LENGTH	DELAY 1	LN. GROUP CAPACITY	DELAY 2	PROGR. FACTOR	LN. GROUP DELAY	L.O.S.	APPROACH DELAY	APPROACH L.O.S.
L	LT.	0.356472	0.3	60	12.50982	443.232	0.218112	1	12.72793	B		
NORTH	TH./RT.	0.577127	0.52	60	7.505594	1617.408	0.385918	1	7.891513	B	8.931800	B
R	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
L	LT.	0	0.12	60	17.65632	177.2928	0	1	17.65632	C		
SOUTH	TH./RT.	0.898159	0.33	60	14.54635	1026.432	7.574473	1	22.12082	C	21.46326	C
R	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
L	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
WEST	ALL	0.284740	0.17	60	16.50590	235.3017	0.188080	1	16.69398	C	16.69398	C
R	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
L	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
EAST	LT./TH.	0.083212	0.17	60	15.93229	264.384	0.003285	1	15.93558	C	10.69703	B
R	RT.	0.447447	0.47	60	8.110068	621.3024	0.357802	1	8.467871	B		

INPUT WORKSHEET

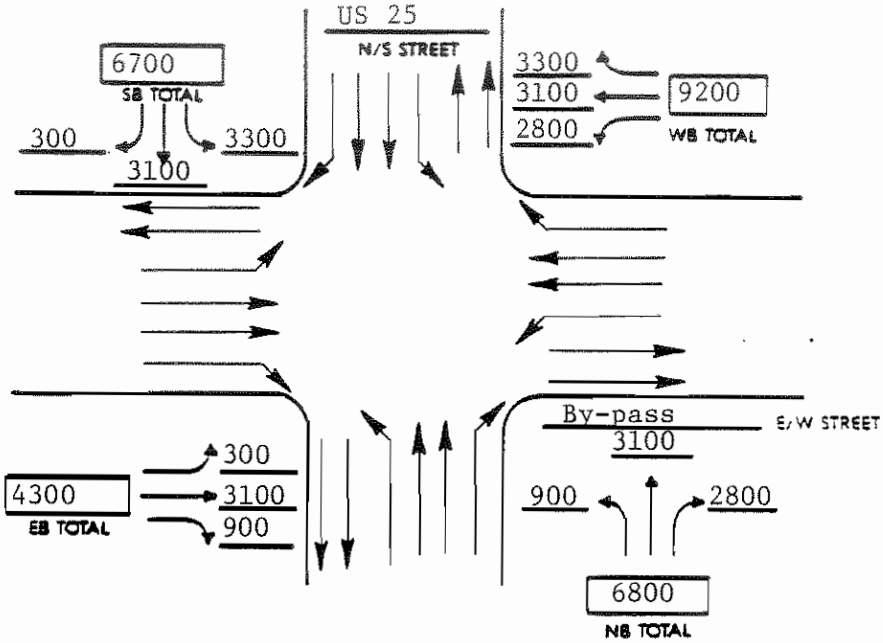
INTERSECTION: Intersection 3, Exhibit 14 DATE: 9/24/85

ANALYST: R.W. TIME PERIOD ANALYZED: _____ AREA TYPE: ☐ CBD ☒ OTHER

PROJECT NO: 000RS 05382 001 CITY/STATE: Georgetown, Ky.
FSP 105 7284 004D

VOLUME AND GEOMETRICS

NORTH



IDENTIFY IN DIAGRAM:

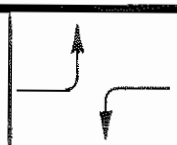
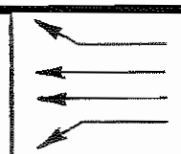
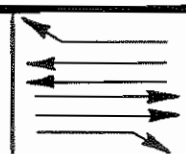
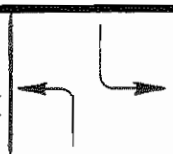
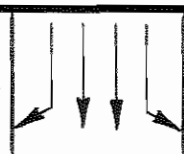
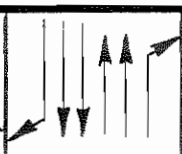
1. Volumes
2. Lanes, lane widths
3. Movements by lane
4. Parking (PKG) locations
5. Bay storage lengths
6. Islands (physical or painted)

TRAFFIC AND ROADWAY CONDITIONS

APPROACH	GRADE (%)	% HV	ADJ. PKG. LANE		BUSES (N_b)	PHF	CONF. PEDS. (peds/hr)	PEDESTRIAN BUTTON		ARR. TYPE
			Y or N	N_m				Y or N	MIN. TIMING	
EB		6				.9				3
WB		6				.9				3
NB		6				.9				3
SB		6				.9				3

GRADE: + up, − down
HV: veh. with more than 4 wheels
N_m: pkg. maneuvers/hr.
N_b: buses stopping/hr.
PHF: peak hour factor
CONF. PEDS: Conflicting peds./hr.
MIN. TIMING: min. green for pedestrian crossing
ARR. TYPE: Type 1–5

PHASING

DIAGRAM								
TIMING	G= 3 Y+R=	G= 10 Y+R=	G= 11 Y+R=	G= 7 Y+R=	G= 6 Y+R=	G= 11 Y+R=	G= Y+R=	G= Y+R=
Pretimed or Actuated	P	P	P	P	P	P		

Protected turns | Permissive turns | Pedestrian | Cycle Length 60 Secs.

VOLUME ADJUSTMENT WORKSHEET

DIR	MVMT.	MVMT. VOLUME	PEAK HR. FACTOR	FLOW RATE	LN. GRP. MVMTS.	FLOWRATE LN. GROUP	NO. LANES	LN. UTIL. FACTOR	ADJ. FLOW
	LT.	30	0.9	33.33333	LT.	33	1	1	33
EAST	TH.	310	0.9	344.4444	TH./RT.	444	3	1.1	488.4
	RT.	90	0.9	100	N/A	0	0	0.95	0
	LT.	330	0.9	366.6666	LT.	367	1	1	367
WEST	TH.	310	0.9	344.4444	TH./RT.	756	3	1.1	831.6
	RT.	280	0.9	311.1111	N/A	0	0	0.95	0
	LT.	90	0.9	100	LT.	100	1	1	100
NORTH	TH.	310	0.9	344.4444	TH./RT.	456	3	1.1	501.6
	RT.	280	0.9	311.1111	N/A	0	0	0.95	0
	LT.	330	0.9	366.6666	LT.	367	1	1	367
SOUTH	TH.	310	0.9	344.4444	TH./RT.	378	3	1.1	415.8
	RT.	30	0.9	33.33333	N/A	0	0	0.95	0

GREEN>	PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5	PHASE 6
TIME>	t = 3	t = 10	t = 11	t = 7	t = 6	t = 11 (seconds)

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

SATURATION FLOW ADJUSTMENT WORKSHEET

DIR	LN. GROUP	MVMTS.	IDEAL SAT. FLOW	NO. LANES	ADJ. WIDTH	ADJ. VEH. HEAVY	ADJ. GRADE	ADJ. PARKING	ADJ. BUS BLOCKAGE	ADJ. AREA	ADJ. RT. TURN	ADJ. LT. TURN	ADJ. SAT. FLOWRATE
	L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
EAST		TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
	R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
	L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
WEST		TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
	R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
	L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
NORTH		TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
	R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0
	L	LT.	1800	1	1	0.96	1	1	1	0.9	1	0.95	1477.44
SOUTH		TH./RT.	1800	3	1	0.96	1	1	1	0.9	0.85	1	3965.76
	R	N/A	1800	0	1	0.96	1	1	1	0.9	1	1	0

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

CAPACITY ANALYSIS WORKSHEET

120 = PERMISSIVE REDUCTION

DIR	LN. GROUP MVMTS.	ADJ. FLOW	ADJ. SAT. FLOWRATE	FLOW RATIO	GREEN RATIO	LN. GROUP CAPACITY	v/c RATIO
L	LT.	0	1477.44	0	0.05	73.872	0
EAST	TH./RT.	488.4	3965.76	0.123154	0.18	713.8368	0.684189
R	N/A	0	0	ERR		0	ERR
L	LT.	247	1477.44	0.167181	0.22	325.0368	0.759913
WEST	TH./RT.	831.6	3965.76	0.209694	0.35	1388.016	0.599128
R	N/A	0	0	ERR		0	ERR
L	LT.	0	1477.44	0	0.12	177.2928	0
NORTH	TH./RT.	501.6	3965.76	0.126482	0.18	713.8368	0.702681
R	N/A	0	0	ERR		0	ERR
L	LT.	247	1477.44	0.167181	0.22	325.0368	0.759913
SOUTH	TH./RT.	415.8	3965.76	0.104847	0.28	1110.412	0.374455
R	N/A	0	0	ERR		0	ERR

60 = CYCLE LENGTH 0.670539 = CRITICAL FLOW RATIO SUMMATION

12 = LOSS TIME PER CYCLE 0.838174 = CRITICAL v/c RATIO

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

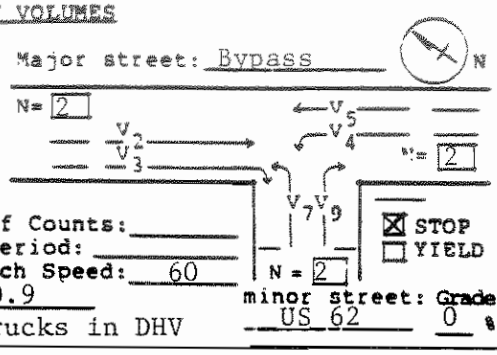
LEVEL OF SERVICE WORKSHEET

DIR	LN. GROUP MVMTS.	v/c RATIO	GREEN RATIO	CYCLE LENGTH	DELAY 1	LN. GROUP CAPACITY	DELAY 2	PROGR. FACTOR	LN. GROUP DELAY	L.O.S.	APPROACH DELAY	APPROACH L.O.S.
L	LT.	0	0.05	60	20.577	73.872	0	1	20.577	C		
EAST	TH./RT.	0.684189	0.18	60	17.48394	713.8368	1.895985	1	19.37992	C	19.49218	C
R	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
L	LT.	0.759913	0.22	60	16.65610	325.0368	6.814614	1	23.47071	C		
WEST	TH./RT.	0.599128	0.35	60	12.18896	1388.016	0.529302	1	12.71826	B	14.75845	B
R	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
L	LT.	0	0.12	60	17.65632	177.2928	0	1	17.65632	C		
NORTH	TH./RT.	0.702681	0.18	60	17.55056	713.8368	2.169823	1	19.72038	C	19.30973	C
R	N/A	ERR	0	60	ERR	0	ERR	1	ERR			
L	LT.	0.759913	0.22	60	16.65610	325.0368	6.814614	1	23.47071	C		
SOUTH	TH./RT.	0.374455	0.28	60	13.20391	1110.412	0.104256	1	13.30817	B	15.60933	C
R	N/A	ERR	0	60	ERR	0	ERR	1	ERR			

LOCATION: Intersection 4, Exhibit 14 **NAME:**

HOURLY VOLUMES

Major street: Bypass

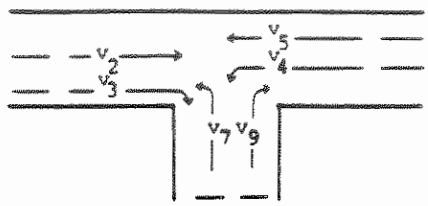


Date of Counts: _____
Time Period: _____
Approach Speed: 60
PHF: 0.9
7% Trucks in DHV

☒ STOP
☐ YIELD

minor street: US 62 Grade 0 %

VOLUMES IN PCPH



VOLUME ADJUSTMENTS

Movement no.	2	3	4	5	7	9
Volume (vph)	330	70	80	330	70	80
Vol.(pcph), see Table 10.1			83		72	83

STEP 1 : RT From Minor Street	↱ V_9
Conflicting Flow, V_c	1/2 V_3+V_2=35+330=365vph (V_{c9})
Critical Gap, T_c and Potential Capacity, c_p	T_c=6.5secs (Tab.10.2) c_{p9}=590pcph (Fig.10.3)
Actual Capacity, c_m	$c_{m9}=c_{p9}$= 590 pcph
STEP 2 : LT From Major Street	↶ V_4
Conflicting Flow, V_c	V_3+V_2=330+70=400 vph (V_{c4})
Critical Gap, T_c and Potential Capacity, c_p	T_c=5.5secs (Tab.10.2) c_{p4}=700pcph (Fig.10.3)
% of c_p utilized and Impedance Factor (Fig.10.5)	(v_4/c_{p4})x100=11.8 P_4=0.93
Actual Capacity, c_m	$c_{m4}=c_{p4}$= 700 pcph
STEP 3 : LT From Minor Street	↰ V_7
Conflicting Flow, V_c	1/2 $V_3+V_2+V_5+V_4$=35+330+330+80=775vph (V_{c7})
Critical Gap, T_c and Potential Capacity, c_p	T_c=8.0secs (Tab.10.2) c_{p7}=215pcph (Fig.10.3)
Actual Capacity, c_m	$c_{m7}=c_{p7}\times P_4$=215x.93= 200 pcph

SHARED-LANE CAPACITY

$$SH = \frac{v_7 + v_9}{(v_7/c_{m7}) + (v_9/c_{m9})}$$ if lane is shared

Movement no.	v(pcph)	c_m(pcph)	c_{SH}(pcph)	c_R	LOS
7	72	200	200	128	D
9	83	590	590	507	A
4	83	700	700	617	A

Figure 10-7. Worksheet for analysis of T-intersections.

LOCATION: Intersection 5, Exhibit 14 **NAME:**

HOURLY VOLUMES

Major street: US 460 N

N= 2 N= 2

Grade 0 %

V_2 V_3 V_5 V_4 V_7 V_9

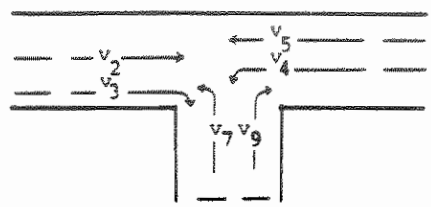
Date of Counts:
Time Period:
Approach Speed: 60
PHF: 0.9
7% Trucks in DHV

N = 2

☒ STOP ☐ YIELD

minor street: By-pass Grade 0 %

VOLUMES IN PCPH



VOLUME ADJUSTMENTS

Movement no.	2	3	4	5	7	9
Volume (vph)	220	180	170	220	180	170
Vol.(pcph), see Table 10.1			176		186	176

STEP 1 : RT From Minor Street ↱ V_9

Conflicting Flow, V_c: 1/2 V_3+V_2 = 90 + 220 = 310 vph (V_{c9})

Critical Gap, T_c and Potential Capacity, c_p: T_c = 5.5 secs (Tab.10.2) c_{p9} = 770 pcph (Fig.10.3)

Actual Capacity, c_m: $c_{m9}=c_{p9}$ = 770 pcph

STEP 2 : LT From Major Street ↶ V_4

Conflicting Flow, V_c: V_3+V_2 = 220 + 180 = 400 vph (V_{c4})

Critical Gap, T_c and Potential Capacity, c_p: T_c 5.5 secs (Tab.10.2) c_{p4} = 700 pcph (Fig.10.3)

% of c_p utilized and Impedance Factor (Fig.10.5): (v_4/c_{p4})x100 = 25.4 P_4 = 0.82

Actual Capacity, c_m: $c_{m4}=c_{p4}$ = 700 pcph

STEP 3 : LT From Minor Street ↰ V_7

Conflicting Flow, V_c: 1/2 $V_3+V_2+V_5+V_4$ = 90 + 220 + 220 + 170 = 700 vph (V_{c7})

Critical Gap, T_c and Potential Capacity, c_p: T_c 8.0 secs (Tab.10.2) c_{p7} = 250 pcph (Fig.10.3)

Actual Capacity, c_m: $c_{m7}=c_{p7}xP_4$ = 250 x .82 = 205 pcph

SHARED-LANE CAPACITY

$$SH = \frac{v_7 + v_9}{(v_7/c_{m7}) + (v_9/c_{m9})}$$ if lane is shared

Movement no.	v(pcph)	c_m(pcph)	c_{SH}(pcph)	c_R	LOS
7	186	205	205	19	E
9	176	770	770	594	A
4	176	700	700	524	A

Figure 10-7. Worksheet for analysis of T-intersections.