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FHWA-TN-EIS-86-02-F
FEDERAL HIGHWAY ADMINISTRATION
REGION IV

DEPARTMENT OF TRANSPORTATION

FINAL

ENVIRONMENTAL IMPACT STATEMENT

PROPOSED KIRBY PARKWAY
FROM SPLIT OAK DRIVE TO STAGE ROAD
AND SYCAMORE VIEW ROAD EXTENSION FROM
MULLINS STATION ROAD TO KIRBY PARKWAY IN
MEMPHIS, SHELBY COUNTY, TENNESSEE

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FINAL ENVIRONMENTAL IMPACT STATEMENT / SECTION 4(f)
SUBMITTED PURSUANT TO 42 U.S.C. 4332(2)(c),
AND 49 U.S.C. 303(c)

U. S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
AND
TENNESSEE DEPARTMENT OF TRANSPORTATION

COOPERATING AGENCY
U. S. ARMY CORPS OF ENGINEERS

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Date of Approval

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For FHWA

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The proposed action would result in the construction of two major streets having six lanes on both existing and new location. The project length is approximately 10 miles.

SUMMARY

General Project Description

The City of Memphis and Shelby County in cooperation with the Tennessee Department of Transportation and the Federal Highway Administration propose to construct a new north-south route in the East Memphis area. It would consist of improving some existing roads and some construction on new alignment to form a continuous route. The route would be designated Kirby Parkway and is shown on Figure 2.1.

The proposed project which is about 10 miles long, would have three traffic lanes in each direction and either a continuous center lane or a raised median with turning lanes. It would also have curbs and gutters with sidewalks.

During the initial coordination phase, the Tennessee Department of Transportation received no notification of any significant proposed actions in the project area by any federal agency. However, the proposed project would cross the proposed Nonconnah Parkway project near the southern end of Kirby Parkway.

Summary of the Preferred Alternative

The Preferred Alternative was selected after evaluating the results of the earlier planning activities. It will begin at Split Oak Drive and proceed northward about 10.0 miles to Stage Road. It will also include an extension of Sycamore View Road, a distance of about 1.3 miles. No construction is proposed for the section between Messick Road and the

Humphreys Boulevard/Walnut Grove Road intersection. There will be three water crossings: Nonconnah Creek; Wolf River; and Fletcher Creek. There will be four grade separated interchanges: Humphreys Boulevard and Walnut Grove Road; Walnut Grove Road and Kirby Parkway; Kirby Parkway and Sycamore View Road; and Kirby Parkway and I-40.

Summary of Environmental Impacts

The primary beneficial impacts of the proposed project include; (a) improved local and regional accessibility and traffic service, (b) improved route continuity, (c) reduction of traffic congestion on existing highways, (d) improved safety and operating conditions in the transportation corridor, and (e) enhancement of future planned growth and development.

The primary adverse impacts of the proposed project include; (a) possible displacement of up to four residences, (b) reduction of wildlife habitat, (c) increased traffic volumes in some residential areas, and (d) temporary construction impacts such as fugitive dust, open burning, equipment noise, inconvenience to the motorist, and temporary siltation to streams.

The proposed project will cross the Wolf River, Fletcher Creek, and Nonconnah Creek floodplains. However, none of the crossings are considered to be a significant encroachment. There will be no wetland involvement. There will be no lands taken from any historic sites or wildlife refuges. The hiking trails in the Shelby Forest Area, which are protected by

Section 4(f) of the Department of Transportation Act of 1966, will be crossed by the project.

Areas of Controversy

There have been objections to the project's intrusion through the residential area south of the Wolf River, and the project's impact on the ecological environment of the Shelby Forest area at the Wolf River crossing.

Possible Actions Required By Other Federal Agencies

U. S. Army Corps of Engineers - Section 404 Permit

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CHAPTER I

PURPOSE AND NEED FOR ACTION

1.1 Purpose

The purpose of the proposed project is to create a new north-south route in the East Memphis area of Shelby County (see Figure 1). It would connect the rapidly growing residential areas of Bartlett and Germantown to the Poplar Corridor employment commercial center. The new route would be formed by improving and connecting existing sections of Kirby Parkway, Whitten Road, and Sycamore View Road. The length of the corridor is about 10 miles between Split Oak Drive and Stage Road.

Since the proposed project would provide improved access to the Poplar Avenue Area, it is expected to reduce congestion along existing routes in the East Memphis area. This would provide a more safe and efficient system.

1.2 Need

The standard major road pattern used for Memphis road planning is the one mile grid system. Prior to 1983, two projects were proposed between I-240 and Germantown Parkway. They were Kirby Parkway and Riverdale Road. In 1983, the Riverdale Road project was deleted from the Major Road Plan. This left the Kirby Parkway project as the only proposed north-south route between I-240 and Germantown Parkway, a distance of from 3 to 4 miles. Agri-Center International has been

developed on the Shelby Farms property (See Figure 5). This would block any future extension of Riverdale Road northward. Riverdale Road could no longer be considered as a possible alternative for a north-south route.

Kirby Parkway would cross several east-west routes. They are from south to north: Nonconnah Parkway (proposed); Poplar Avenue; Walnut Grove Road; I-40; Summer Avenue; and Stage Road. These routes should experience some traffic relief when Kirby Parkway is completed.

Between Split Oak Drive and Walnut Grove Road and between Summer Avenue and Stage Road, Kirby Parkway has been designated as an Urban Collector. It has been designated as an Urban Minor Arterial between Walnut Grove Road and Summer Avenue.

The 1969 Memphis Urban Area Transportation Study included Kirby Parkway in the plan. It was part of the Crumpler-Kirby-Whitten-Dutwiler-Sledge-Armour Corridor. The 1973 East Memphis Transportation Plan, Update prepared for the Memphis and Shelby county Planning Commission by Harland Bartholemew and Associates studied the need for Kirby Road-Kirby Parkway-Whitten Road as a continuous north-south arterial. Their analysis confirmed the need for this project due to the rapidly developing areas of Barlett and Germantown. The 1981 Major Road Plan, Update prepared by the Memphis and Shelby County Office of Planning and Development called

for the construction of Kirby Parkway by the year 1990. The Transportation Improvement Program 1991-1995 for the Memphis Urbanized Area designated Kirby Parkway a priority of 4. It is to be built with Interstate Substitution Project funds.

The East Memphis area has experienced tremendous population growth. In 1964, the East Memphis area contained about 5,700 people. By 1970, the population in the same area had reached almost 17,000. A Kirby Parkway Corridor Study prepared by the Memphis and Shelby County Office of Planning and Development in June, 1986, put the 1985 population within the corridor at 78,702 and projected the 2005 population to be at 125,745.

In addition to the population growth, the proposed project crosses the Poplar Corridor which has been identified as the third largest employment center in the county. According to the 1986 Poplar Corridor Study more than 25 percent of recent office construction activity in Shelby County has occurred within the Poplar Corridor.

This combination of population growth around a major employment center has resulted in congestion along existing east-west routes, particularly on Walnut Grove Road, Poplar Avenue, and Poplar Pike. It also contributes to the traffic burden on the two north-south routes, I-240 and Germantown Parkway. The completion of

Kirby Parkway would help reduce this congestion by providing an alternative route to/and from the residential areas to the north and south of the business/employment areas along Poplar Avenue.

Traffic volumes vary along the 10.0 mile length of the project corridor. After completion, it is expected to serve from about 3,000 (between Sumner Avenue and Stage Road) to about 16,300 (north of Poplar Avenue) vehicles per day. By the year 2010, the volumes are predicted to be from 5,700 to 32,900 vehicles per day.

The following chart shows the expected traffic for the existing system if no improvements are made.

Kirby Parkway	1990 ADT	2010 ADT
South of Poplar Avenue	8,580	32,000
North of Poplar Avenue	6,790	28,600
Whitten Road	**1990 ADT**	**2010 ADT**
North of I-40	15,700	22,700

Traffic figures are included in Appendix "E".

Traffic carrying capacities are rated in descending order in accordance with the following level of service (LOS) table:

Level A - primarily free flow operations

Level B - reasonably free flow operations

Level C - stable operations approaching a range in which small increases in flow will cause substantial deterioration in service.

Level D - borders on unstable

Level E - extremely unstable operations

Level F - forced or breakdown flow

LOS SUMMARY

SEGMENT	Existing LOS	Future LOS with project
Split Oak Dr. to Messick Rd.	B	B
Messick Rd. to Quail Hollow Rd.	D	F
Quail Hollow Rd. to Humphreys Blvd.	C	E
Humphreys Blvd. to Mullins Station Rd.	N/A	F
Mullins Station Rd. to Reese Rd.	C+	D-
Reese Rd. to Stage Rd.	C+	A

* The chart is based on LOS table in Appendix "E"

Evaluation of the proposed project corridor revealed several problem areas. These areas exist on both the part of the project with proposed improvements as well as the part where no improvements are proposed.

If the project was not completed, the following intersections would fall to a low level-of-service by the year 2010: Quince Road (LOS E); Nottingham Place (LOS E); Dexter Road (LOS F); I-40 (LOS F); and Reese Road (LOS E). If the project were completed, the LOS would improve for all these intersections. They would

improve to: Quince Road (LOS B); Nottingham Place (LOS D); Dexter Road (LOS D); I-40 (LOS D); and Reese Road (LOS B).

There are two areas of particular concern. They are: the Poplar Avenue/Kirby Parkway intersection and those intersections from Humphreys Boulevard to Mullins Station Road where the project crosses the Wolf River and the Shelby Farms property.

The Poplar Avenue intersection presently operates at LOS D and would fall to LOS F in 2010. This condition exists if the project were built or not. However, Memphis has identified it as needing to be improved. This information is contained in the Poplar Corridor Study, 1986. This study recommended the upgrading of Poplar Avenue through Kirby Parkway. Although no specific measures to improve the intersection have been identified as a part of this project, if a grade separated intersection was built, the LOS would increase to C in 2010.

The original concept for the proposed project called for an alignment which would cross Humphreys Boulevard and go straight across Shelby Farms. To minimize impacts to Shelby Farms, it became necessary to divert Kirby Parkway traffic onto existing Humphreys Boulevard and Walnut Grove Road in order to cross the Wolf River. This merging of traffic from three different facilities

will be a problem to traffic movement both when the project is built and in the year 2010.

The intersections involved and their design year LOS are: Kirby Parkway/Humphreys Boulevard, at grade intersection (LOS E); Humphreys Boulevard/Shady Grove Road, at grade intersection (LOS F); Humphreys Boulevard/Walnut Grove Road, grade separated intersection (LOS F); Walnut Grove Road/Kirby Parkway, grade separated intersection (LOS B); and Kirby Parkway/Sycamore View Road, grade separated intersection (LOS A). Although each intersection will operate a little better when the project is built, the levels-of-service shown will be reached before the year 2000.

Since it is not feasible to control the access through this area and due to the development along this corridor, this is the best facility which can be provided. Once the above levels-of-service have been reached, the traffic will redistribute to other local systems.

Even with the problem areas, the proposed improvements will satisfy the project's purpose. It provides a north-south route in East Memphis according to the approved one-mile grid transportation system. The overall transportation system in the project area will be improved. Therefore, this proposal is consistent with local planning goals.

The intersection at Neshoba Road would have a LOS of E in 2010. This is due to the five lane section capacity that exists on Kirby Parkway at this location at this time. This section will ultimately need to be upgraded to be compatible with the typical cross-section proposed for the project. This would require taking right-of-way from property along both sides of Kirby Parkway between Quail Hollow Road and Massey Lane.

It may be necessary to re-evaluate the intersection of Kirby Parkway and I-40 in the future. The ramps may need to be redesigned in order to meet traffic demand in 2010.

Chapter I Figures

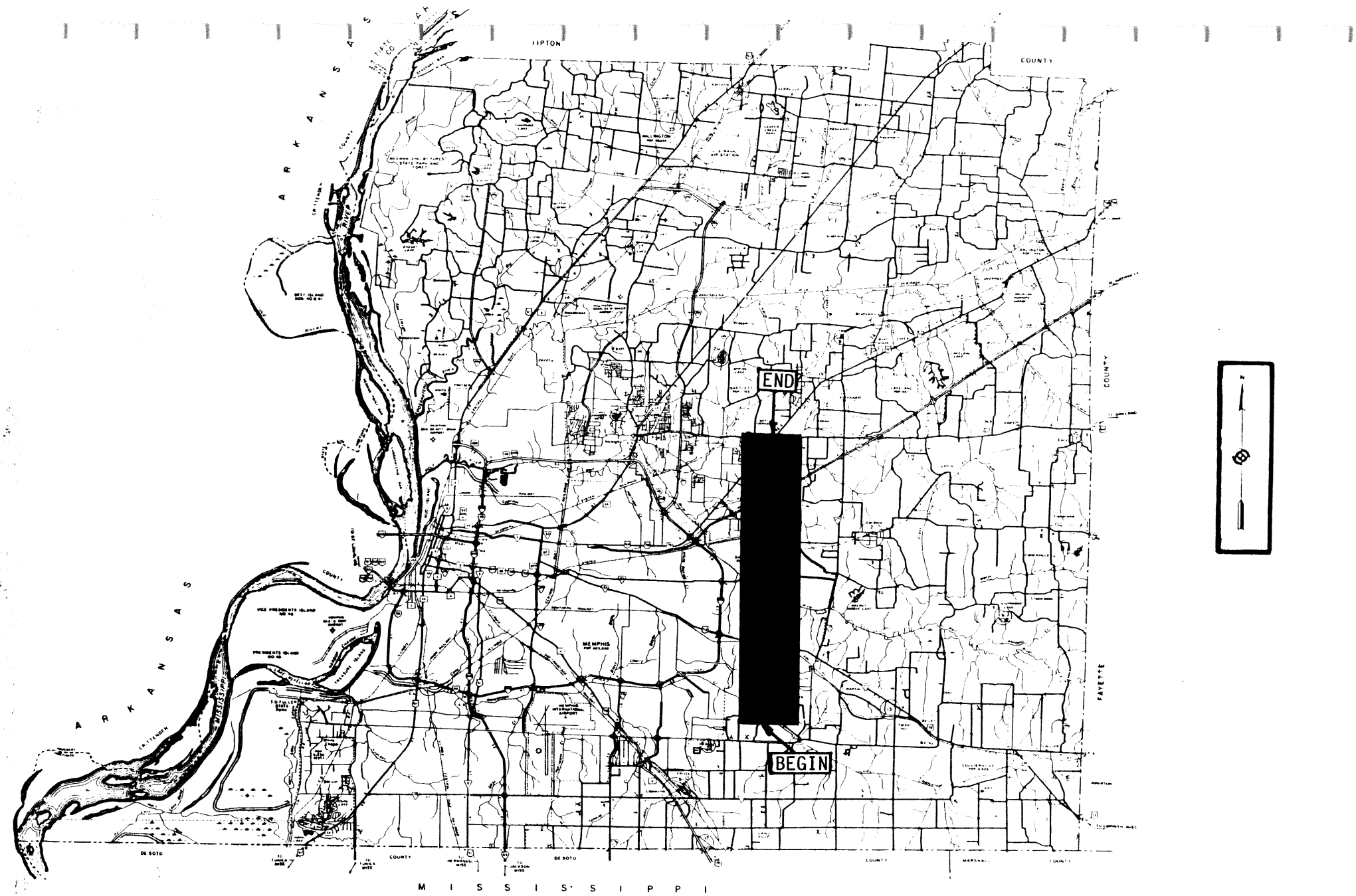


FIGURE 1

VICINITY MAP

Proposed Kirby Pkwy. and
Sycamore View Rd. Extension

Memphis, Shelby Co., TN

CHAPTER II

PROPOSED ACTION AND ALTERNATIVES

2.1 Alternatives Previously Considered

In addition to the alternatives described later in this chapter, several other alternatives were evaluated early in the planning process. These alternatives were not considered to be reasonable solutions to the transportation needs and were eliminated. They were eliminated because of excessive displacements and community disruptions.

One alternative considered was to the west of Kirby Parkway (See Figure 2). It would combine improvements to existing facilities and construction on new alignment. Traffic would be directed west on Quince Road then north on West Massey Road to Humphreys Boulevard.

This alternative would be very disruptive to the local communities. Since land use planning did not contemplate a highway facility of a scale of the proposed Kirby Parkway, development along this corridor was not set back far enough to avoid a large number of displacements. Since widening along this corridor would displace or damage heavily, from a right-of-way perspective, almost all of the existing development and because a 6 or 7 lane arterial is not part of the area's land use plan, this alternative was eliminated.

An alternative to the east of Kirby Parkway was also considered (See Figure 2). This area does not have a

network of north-south streets which could be connected and widened to the extent the other alternatives did. Therefore, this alternative would have to be extensively on new alignment. Since the area's land use plan does not contemplate a 6 of 7 lane arterial along this corridor and because of its detrimental effect on existing and planned development, this alternative was eliminated.

One alternative was considered from Quail Hollow Road at Kirby Parkway to Humphreys Boulevard. This alignment was to the west of Kirby Parkway and would be built on new alignment. It was developed to prevent the merging of Kirby Parkway traffic and Humphreys Boulevard traffic if the Wolf River were crossed at the landfill site. This 1.2 mile section would cause eight (8) displacements and would cost almost $10,000,000. Since it would be built on new alignment, it would separate the existing neighborhood and would not be in accordance with the existing land use plan for the area. For these reasons, it was eliminated.

No other route between the east alternative and the west alternative, except the proposed route, would provide a reasonable solution to the transportation needs for the same reasons as the alternatives already discussed.

2.2 Alternatives Considered

The proposed project begins at Split Oak Drive and proceeds northward to Stage Road (See Figure 2) a distance of about 10.0 miles. Also proposed is an extension of Sycamore View Road from Mullins Station Road southeasterly

to Kirby Parkway a distance of about 1.3 miles. This is a new north-south route which consists of construction on new alignment to connect existing street segments and widening of portions of existing facilities. The section between Split Oak Drive and Stout Road, as well as the section between Mullins Station road and Reese Road would be widened. Construction on new alignment is required between Stout Road and Messick Road, as well as between Humphreys Boulevard and Mullins Station Road, including the Sycamore View Road extension. One of the alternatives at the north end of the project would also be built on new alignment.

While not proposed at this time, the section between Quail Hollow Road and Humphreys Boulevard would need to be widened to obtain a facility compatible with the typical Kirby Parkway section.

The following chart gives the existing condition and the proposed cross section for the proposed project:

Road Segment	Existing	Proposed
Split Oak Road to Mt. Moriah Road	Transition from 6 lanes to 2 lanes	108' R.O.W. 7 lanes
Mt. Moriah Road to Quince Road	2 lanes	108' R.O.W. 7 lanes
Quince Road to 1000' north of Stout Road	2 lanes	114' R.O.W. 6 lanes with median
1000' north of Stout Road to Messick Road	New construction	114' R.O.W. 6 lanes with median

Messick Road to Quail Hollow Road	6 lane capacity with median; 106' R.O.W.	No improvements proposed
Quail Hollow Road to Massey Lane	5 lane capacity 80' R.O.W.	No improvements proposed at this time
Massey Lane to Humphreys Boulevard	4 lanes with median	No improvements proposed at this time
Humphreys Boulevard to Walnut Grove Road	6 lanes with median	No improvements at this time
Walnut Grove Road to Mullins Station Road	4 lanes with median & new alignment	114' R.O.W. 6 lanes with median
Mullins Station Road to Reese Road	2 lanes	108' R.O.W. 7 lanes
Reese Road to to Stage Road	New Construction	108' R.O.w. 7 lanes
Sycamore View Road from Kirby Pkwy. to Mullins Station Rd.	New Construction	114' R.O.W. 6 lanes with median

The City of Memphis plans to upgrade the section between Messick Road and Humphreys Boulevard at a later date.

Several design alternatives were studied. Four (4) alternatives were studied between Humphreys Boulevard and Mullins Station Road which is the Shelby Farms area. Three (3) alternatives were considered from Mullins Station Road to Shelbytown Parkway, which is the Whitten Park area. The north end of the project between Reese Road and Stage Road had two (2) alternatives. Table 1 contains a comparison of these alternatives.

The existing bridges at Fletcher Creek, I-40 and Nonconnah Creek will be improved. The Wolf River crossing will require either a bridge at a new location or improvements to the existing Walnut Grove Road bridge depending on which alternative is selected. Also depending on the alternative utilized, a bridge could be needed in the Shelby Farms area at the Walnut Grove Road/Kirby Parkway intersection.

The project has two (2) typical cross sections (See Figure 3). One section will be built within a 108-foot right-of-way and the other within a 114-foot right-of-way. Both sections will have three 12-foot traffic lanes in each direction with curbs and gutters. The 108-foot section will have a raised median. It will be used from Split Oak Drive to Quince Road and from Mullins Station Road to Stage Road. The 114-foot section will have a 12-foot turn lane. It will be used from Quince Road to Messick Road, from the Humphreys Boulevard/Walnut Grove Road intersection to Mullins Station Road, and on the Sycamore View Road extension.

The design speed for the proposed project is 50 mph. The posted speed would be established by local authorities.

Depending on which combination of alternatives is chosen, the project would require from 95 to 140 acres of additional right-of-way and would cost from $39,819,000 to $63,079,000. It would also require the displacement of from 0 to 44 residences and from 0 to 23 businesses.

2.2.1 Shelby Farms Alternatives

Several alternatives were developed to connect Kirby Parkway south of the Wolf River and Whitten Road north of Mullins Station Road. These alternatives are designated SF-1, SF-2, SF-3 and SF-4. They are shown on Figures 2a thru 2f. The alternatives would cross the Shelby Farms property impacting the Shelby Farm Forest Natural Area and the recreational trails along the north margin of the Wolf River. All alternatives would cross the trails. Only SF-2a alternative would avoid taking land from the natural area.

The alternatives include intersections with Humphreys Boulevard. Both at-grade intersections and grade-separated intersections were considered at these intersections. Level of service for the alternatives are shown in Appendix "E". There would be from 0 to 44 residential relocations and from 0 to 23 business relocations depending on which alternative is considered.

The Shelby Farms Alternative selected as a part of the Preferred Alternative will be discussed in Section 2.6. It will cross the Wolf River at the existing Walnut Grove Road Bridge location as in alternatives SF-3, 4a and 4b. However, the intersection for Kirby Parkway/Walnut Grove Road had to be moved to avoid the use of Section 4(f) land.

2.2.1.1 SF-1 Alternative

SF-1 (See Figure 2a) is the most direct route across Shelby Farms and would require the construction of a new bridge over the Wolf River. It begins just south of the

Wolf River at Humphreys Boulevard and extends northward to Whitten Road. There are intersections at Walnut Grove Road and Sycamore View Road.

In an effort to provide a highway facility which would be compatible with existing and future uses of the Shelby Farms Forest Natural area and the recreational trails on the north margin of the river, four (4) alternative bridge designs were developed. They are listed below giving the bridge length of each and the total estimated cost of the alternative.

Alternative	Total Bridge Length	*Estimated Cost w/at-grade intersection	*Estimated Cost w/grade separate intersection
SF-1a	1,000'	$21,593,000	$22,193,000
SF-1b	1,550'	$26,023,000	$26,623,000
SF-1c	2,450'	$33,458,000	$34,058,000
SF-1d	1,350'	$23,073,000	$23,673,000

*at-grade or grade-separated intersection at Kirby Parkway and Humphreys Boulevard

Alternative SF-1a has the shortest bridge length. It would only span the Wolf River. The design includes a spur dike at each end of the bridge to accommodate a 100-year flood. The bridge would span one of the trails, but the other trail would be blocked by the elevated roadway. This concept would provide a box culvert for vehicles using a loop road at the north margin of the woods. The bridge in alternative SF-1b would span the river and both trails, but a box culvert would still be provided for the loop road. The alternative SF-1c bridge would span the river and the

entire forest area, including the loop road. The SF-1d concept would utilize two bridges. The first bridge would cross the Wolf River and span both of the trails as in SF-1b. A second bridge would span the loop road, instead of the box culvert as in SF-1b.

These alternatives were not selected since they would require the acquisition of 10.0 acres of right-of-way from the Shelby Farms Natural Area, which is Section 4(f) land.

2.2.1.2 **SF-2 Alternative**

Alternatives SF-2a & 2b would cross the Wolf River at the narrowest section of the woodland which is near the landfill. Alternative SF-2a (See Figure 2b) would cross the Wolf River at nearly a perpendicular angle and intersect with Humphreys Boulevard. This would result in an off-set in the Kirby Parkway alignment and causes Kirby Parkway traffic to use a short section of Humphreys Boulevard. This alignment would then continue northward intersecting with both Walnut Grove Road and Sycamore View Road before ending at Mullins Station Road. If at-grade intersections, at Humphreys Boulevard are used, there would be no relocations and would cost about $21,446,000. If grade separated interchanges are used at the Humphreys Boulevard intersections, there would be about forty-four (44) residential relocations. Four (4) of the displacements are houses near the end of the present Kirby Parkway location. The remaining forty (40) relocations would be condominium

units being developed across from the landfill crossing. The estimated cost would be about $34,440,000.

Alternative 2b (See Figure 2f) would also cross the Wolf River near the landfill. However, it would keep traffic on Kirby Parkway separated from that on Humphreys Boulevard. This is done by building an interchange at the existing Kirby Parkway/Humphreys Boulevard intersection. The alignment would move westward between Humphreys Boulevard and the Wolf River. It would cross the river at a skewed angle near the land fill. This alternative would cause twenty (20) residential displacements because of the interchange at Kirby Parkway and Humphreys Boulevard. The estimated cost would be about $24,446,000.

Both SF-2a and SF-2b alternatives would cross the recreational trails and the closed landfill. The SF-2b alternative would require the acquisition of 1.8 acres of right-of-way from Shelby Farms Forest Natural Area which is Section 4(f) land.

Alternative SF-2a was not selected because it would have required construction over a landfill. Alternative SF-2b was not selected because if would have also involved the landfill. In addition, it would have required the use of Section 4(f) land.

2.2.1.3 **SF-3 Alternative**

Alternative SF-3 (See Figure 2c) would utilize the existing Walnut Grove Road Bridge to cross the Wolf River. This would require the bridge to be widened. South of the

river, Humphreys Boulevard would connect Walnut Grove Road and Kirby Parkway. North of the river, Walnut Grove Road would be realigned to intersect with Sycamore View Road and Kirby Parkway at one intersection.

If at-grade intersections are utilized at the two Humphreys Boulevard intersections, there would be no displacements and the cost would be about $16,920,000.

If grade separated interchanges are utilized, there would be four (4) residential displacements at the Kirby Parkway intersection and twenty-three (23) business relocations at Walnut Grove Road intersection. It would cost about $33,920,000.

It would cross the recreational trails and take 3.0 acres of right-of-way from the Shelby Farms Forest Natural Area.

Alternative SF-3 was not selected because it would require the use of Section 4(f) land.

2.2.1.4 **SF-4 Alternative**

Alternative SF-4 (See Figure 2d and 2e) would utilize the existing Walnut Grove Road Bridge to cross the Wolf River. South of river, Humphreys Boulevard would connect Walnut Grove Road and Kirby Parkway. North of the river, two intersections are proposed. The first is with Walnut Grove Road and the second is with Sycamore View Road.

Two designs for the Kirby Parkway/Walnut Grove Road intersection have been developed for this alternative. An at-grade intersection is proposed for SF-4a (See Figure 2d)

and a grade separated intersection is proposed for SF-4b (See Figure 2e). Both SF-4a and SF-4b would require the Walnut Grove Road Bridge to be widened.

If at-grade intersections are utilized at the two Humphreys Boulevard intersections, there would be no displacements and the estimated cost of each alternative would be: SF-4a is $14,524,000 and SF-4b cost is $15,599,000.

If grade separated interchanges are utilized, there would be four (4) residential displacements at the Kirby Parkway intersection and twenty-three (23) business relocations at the Walnut Grove Road intersection. The estimated cost of each alternative is: SF-4a cost is $31,524,000 and SF-4b cost is $32,599,000.

Both alternatives would cross the recreational trails and take 2.1 acres of right-of-way from the Shelby Farms Forest Natural Area. Since they would require the use of Section 4(f) land, they were not selected.

2.2.2 Whitten Park Alternatives

The proposed project passes Whitten Park, which is located on the east side of Whitten Road between Mullins Station Road and Macon Road (See Figure 2). However, there is no use of parkland. These alternatives would be built on the 108' right-of-way and would consist of six traffic lanes with a continuous turning lane. Table 1 has a comparison of these alternatives.

2.2.2.1 **WP-1 Alternative**

WP-1 alternative (See Figure 2) begins at Mullins Station Road and proceeds northward to Shelbytown Parkway. The centerline of the proposed Kirby Parkway would coincide with the centerline of Whitten Road. This alternative would also require the relocation of five (5) residences. The total estimated cost of this alternative is $7,849,000.

This alternative was modified and included as a part of the Preferred Alternative. It is discussed in Section 2.6.

2.2.2.2 **WP-2 Alternative**

WP-2 alternative (See Figure 2) begins at Mullins Station Road and ends at Shelbytown Parkway. The alignment of the proposed project would be shifted to the west so that the proposed right-of-way and the existing right-of-way on the east side will coincide near Whitten Park. This would require the relocation of thirty-one (31) residences. The total estimated cost of this alternative is $8,895,000.

This alternative was eliminated due to the high number of residential displacements it would cause.

2.2.2.3 **WP-3 Alternative**

The WP-3 alternative would be built on new alignment between Mullins Station Road and Macon Road (See Figure 2). This would move the proposed alignment to the east side of Whitten Park. This would miss the residential areas west of Whitten Road. It would cause the displacement of three (3) businesses. The total estimated cost of this alternative is $5,994,000.

This alternative was not selected because it did not have the support of local officials, it was the longest alternative, and it would require extra turning movements over a short distance to direct traffic around the Park.

2.2.3 North End Alternatives

Two (2) alternatives were developed for the north end of the project from Reese Road to the project terminus at Stage Road (See Figure 2). One alternative would be built along the center line of the existing facility while the other would be built on new alignment. The converging of two main routes, Stage Road and Summer Avenue, at the end of the project and the business development along Whitten Road prompted the second alternative.

2.2.3.1 NE-1 Alternative

NE-1 alternative calls for Whitten Road to be widened along its center line. This route would begin at Reese Road and cross Summer Avenue at a skew before ending at Stage Road. The area on both sides of Whitten Road between the Summer Avenue intersection and the Stage Road intersection has been developed commmercially. This route would require the relocation of four (4) business and would cost about $3,162,000.

This alternative was eliminated due to the number of displacements as well as the skewed intersection at Summer Avenue.

2.2.3.2 **NE-2 Alternative**

NE-2 alternative would be built on new alignment (See Figure 2). At Reese Road, the proposed route would proceed in a northwest direction intersecting with Summer Avenue at a more perpendicular angle before ending with an intersection at Stage Road. The intersection at Summer Avenue would be improved since the angle at the skew would be reduced. Also, the roadway length between the intersections at Summer Avenue and at Stage Road would be longer. This would allow more distance for vehicular movements and storage. This alternative would require no displacements and would cost about $2,775,000.

This alternative was selected because it caused no displacements ,it had better roadway geometry and it cost less.

2.3 **"No-Action" Alternative**

The "No-Action" alternative denotes no major improvements being made to the existing roads. This alternative would preserve the existing land use pattern for a time and would not disturb the wildlife habitat. There would be no construction disruption of the area or siltation of local water courses. There would be no changes in the existing traffic patterns. The already over taxed east-west and north-south routes would not benefit from the proposed improvements.

Based on studies by the Memphis and Shelby County Office of Planning and Development, the East Memphis area

has experienced rapid population growth since 1964. Projected population figures indicate this trend will continue. The proposed project has been identified as serving an important role in meeting the transportation needs of the area. The "No-Action" alternative would not provide an improved transportation link for the spreading suburban growth. Traffic generators, such as parks and businesses in the area, will only serve to increase the area transportation problem.

2.4 Transportation Management System

The Memphis and Shelby County Office of Planning and Development indicate that van and car pools are presently being encouraged. However, the reduction of vehicular trips along the Kirby corridor is expected to be very small.

The use of HOV lanes is not specified for the Kirby corridor in the Memphis Major Route Plan. Even if HOV lanes were used on the existing section of Kirby Parkway between Messick Road and Humphreys Boulevard, it would not serve the transportation need south of Messick Road and north of the Wolf River.

Transportation system management does not meet the need or purpose so it is not a reasonable alternative.

2.5 Mass Transit

The Kirby Corridor is the western most extent for Memphis Area Transit Authority bus routes. Presently, there are six (6) routes which serve the study area and four (4) of them operate only during peak hours. None of the routes

serve the north-south transportation need as identified by this project.

The Transit Authority is considering the addition of additional routes in the East Memphis Area. Completion of the proposed project would allow the Authority to incorporate it into their future route plans. The new north-south route would allow the bus system to operate more efficiently.

Mass transit does not meet the need or purpose so it is not a reasonable alternative.

2.6 Preferred Alternative

The Preferred Alternative begins at Split Oak Drive and proceeds northward to Stage Road (See Figure 2.1), a distance of about 10.0 miles. It will also include an extension of Sycamore View Road from Mullins Station Road to Kirby Parkway, a distance of about 1.3 miles. It will consist of both the widening of some existing facilities and the construction on a new alignment. In the Shelby Farms area, it will use a modification of the SF-3, 4a and 4b alternatives. At Whitten Park, it will use a modification of WP-1. And at the north end of the project, it will use alternative NE-2. This will provide a new north-south route in East Memphis between Germantown and Bartlett.

While the project termini are between Split Oak Drive and Stage Road, the construction termini are between Split Oak Drive and Messick Road and between Walnut Grove Road and Stage Road. No improvements to the section between Messick

Road and Walnut Grove Road are included as a part of this project.

The project has two (2) typical cross-sections (See Figure 3). One section will be built within a 108-foot right-of-way and the other within a 114-foot right-of-way. Both sections will have six 12-foot traffic lanes with curbs and gutters. The 114-foot section will have a 12-foot turn lane. It will be used from Quince Road to Messick Road, from the Humphreys Boulevard/Walnut Grove Road intersection to Mullins Station Road, and on the Sycamore View Road extension. The 108-foot section will have a raised median. It will be used from Split Oak Drive to Quince Road and from Mullins Station Road to Stage Road.

Construction will begin at Split Oak Drive. It will consist of widening existing Kirby Parkway from that point to 1000 feet north of Stout Road. From there, the project will be built on new location to Messick Road.

Construction will begin again at the Walnut Grove Road/Humphreys Boulevard intersection. As in alternatives SF-3, 4a and 4b, the Preferred Alternative will cross the Wolf River at the existing Walnut Grove Road Bridge location. From there, Walnut Grove Road will be widened to a point north of the landfill. Alternatives SF-3, 4a and 4b include this intersection closer to the Walnut Grove Road Bridge but this required the use of Section 4(f) land (the Shelby Farms Forest Natural Area North). Therefore, it was shifted to its present location to avoid the protected land.

It also provides more distance for traffic movements between this intersection and the one across the Wolf River. From there, the project will then turn northward across Shelby Farms to Whitten Road at Mullins Station Road. An extension of Sycamore View Road will be built on new location in Shelby Farms. It will connect Sycamore View Road and Kirby Parkway.

From Mullins Station Road, Whitten Road will be widened to Reese Road. Widening of the existing facilities north and south of Whitten Park will be on both sides of the roadway. Where this section of the project passes Whitten Park, a modification of alternative WP-1 was used to reduce the impacts to the residences on the west side of Whitten Road across from the Park. This would be accomplished by widening the existing facility on the east side. An 80-foot corridor at the Whitten Park location currently exists, which is under the ownership of the Shelby County Government, to accommodate the proposed project. This reserved corridor is shown in Figure 9. There would be no section 4(f) property required.

The selection of the WP-1 modification is in accordance with the local authorities planning goals and preferences. In addition, the County is currently negotiating with private interest groups to exchange properties in order to move the Whitten Park facility to a more beneficial location.

From Reese Road to Stage Road, the project will use alternative NE-2 and will be built on new alignment.

The following chart lists the existing conditions and the proposed cross-sections for the proposed project:

Road Segment	Existing	Proposed
Split Oak Road to Mt. Moriah Road	Transition from 6 lanes to 2 lanes	108' R.O.W. 7 lanes
Mt. Moriah Road to Quince Road	2 lanes	108' R.O.W. 7 lanes
Quince Road to 1000' north of Stout Road	2 lanes	114' R.O.W. 6 lanes with median
1000' north of Stout Road to Messick Road	New construction	114' R.O.W. 6 lanes with median
Messick Road to Quail Hollow Road	6 lane capacity with median; 106' R.O.W.	No improvements proposed
Quail Hollow Road to Massey Lane	5 lane capacity 80' R.O.W.	No improvements proposed at this time
Massey Lane to Humphreys Boulevard	4 lanes with median	No improvements proposed at this time
Humphreys Boulevard to Walnut Grove Road	6 lanes with median	No improvements at this time
Walnut Grove Road to Mullins Station Road	4 lanes with median & new alignment	114' R.O.W. 6 lanes with median
Mullins Station Road to Reese Road	2 lanes	108' R.O.W. 7 lanes

Reese Road to to Stage Road	New Construction	108' R.O.w. 7 lanes
Sycamore View Road from Kirby Pkwy. to Mullins Station Rd.	New Construction	114' R.O.W. 6 lanes with median

The bridges at Fletcher Creek, I-40, and Nonconnah Creek will be widened. Grade separated interchanges will be built: at the Walnut Grove Road/Humphreys Boulevard intersection; at the Walnut Grove Road/Kirby Parkway intersection; and at the Sycamore View Road/Kirby Parkway intersection. Widening of the existing Wolf River bridge will be designed as a part of the Walnut Grove Road/Humphreys Boulevard interchange.

The project will require about 136 acres of additional right-of-way and will cost about $59,550,000. It will require the displacement of four residences and one commercial building which contains six office spaces.

In accordance with the local authorities planning goals and preferences, no construction for the section between Messick Road and Humphreys Boulevard is proposed for this project. Although the level-of-service would initially be at an acceptable level, the LOS would become unacceptable as the traffic demands increase. The deficiencies that exist will need to be addressed at some point in the future. The section between Quail Hollow Road and Humphreys Boulevard has 80-feet of existing right-of-way and therefore has the capacity to be widened to five lanes now with appropriate striping. In order to improve this section to seven lanes within 108-feet of right-of-way, approximately 14-feet of

additional right-of-way would have to be acquired on both sides of Kirby Parkway between Quail Hollow Road and Humphreys Boulevard to build a facility consistent with the project's proposed typical cross-section.

This would not require any relocations. Since Kirby Parkway has been in the Shelby County transportation plan for over twenty years, the development along this section has been set back a sufficient distance to accommodate the proposed project. The houses are about 80-feet from the existing pavement.

There may be a beneficial impact for the community in this area. This section of the corridor should experience reduced speeds. This would serve as a transition period to allow the community to adjust to the proposed project before being impacted by construction. The impacts to this area if the facility were widened in the future are discussed in the appropriate sections of Chapter IV; such as: Social in 4.3, Relocation in 4.4, Noise in 4.7, and Visual in 4.16.

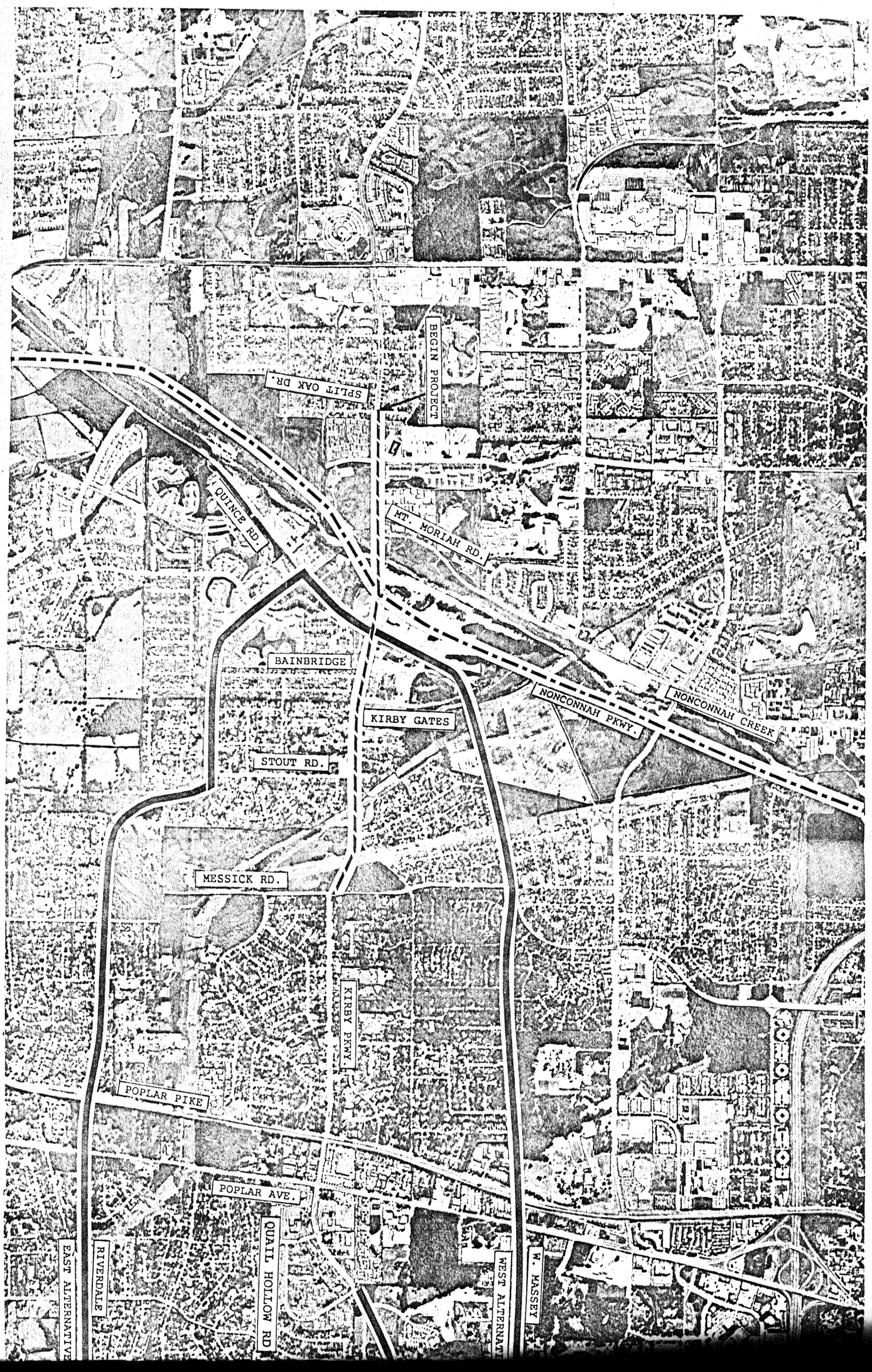
The existing facility between Quail Hollow Road and Massey Lane is presently striped for two lanes. The City of Memphis intends to stripe this section for five lanes after the project has been completed. (See the letter from the City in Appendix "E".) However, at some point before the design year, this section may need to be widened to match the proposed section.

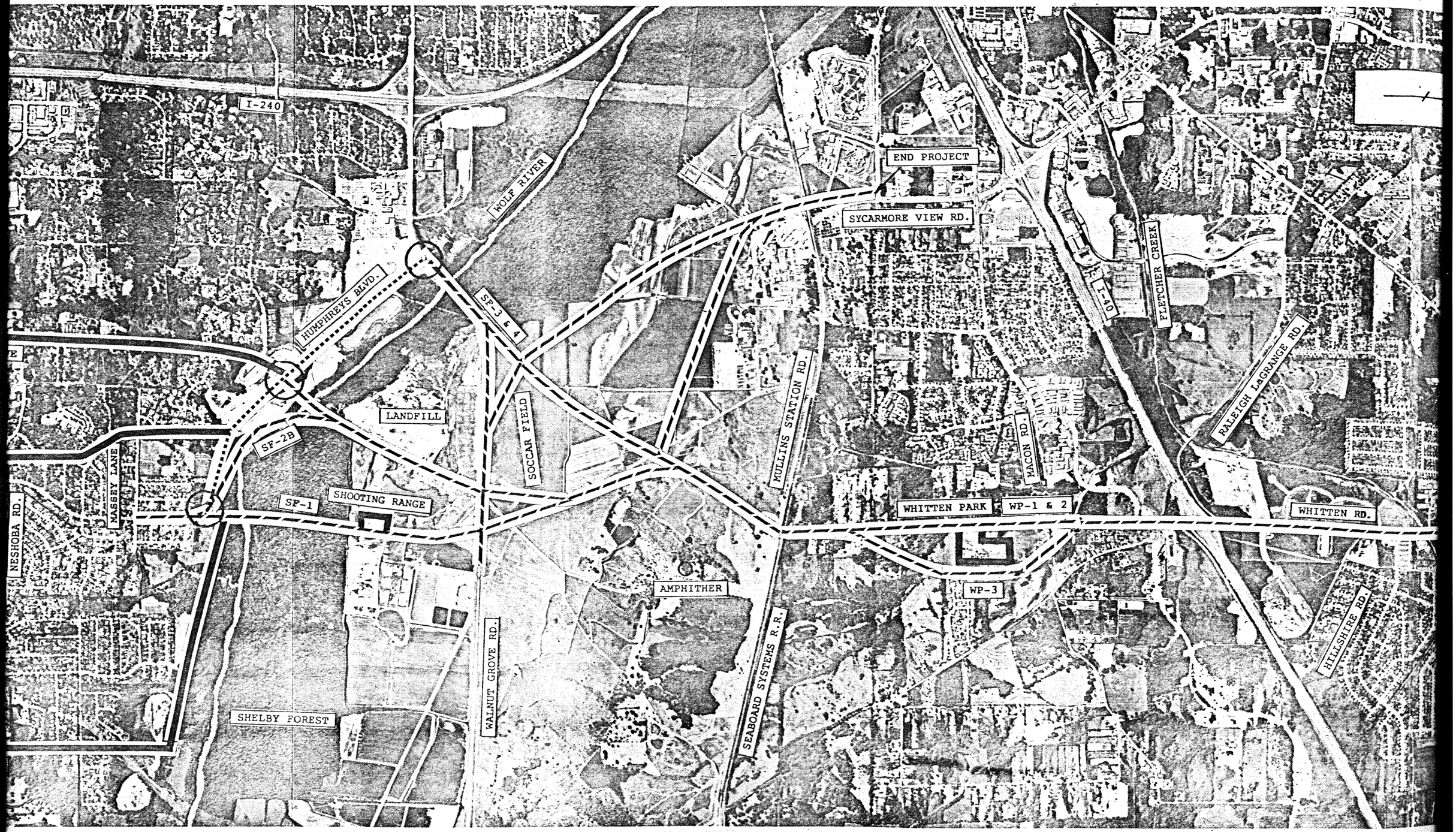
The existing intersection at Poplar Avenue and Kirby Parkway presently operates at capacity. In order to improve

this intersection, a grade separated intersection could be built in the future.

The cross-section for Humphreys Boulevard, both for the existing section which is west of Kirby Parkway and the section east of Kirby Parkway which is under construction, is compatible with the project's proposed cross-section. Therefore, no improvements are required.

CHAPTER 2 FIGURES


SPLIT OAK DR.
BEGIN PROJECT
QUINCE RD.
MT. MORIAH RD.
BAINBRIDGE
NONCONNAH PKWY.
NONCONNAH CREEK
KIRBY GATES
STOUT RD.
MESSICK RD.
KIRBY PKWY.
POPLAR PIKE
POPLAR AVE.
QUAIL HOLLOW RD
RIVERDALE
EAST ALTERNATIVE
WEST ALTERNAT
W. MASSEY


I-240
WOLF RIVER
END PROJECT
SYCARMORE VIEW RD.
HUMPHREYS BLVD.
SF-3 & 4
I-240
FLETCHER CREEK
RALEIGH LaGRANGE RD.
LANDFILL
SOCCAR FIELD
MULLINS STATION RD.
MACON RD.
SF-2B
MASSEY LANE
NESHOBA RD.
SF-1
SHOOTING RANGE
WHITTEN PARK
WP-1 & 2
WHITTEN RD.
AMPHITHER
WP-3
HILLSHIRE RD.
WALNUT GROVE RD.
SEABOARD SYSTEMS R.R.
SHELBY FOREST

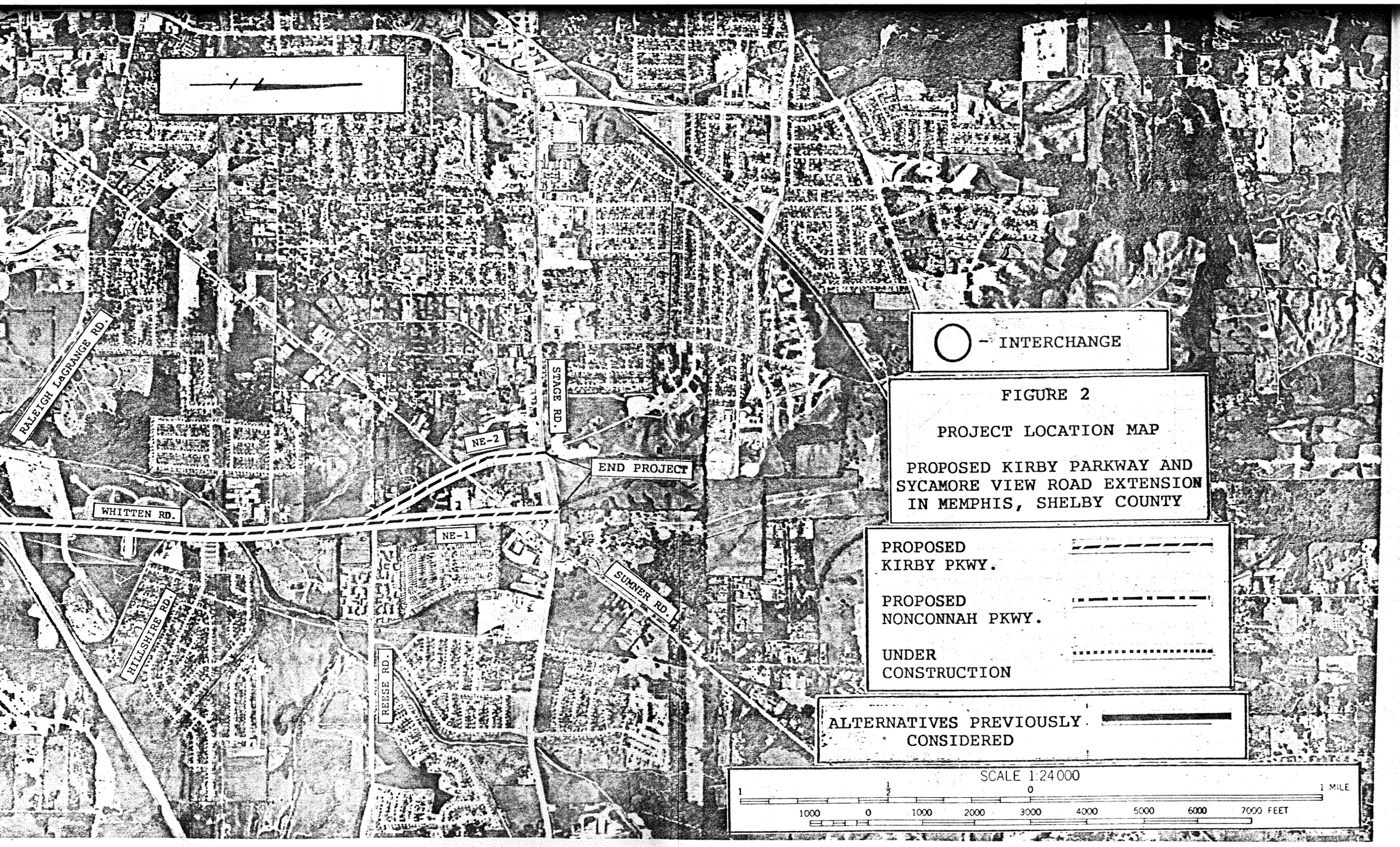


FIGURE 2

PROJECT LOCATION MAP

PROPOSED KIRBY PARKWAY AND SYCAMORE VIEW ROAD EXTENSION IN MEMPHIS, SHELBY COUNTY

FIGURE 2a

SF-1 ALTERNATIVE

FIGURE 2b
SF-2a ALTERNATIVE

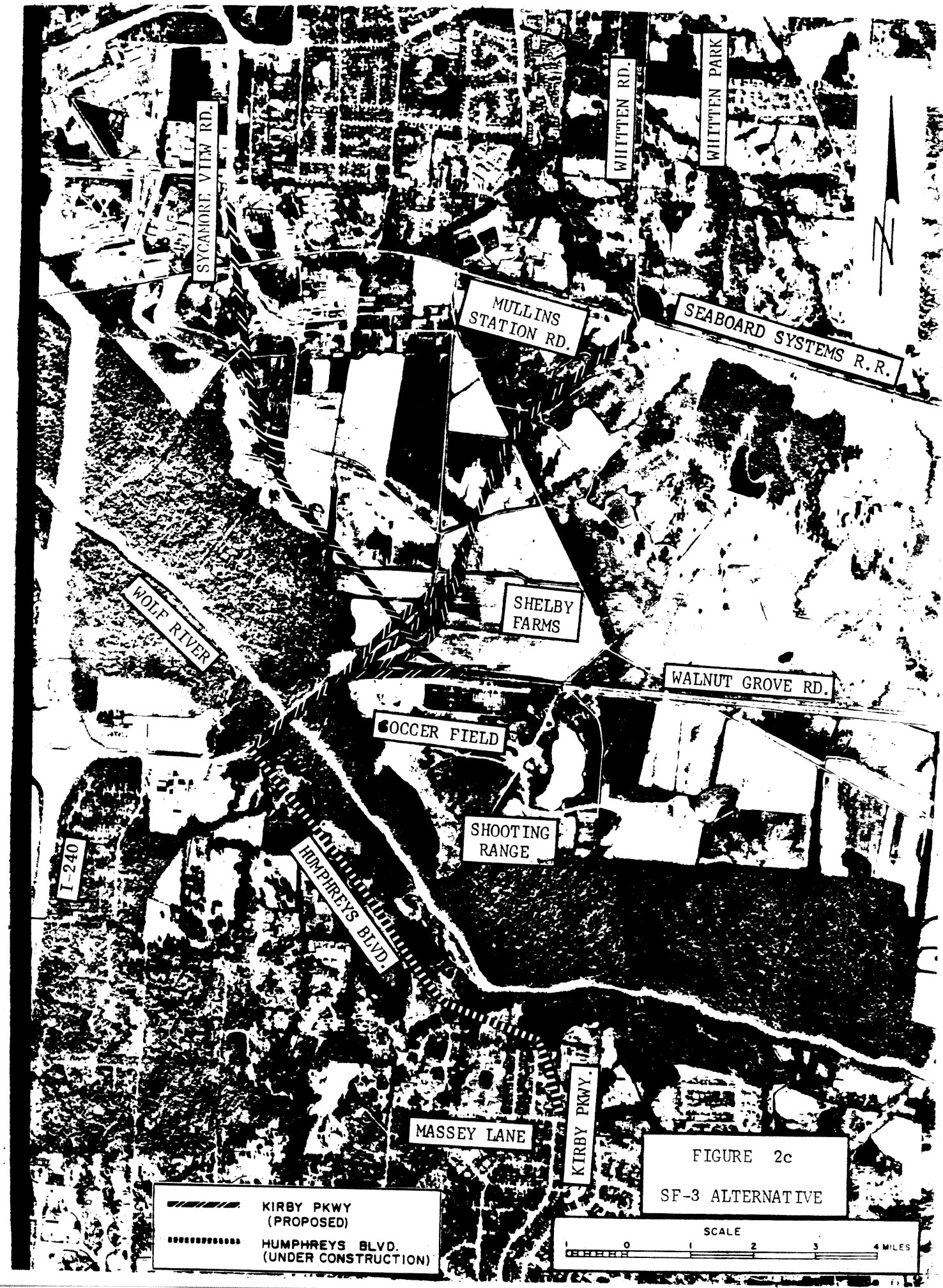


FIGURE 2c

SF-3 ALTERNATIVE

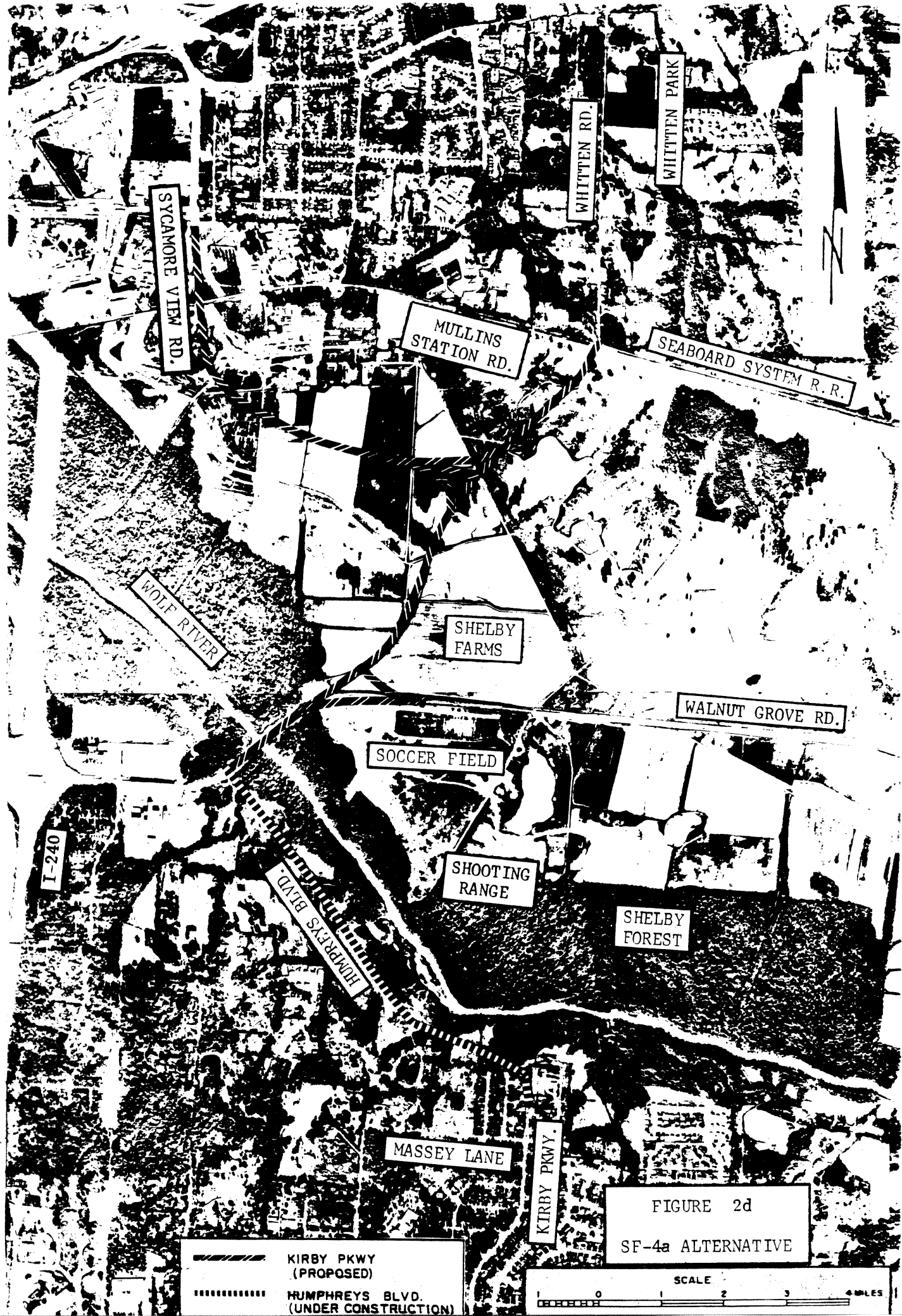


FIGURE 2d

SF-4a ALTERNATIVE

FIGURE 2e

SF-4b ALTERNATIVE

FIGURE 2F
SF-2b ALTERNATIVE

Seaboard System R.R.
Walnut Grove Rd.
Landfill
Shelby Farms
Shelby Forest
Wolf River
Humphreys Blvd.
Begin Construction
I-240
Massey Lane
Poplar Ave.
Poplar Pike
End Construction
Kirby Pkwy.
Mississippi Blvd.
Stout Rd.
Nonconnah Pkwy.
Nonconnah Creek
Mt. Moriah Rd.
Quince Rd.
Split Oak Dr.
Begin Project
GRADE-SEPARATED INTERCHANGE
GRADE-SEPARATED INTERCHANGE
HUMPHREYS BOULEVARD (under construction)
GERMANTOWN
PENAL FARM

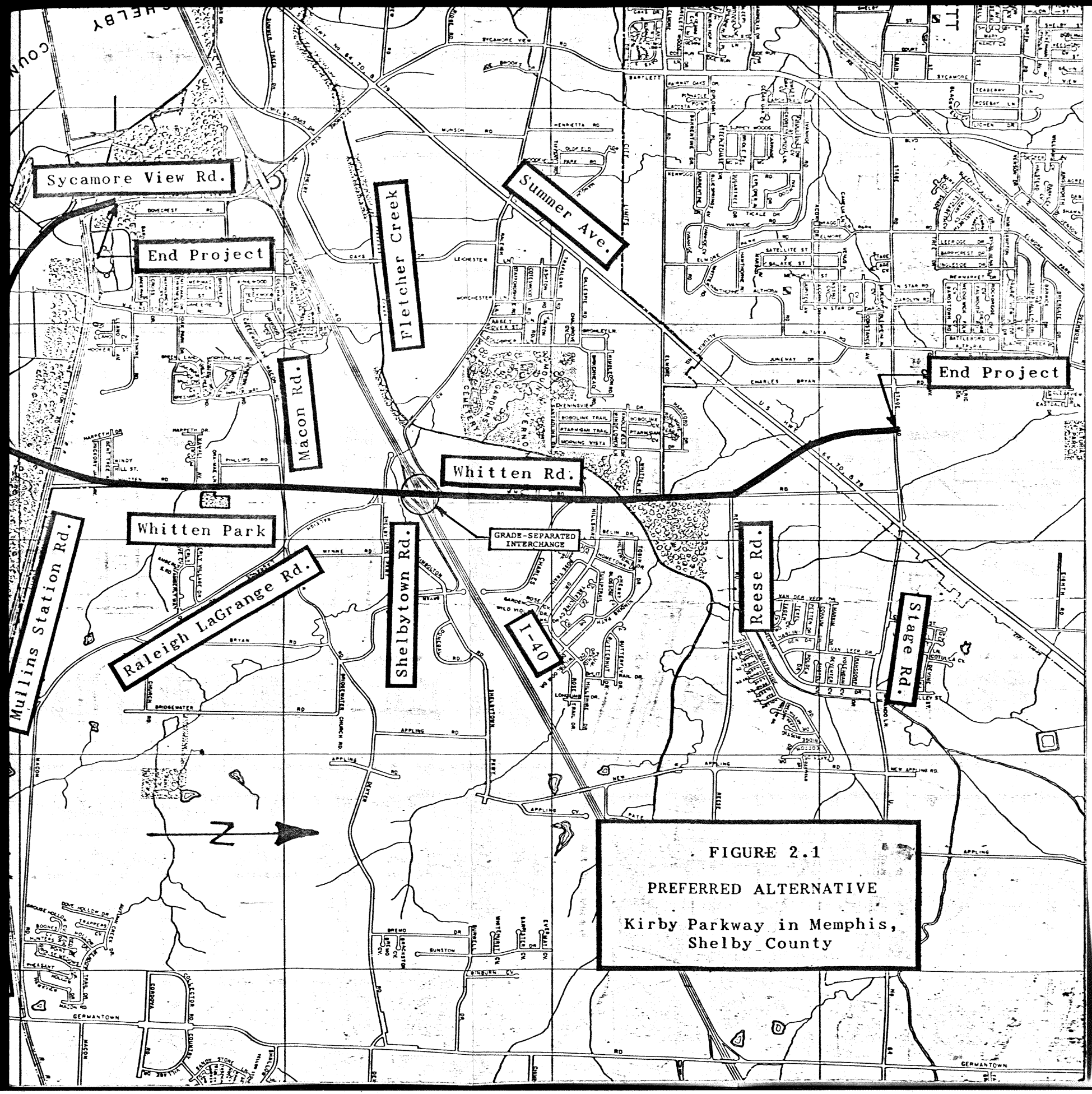
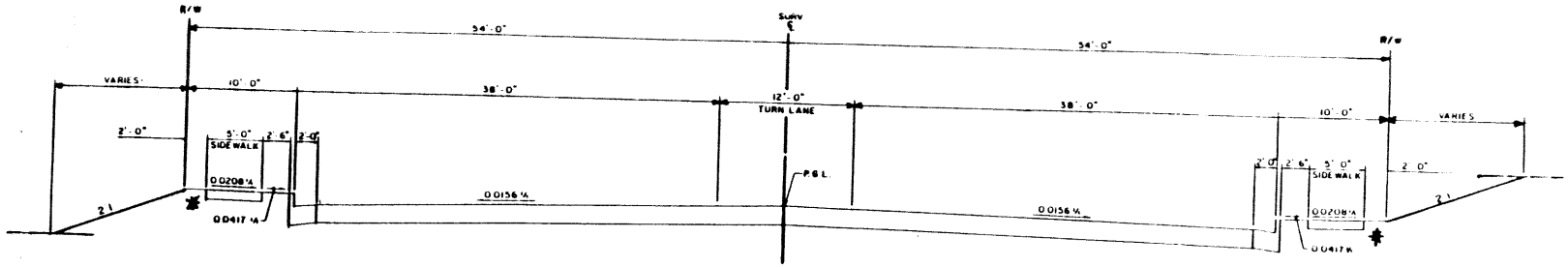


FIGURE 2.1

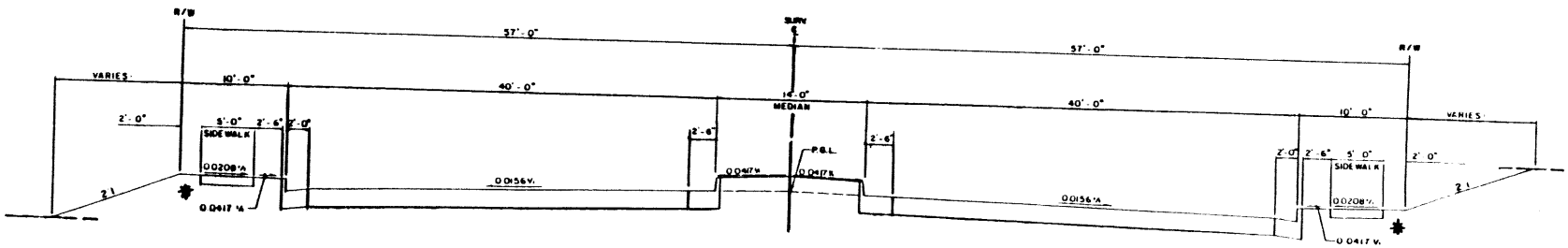
PREFERRED ALTERNATIVE

Kirby Parkway in Memphis, Shelby County

KIRBY PARKWAY AND SYCAMORE VIEW RD. EXTENSION



KIRBY PARKWAY
TYPICAL TANGENT SECTION 108' R.O.W.
SPLIT OAK DR. TO QUINCE RD. AND
MULLINS STATION RD. TO STAGE RD.



TYPICAL TANGENT SECTION 114' R.O.W
QUINCE RD. TO MESSICK RD.;
HUMPHREYS BLVD. TO MULLINS STATION RD.;
AND SYCAMORE VIEW RD. EXTENSION

✱ THE LOCATION OF THE SIDEWALKS WILL BE DETERMINED ACCORDING TO CURRENT STANDARDS DURING THE DESIGN PHASE.

FIGURE 3
TYPICAL SECTIONS
KIRBY PARKWAY AND
SYCAMORE VIEW RD. EXTENSION

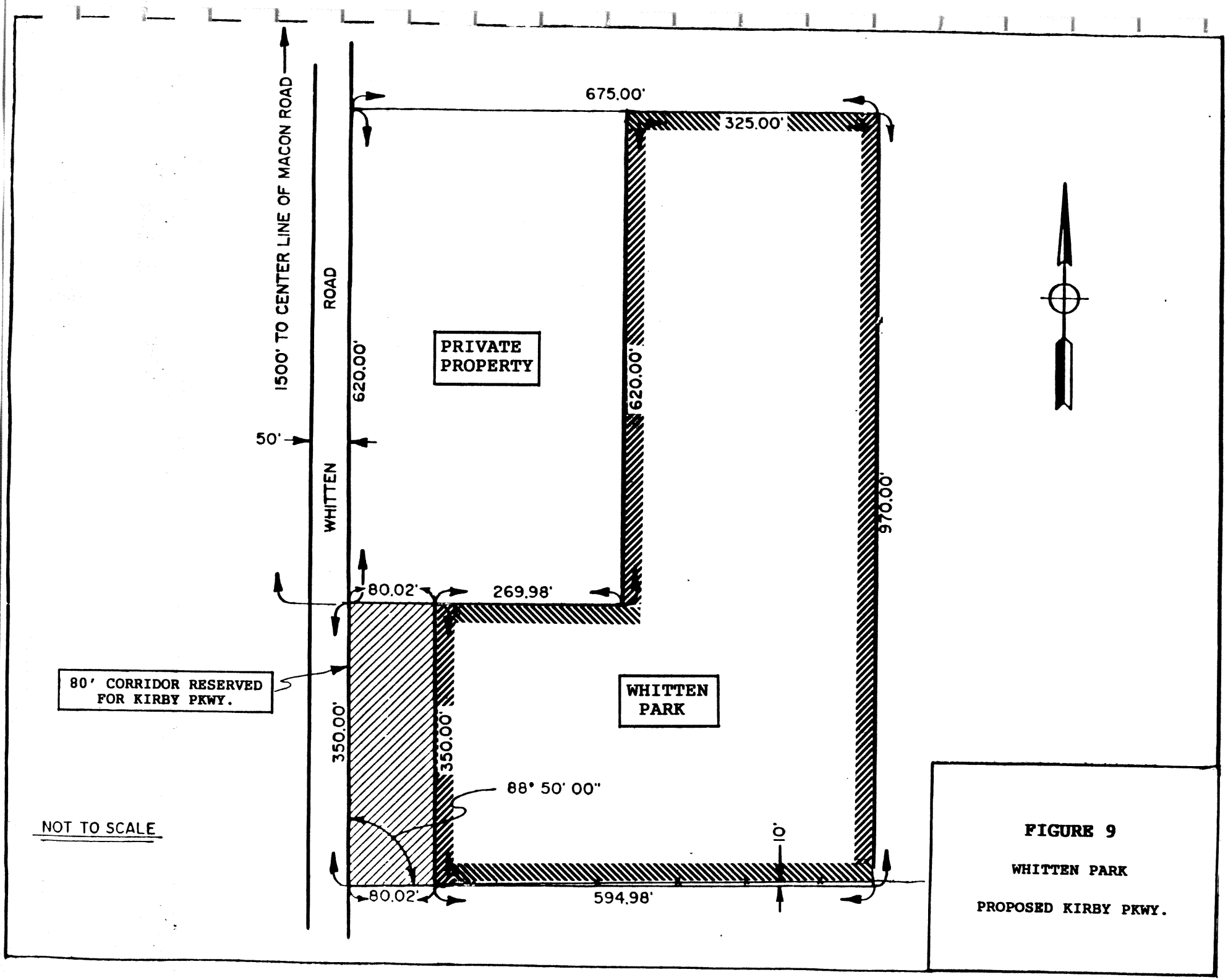


FIGURE 9

WHITTEN PARK

PROPOSED KIRBY PKWY.

TABLE 1

Comparison of Alternatives Considered

ALTERNATIVES		APPROXIMATE NEW R.O.W. ACRES REQUIRED	DISPLACEMENTS		ESTIMATED COST			
			RESIDENCES	COMMERCIAL	CONSTRUCTION	RIGHT-OF-WAY	UTILITIES	TOTAL
Shelby Farms Alt.	SF-1a	74	0	0	19,650,000	1,803,000	140,000	21,593,000
	SF-1a*	74	4	0	21,650,000	2,403,000	140,000	24,193,000
	SF-1b	74	0	0	24,080,000	1,803,000	140,000	26,023,000
	SF-1b*	74	4	0	26,080,000	2,403,000	140,000	28,623,000
	SF-1c	74	0	0	31,515,000	1,803,000	140,000	33,458,000
	SF-1c*	74	4	0	33,515,000	2,403,000	140,000	36,058,000
	SF-1d	74	0	0	21,130,000	1,803,000	140,000	23,073,000
	SF-1d*	74	4	0	23,130,000	2,403,000	140,000	25,673,000
	SF-2a	75	0	0	19,615,000	1,704,000	127,000	21,446,000
	SF-2a*	75	44	0	24,615,000	14,704,000	127,000	38,946,000
	SF-2b	75	20	0	19,615,000	4,704,000	127,000	24,446,000
	SF-3	82	0	0	14,900,000	1,815,000	205,000	16,920,000
	SF-3*	82	4	23	18,900,000	18,815,000	205,000	35,920,000
	SF-4a	82	0	0	12,565,000	1,804,000	155,000	14,524,000
	SF-4a*	82	4	23	14,565,000	18,804,000	155,000	33,524,000
	SF-4b	82	0	0	13,640,000	1,804,000	155,000	15,599,000
	SF-4b*	82	4	23	15,640,000	18,804,000	155,000	34,599,000
Whitten Park Alt.	WP-1	12	5	0	3,465,000	4,063,000	321,000	7,849,000
	WP-2	12	31	0	3,465,000	5,184,000	246,000	8,895,000
	WP-3	16	0	3	3,600,000	2,196,000	148,000	5,944,000
North End Alt.	NE-1	5	0	4	1,580,000	1,567,000	15,000	3,162,000
	NE-2	38	0	0	1,775,000	996,000	4,000	2,775,000

*Indicates that grade separated interchanges are utilized at the Humphrey Boulevard Intersections

CHAPTER III

AFFECTED ENVIRONMENT

3.1 Physical Setting

The proposed project is located in Memphis, Shelby County, Tennessee. It lies within the physiographic Coastal Plain Province, which is characterized by relatively low elevations and relief with sediments of the same characteristics as the coastal regions in other southeastern states.

Soils in the area are principally of the Loess Region. Soils of the southern portion of the project are of the Grenade-Calloway-Henry Association which are moderately to poorly drained, silty soils. The project crosses two areas with soils from the Falaye-Waverly-Collins Association. These are soils of the major stream bottoms.

The project crosses three floodplains; the Nonconnah Creek floodplain, the Wolf River floodplain, and the Fletcher Creek floodplain. Nonconnah Creek and the Wolf River are tributaries of the Mississippi River. Fletcher Creek drains into the Wolf River. The topography of the area is mostly flat.

The National Oceanic and Atmospheric Administration indicated the presence of both horizontal and vertical geodetic control survey monuments in the proposed project area. Any disturbance of these would need to be

coordinated with the Administration during the construction phase.

The Geological Survey of the U. S. Department of the Interior has established a streamflow gauging station on the Wolf River at Walnut Grove Road. Coordination with the Geological Survey during the construction phase will be required if the gauge needs to be moved.

3.2 Socio-Economic Setting

The proposed project is located in East Memphis. This area is one of the fastest growing areas in Shelby County. As discussed in Chapter I, this area has experienced tremendous population growth in the last twenty-one years. It has increased from about 5,700 in 1964, to about 78,702 in 1985, a 1280% increase. Although the population growth for the next twenty years is not expected to be quite as dramatic, it is expected to increase another 60% to about 125,745 in 2005.

Memphis is the largest urban area in the region and is a hub for economic activity. The city supports a diversified economic base.

As the population increased, business and commercial activity also increased in the East Memphis area. One of the three major employment centers in the county has developed along the Poplar Corridor. This corridor crosses the proposed project.

The current land uses along the project corridor are shown on Figure 4. It shows a mixture of residential

and commercial uses. The area south of the Wolf River is more densely developed than that on the north side of the river.

Residential areas have developed along the existing street system at various locations. The following chart identifies the residential areas.

Location	Type of Residence
From Split Oak Drive to Mt. Moriah Road	Apartments and Townhouses
From Bainbridge To 1000' North Of Kirby Gates	Single Family
From Messick Road To Poplar Pike	Single Family
From Nashoba To Humphreys Boulevard	Single Family
From Poplar Pike To Quail Hollow Road	Apartments
From Mullins Station Road To I-40	Single Family

In addition to the residential and commercial uses, there is a large area of public owned land, known as Shelby Farms, near the middle of the project.

3.3 Environmental Setting

The proposed project would be built on a combination of existing road facilities and new alignment. This would provide a variety of environmental settings. They would vary from urbanized areas to agricultural and undeveloped areas. An ecological study was conducted by

the Tennessee Department of Transportation. The results of that study is included in Appendix "B". The largest area of open and undeveloped land is near the center of the project. This area is known as Shelby Farms.

3.3.1 Shelby Farms

The proposed project will cross the Shelby Farms property (See Figure 2). Shelby Farms is located on 4500 acres which is owned by the Shelby County Government. It is bounded by the Wolf River, Mullins Station Road, Raleigh LaGrange Road and Germantown Parkway. The Plough Development Board oversees the property.

The Plough Development Board is preparing a land use plan, the Shelby Farms Concept Plan. The preliminary plan has been reviewed by FHWA and is being reviewed by Shelby County Officials. No action on the Plan has been taken. The local authorities are awaiting approval of this FEIS before completing their plans for developing the Shelby Farms property.

The Concept Plan includes most of the current uses and proposes some additional developments. Some of the existing facilities are projected to be expanded or relocated. The Concept Plan envisions the construction of Kirby Parkway across Shelby Farm, in the area of the Shelby Farms Forest Natural Area South near the landfill.

The present uses of Shelby Farms are shown on Figure 5. Some of the land is used for either row crops or pasturage. A bottomland hardwood forest is located along the margin of the Wolf River. Hiking trails have been established in the forest area. Some areas have been dedicated to institutional use such as the Shelby County Correctional Center, the county landfill, and the Agriculture International. Some of the open land is utilized by the institutions for agricultural uses. Other areas are open to public uses. Some of the uses are the senior citizens gardens, soccer fields, canoe landings, hiking trails, an arboretum, Plough Park, a rifle range, and the Shelby Farms Forest Natural Areas.

While the Shelby Farms property is publicly owned, its entire area would not be considered as subject to Section 4(f) of the Department of Transportation Act of 1966. This is because there are uses of the property which are not covered by Section 4(f). Two examples of this are the Shelby County Correction Center and the closed landfill. There are, however, several areas (See Figure 5a) which would be considered as subject to Section 4(f). They are: (1) the recreational trails along the Wolf River; (2) Shelby Farms Forest Natural Area North; (3) Shelby Farms Forest Natural Area South; (4) the rifle range; (5) the soccer fields; (6) the BMX Track; (7) the Arboretum, which includes the Amphitheater; and (8) Plough Park.

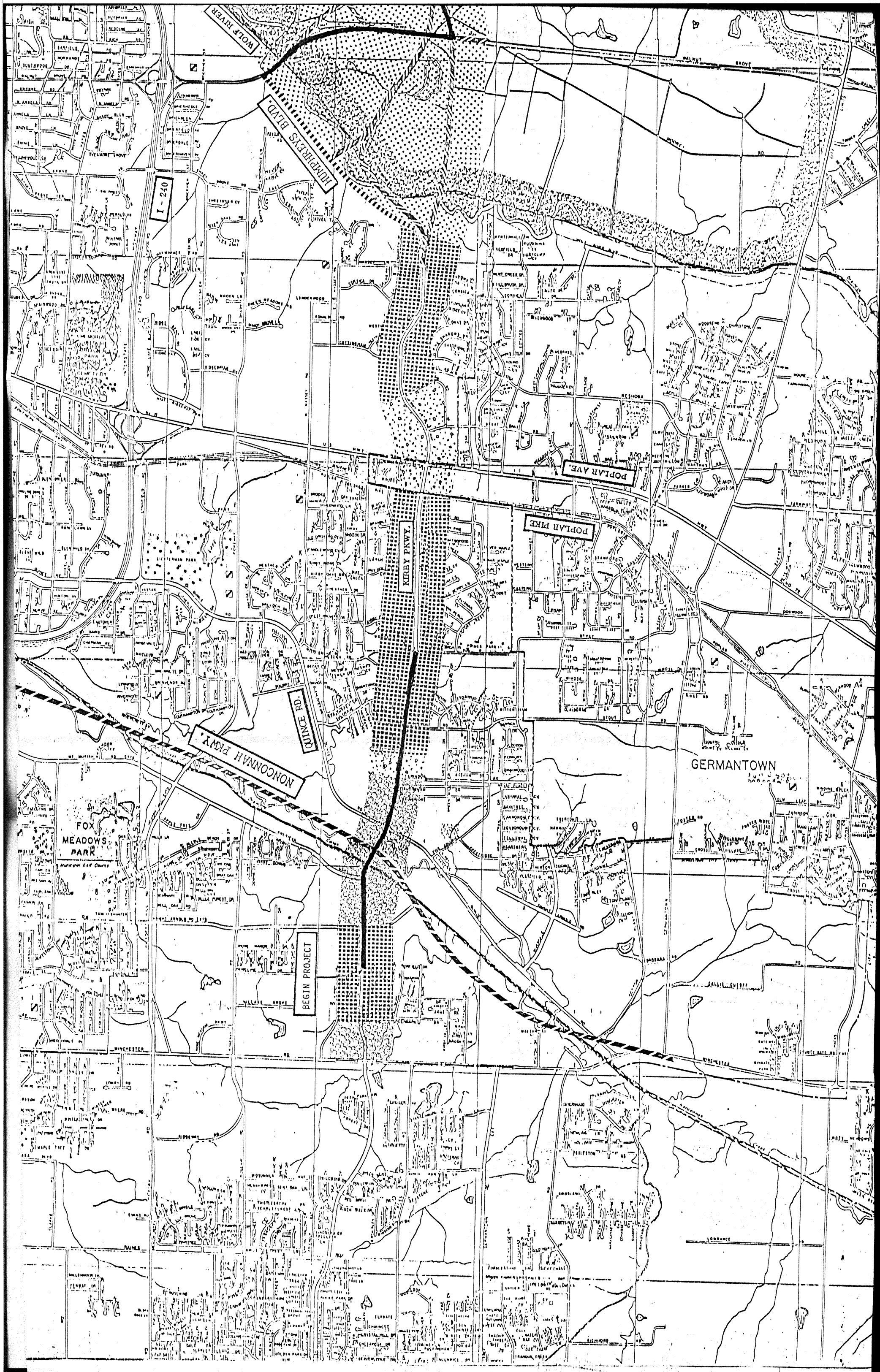
In a letter (see Appendix "E"), dated June 17, 1991, the Shelby County Government, which has jurisdiction over the Shelby Farms property, stated that they agreed with the preferred alternative. They also stated that the selected alternative would not adversely impact the existing or planned uses for the Shelby Farms properties.

The preferred alternative will be designed so that no right-of-way will be required from any of the Section 4(f) areas in Shelby Farms. However, the project will be built over the recreational trails which will constitute a use of that area. The impacts to that area are discussed in Chapter V. The impacts to the various Section 4(f) areas, such as noise impacts, will be discussed in the appropriate section of Chapter IV.

The landfill was a registered sanitary landfill. It was issued a permit by the Tennessee Department of Health and Environment (TDHE) in June, 1972. In September, 1981, it was granted an extension. It was closed in October, 1988.

The USGS is conducting a study in the vicinity of the landfill. The final report has not been completed. However, they have provided some data concerning the wells which they have sampled. This information is contained in Appendix "E."

CHAPTER 3 FIGURES


WOLF RIVER
HUMPHREYS BLVD.
I - 240
POPLAR AVE.
POPLAR PIKE
KIRBY PKWY.
QUINCE RD.
NONCONNAH PKWY.
GERMANTOWN
FOX MEADOWS PARK
BEGIN PROJECT
WALNUT GROVE
WINCHESTER
RAINES

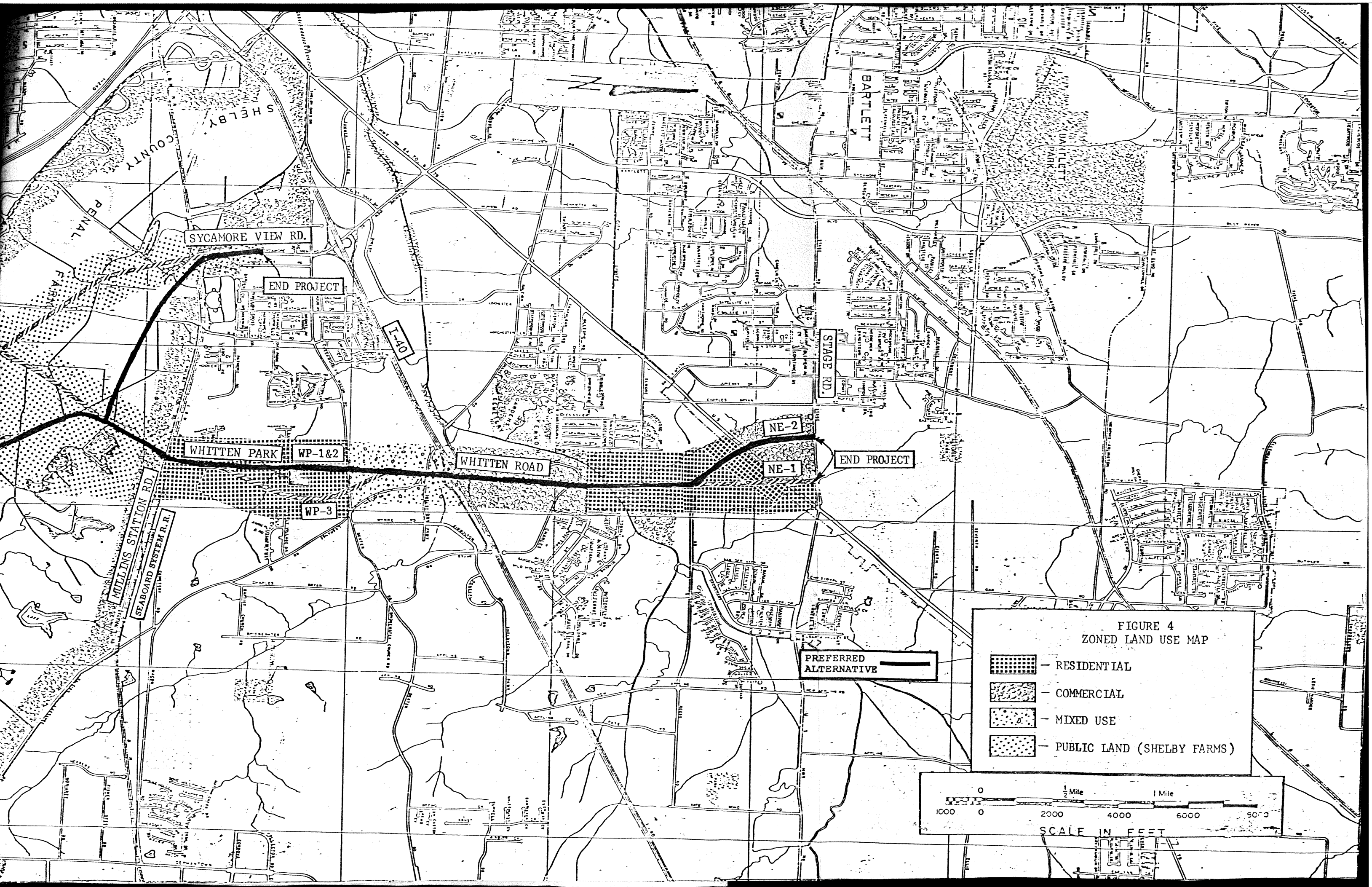


FIGURE 4
ZONED LAND USE MAP

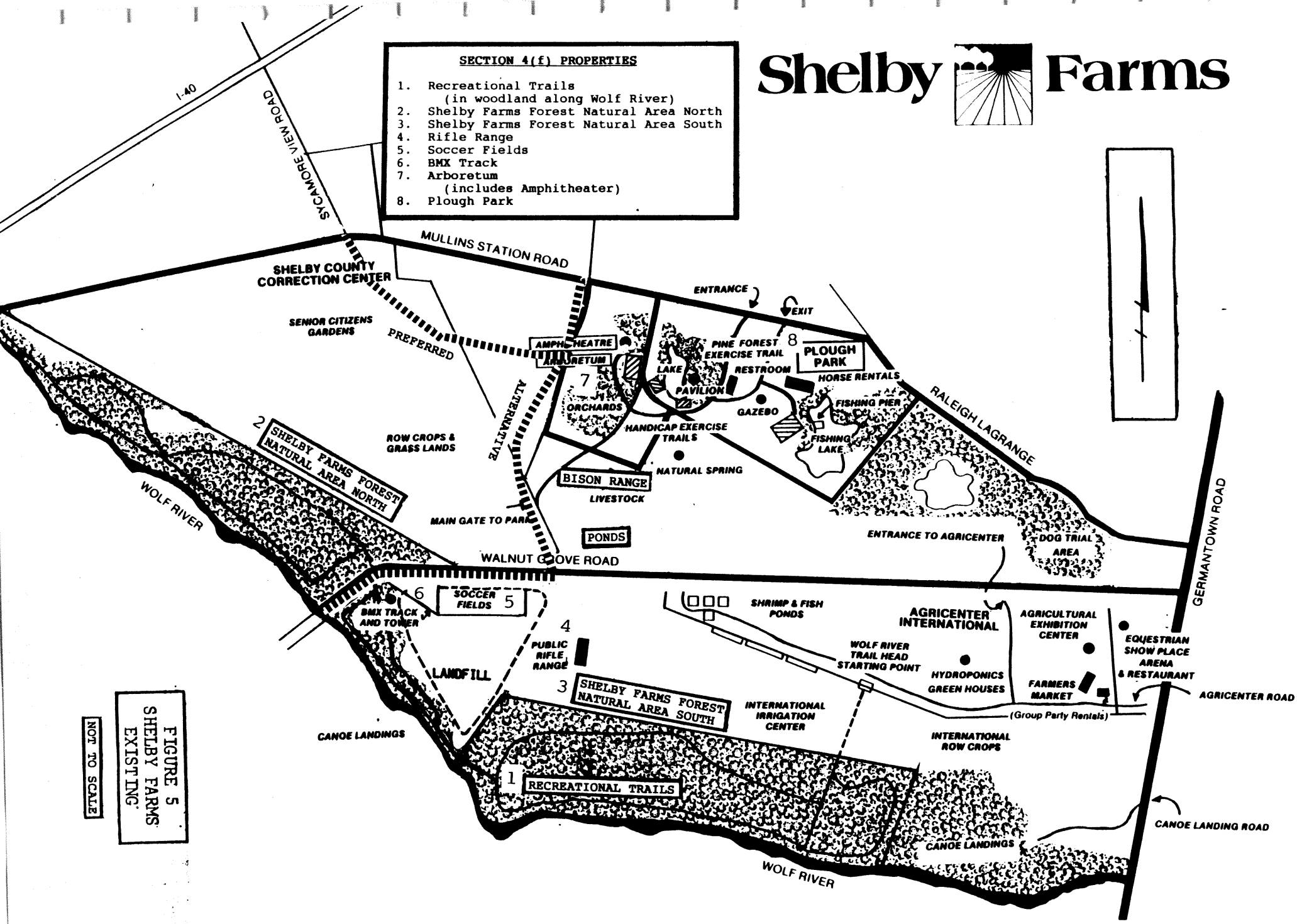


FIGURE 5
SHELBY FARMS
EXISTING

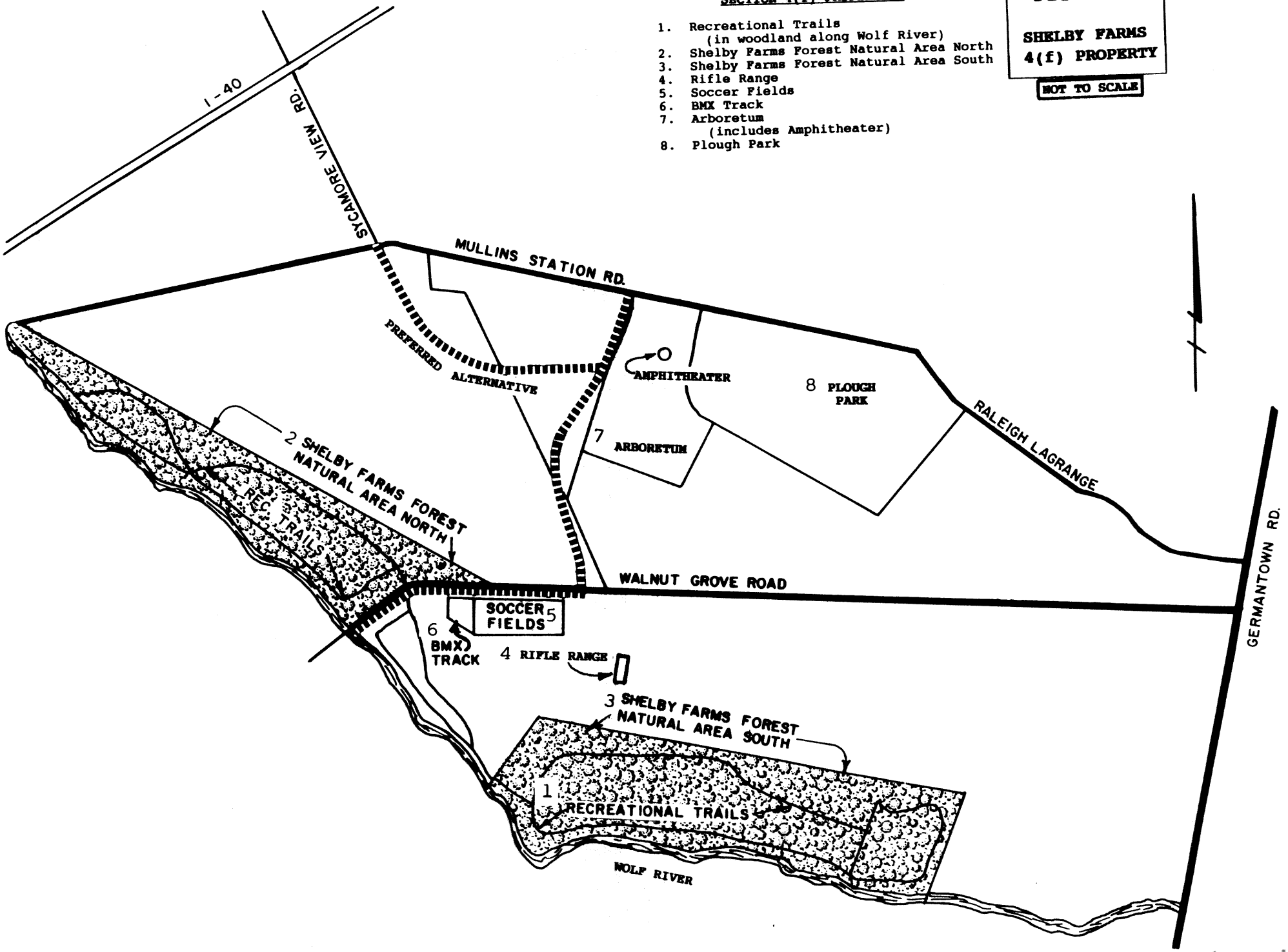
FIGURE 5a

SHELBY FARMS 4(f) PROPERTY

NOT TO SCALE

SECTION 4(f) PROPERTIES

1. Recreational Trails (in woodland along Wolf River)
2. Shelby Farms Forest Natural Area North
3. Shelby Farms Forest Natural Area South
4. Rifle Range
5. Soccer Fields
6. BMX Track
7. Arboretum (includes Amphitheater)
8. Plough Park



CHAPTER IV

PROBABLE IMPACTS

The purpose of this chapter is to discuss the probable social, economic, and environmental effects of the project and the mitigation measures to those effects. This chapter discusses anticipated effects, including primary impacts, or those which will result directly from construction and the use of the highway, and secondary impacts, or those which may be caused by changes in traffic patterns and accessibility. This chapter contains the consideration of adverse environmental impacts which cannot be avoided, the relationship between short term uses of man's environment and long-term productivity, and irreversible or irretrievable commitments of resources.

4.1 Land Use Impacts

The existing land use types in the project area may be described as suburban residential with scattered commercial development (See Figure 4). Scattered along the route are areas of undeveloped and sparsely developed land and public owned land. Construction of the project may hasten development of the vacant areas along the corridor.

The project as proposed has been found to be consistent with local and regional planning documents and will not be in conflict with the long range planning activities of any local or regional activity. As discussed in Section 1.2, Need for Action, it has been a part of the Memphis and

Shelby County transportation planning since 1969. Both current and future land use plans have been made with Kirby Parkway as a part of the transportation system.

The secondary impacts associated with the proposed project are increased development potential and the possible spread of residential and commercial development into new areas. Development of this area would probably occur with or without the proposed project. However, it would tend to occur at a faster pace with the project. These developments should be controlled by local planning and governing agencies. The land use plans for the Memphis-Shelby County areas take into account the spread of current land use types through the project area. The induced growth generated by the proposed project should be adequately controlled by conformity to the already established local land use plans. Land use impacts are the same for all alternatives.

4.2 Farmland Impacts

Some of the Shelby Farms property is presently used for agricultural purposes. These are pasture land, row crops and garden plots for use by senior citizens. The senior citizens' garden plots may be impacted by the proposed project. If it is, the garden site would be relocated to another portion of the Farms property.

The Farmland Protection Policy Act of 1981 (FPPA) does not apply to the Shelby Farms property. The FPPA has as its purpose "to minimize the extent to which Federal

programs contribute to the unnecessary and irreversible conversion of farmland to nonagricultural uses, and to insure that Federal programs are administered in a manner that, to the extent practicable, will be compatible with state, local government, and private programs and policies to protect farmland."

However, Part 658.2 of the Farmland Protection Policy Act states that a comprehensive Land Use Plan which has expressly been adopted or reviewed in its entirety by the unit of local government in whose jurisdiction it is operative within ten years preceding implementation of the particular Federal Protection would exempt the area from the definition of Prime Farmland.

The Memphis and Shelby County Office of Planning and Development has a land use plan which deals with the area in question. Therefore, further provisions of the FPPA do not apply to this project. The Soil and Conservation Service agrees with this assessment (See Appendix E).

4.3 Social Impacts

The proposed project will affect the existing social structure of the project area communities by the improved accessibility to the areas along the project corridor. Suburban development in the area of the project as well as commercial development along portions of the corridor and in the project area are a predictable development of improved transportation facilities.

The project will not pose a threat to neighborhood continuity or "cohesion". It would not be disruptive to the community by splitting neighborhoods. There are no known minority communities in the study area.

Construction of the project will not adversely affect any health/education facility or any sanitation/water system. Fire, police, and ambulance services to the area should be improved by the use of an improved facility. The relocation of any utilities will be coordinated with the proper officials and agencies.

The proposed improvements should be advantageous to the local community. It will allow easier access to public facilities and services. The improvement will aid fire, police, and ambulance responsiveness. It would also aid local residents in their use of schools, hospitals, and local seats of government.

The social impacts are the same for all alternatives.

A group of concerned citizens known as the Greentrees Civic Association responded to the proposed projects initial coordination. Members of the Association generally live in the community around Kirby Parkway between Messick Road and Poplar Pike. They were concerned about the impact of the proposed project through their community. They want the present roadway through their community to remain unchanged.

No improvements are proposed for the section of Kirby Parkway through the Greentrees Civic Association area. The

cross section in this area consists of a paved area which can accommodate six (6) lanes with a median on a 106' right-of-way. The paved area is striped for two (2) lanes with a shoulder in each direction. Once the project is completed, the average daily traffic is expected to be about 13,700 vehicles per day. By 2010, the traffic is expected to increase to about 23,100 vehicles per day.

When the initial coordination was distributed for the project, in 1984, Kirby Parkway ended at Massey Lane. Therefore, all traffic in the area between Quail Hollow Road and Massey Lane was local residential traffic since Kirby Parkway ended at Massey Lane. Since that time, the City of Memphis has completed Humphreys Boulevard between Walnut Grove Road and Kirby Parkway. This has changed the characteristics of the traffic using Kirby Parkway. By providing access to I-240 and Walnut Grove Road via Humphreys Boulevard, Kirby Parkway would become a through street. It no longer serves only local residential needs. When the project is completed, the average daily traffic is expected to be about 13,300 vehicles per day. By 2010 this figure is expected to increase to about 32,900 vehicles per day.

The section between Quail Hollow Road and Humphreys Boulevard has a five traffic lane capacity. However, to be compatible with the typical Kirby Parkway section, this section would need to be widened. This would be done

sometime in the future in accordance with the local authorities planning goals and preferences.

Even though no construction is planned through the Greentrees Community or the community between Quail Hollow Road and Humphreys Boulevard, both neighborhoods will be impacted due to the increased traffic.

This document has been reviewed and found acceptable by the Tennessee Department of Transportation's civil rights office in accordance with Title VI of the Civil Rights Act of 1964.

4.4 Relocation Impacts

The most direct impact of the proposed project would be the possible displacement of families and businesses along the alignment. The number of displacements for the Preferred Alternative will be four (4) residential and one (1) commercial building which contains six (6) office spaces.

A Conceptual Stage Relocation Plan has been prepared for this project to assess the impacts of displacements on the affected families and communities and to indicate the probability of successful relocation of all displacees (See Appendix "D").

The Conceptual Stage Relocation Plan indicates that any business displacements would have little impact on the community. This is because there are similar businesses and services being offered within a short distance of the project. Also, displaced businesses should be able to

relocate since there are several replacement commercial lots or buildings for sale or rent which are available in the area.

It also indicates that there is ample, decent, safe, and sanitary replacement housing within the financial means of the individuals and families displaced. The real estate market is very active in and around the project area and a new subdivision is under construction indicating the probability of continuing availability of comparable properties during the proposed acquisition period.

The Conceptual Stage Relocation Plan indicated the residential displacements consist of an average family size ranging from two (2) to four (4) members ranging in age from five (5) to forty-five (45) years of age. They are also middle income, white, and owner occupants.

Although not presently a part of the Preferred Alternative, grade separated interchanges may be built at some time in the future at two (2) locations. One is at the Kirby Parkway/Poplar Avenue intersection. The other is at the Kirby Parkway/Humphreys Boulevard intersection. If these interchanges were built, there would be twenty-eight (28) single family and two (2) apartment buildings, with a total of sixteen (16) units, displaced. The commercial displacements would be one (1) ten story office building, two (2) banks, one (1) building with three (3) units and two (2) restaurants.

Widening of the section between Quail Hollow Road and Humphreys Boulevard is also not scheduled as a part of the project. If it becomes necessary to do this in the future, no relocations would be required.

The acquisition and relocation program will be conducted in accordance with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and relocation resources are available to all residential and business relocatees without discrimination. If any elderly or handicapped individuals are relocated, they will be given special consideration during the relocation process.

The Tennessee Department of Transportation provides advance notification of impending right-of-way acquisition and before acquiring right-of-way, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights.

Brochures which describe in detail the right-of-way acquisition program and the relocation assistance and payments program are distributed at all public hearings and are made available upon request to any interested persons.

Many of the displaced families will be able to relocate on property near their present home. It is the Department's intent to relocate displaced persons on property near the same neighborhood from which they are

removed whenever possible, if that is the desire of the relocatees. Some relocatees moving to new neighborhoods may experience some difficulty in adjusting to new circulation patterns, forming new community ties, and getting to know new neighbors. The provisions of suitable acceptable replacement housing combined with adequate relocation payments will help to minimize relocation impacts.

The basic social arrangement and the residential character of the project area will not significantly change. The proposed project will not affect any specific interest group or alter the racial composition in the area.

4.5 Economic Impacts

With the completion of the proposed project, Memphis-Shelby County will experience a short-term tax base loss. This loss will be as a result of land removed from the tax rolls because of right-of-way acquisition. This could consist of as much as 136 acres. Loss would also come from relocation of up to 4 residents. This loss should be viewed as temporary. The continuation of existing development patterns should bring tax revenues back to a level equal to or higher than the current levels.

Economic gain and orderly growth are primary goals of any level of government or of any community. The construction of the proposed project, along with careful regulation of the expected growth potential, will help the

local government and planning agencies in obtaining and maintaining orderly growth.

4.6 Air Quality Impacts

A microscale air quality analysis was performed using CALINE 3 developed by the Environmental Improvement Branch, Transportation Laboratory of CALTRANS. CALINE 3 is a computerized version of the California Line Source Dispersion Model which takes into account (1) traffic, (2) emission factors based on EPA's latest emissions factors, (3) meteorology, (4) type of highway design, (5) Pasquill's stability classification.

The outputs from this model are stated in terms of carbon monoxide concentrations in parts per million (ppm) or micrograms per cubic meter (ug/m^3).

The National Ambient Air Quality Standard for carbon monoxide, which is not to be exceeded more than once a year, is as follows:

CARBON MONOXIDE

(National Ambient Air Quality Standard)

Maximum 1-hour Concentration	Maximum 8-hour Concentration
35 ppm	9 ppm

The CALINE 3 Model was used to predict future pollution levels for the estimated time of completion (ETC) of the project (1990) and the ETC plus twenty years or the design year (2010). Heaviest traffic volumes 53,000 and 78,900 ADT respectively, as well as the poorest meteorological conditions, were utilized in this microscale analysis in

order that the most conservative results would be obtained ("E") stability class, parallel winds at one meter per second, 20.6% cold starts and a 30°F ambient temperature.

The projected pollutant maximum one-hour concentrations without the ambient or background levels for the subject project are as follows:

1990	2010
3.7 ppm	3.0 ppm

A background of 2 ppm concentrations of carbon monoxide was added to the predicted carbon monoxide levels to determine the air pollution impact on the project area. The results are as follows:

Year	Predicted		Background		Total
1990	3.7 ppm	+	2.0 ppm	=	5.7 ppm
2010	3.0 ppm	+	2.0 ppm	=	5.0 ppm

The distance for the receptor location was 60 feet downwind of the project, which is the closest sensitive receptor within the project area. Therefore, if the design year carbon monoxide concentration predicted at this receptor location is well below the National Ambient Air Quality Standard for carbon monoxide, concentrations at all sensitive receptors within the project area are also assured to be well below the standard.

This project is in an air quality attainment area which has transportation control measures in the State Implementation Plan (SIP) which was conditionally approved by the Environmental Protection Agency March, 1984. The

Federal Highway Administration has determined that both the transportation plan and the transportation improvements program conform to the SIP. The FHWA has determined that this project is included in the Transportation Improvement Program 1988-1992, for the Memphis-Shelby County urbanized area. Therefore, pursuant to 23 CFR 770, this project conforms to the SIP.

4.7 Noise Impacts

The effects of increased noise levels due to the proposed project have been evaluated according to the guidance of Federal-Aid Highway Program Manual, Volume 7, Chapter 7, Section 3. Predicted noise levels have been compared to existing levels and to FHWA Noise Abatement Criteria (as listed in Table 2) to determine the impact of highway-generated noise on the community.

One of the provisions of the federal noise guidelines is that the designer must account for the statistical variation in traffic noise with respect to time. This is accomplished by stating the existing, predicted, and FHWA Noise Abatement Criteria in terms of an "L_{10}" value. This value specifies the sound level (measured on the "A" frequency weighing scale, dBA) which is exceeded no more than 10 percent of the time for the period under consideration. This value indicates both the magnitude and the frequency of occurrence. A noise impact can occur when predicted noise levels approach or exceed the FHWA noise abatement criteria levels listed in Table 2. Also, a noise

impact can exist when there are "substantial" increases in design noise levels over the existing noise levels. The criteria used to define "substantial" are as follows:

Increase (dBA)	Subjective Descriptor
0-5	No Impact
6-15	Moderate Impact
> 15	Substantial Impact

An existing noise level survey was conducted for this project by Tennessee Department of Transportation personnel. These readings were made using the method outlined in FHWA'S "FUNDAMENTALS AND ABATEMENT OF HIGHWAY TRAFFIC NOISE". These noise levels were made at representative receptor sites. The locations of these existing noise level sites are shown in Figure 8.

By using the latest functional layouts and the most recent traffic estimates for the proposed project, the design year (2010) peak hour noise levels were predicted at various locations along the project area. THE FEDERAL TRAFFIC PREDICTION MODEL (STAMINA 2.0/ OPTIMA) was used to predict the design year noise levels.

The existing and design "L_{10}" levels for the project are presented in Table 3. According to the sensitive receptor sites along the preferred alternative (Table 3), there will be approximately 84 residences, 1 housing complex, 3 churches, a soccer field, a natural area, recreational area, and Whitten Park affected by the project. The preferred alternative will encompass sites 1, 2, 2A, 4, 5, 5A, 6, 7, 8, 9, 10 and 11. This table shows

that all sites except 2A, 3A, 4A, 5, 5A, 6, and *6 exceed the noise abatement Criteria for land use Category "B" as listed in Table 2. Sites 4A, 5A, and *5 exhibit a moderate impact between 6 and 15 dBA. Site *5 and *6 represent Alternative SF-1. Site 3A, located at and near Whitten Park, exhibits a substantial impact of above 15 dBA.

These sites have uncontrolled access which limits considerably the efficiency of noise barriers because of the opening in the barriers that the access roads create. A noise barrier of sufficient length to obtain significant noise reduction should normally extend eight (8) times the distance from the barrier to the sensitive site. Any access openings can considerably limit the barrier's effectiveness. It then becomes economically unreasonable to construct a barrier for a small noise reduction. Also, due to restricted sight distances at access openings noise barriers near highways could create safety problems. Alteration of horizontal and vertical alignments and traffic management measures such as reducing speed limits, prohibition of heavy trucks, etc. were considered in order to attenuate the noise levels for this project; however, these forms of attenuation were also found to be infeasible. Alteration of horizontal and vertical alignments for the project would require undesirable curvature in alignment, impossible drive construction, or additional construction costs and right-of-way purchases. Reduction of speed limits and the elimination of truck

traffic were determined to be contrary to the major reasons for building the highway, which are to facilitate better movement of traffic in the area.

These methods seem to be unreasonable and infeasible when compared to any limited noise attenuation they might offer. Because of these reasons, it is unlikely that any form of abatement measures will be recommended.

In the special cases of churches and hospitals along the project area, it was felt that interior noise abatement criteria would apply since there are few exterior activities. The construction of the structures is sufficient to reduce the interior levels to within the noise abatement criteria of 55 dBA.

Shelby Farms 4(f) Property	Distance From Proposed Project
1. Recreational Trails	R-O-W **
2. Shelby County Forest Natural Area North	R-O-W **
3. Shelby County Forest Natural Area South	2,500 Ft. *
4. Rifle Range	1,250 Ft. *
5. Soccer Fields	120 Ft. *
6. BMX Track	120 Ft. *
7. Arboretum	R-O-W **
(Amphitheater)	1,280 Ft. *
8. Plough Park	1,340 Ft. *

* Measured at the nearest traffic lane
** Nearest point at the right-of-way line

Noise levels at Shelby Farms Forest Natural Area North and the recreational trails, within the woodlands along the

margins of the Wolf River, will be substantial at a distance of 150 ft. and closer. With a forested area such as this, the noise levels will drop off, because of the trees, 5 dBA at each 100 foot interval to a maximum of 10 dBA noise reduction at a distance of 300 feet from the proposed project. The Arboretum noise levels will be the same as Shelby Farms Forest Natural Area North.

Table 3 shows that there will be a moderate impact at the soccer field of 7 dBA in the design year and the same levels will hold true for the BMX Track. Because of the inherent nature of the majority of activities at the soccer field and BMX Track, the project impact on these facilities will be reduced.

The other 4(f) properties (Shelby Farms Forest Natural Area South, rifle range, arboretum, and Plough Park) will not be affected because of their distances from the proposed project.

Because of the sporadic intervals of use in these areas, it is unlikely that any form of abatement will be recommended. Because of the length of the noise abatement walls, it seems to be unreasonable when compared to any noise attenuation they might offer.

Mitigation of Construction Noise Impacts

Construction procedures will be governed by the Standard Specifications for Road and Bridge Construction as issued by TDOT and as amended by the most recent applicable supplements. The contractor must observe any noise

ordinance in effect within the project limits. Detoured traffic shall be routed during construction so as to cause the least practicable noise impact upon residential and noise-sensitive areas.

Coordination With Local Officials

The following table, Table 4 indicates the future predicted noise levels and their critical distances. This information is being included to make local officials and planners aware of the anticipated highway noise levels.

The distances in the table are measured perpendicular to the center of the proposed near lane at an at-grade situation. The predicted "L_{10}" noise levels displayed are conservative and should be considered to be maximum (highest) noise levels expected at any location along the entire roadway at the same distance from the roadway. "L_{10}" is the decibel level measured on the "A" frequency weighing scale (dBA) which is exceeded no more than ten percent of the time during the peak traffic hour of the design year (2010).

Table 2 indicates the relationship between various land uses or activity categories and the upper limits of acceptable traffic noise levels for each category as established by ***FHPM*** 7-7-3.

4.8 Water Quality Impact

The proposed project will cross Fletcher Creek, Nonconnah Creek and the Wolf River. The Wolf River is the most prominent water resource within the project area. It

is typical of the larger streams in West Tennessee in that it has been extensively channelized. Water fluctuates greatly in depth, is normally turbid, and is polluted with industrial and domestic wastes. The constant turbidity is the product of poor agricultural practices, soil erosion on developing residential and commercial sites, and the inherent instability of the river banks resulting from channelization. Obviously, these conditions have been very detrimental to water quality and aquatic organisms. Although water parameters (temperature, dissolved oxygen, etc.) in a river this size are moderated by its large volume, the limiting factor which is controlling the quality of the habitat is the turbidity. This destroys breeding areas, smothers eggs and food organisms, and clogs the gills of less vigorous fish species. Principle fish species caught from the Wolf River are buffalo Ictiobus cyprinellus), carp (*Cyptinus* carpio), and bullheads (Ictalurus spp.). Other fishes present are the green sunfish (Lepomis cyanellus) and the bluegill (Lepomis macrochirus). Principle invertebrate organisms are mayfly (Ephemeroptera) and crayfish (Decapoda) species.

Historic data shows Fletcher Creek and Nonconnah Creek to be of very poor quality with little fishing value. Field studies over a three month period supported this. Habitat available to aquatic organisms was almost nonexistent with both creeks suffering from the heavy pollution which typifies that in the Wolf River. Fish and

invertebrate species in these creeks would be similar to those found in the Wolf River.

Siltation due to erosion associated with the construction phase is the most severe adverse impact to the aquatic environment. Although there is already heavy siltation existing, these waterways would be protected from further damages during construction.

Erosion impacts can be effectively controlled and minimized through use of those measures contained in the Tennessee Department of Transportation's "Standard Specifications for Road and Bridge Construction". This project will be built in compliance with these standards.

4.9 Wetland Impacts

The Corps of Engineers has determined the existence of wetlands adjacent to the Wolf River (See Appendix "B") in the area of the proposed project. Copies of the Draft Environmental Impact Statement were provided to the Environmental Protection Agency for their comments. These comments can be found in Section 6.3.2.

Field studies in 1984 (See Appendix "B") revealed a wetland in the project area near Kirby Road and Knight Arnold Road. It was an old meander of the original channel of Nonconnah Creek created by channelization operations. However, this area has been destroyed by being cleared and graded for residential development.

The primary functions of wetlands are such things as flood control, wildlife habitat, and ground water recharge.

The extent of wetlands in the project area has been deminished by dredging and development. The wetland that remains is relatively small. While any area of wetland is important, the contribution of the existing areas is relatively small.

There will be no loss of wetlands due to this project. The preferred alternative avoids all wetland areas by crossing the Wolf River at the location of the existing Walnut Grove Road Bridge.

4.10 Wildlife Impacts

The largest portion of land affected by the Kirby Parkway project borders existing highway right-of-way. This includes all of the land along Whitten Road north of the Wolf River and most of the land along Kirby Parkway south of the river. Urbanization has irrevocably altered the natural ecology. The only natural habitat remains as "strips" or "fringe" along fence rows, roads, and creeks. These areas support the growth of plant species which would not ordinarily be planted or allowed to grow in yards or croplands. This habitat type supports song birds, small mammals and reptiles. Usually these species are able to compete well in the disturbed environment and coexist with humans. Disregarding the Wolf River bottomlands, most of the trees along the right-of-way are located in these "fringe" locations. Clearing of these fringes for urban development is occurring at a rapid pace, which probably won't be changed by this project. However, those areas

impacted by road improvement will be temporarily lost, but replaced by new "fringe" with time.

The Preferred Alternative will cross the Wolf River at the location of the existing Walnut Grove Road Bridge which will require a wider bridge. Since this site has already been disturbed by previous construction, the resulting impacts would be less than construction on a new location.

The project will be built to allow wildlife movement along the river. No land will be taken from the Shelby Farms Forest Natural Areas.

4.11 Floodplain Impacts

Based on information provided in the Federal Emergency Management Agency (FEMA), Flood Hazard Boundary Maps, the proposed project would encroach on the 100-year floodplains of Fletcher Creek, Nonconnah Creek, and the Wolf River (See Figure 7), but is not considered to be a significant encroachment according to the criteria set forth in FHPM 6-7-3-2. This implements Executive Order 11988 because: (1) there is no direct support of floodplain development because of access control of the highway where it crosses the floodplain; (2) there is no potential for interruption or termination of a transportation facility which is needed for emergency vehicles or provides a community's only evacuation route; (3) the design will include an evaluation to eliminate a significant risk, and (4) there will be no significant adverse effect on the natural and beneficial floodplain values. The impact on the natural and the

beneficial floodplain values of the proposed project area would be the loss of wildlife habitat and the loss of vegetation. These would be short-term and minimal losses due to the re-establishment capabilities of the plant and animal species in the area within the right-of-way.

Since construction of the proposed project will involve crossing Fletcher Creek, Nonconnah Creek, and the Wolf River, and their floodplains, project development must proceed according to Executive Order 11988, "Floodplain Management". The Federal Emergency Management Agency (FEMA), Federal Insurance Administration, completed the Flood Insurance Study, City of Memphis, Shelby County, Tennessee in August, 1985, the Flood Insurance Study, City of Bartlett, Shelby County, Tennessee in June, 1981, the Flood Insurance study, City of Germantown, Shelby County, Tennessee in January, 1982, and the Flood Insurance Study, Shelby County, Tennessee in December, 1982. This study established a regulatory floodway (under the jurisdiction of the Corps of Engineers and the 100-year and 500-year flood boundaries. Figure 7 has been reproduced from Flood Boundary and Floodway Maps contained in the study and shows the 100-year flood and any regulatory floodway.

Encroachment on floodplain by new development or artificial fill reduces the flood-carrying capacity and increases the flood hazards in areas beyond the encroachment itself. One aspect of proper floodplain management involves balancing the economic gain from

floodplain development against the resulting increase in flood hazard. For purposes of the National Flood Insurance Program, the concept of a floodway is used as a tool to assist local communities in this aspect of floodplain management. Under this concept, the area of the 100-year flood was divided into a floodway and a floodway fringe. The floodway is a channel of the river, plus any adjacent floodplain areas that must be kept free of encroachment in order that the 100-year flood may be carried without substantial increases in flood heights. Minimum standards limit such increases in flood heights to 1.0 foot, provided that hazardous velocities are not produced. The area between the floodway and the boundary of the 100-year flood is termed the floodway fringe. The floodway fringe thus encompasses the portion of the floodplain that could be completely obstructed without increasing the water-surface elevation of the 100-year flood more than 1.0 foot at any time.

In order to insure that the proposed project would be compatible with floodplain management, early project coordination was sent to federal, state, and local agencies responsible for control of the Mississippi River Regulatory Floodway. These agencies are the Tennessee State Planning Office, Memphis and Shelby County Office of Planning and Development, and the U. S. Corps of Engineers. These agencies coordinate with FEMA. Comments from these

agencies did not identify any potential problems which would prevent the construction of the proposed project.

Preliminary hydrological studies have indicated that the proposed bridge locations are adequate and that the proposed project can be designed to convey anticipated floods. More detailed hydrological studies will be performed during the project design phase.

Construction of this project may require a permit from the U. S. Corps of Engineers under Section 404 of the Clean Water Act for any fill placed below ordinary high water areas. In compliance with the Memorandum of Agreement between the Department of the Army and the U. S. Department of Transportation, TDOT requested this agency to participate as a "cooperating agency" in the preparation of the draft EIS. The U. S. Corps of Engineers was asked to identify any specific areas of concern necessary to satisfy the requirements of the National Environmental Policy Act or other related laws which should be addressed prior to permit application. Their response is included in Appendix "A" and their concerns are addressed in this document.

There is no practicable alternative to this proposed improvement which would accomplish the objectives of this project without encroaching on the floodplains of Fletcher and Nonconnah Creeks and the Wolf River. All stream crossings will be designed to be as nearly perpendicular as practicable. The floodplain crossings will be designed so as to be consistent with the standards established for the

regulatory floodway and all other federal, state, or local regulations. This will be insured by continuing close project coordination with appropriate agencies responsible for the administration of the regulatory floodway.

The proposed project will increase the potential for development in the floodplain as a secondary impact. Such development will be under the control of local zoning policies.

The preferred alternative will cross the three floodplains (Fletcher Creek, Nonconnah Creek and Wolf River) at the location of an existing highway bridge. The Fletcher Creek floodplain will be crossed at the Whitten Road Bridge location. The Nonconnah Creek floodplain will be crossed at the Kirby Parkway Bridge location. And the Wolf River floodplain will be crossed at the Walnut Grove Road Bridge location.

4.12 Endangered Species Impacts

A review of pertinent literature and correspondence with state and federal agencies was conducted in an effort to determine the likelihood of the presence of endangered species or their preferred habitat. This was followed by a field review which was conducted for a total of eight days over a five month period.

In a letter, dated February 22, 1984, the U. S. Fish and Wildlife Service advised that they were not aware of any federally listed or proposed endangered or threatened

plants or animal species in the impact area of the proposed project. (See Appendix "B").

The Tennessee Department of Conservation's letter of March 12, 1984, listed two rare avian species which have been sighted in the Shelby Farms area. (See Appendix "B"). The first is the grasshopper sparrow (Ammodramus savannarum) which is considered threatened in Tennessee by the Tennessee Wildlife Resources Agency (TWRA) and the Tennessee Natural Heritage Program (TNHP). The other is the lark sparrow (Chondestes grammacus) which is considered in need of management by TWRA and of special concern by TNHP. Sightings of these species have been recorded within the boundaries of Shelby Farms.

Open grassy fields is the nesting habitat for these two uncommon species of birds which breed from April to late August. To prevent possible destruction of active nest sites, the Department has agreed to cut and grub the right-of-way through Shebly Farms between mid-September and March before construction begins.

4.13 Construction Impacts

There are several categories of unavoidable adverse environmental effects which are expected to occur during the actual construction phase of the project. These are (1) soil erosion and pollution of water courses, (2) disposal of solid waste, control of open burning and fugitive dust, (3) construction noise, and (4) detours, public safety, and utility relocations. These adverse

construction impacts are primarily short term in duration or only exist during the construction period.

Throughout the term of the project construction, soil erosion and pollution abatement safeguards shall be exercised to the fullest practicable extent. Construction procedures shall be governed by the Standard Specifications for Road and Bridge Construction as issued by the Tennessee Department of Transportation and as amended by the most recent applicable supplements, and by FHPM 6-7-3-1 dated September 25, 1974, on "Erosion and Sediment Control for Highway Construction" as issued by the U. S. Department of Transportation. When regulations from these two publications are in conflict, the more stringent of the two requirements will be applied.

Subsection 107.08 of the Standard Specifications for Road and bridge Construction and Section 209, "Temporary Project Water Pollution/Soil Erosion", which apply to protection of streams, lakes, and reservoirs, will be applicable to this proposed project.

Also, other special provisions of Tennessee highway specifications related to excavation and undercutting, landscape planting, operation of equipment in urbanized areas, sod certification, and traffic control devices will be observed during the construction of this project. The various American Association of State Highway and Transportation officials (AASHTO) standards, policies, and guidelines mentioned in FHPM 6-2-1-1 will be used to the

greatest degree applicable as they regard this project. The above measures will not eliminate siltation but are expected to reduce pollution to acceptable limits.

Solid waste generated by construction of this highway project will be disposed of in accordance with all state solid waste management rules and regulations. Landclearing waste construction and demolition materials shall be disposed of in a registered, sanitary landfill site if this is at all possible. If no landfill site is available or its use is not feasible, the contractor shall dispose of solid waste in a manner that will not create a hazard to public health or become a public nuisance in accordance with all state solid waste disposal rules and regulations.

During construction of this proposed project, public safety will be achieved by adhering to all applicable provisions of the Tennessee Standard Specifications for Road and Bridge Construction and to all applicable federal regulations. Care will be taken to provide traffic control devices, detour routes, warning devices, signs, barricades, flashers, flagmen, and any other precautions necessary to ensure the safety of persons and vehicles.

There is the possibility that some crossroads will be closed during the construction phase. The detouring of traffic will be coordinated with appropriate local officials.

Disruption of any utility services, if necessary, would be minimized as much as possible since it is the standard

policy of the Department of Transportation to coordinate all utility relocations with the affected utility companies.

4.14 Historical and Archaeological Impacts

Historical and archaeological surveys were conducted for this project by staff of the Department of Transportation. These reconnaissance reports, concurrence by the State Historic Preservation Office (SHPO), and related correspondence are in Appendix "C".

4.14.1 Historical Impacts

No properties in the project area are currently listed in the National Register of Historic Places, nor have any been determined to be eligible for listing. A field survey did not identify any previously unrecorded properties which might meet the criteria of the National Register as set forth in 36 CFR 60.4.

As a result of these investigations, it appears that the project, as presently designed, will have no effect on any buildings, structures, or objects listed in or eligible for listing in the National Register of Historic Places.

4.14.2 Archaeological Impacts

A search of the site survey files at the Tennessee Division of Archaeology indicated two previously recorded sites in the project area. Both sites, 40SY100 and 40SY101, were located in the project area immediately south of the Wolf River. Sometime prior to 1966 both sites

were apparently destroyed when the Wolf River was channelized. No evidence of either site remains.

The field survey revealed no additional archaeological sites in or adjacent to the project area. Based upon this finding, the proposed project will have no impact upon any archaeological property included in or potentially eligible for inclusion in the National Register of Historic Places pursuant to 36 CFR 60.4.

4.15 Energy Impacts

The energy requirements of the various construction alternatives are similar. They are greater than the energy requirements of the no-build alternative. Conversely, the post-construction, operational energy requirements of the facility should be less with the proposed project than with the no build alternative.

The fuel used during construction will be an indirect energy impact and should be more than offset by the fuel saved during operation of the proposed facility. Fuel used to operate vehicles on the new highway facility is considered to be a "direct" energy impact. Vehicles traveling on the multi-lane roadway will be able to operate under more energy efficient conditions with reduced travel time and distance.

4.16 Visual Impacts

The visual impacts of the proposed project upon the area, area residences, and neighborhood businesses is of considerable importance. While the project is a

combination of improvements to existing facilities as well as construction on new location, it is located near urbanized and suburban areas. Its completion will alter the visual quality of the area in both the view of the road and the view from the road.

There are two areas where adverse visual impacts will be more pronounced. One is along Whitten Road from Mullins Station Road to I-40. Since a seven (7) lane section would replace a two (2) lane section, any improvements to the existing facility would result in unavoidable adverse visual impacts.

The preferred alternative will use a modification of alternative WP-1. This proposed improvement will not take any property from Whitten Park. It will be modified during the design phase to shift the alignment eastward to reduce the right-of-way take from the properties on the west side of Whitten Road near Whitten Park. This would reduce the impact to these properties. Through this area, the number of dwellings on the east side of Whitten Road are fewer than on the west side. The proposed roadway would be nearer the Park facility, thereby, causing some visual impacts. This affected area does not contain any landscaped features such as trees and shrubbery.

The other area which is adversely impacted is Shelby Farms. The portion of the project built in Shelby Farms would serve as the connecter link to existing roadways to from a continuous north-south facility. This would,

however, abruptly alter the contour of the land and result in unavoidable adverse visual impacts.

A narrower median was considered during the early planning stages. However, this was not selected due to the local planning goals and preferences.

Appropriate measures will be taken to make the design and appearance of the new roadway as pleasing as possible, such as, contouring and seeding the slopes. Since this facility will be under the control of the local governments, maintenance would be under their jurisdiction

The preferred alternative will use a modification of alternative SF-4. It will cross the Wolf River at the location of the existing Walnut Grove Road Bridge. The intersection on the north side of the river will be redesigned to avoid the Shelby Farms Forest Natural Area. This alternative will minimize the visual impact through the forested area since it will result in the least amount of tree loss. The general appearance will be the same since there is already a bridge crossing there.

The section between Quail Hollow Road and Humphreys Boulevard will also suffer adverse visual impacts. The facility will change from a very wide two lane residential type street to a five lane facility. If it becomes necessary to widen the section, there would be a loss of right-of-way from the front yards which would constitute an esthetic loss.

4.17 Construction Relating to Pedestrians and Bicyclists

Sidewalk facilities, for pedestrians, are included as a part of the proposed project (See Figure 3). This would reduce the access impact to the community.

Six (6) foot bikeways were considered for the portion of the project between Massey Lane and Mullins Station Road. At a meeting held in January, 1986, officials from the Tennessee Department of Transportation, Shelby County Government, City of Memphis, and City of Bartlett agreed to omit the bikeways from the project. They felt that a bikeway adjacent to traffic lanes with a design speed of 50 mph was undesirable with regard to bicyclist safety.

4.18 Hazardous Waste Sites

A visual survey indicated the presence of underground storage tanks within the project corridor. These are located at the intersections of the Preferred Alternative with Quince Road, Shelbytown Parkway, I-40, and two at Hillshire Drive. Should any of these need to be removed, it will be done according to the appropriate State and Federal regulations.

The closed landfill, in Shelby Farms, is located between Walnut Grove Road and the Wolf River. For the approximate boundaries of the landfill, see Figure 5 in Chapter 3 and the United States Department of Interior letter in Appendix "E". The preferred alternative will avoid the closed landfill in Shelby Farms by crossing the

Wolf River at the existing Walnut Grove Road Bridge location.

4.19 Relationship Between Short-term Uses of the Environment and Long-term Productivity

The alternatives that were considered have similar impacts. The improvements are based on comprehensive local planning which considers the need for both present and future traffic requirements. Present and future land use development was used in developing the proposed project.

The local short-term impacts and use of resource by the proposed action is consistent with the maintenance and enhancement of long-term productivity for the local area.

4.20 Irreversible and Irretrievable Commitment of Resources

Implementation of the proposed action involves a commitment of a range of natural, physical, human, and fiscal resources. Land used in the construction of the proposed facility is considered an irreversible commitment during the time period that the land is used for a highway facility. However, if a greater need arises for use of the land or if the highway facility is no longer needed, the land can be converted to another use. At present, there is no reason to believe such a conversion will ever be necessary or desirable.

Considerable amounts of fossil fuels, labor, and highway construction materials such as cement, aggregate, and bituminous material are expended. Additionally, large amounts of labor and natural resources are used in the

fabrication and preparation of construction materials. These materials are generally not retrievable. However, they are not in short supply and their use will not have an adverse effect upon continued availability of these resources. Any construction will also require a substantial one-time expenditure of both local and Federal funds which are not retrievable.

The commitment of these resources is based on the concept that residents in the immediate area and region will benefit by the improved quality of the transportation system. These benefits will consist of improved accessibility and safety, savings in time, and greater availability of quality services which are anticipated to outweigh the commitment of these resources.

CHAPTER 4 FIGURES

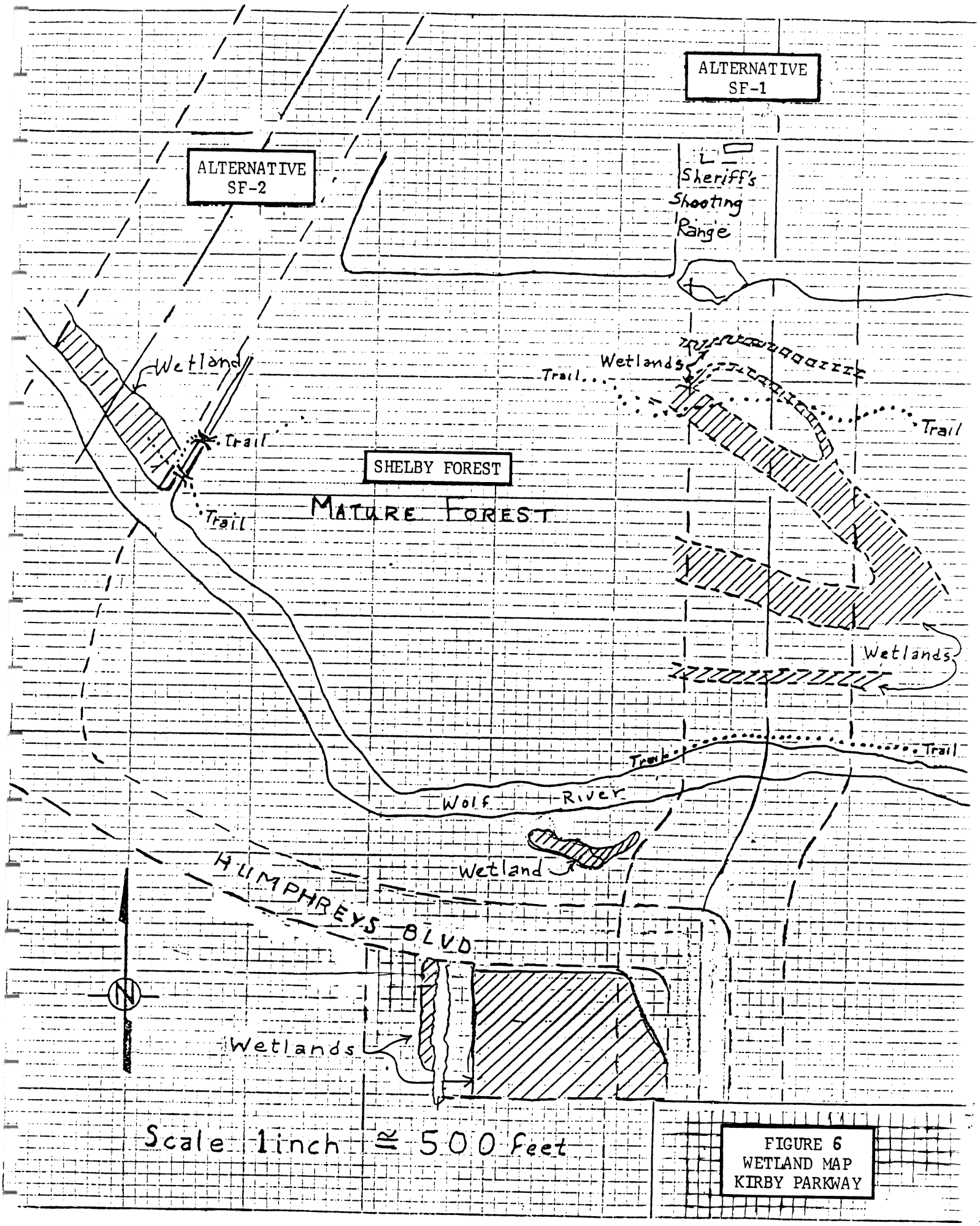
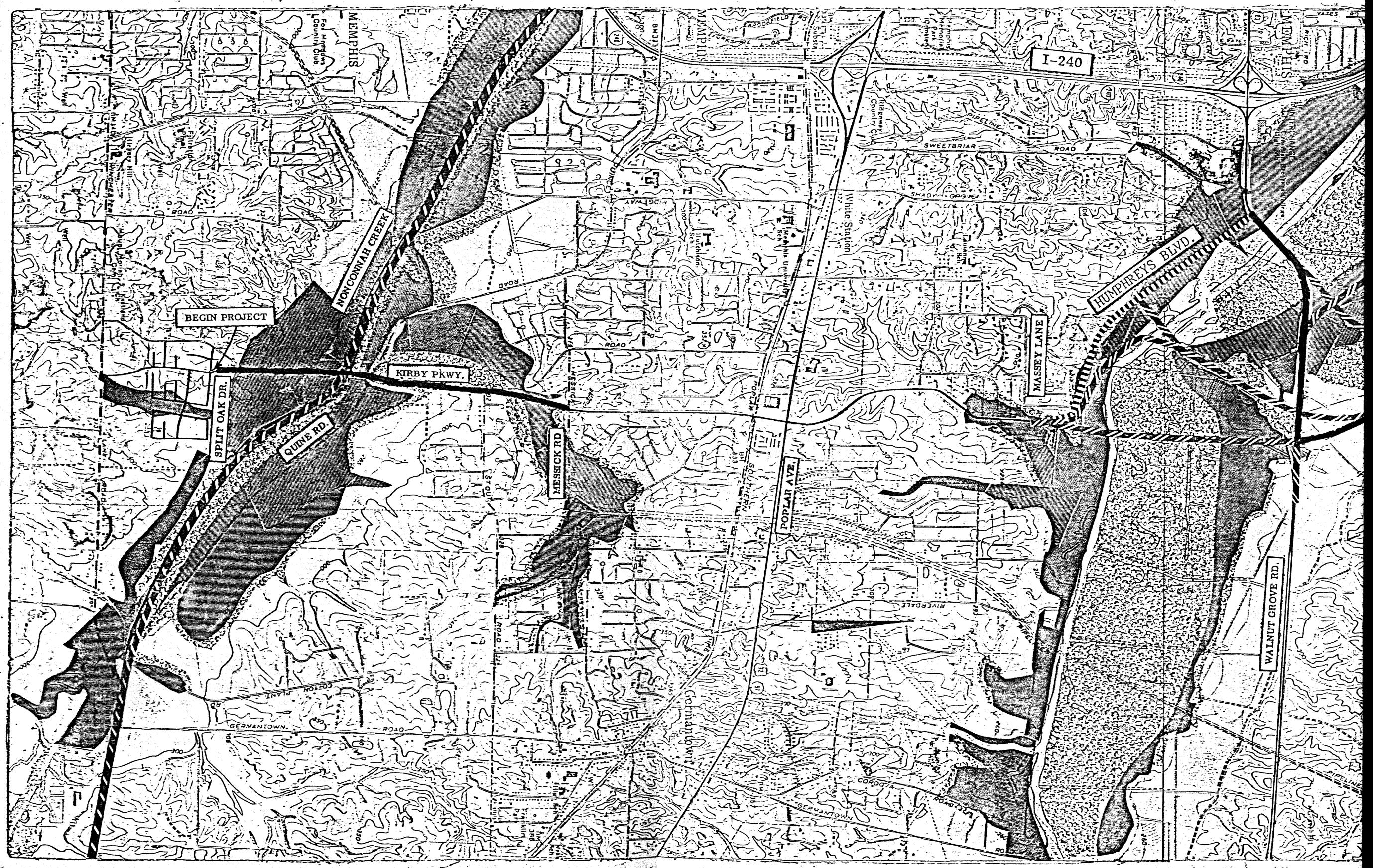


FIGURE 6
WETLAND MAP
KIRBY PARKWAY


BEGIN PROJECT
NONCONNAH CREEK
KIRBY PKWY.
SPLIT OAK DR.
QUINE RD.
MESSICK RD.
POPLAR AVE.
MASSEY LANE
HUMPHREYS BLVD.
WALNUT GROVE RD.
I-240
MEMPHIS
MEMPHIS
MEMPHIS
Fox Meadows Country Club
Oakhaven Country Club
White Station
Germantown
SWEETBRIAR ROAD
SHADY GROVE ROAD
GERMANTOWN ROAD
COTTON PLANT RD.
RIVERDALE
CORDOVA
PIPELINE

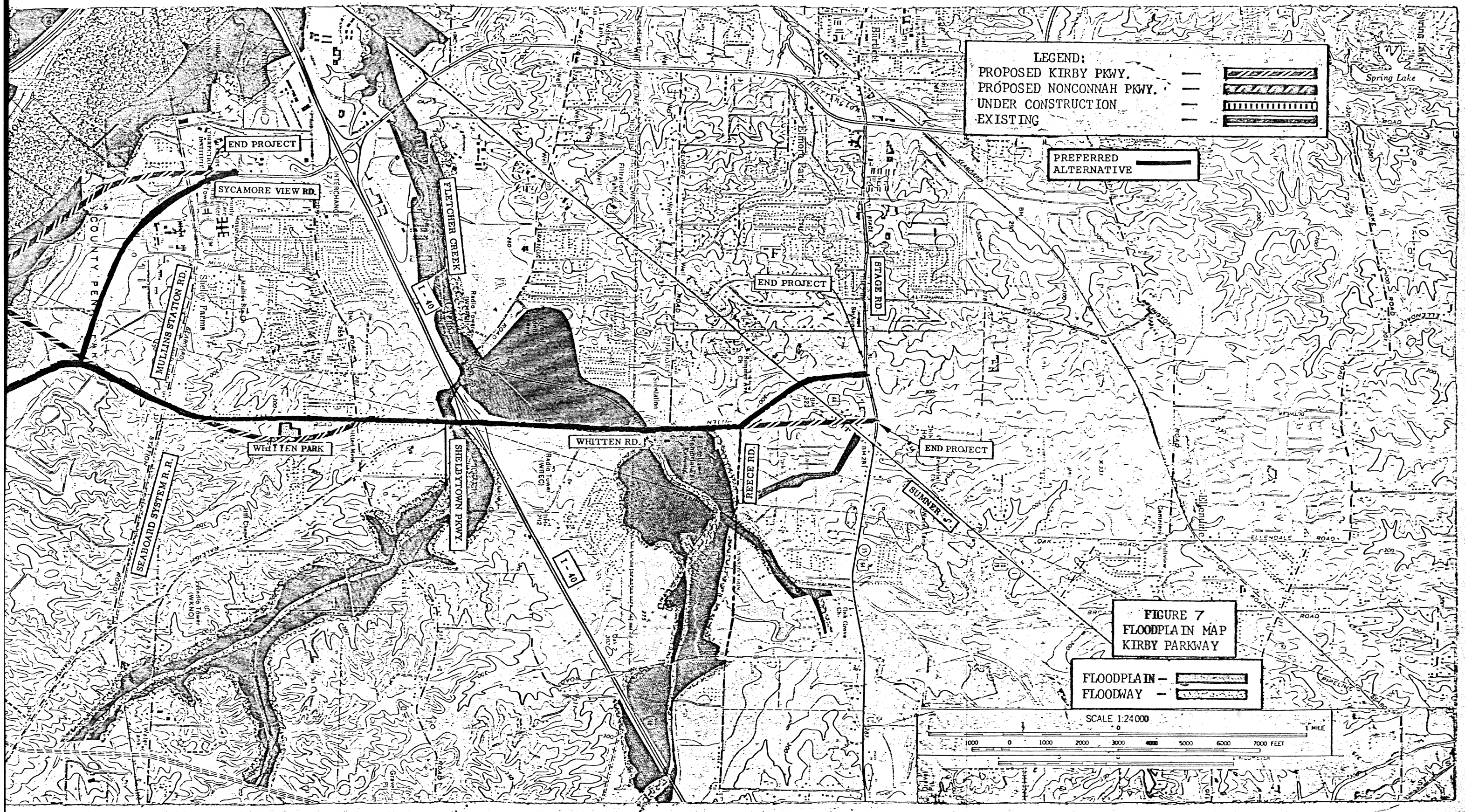
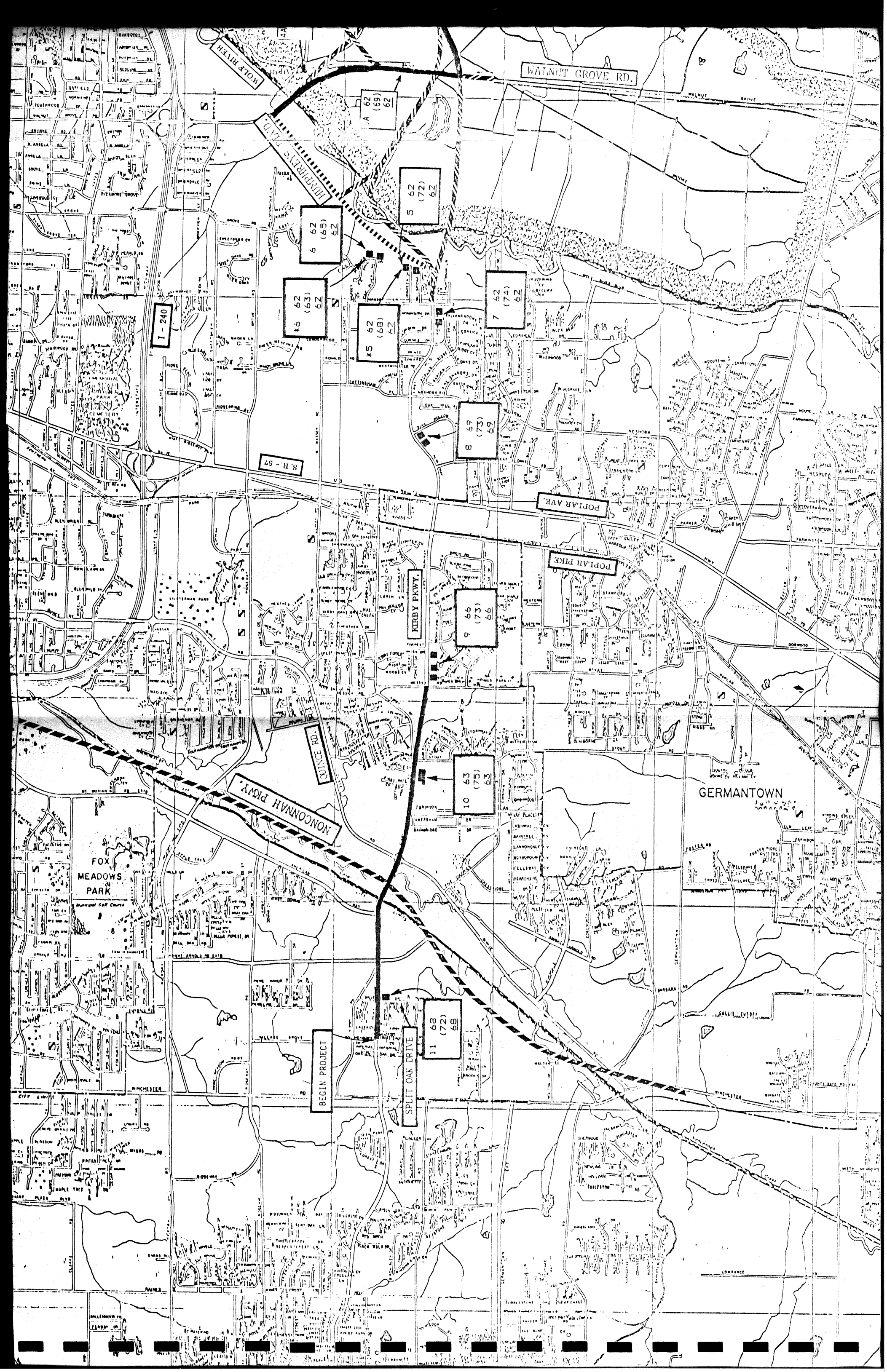


FIGURE 7
FLOODPLAIN MAP
KIRBY PARKWAY


WALNUT GROVE RD.
WOLF RIVER
HUMPHREYS BLVD.
I - 240
S.R. - 57
POPLAR AVE.
POPLAR PIKE
KIRBY PKWY.
NONCONNAH PKWY.
GERMANTOWN
FOX MEADOWS PARK
BEGIN PROJECT
SPLIT OAK DRIVE
A 62 (69) 62
5 62 (72) 62
6 62 (65) 62
*6 62 (63) 62
*5 62 (68) 62
7 62 (74) 62
8 69 (73) 69
9 66 (73) 66
10 63 (75) 63
11 68 (72) 68

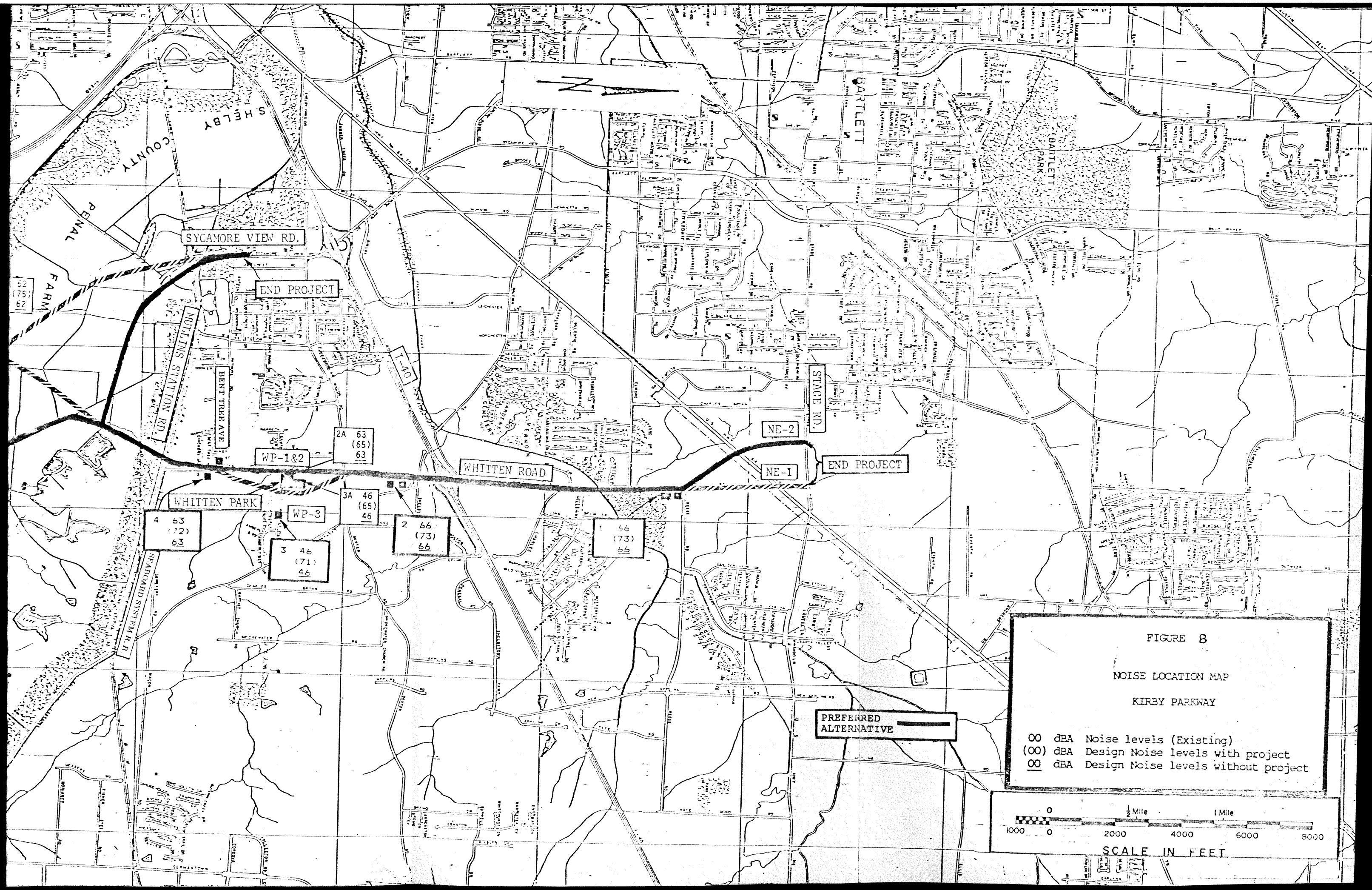


FIGURE 8

NOISE LOCATION MAP

KIRBY PARKWAY

00 dBA Noise levels (Existing)
(00) dBA Design Noise levels with project
00 dBA Design Noise levels without project

TABLE 2

RELATIONSHIPS OF LAND USE AND ACTIVITY CATEGORIES

	Land Use or Activity Category	FHWA Noise Abatement Criteria "L_{10}" Levels
A.	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is esstential if the area is to continue to serve its intended purpose.	60 (Exterior)
B.	Picnic areas, recreation areas, playgrounds, active sports areas, and parks which are not included in the above category and residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.	70 (Exterior)
C.	Developed lands, properties or activities not included in either of the above two categories.	75 (Exterior)
D.	Residences, motels, hotels, public meeting rooms, schools, chuches, libraries, hospitals, and auditoriums	55 (Interior)

TABLE 3
SUMMARY AND COMPARISON OF EXISTING AND PREDICTED
"L_{10}" NOISE LEVELS IN dBA

Location Point	Existing Noise Levels	Design Year Noise Levels With Project (2010)	Design Year Noise Levels Without Project (2010)	Number & Type of Sensitive Receptors Represented
1	66	73	66	6 Residences
2	66	73	66	1 Church 8 Residences
2A	63	65	63	Whitten Park
3	46	71	46	Housing Complex
3A	46	65	46	Whitten Park
4	63	72	63	1 Church 12 Residences
4A	62	79	62	Shelby Farms Forest Natural Area
5	62	72	62	5 Residences
5A	62	69	62	Soccer Field
5*	62	68	62	5 Residences
6	62	65	62	3 Residences
6*	62	63	62	3 Residences
7	62	74	62	23 Residences
8	69	73	69	Housing Complex
9	66	73	66	11 Residences
10	63	75	63	1 Church 10 Residences
11	68	72	68	6 Residences

*For Alternative SF-1
(all other points are the same for all alternatives)

TABLE 4

Design Year (2010) Predicted "L_{10}"
Project-Contributed Noise Levels (dBA)

Distance *	"L_{10}" Noise Level
100 feet (46 m.)	73 dBA
200 feet (77 m.)	69 dBA
300 feet (107 m.)	66 dBA
400 feet (138 m.)	65 dBA
500 feet (168 m.)	63 dBA
600 feet (199 m.)	62 dBA
700 feet (230 m.)	61 dBA
800 feet (260 m.)	60 dBA
900 feet (291 m.)	59 dBA
1000 feet (321 m.)	58 dBA
1200 feet (382 m.)	57 dBA

* Perpendicular distance to the center of the proposed traffic lane for an at-grade situation.

CHAPTER V

SECTION 4(F) EVALUATIONS

The Draft Environmental Impact Statement (DEIS) described the proposed project's impacts to three (3) properties which would be covered by Section 4(f) of the Department of Transportation Act of 1966, as amended by Section 138 of the Federal Aid Highway Act of 1968. They were: Whitten Park; the Shelby Forest Trails; and the Shelby Farms Forest Natural Areas. After evaluating the DEIS and the comments received as a result of circulating the document and the public hearing, the preferred alternative was selected. This alternative will avoid all of these Section 4(f) properties except the Shelby Forest Trails. Since the Trails extend through the entire length of the forested area along the Wolf River, it is not possible to avoid them and it is not feasible to go around the Shelby Farms property. It will not be necessary to take any of the trails, however, crossing over them would constitute a use of the 4(f) property.

The preferred alternative will avoid the Shelby Farms Forest Natural Areas by crossing the Wolf River at the Walnut Grove Road Bridge location. All of the other 4(f) properties in Shelby Farms will be avoided. It will also avoid taking any property from Whitten Park since an 80-foot strip was reserved for the proposed improvement.

5.1 Section 4(f) Evaluation for the Shelby Forest Trails

5.1.1 Statement of Determination

The Tennessee Department of Transportation (TDOT), with funding made available through the Federal Highway Administration (FHWA) is planning for the construction of Kirby Parkway from Split Oak Drive to Messick Road and from Humphreys Boulevard to Stage Road with an extension of Sycamore View Road from Mullins Station Road to Kirby Parkway in Memphis, Shelby County. The length of the project is approximately 10 miles and is located in the East Memphis area (See Figure 1).

There are a number of recreational trails in the bottomland hardwoods which is known as Shelby Farms Forest (See Figure 12). All of the design alternatives under consideration for the proposed project (See Figure 2) would cross these trails. Therefore, they impact recreational facilities, requiring a determination under Section 4(f) of the Department of Transportation Act of 1966, as amended by Section 138 of the Federal Aid Highway Act of 1968.

Section 4(f) declares it "...to be the national policy that special effort should be made to preserve the natural beauty of the countryside and public park and recreation lands, wildlife and waterfowl refuges, and historic sites". Section 4(f) further requires that "...the secretary shall not approve any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local

significance as determined by the federal, state or local officials having jurisdiction thereof, or any land from a historic site of national, state or local significance as so determined by such officials unless: (1) there is no feasible or prudent alternative to the use of such land, and (2) such program includes all possible planning to minimize harm to such park, recreation area, wildlife and waterfowl refuge, or historic site resulting from such use."

5.1.2 Description of the Proposed Action

The portion of the proposed project which impacts the Shelby Forest Trails would be built within a 114-foot right-of-way. It would have six traffic lanes, a raised median and sidewalks with curbs and gutters.

The Preferred Alternative will cross the Wolf River at the existing Walnut Grove Road Bridge. The bridge would have to be widened. This alternative would be bounded to the north by the Shelby Farms Forest Natural Area North and would cross one trail.

The purpose and need for the entire project was discussed in Chapter I. Chapter II contains the description of the complete project which includes alternatives SF-1, SF-2, SF-3, and SF-4.

5.1.3 Description of the Section 4(f) Resource

5.1.3.1 Trail Description

The remnant of a once vast bottomland hardwood forest remains along the margin of the Wolf River as a greenbelt. As the local inhabitants walked in these areas, a

series of trails were created. The quality of these trails vary from crude and difficult to use trails along much of the length of the river to well developed and easily used trails like the ones which are maintained in the Shelby Farms areas.

There are two types of trails (See Figure 12) in Shelby Farms: those used for hiking and bicycling and those used for motorized vehicles such as motorcycles and all terrain vehicles (ATV's). The trails to the south of Walnut Grove Road are for hiking and bicycling while those to the north are used by motorized vehicles.

5.1.3.2 **Activities and Usage**

The hiking trails, which are located between Germantown Boulevard and Walnut Grove Road are used by individuals as well as organized groups. Some of the groups which use the trails are school groups, church groups, scout troups, and birding clubs. Some of the trails are relatively flat and are sometimes used by elderly and physically impaired individuals.

The trails provide a resource for a wide range of activities. These activities generally fall into one or both of two categories; recreational and educational. Walking the trails provide exercise and enjoyment of nature to many. Some utilize the habitat around the trails to study and observe the plant and animal life. There is some overnight camping along the trails.

The trails between Walnut Grove Road and Mullins Station Road are utilized by individuals on motorized vehicles, either motorbikes or all terrain vehicles (ATV's).

Although the trails were developed and are maintained by Shelby County, their use is not supervised. No records are maintained as to the number of individuals using the trails. They have, however observed that the spring and fall are the seasons with the highest usage.

5.1.4 Impacts on the Section 4(f) Resource

There were four (4) design alternatives which impact the recreational trails (See Figure 12). These alternatives cross the trails at three (3) different locations. SF-1 (a thru d) alternatives cross the trails through an area known as Shelby Farms Forests. SF-2 (a and b) alternatives cross them at a narrowing of the greenbelt near the landfill. SF-3 and SF-4 (a and b) cross them at the existing Walnut Grove Road location.

Alternatives SF-1 and SF-2 would cross the Wolf River on a new location but SF-3 and SF-4 would cross it at the existing Walnut Grove Road bridge location. Therefore, the noise increase impacts from SF-3 and SF-4 would be less than those for SF-1 and SF-2 because there is already a disturbance due to the existing bridge.

The other impacts are discussed separately by alternative.

5.1.4.1 **SF-1 Alternative**

The SF-1 alternatives would have crossed the Shelby Farms area though a 413-acre woodland known as the Shelby Farms Forest. This would cause the alignment to cross two (2) hiking trails (See Figure 12). There were four (4) bridge design concepts for this alternative. One of the bridge designs, which was designated the SF-1a alternative, would span the trail nearest the Wolf River, but it would completely block the other trail. The other three (3) bridge designs, designated SF-1b, SF-1c, and SF-1d, would span both trails.

Other than completely blocking a trail, as with SF-1a alternative, the main impact to the trails would be visual. The construction of the project would require the cutting of some of the vegetation which would alter the view from the trails. The bridge itself would also alter the view. While some of the vegetation would regrow, the bridge would remain a permanent alteration of the area.

The construction of the project would cause temporary disruptions in the use of the trails.

5.1.4.2 **SF-2 Alternative**

The SF-2 alternatives would have crossed the Section 4(f) Resource near the landfill (See Figure 12). At this location, the trails have merged into one trail. This is due to the narrowing of the woodlands at this location.

Both of the alternatives, SF-2a and SF-2b, would have spaned the trail. As with the SF-1 alternatives, the main

impact to the trail would be visual due to the construction of a permanent overhead bridge structure as well as the cutting of vegetation during construction. There would also be construction disruption to the use of the trail.

These alternatives differ by the angle which they cross the trails. The SF-2a alternative crosses at nearly a 90° angle. The SF-2b alternative crosses at a skew angle. This would increase the impact on the trails because the structure would be wider.

5.1.4.3 **SF-3 and SF-4 Alternatives**

These alternatives would have crossed the Section 4(f) Resource at the existing Walnut Grove Road Bridge location (See Figure 12). This would require the bridge to be widened. There is one trail under the bridge.

The widening of an existing structure would cause less disturbances to the woodland area than the construction of a new bridge. There would; however, be some damage to the vegetation during the construction phase. Disruptions to the use of the trail would also occur during construction.

5.1.5 **Avoidance Alternatives**

The trails in the woodland on the northern margins of the Wolf River extend beyond the boarders of Shelby Farms. However to avoid the trails that are within Shelby Farms, two (2) alternatives were investigated. These alternatives would direct traffic from Kirby Parkway onto proposed Humphreys Boulevard, and then to the existing facilities to the east or west of Shelby Farms.

An alternative to the west of Shelby Farms would require the use of Humphreys Boulevard, Walnut Grove Road, I-240, and I-40 (See Figure 13). An alternative to the east of Shelby Farms would use the proposed Humphreys Boulevard, Germantown Parkway, and I-40 (See Figure 13).

Both alternatives would defeat the purpose of the proposed project (See Section 1.1). Memphis Road Planning is based on the one-mile grid concept, use of either alternative would leave a gap in that system between Humphreys Boulevard and Stage Road. Part of the purpose of the project was to provide a near north-south route which would help relieve traffic problems on the existing transportation system in the vicinity of the project. Using the existing streets would not accomplish this objective. These alternatives would also add to the length of travel and travel time for those using Kirby Parkway.

5.1.6 Measures to Minimize Harm

Cutting of the trees near the Wolf River will be held to the minimum necessary for the bridge construction. The provisions of the Standard Specifications for Road and Bridge Construction will be followed throughout the term of the project construction.

The elimination of bikeways for the proposed project will result in a narrower section crossing the trails. If any trails are blocked or destroyed due to construction, they will be restored to be compatible with the existing trails.

The structure which will be built over the trails will have sufficient clearance for users to pass under them.

5.1.7 Coordination

Initial coordination was sent to various Federal, regional, State, and local agencies and officials on February 1, 1984, for their review and comment. A discussion of the coordination with these agencies and their responses are in Chapter VI. Of those responding to the initial coordination, no comments were offered as to the recreational trails.

After the initial coordination phase was completed the recreational trails were identified as a Section 4(f) resource. Also, there was growing opposition to crossing the woodlands containing the hiking trails. In a response to this, the County has been involved in developing alternate routes through the Shelby Farms area.

In a meeting held on January 29, 1987, the County indicated they wanted to provide for both human and animal movements through the woodland area. They also wanted an underpass for the loop road near the woodlands. The Tennessee Department of Transportation agreed to develop alternatives which provided this. It was also decided not to provide noise walls due to the visual impact, maintenance, additional right-of-way required, and a feeling that the noise impact was not significant.

In a meeting held on October 11, 1988, county officials said that "After all studies have been completed and the results have been presented for public review and comment,

Shelby County will support the alternatives that best meets the need of the community as it relates to traffic and environment".

After completion of the Draft Environmental Impact Statement, it was distributed to various Federal, State, local and private agencies for their review and response. This includes coordination with the Headquarters of the Department of the Interior and those agencies under that Department. In addition, a public hearing was held on December 19, 1988. The results of these activities can be found in section 6.3.

The City of Memphis and the Shelby County Government, which includes the agencies responsible for the various park facilities, had expressed support for the Preferred Alternative.

5.1.8 Preferred Alternative

The Preferred Alternative will cross the Wolf River at the existing Walnut Grove Road Bridge location. It will proceed westward along Walnut Grove Road to a point north of the shooting range where it turns northward toward its connection with Whitten Road. About midway between Walnut Grove Road and Mullins Station Road, Kirby Parkway intersects with the Sycamore View Road extension portion of the alternative (See Figure 2.1).

Since the project will cross the trails at the Walnut Grove Road bridge location, the impact would be less than at

a location which would require a bridge across the Wolf River on new location. This will also require a loss of less forested area than any of the other alternatives considered. This alternative will minimize the adverse impacts to the trails.

The noise levels for this alternative would increase by 13 dBA from 62 dBA to 75 dBA.

5.1.9 **EVALUATION**

Recreational trails extend the entire length of the Shelby Farms property along the margins of the Wolf River (See Figure 12). The extent of these trails makes it impossible to build a facility through Shelby Farms without crossing them.

As a result, alternatives were developed and studied to either avoid Shelby Farms or to minimize harm to the Section 4(f) property. The alternatives to minimize harm are shown on Figure 12 and those to avoid Shelby Farms are shown on Figure 13.

The alternatives to avoid Shelby Farms were not selected due to the extensive redirection of traffic as well as the increased distance and driving time required to go around the property. The existing facilities are already extensively used and have traffic problems of their own.

Alternative SF-1 was not selected because it crossed another Section 4(f) property, the Shelby Farms Forest Natural Area South. In addition, it would cross two trails

which would require a new bridge to be built over the Wolf River and the trails.

Alternative SF-2 would also have required a new bridge to be built over the Wolf River and the trails. Its alignment would cross an old landfill which could present serious environmental problems. It would require the use of the Perpetual Open Space Conservation Easement, on the south side of the Wolf River, which was required by the Section 401 certification of the 404 permit for Humphreys Boulevard.

Alternatives SF-3&4 were not selected since they would both require the use of another Section 4(f) property, the Shelby Farms Forest Natural Area North.

Like Alternatives SF-3&4, the Preferred Alternative also crosses the Wolf River at the existing Walnut Grove Road Bridge location. However, its alignment was modified to avoid the Shelby Farms Forest Natural Area. This alternative minimizes the impacts to the recreational trails. It will cross only one trail. The crossing will be at a location where the trail is already crossed by a bridge. The additional bridge width necessary to build the preferred alternative would be less than having to build an entire bridge on a new location.

Based upon the above considerations, there is no feasible and prudent alternative to the use of land from the Recreational Trails and the proposed action includes all possible planning to minimize harm to the trails resulting from such use.

CHAPTER 5 FIGURES

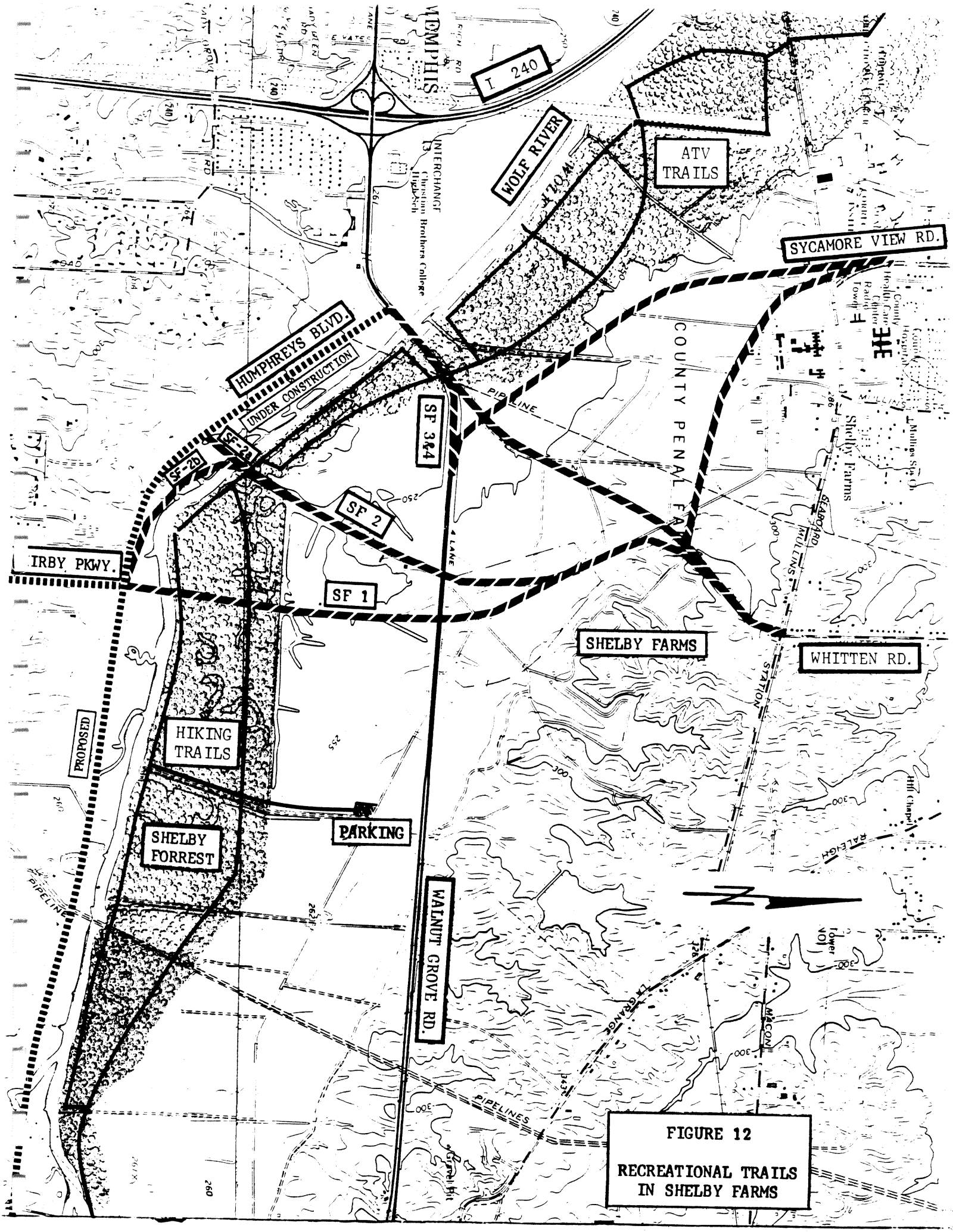


FIGURE 12

RECREATIONAL TRAILS IN SHELBY FARMS

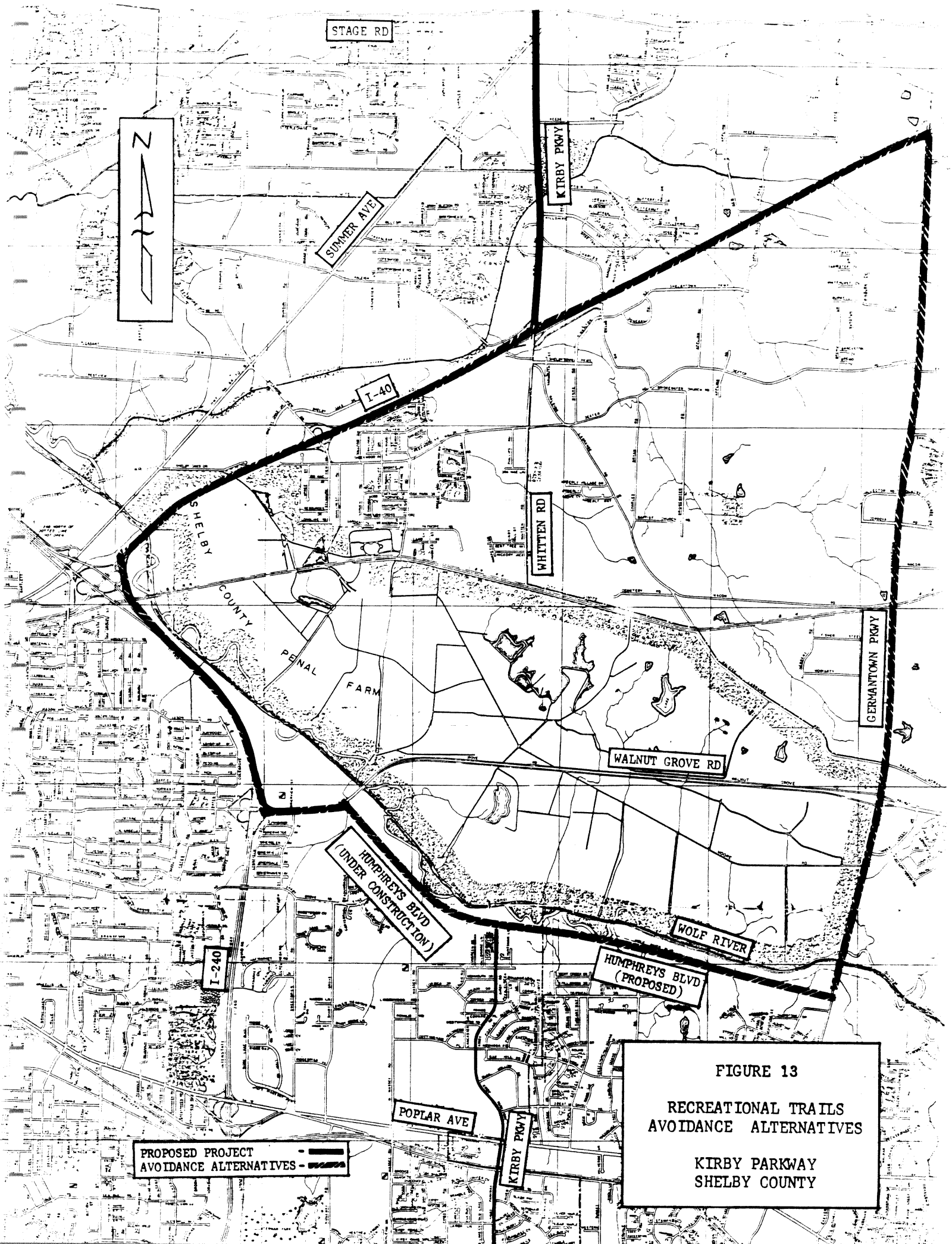


FIGURE 13

RECREATIONAL TRAILS
AVOIDANCE ALTERNATIVES

KIRBY PARKWAY
SHELBY COUNTY

CHAPTER VI

COORDINATION AND COMMENTS

6.1 Initial Coordination

Initial Coordination packages were sent out on February 1, 1984, to fifty-nine (59) Federal, State, and Local agencies and officials for their comments on the proposed project. There were a total of seventeen (17) replies. Copies of those replies and a list of those who received initial coordination packages is in Appendix "A".

Summarized below are the comments received as a result of the initial coordination phase. Each comment is addressed immediately below it.

Summary and Disposition of Comments Received During Initial Coordination

FEDERAL AGENCIES

U. S. Department of Interior, Fish and Wildlife Service

Comments: They were concerned about the impacts of the project on the Nonconnah Creek and the Wolf River floodplains.

Disposition: This is discussed in Section 4.11.

U. S. Department of Interior, Geological Survey

Comments: They indicated that the project would have no effect on any of their programs.

They did not foresee any major potential hydrologic impacts.

Federal Energy Regulatory Commission

Comments: They are concerned that provisions be made to protect electrical transmission lines and natural gas pipelines which may be in the construction area.

Tennessee Valley Authority

Comments: Their "Cordova-West Memphis 500-KV Line will be affected by the proposed project." Any relocations would be handled according "to the terms of Master Agreement TV-34932A between the State and TVA.

Disposition: This is discussed in Section 4.13.

Department of Army, Corps of Engineers

Comments: They feel the original channel design for the Wolf River should be considered as a minimum for the proposed bridge. They are concerned with erosion control at the Nonconnah Creek crossing. They are also concerned about wetlands within the project.

Disposition: The bridge at the Wolf River crossing will be designed to provide adequate vertical and horizontal

clearance so as to maintain current river operations. All water way crossings will be protected against erosion. See Section 4.13. Wetlands are discussed in Section 4.9.

Federal Aviation Administration

Comments: The project will not adversely affect any work planned by their office.

Disposition: None.

Environmental Protection Agency

Comments: Their main concerns involve potential adverse impacts to wetlands, water quality, air quality, and noise.

Disposition: Their concerns were addressed in the following sections of the EIS:

Wetlands	-	Section 4.9
Water Quality	-	Section 4.8
Air and Noise	-	Section 4.6 and 4.7

U. S. Coast Guard

Comments: They offered no comments on the proposed project.

STATE AGENCIES

Mississippi-Arkansas-Tennessee Council of Government

Memphis Delta Development District

Comments: They suggested that a bikeway be considered for the project.

Disposition: This was discussed in Section 4.17.

Department of Transportation, Office of Aeronautics

Comments: Project does not conflict with any present or future programs.

Disposition: None.

Department of Conservation

Comments: They were concerned about the possible impact of the project on two rare bird species.

Disposition: This was discussed in Section 4.12.

Tennessee Wildlife Resources Agency

Comments: They expressed concerns about the project impact on wetlands, floodways, and clearing for right-of-way through woodlands.

Disposition: Wetlands and floodplains are discussed in Section 4.9 and 4.11. Clearing of woodland was discussed in Section 4.10.

LOCAL AGENCIES

City of Memphis

Comments: They expressed support for the project.

Memphis and Shelby County Office of Planning and Development

Comments: They feel the project is consistent with local plans.

City of Germantown

Comments: They expressed support for the project.

City of Bartlett

Comments: They expressed support for the project.

Greentree Civic Association

Comments: They expressed concern about the project's impact on their subdivision.

Disposition: This was discussed in Section 4.3.

6.2 Public Meeting

A public meeting was held by the Shelby County Division of Public Works on November 15, 1984, at the Shelby County Administration Building. A total of seventeen (17) people attended the meeting; none of whom were private citizens. All comments were favorable toward the proposed project.

6.3 Public Hearing

A public hearing was held on December 19, 1988, in Shelby County at the Agri-Center which is located on the Shelby Farms property. It was a corridor hearing for the entire project. The sections between Split Oak Road to Messick Road and Macon Road to Stage Road were also design hearings.

The hearing was well attended with 514 people signing the register. Of those signing in, 109 gave a verbal statement to the court reporter. An additional 831 people submitted a written statement. This made a total of 940 commentors. A petition was also received

which contained 2933 different signatures. Therefore, 3873 people expressed an opinion about at least some issue concerning the proposed project.

Most of the 940 people who submitted either a written of verbal opinion, addressed more than one issue. Table 5 is a detailed listing of the issues which were raised as a result of the Public Hearing.

6.3.1 Analysis of Main Issues

Many different issues were raised during the hearing. However, the majority of the comments involved the portion of the project which would cross the Shelby Farms property.

One hundred seventy (170) people only stated they were against the project altogether. Most of these people cited Shelby Farms and environmental issues as the reason. A few cited the possible loss of their homes.

Ninety-one (91) people expressed support for the project as their only comment. The most often cited reason for support was to relieve traffic congestion and accommodate progress in the area.

It is difficult to determine the exact number of people who support the project. This is because of those stating an alternative preference, their support was conditional on that alternative being selected.

One hundred forty-five (145) opposed the project going through the Shelby Farms Forest area. The

petition containing 2933 signatures also expressed the same comment. That would make 3078 people against disturbing the forest.

There were a number of people which indicated a preference as to the alternative crossing the Wolf River. Two hundred fifty-one (251) preferred Alternative SF-1. Two hundred fifty-seven (257) preferred either Alternative SF-3 or 4. Their main concern, in picking either SF-3 and 4, was that there be no new bridge built over the Wolf River because this would further disturb the ecology.

If the comments indicating a concern for the forest area were grouped together, about 578 comments were received opposing any alignment which would bisect the forest. When the petition is added to this number, it would increase to about 3511, opposed to bisecting the forest.

Of those expressing an alternative preference at Whitten Park and the north-end of the project, the clear choise was WP-3 and NE-2. Twenty-one (21) preferred WP-3 and nineteen (19) preferred NE-2.

6.3.2 Disposition of Comments

The areas of concern of the commentors are generally as follows (the number of comments received is shown in parenthesis):

(1) In favor of the project (91)

(2) Against the project (170)

(3) Don't cross Shelby Farms Forest (145)

(If the petition containing 2933 signatures are included, the number of comments increases to 3078.)

Disposition: The preferred alternative will avoid the forest area. See Section 2.9.

(4) Prefers Alternative SF-1 (251)

Prefers Alternative SF-2 (6)

Prefers Alternative SF-3 (2)

Prefers Alternative SF-4 (114)

Prefers Alternative SF-3 or 4 (131)

Disposition: The preferred alternative will cross the Wolf River at the present location of the Walnut Grove Road Bridge. It will be similar to Alternative SF-3 and 4. See Section 2.9.

(5) No new bridge over the Wolf River (10)

Disposition: The existing Walnut Grove Road Bridge will be widened for the proposed project. See Section 2.9.

(6) Wants to improve the existing facilities (12)

Disposition: The existing facilities will be used. (Humphreys Boulevard and Walnut Grove Road).

(7) Wants to investigate an alternative around the perimeter of Shelby Farms (20)

Disposition: Since the Shelby Farms property is bounded by I-240 and I-40 to the west and Germantown Parkway to the east, it would not be practicable to utilize these roadways in order to go around the farms.

(8) Prefers Alternative WP-1 (2)

Prefers Alternative WP-2 (4)

Prefers Alternative WP-3 (21)

Disposition: Alternative WP-1 will be modified and used as a part of the preferred alternative.

(9) Prefers Alternative NE-1 (1)

Prefers Alternative NE-2 (19)

Disposition: Alternative NE-2 was selected as the preferred alternative. See Section 2.0.

(10) Wants to Cul-de-sac Kirby Road (34)

Doesn't want to cul-de-sac Kirby Road (3)

Disposition: Kirby Road will have an intersection with Kirby Parkway.

(11) Wants to restrict speed limit (15)

Disposition: The speed limit will be established by the local authorities.

(12) Wants to prohibit truck traffic (15)

Disposition: Any traffic restriction would be under the control of local authorities.

(13) Wants to remove the Sycamore View Road Extension (6)

Disposition: The Sycamore View Road extension was included as a part of the preferred alternative. See Section 2.9.

(14) Wants improved mass transit (3)

Disposition: Mass transit will not meet the purpose and need. Such improvements are the responsibility of MATA.

(15) Don't widen Kirby Parkway between Massey Lane and Humphreys Boulevard (4)

Disposition: This section will not be improved as a part of the proposed project. However, it may be widened later to meet future traffic demands.

(16) Improve Kirby Parkway between Poplar Avenue and Massey Lane (1)

Don't improve this section (1)

Disposition: Improvement to this section will not be included as a part of the proposed project. However, it would have to be widened in the future, as traffic volumes increase.

(17) Wants independent engineering study (6)

Disposition: It was felt that an independent study was not needed.

(18) Feels that a 7-lane section is too much (6)

Disposition: It was felt that the proposed cross-section was justified to meet future traffic needs.

(19) Against disturbing grave sites (5)

Disposition: No grave sites will be disturbed by the proposed project.

(20) Feels the DEIS was inadequate (10)

(21) Wants noise barriers (10)

Disposition: Noise barriers will not be included as a part of the project. See Section 4.7.

(22) Wants visual barriers (3)

Disposition: Barriers through the forested area along the Wolf River would not be feasible since only the trees to be cut would be those necessary to build the project.

(23) Does not want borrow pits located in Shelby Farms (2)

Disposition: Location of borrow pits is a part of the responsibility of the contractor. However, there are regulation governing its location. The

contractor would also have to obtain the consent of the property owners.

(24) Wants a meander alignment through Shelby Farms (6))

Disposition: The proposed alignment has several curves within the Shelby Farms area.

(25) Wants to replant forest lost to construction (6)

Disposition: The preferred alignment will not take any Shelby Farms Forest Natural Area property.

(26) Wants the bridge over the Wolf River to accommodate the trails and wildlife movements (6)

Disposition: Since the existing bridge over the Wolf River will be widened, the physical use of the trails, as well as wildlife movements, should be about the same after the construction phase.

(27) Wants a private group established to supervise during the construction phase (6)

Disposition: There are provisions for the supervision and inspection of projects. It is felt that a private group would not be necessary.

(28) Wants the roadway below grade near Plough Park (1)

Disposition: The roadway will not be depressed through this area.

List of Draft Environmental Impact Statement Distribution:

Federal Agencies	Response
Federal Highway Administration	X
Department of Housing and Urban Development	
U. S. Department of Interior	
Geological Survey	X
Office of Environmental Project Review	X
U. S. Department of Commerce	
National Oceanic and Atmospheric Administration	X
Department of Transportation	X
Federal Aviation Administration	
Tennessee Valley Authority	X
U. S. Army Corps of Engineers	
Environmental Protection Agency	X
U. S. Department of Agriculture	
Soil Conservation Service	X
Tennessee State Agencies	
Tennessee State Planning Agency	X
Public Transportation and Aeronautics Div.	
Tennessee Dept. of Health and Environment	X
Tennessee Wildlife Resources Agency	X
Tennessee Department of Conservation	X

Other Agencies

Memphis Delta Development District	
Memphis and Shelby County Office of Planning and Development	
Memphis Urban Area Transportation Study	
Tennessee Chapter of the Wildlife Society	
Tennessee Trails Association	X
Tennessee Conservation League	
Tennessee Scenic Rivers Association	
Tennessee Environmental Council	
Environmental Planning and Design	
Wolf River Conservancy	X
Eastwood Manor Association	
Memphis Hightrailers Bicycle Club	
Tennessee Ornithological Society	
Memphis Group of the Tennessee Sierra Club	X
Dr. Ray D. Burckett, Shelby State Community College	X
Shelby County Government	
City of Memphis	
City of Bartlett	
City of Germantown	X
Memphis Audubon Society	X

Summary of Comments

on the DEIS

U. S. Department of Commerce

National Oceanic and Atmospheric Administration

Comments: They indicated the presents of both horizontal and vertical geodetic control survey monuments in the proposed project area. They require at least 90 days notification before a monument is disturbed or destroyed in order to plan for their relocation.

Disposition: The Department will coordinate any construction activity which might involve monument sites with the Administration.

U. S. Department of the Interior

Geological Survey

Comments: Indicated they had a streamflow gaging station on the Wolf River at Walnut Grove Road which would need to be moved during project construction if the existing bridge were widened.

Disposition: The preferred alternative will require widening the bridge. Therefore, the construction phase would be coordinated with the Department of Interior.

Office of Environmental Project Review

Comments:

1) They preferred alternative WP-3 and felt the need for access should be considered for WP-3 as well as for Whitten Road in Section 4(f). Also felt that noise barriers should be considered for WP-3 at Whitten Park.

2) Felt that alternative SF-2(a) would have least impact on Section 4(f) trails in Shelby Farms since the greenbelt is at its most narrow section.

3) Preferred alternative SF-2a to avoid taking Section 4(f) land from Shelby Farms Forest Natural Areas.

4) Felt the Wolf River and the Shelby Farms property should be considered as Section 4(f) involvements.

5) Determined that Section 6(f) would not apply to the Shelby Farms property.

6) The Fish and Wildlife Service would support alternative SF-2(a). They were concerned about loss of wetlands and wanted a thorough inspection of the area to delineate existing seasonal wetlands.

7) The Fish and Wildlife Service felt the requirements of Section 7 of the Endangered Species Act have been fulfilled.

8) The U. S. Geological Survey felt a description of the geologic character of the region and site-

specific geologic hazards was needed in addition to any consideration to seismic hazards in the project design.

Disposition:

1) There is no longer a Section 4(f) involvement with Whitten Park. The preferred alternative will be built along Whitten Road.

2) The preferred alternative will cross the Wolf River at the existing Walnut Grove Road Bridge location. The widening of the structure would have less impact on the trails since it would require less additional right-of-way than SF-2a and the site has already been disturbed by road construction.

3) The preferred alternative will not take any land from the Shelby Farms Forest Natural Areas.

4) When the areas to be subject to Section 4(f) were determined, the Wolf River and the entire Shelby Farms property were not felt to be eligible.

5) None

6) The preferred alternative will not involve any wetlands. Wetland determination was conducted by both the Tennessee Department of Transportation, and later by the Corps of Engineers.

7) None

8) The existing seismic conditions will be considered during the detailed design stage.

U. S. Department of Transportation

Office of the Secretary

Comments: None

Tennessee Valley Authority

Comments: They concur with the analysis and conclusions.

Environmental Protection Agency

Comments:

1) Feel additional noise mitigation measures need to be considered.

2) Feel alternative SF-3 or 4 would be better from a wetland perspective as well as damage to forested area and floodplain impacts.

3) Need to address mitigation for habitat loss and animal movement.

4) Need to address any Nonconnah Creek natural area loss.

5) Provide erosion control measures for highway construction.

Disposition:

1) Sound proofing and monetary compensation will not be included as a part of this project.

2) The preferred alternative will use a modification of alternative SF-4. It will avoid both the wetlands and the Shelby Farms Forest Natural Areas.

3) The preferred alternative will be built within the existing right-of-way across the Wolf River and along Walnut Grove Road.

4) There will be no loss of natural habitat along Nonconnah Creek due to the development in this area.

5) Erosion control measures are provided in the standards for highway design and construction which apply to all Federal and State projects.

U. S. Department of Agriculture

Soil Conservation Service

Comments: Corrected spelling of several species scientific names.

Tennessee State Planning Office

Comments: Recommended the project be approved based on the information made available.

Tennessee Department of Health and Environment

Comments:

1) Recommended alternative SF-3 or 4.

2) Felt that lack of habitat for benthic and aquatic life as well as turbidity were limiting factors.

Disposition:

1) The preferred alternative will cross the Wolf River at the location of the existing bridge.

2) None.

Tennessee Wildlife Resources Agency

Comments:

1) Recommended an alternative which would avoid the Shelby Farms Forest Natural Area.

2) General comments about the lack of coordination of planning for projects located in the same area.

Disposition:

1) The preferred alternative will cross the Wolf River at the location of the existing bridge which will avoid the Natural Area.

2) While projects were not merged into one larger environmental document, an effort is made to describe one project's impacts upon others in the area in its document.

Tennessee Department of Conservation

Comments:

1) Suggested an alternative using Mullins Station Road be studied.

2) Of the described alternatives, they feel SF-3 or 4 would be the least damaging. SF-1 would bisect the Shelby Farms Forest Natural Area and SF-2 would cross land set aside for construction of Humphreys Boulevard.

Disposition:

1) Any route around the perimeter of Shelby Farms would not be feasible since it would be necessary to

merge traffic with existing major routes; such as Germantown Road, I-240 and I-40.

2) The preferred alternative will cross the Wolf River at the existing Walnut Grove Road Bridge location and will avoid all Shelby Farms Forest Natural Area land.

Tennessee Trails Association

Comments: They are opposed to alternative SF-1 and prefer alternative SF-4.

Disposition: The preferred alternative will avoid all Shelby Farms Forest Natural Area land by using the existing bridge crossing the Wolf River.

Wolf River Conservancy

Comments:

1) They endorse any alternative which crosses the Wolf River at the existing Walnut Grove Road Bridge location.

2) Feel an alternative around Shelby Farms should be considered.

3) Felt a grade-separated interchange should be considered at Kirby Parkway and Humphreys Boulevard.

4) Wanted to know the impact of other projects on the Kirby Parkway traffic.

5) Would like to see improvements to Mullins Station Road and Raleigh LaGrange Road.

Disposition:

1) The preferred alternative will cross the Wolf River at the existing bridge location.

2) Using Germantown Parkway or I-240 and I-40 to provide a perimeter route around Shelby Farms would not be practical. This would both increase the travel length and require the use of already heavily traveled major routes.

3) A grade separated intersection was considered for this intersection. See Section 2.3.

4) The traffic shown in Appendix "E" assumed all proposed projects in the area to be completed.

5) Since a perimeter route is not feasible, improvements to Mullins Station Road and Raleigh LaGrange Road are out of the limit of the project.

Sierra Club

Comments: They prefer alternative SF-4.

Disposition: This alternative will be modified to avoid the Shelby Farms Forest Natural Areas and be used in the preferred alternative.

Shelby State Community College

Comments:

1) Preferred alternative SF-4.

2) Felt the biological survey was incomplete since it did not mention many of the major bottomland hardwood species.

3) Felt that the proposed widening of Germantown Road was not considered.

Disposition:

1) Like alternative SF-4, the preferred alternative will cross the Wolf River at the existing Walnut Grove Road Bridge location.

2) The ecological study done by the Department was sufficient to determine what conditions exist in the project area so that an intelligent decision concerning the proposed project could be made. It was not intended to be a complete ecological study.

3) The impact of completing Germantown Parkway was included in the traffic studies for this project.

<u>City of Germantown</u>

Comments: Support the completion of the project. They prefer an alternative which would best handle the anticipated traffic with the least damage to the environment.

<u>Memphis Audubon Society</u>

Comments: They are opposed to alternative SF-1. They prefer using the existing bridge and roadways to carry traffic.

Disposition: The preferred alternative would cross the Wolf River at the Existing Walnut Grove Road Bridge location. However, it would require the construction of some new facilities in Shelby Farms north of the river crossing.

6.4 List of Preparers

TENNESSEE DEPARTMENT OF TRANSPORTATION

1. Carver, Martha A. (Historic Preservation Specialist)

   Education: B.A. in History; M.A. in History, with emphasis on historical preservation

   Professional Affiliations: National Trust for Historic Preservation, Society for Industrial Archaeology

   Experience: Staff Historian, Tennessee Department of Transportation, 10 years; Historic Preservation Planner for Chattanooga Hamilton County Regional Planning Commission, 2 3/4 years.

2. Crabb, Michael A. (Civil Engineer Specialist 1)

   Education: B. S. in Biology and Engineering

   Experience: Tennessee Department of Transportation Environmental Planning Office, 7 years; Division of Structures, 5 years; Traffic Engineering Office, 3/4 years; Tennessee Department of Public Health, Water Quality Control, 2 years.

3. Green, Donald L. (Biologist 2)

   Education: B.S. and M.S. in Biological Science

   Experience: Tennessee Department of Transportation Environmental Planning Office, 9 years

4. Kline, Gerald (Archaeologist Supervisor)

   Education: B.S.; M.S.; Ph.D. Program, degree pending

   Professional Affiliations: Tennessee Department of Transportation, 7 months; Archaeological field work in Indiana, Arizona, and Tennessee, 6 years with developed expertise in analysis of prehistoric lithic artifacts, lithic

technology instructor, contract archaeologist, 9 years

5. Rust, William D. (Biologist 3)

Education: B.S. Wildlife Management; M.S. Biology

Experience: Tennessee Department of Transportation Environmental Planning Office, 7 years; Allinson, Inc. biological and environmental impact analysis, 3 years

U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION

1. Johnson, Robert A. (Program Development Manager, FHWA-Tennessee Division)

Manager responsible for the coordination of environmental and location studies for Federal-Aid projects in Tennessee.

CHAPTER 6 FIGURES

TABLE 5

LIST OF HEARING ISSUES

ISSUES	NUMBER
In favor of the project	91
Against the project	170
Don't cross Shelby Farms Forest	145
Prefers Alternative SF-1	251
Prefers Alternative SF-2	6
Prefers Alternative SF-3	2
Prefers Alternative SF-4	114
Prefers Alternative SF-3 or 4	131
No new bridge over the Wolf River	10
Wants to improve the existing facilities	12
Wants to investigate an alternative around the perimeter of Shelby Farms	20
Prefers Alternative WP-1	2
Prefers Alternative WP-2	4
Prefers Alternative WP-3	21
Prefers Alternative NE-1	1
Prefers Alternative NE-2	19
Wants to Cul-de-sac Kirby Road	34
Doesn't want to Cul-de-sac Kirby Road	3
Wants to restrict speed limit	15
Wants to prohibit truck traffic	15
Wants to remove Sycamore View Road extension	6
Wants improved mass transit	3
Don't widen Kirby Parkway between Massey Lane and Humphreys Boulevard	4
Improve Kirby Parkway between Poplar Avenue and Massey Lane	1
Don't improve Kirby Parkway between Poplar Avenue and Massey Lane	1
Wants independent engineering study	6
Feels the 7-lane section is too much	6
Against disturbing grave sites	5
Feels the DEIS was inadequate (noise section, ecological section)	10
Mitigation Comments Concerning Shelby Farms	
Wants noise barriers	10
Wants visual barriers	3
Wants off-site borrow pits (Shelby Farms Area)	2
Wants meander alignment through the Farms	6
Wants to Re-plant forest lost to construction	6
Wants bridge designed to accommodate trails and wildlife movement	6
Wants a private group established to supervise during construction	6
Wants road below grade near Plough Park	1

APPENDIX "A"

Replies to Initial Coordination

Kirby Parkway from Split Oak Drive to Stage Road and Sycamore View Road Extension from Mullins Station Road to Kriby Parkway in Memphis, Shelby County

Initial Coordination

List of agencies and local officials to which initial coordination was sent.

Federal Agencies	Response
U.S. Department of Housing and Urban Development	
U.S. Department of Housing and Urban Development Memphis Insuring Office	
U.S. Department of the Interior	
Fish and Wildlife Service	X
Heritage Conservation and Recreation Service	
U.S. Geological Survey, Environmental Impact Analysis	
U.S. Geological Survey, Water Resources Division	X
Bureau of Mines, East Field Operations	
Office of Surface Mining	
Southeast Region	
Federal Energy Regulatory Commission	X
Tennessee Valley Authority, Environmental Quality	X
U.S. Corps of Engineers	
Memphis District	X
Engineering Division	
Regulatory Functions Branch	
U.S. Department of Transportation	
Federal Aviation Administration	X
U.S. Department of Health and Human Services	
Environmental Protection Agency	
EIS Review Section	X
U.S. Department of Energy	
Division of NEPA Affairs	
U.S. Coast Guard	
Second Coast Guard District	X
U.S. Department of Commerce	
Ecology and Conservation	
U.S. Department of Agriculture	
Soil Conservation Service	

State Agencies	Response
Tennessee State Planning Office	
Federal and State Programs Review	
Mississippi-Arkansas-Tennessee Council of Governments	
Memphis-Delta Development District	X
Tennessee Energy Authority	
Tennessee Department of Economic and Community Development	
Divison of Industrial Development	
Tennessee Department of Public Health	
Bureau of Environmental Health	
Tennessee Department of Transportation	
Aeronautics Office	X
Public Transportation and Aeronautics Division	
Facilities Planning Section	
Tennessee Department of Conservation	
Division of Planning and Development	X
Division of Archaeology	
Tennessee Department of Education	
Memphis Satellite Office	
Director of School Plant	
School Plant Specialist	
Tennessee Wildlife Resources Agency	X
Tennessee Historical Commission	
Tennessee Department of Agriculture	

Other Agencies and Organizations

Association for the Preservation of Tennessee Antiquities

Tennessee Chapter of the Wildlife Society

Tennessee Trails Association

Tennessee Ornithological Society

Tennesseans for Better Transportation

Tennessee Conservation League

Tennessee Scenic Rivers Association, Inc.

Tennessee Lung Association

Baptist Childrens' Home

Local and County Officials	Response
The Honorable William N. Morris Mayor of Shelby County	
Mr. George L. Reed Director of Public Works for Shelby County	
Mr. Raymond E. Harvell, Chairman Shelby County Housing Authority	
The Honorable Richard Hackett Mayor of Memphis	
Mr. Maynard Stiles Director of Public Works, Memphis	X
Mr. Ben Whitton, Chairman Memphis and Shelby Couty Office of Planning and Development	X
Ms. Ann McComic Shelby County Government 160 North Mid America Mall Memphis, Tennessee 38104	
Memphis Housing Authority	X
Mr. Herman Dwing, Director Memhis Area Urban League	
Reverend William R. Johnson, President National Associaton for the Advancement of Colored People	
Memphis Urban Area Transportation Study	
The Honorable W. A. Nance Mayor of Germantown	X
The Honorable Oscar T. Yates Mayor of Bartlett	X

46-1603

U.S. Department
of Transportation
**Federal Highway
Administration**

Tennessee Division Office
801 Broadway, Room A926
Nashville, Tennessee 37203

June 5, 1984

IN REPLY REFER TO:
HDV-TN

RECEIVED
JUN 12 1984
TDOT
ENVIRONMENTAL PLANNING

Mr. E. R. Terrell, Executive Director
Bureau of Planning and Development
Tennessee Department of Transportation
Nashville, Tennessee

Dear Mr. Terrell:

Subject: Proposed Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway, Shelby County

We have evaluated the comments received from Federal Land Management entities as a result of the early coordination efforts for this project. This evaluation was made in accordance with the requirements of Section 102(2)(D)(IV) of the 1969 National Environmental Policy Act, as amended.

Comments from the Federal Land Management entities did not identify any issues which indicate a significant disagreement with positions taken by TDOT and FHWA with regard to project impacts. The proposal may be advanced to the environmental assessment phase.

Sincerely yours,

R. D. Carr

(For) E. G. Oakley
Division Administrator

DIRECTOR
JUN 11 1984
DIVISION OF PLANNING

United States Department of the Interior
FISH AND WILDLIFE SERVICE
Post Office Box 845
Cookeville, TN 38501

RECEIVED
MAR 8 1984
ENVIRONMENTAL PLANNING

March 6, 1984

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Department of Transportation
900 James K. Polk Building
Nashville, Tennessee 37219

Dear Mr. Bush:

Pursuant to your letter and enclosures of February 1, 1984, the U.S. Fish and Wildlife Service has reviewed the information provided concerning the program for improvement of Kirby Parkway and Sycamore View Road Extension in Memphis, Shelby County, Tennessee. The following comments are provided to aid you in identifying critical areas and thereby planning to minimize environmental impacts in the early stages of project development.

Most of the planned improvements follow existing transportation corridors and lie within residential or commercial areas; environmental impacts in these areas are anticipated to be minimal. However, there are two areas where the potential exists for adverse impacts. These areas are the crossings of the Wolf River and Nonconnah Creek floodplains. The Nonconnah Creek crossing is mentioned in the information package provided to us; however, no mention is made of the Wolf River crossing. Since the Wolf River crossing will be on new location, and involves a more extensive floodplain than Nonconnah Creek, potential impacts are much greater than those involving the Nonconnah Creek crossing. Both of these areas will require careful planning in order to minimize adverse environmental effects. Section 404 permits will probably be required for these crossings, and we will provide additional comments at that time. In the interim, we recommend that the following measures be considered in future planning for this project.

(1) Right-of-way incursions into wetlands and wooded areas be restricted to the minimum necessary,

(2) Sufficient bridge span be provided to prevent ponding of water upstream of the roadway during high flow periods,

(3) Erosion and sediment control measures be implemented on all vegetatively denuded areas,

(4) All fill be stabilized, and

(5) Channel excavations for pier placement be restricted to the minimum necessary for that purpose.

We appreciate the opportunity for early input into the planning process. Please advise us if we can be of further assistance.

Sincerely,

Thomas S. Taller

Thomas S. Taller
Field Supervisor

TST/RLW/r

xc: FWS, AHR, Atlanta, GA
TWRA, Dan Sherry, Nashville, TN
EPA, Atlanta, GA

United States Department of the Interior

GEOLOGICAL SURVEY
Water Resources Division
Tennessee District

A-413 Federal Bldg.
U.S. Courthouse
Nashville, TN 37203
February 23, 1984

RECEIVED
FEB 24 1984
TDOT
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush
Administrator
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, TN 37219

SUBJECT: Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County

Dear Mr. Bush:

The subject highway construction will have no effect on any programs being planned or executed by this agency. No major potential hydrologic impacts from the proposed construction are foreseen at this time. If additional review and comments are needed, please let us know.

Sincerely yours,

FOR THE DISTRICT CHIEF

Clarence H. Robbins

Clarence H. Robbins, Hydrologist
Hydrologic Investigation Section

FEDERAL ENERGY REGULATORY COMMISSION

REGIONAL OFFICE

730 Peachtree Street, N. E.
Atlanta, Georgia 30308
February 10, 1984

RECEIVED
FEB 16 1984
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush
Administrator
Environmental Planning Office
State of Tennessee
Department of Transportation
Nashville, Tennessee 37219

Dear Mr. Bush:

This is in response to your letter dated February 1, 1984, with attachment, requesting comments regarding the proposed improvement of Kirby Parkway in Shelby County.

In reviewing the area of consideration, it has been determined that this project is not within the hydropower licensing jurisdiction of the Atlanta Regional Office (ARO). It is within the Fort Worth Regional Office jurisdiction and, therefore, you may wish to contact the Fort Worth Regional Engineer for comments concerning the proposed effects on Federal Energy Regulatory Commission licensed projects.

From a power supply standpoint, the area is within the ARO jurisdiction. Our concern is with the construction phase, in that provisions should be made to protect electrical transmission lines and natural gas pipelines in the construction area.

Very truly yours,

Aarne O. Kauranen, P.E.
Regional Engineer

TENNESSEE VALLEY AUTHORITY
NORRIS, TENNESSEE 37828

April 12, 1984

RECEIVED
APR 20 1984
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Tennessee Department of Transportation
Nashville, Tennessee 37219

Dear Mr. Bush:

KIRBY PARKWAY FROM NORTH OF SPLIT OAK DRIVE TO ST. ELMO ROAD AND SYCAMORE VIEW ROAD EXTENSION FROM MULLINS STATION ROAD TO KIRBY PARKWAY IN MEMPHIS, SHELBY COUNTY

This responds to your February 1 request to Mohamed T. El-Ashry (Martin C. Rivers) for TVA comments on the State's proposal to improve Kirby Parkway and Sycamore View Road extension in Memphis, Tennessee.

TVA's Cordova-West Memphis 500-kV Line will be affected by the proposed project. Any relocation of TVA's transmission line will be handled pursuant to the terms of master Agreement TV-34932A between the State and TVA.

Please let us know if we may be of further assistance.

Sincerely,

Frank R. Holland

Frank R. Holland, Chief
Land Management Branch
Division of Land and Economic Resources

DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT, CORPS OF ENGINEERS
B-314 CLIFFORD DAVIS FEDERAL BUILDING
MEMPHIS, TENNESSEE 38103

Reply to
Attention of:

March 12, 1984

RECEIVED
MAR 26 1984
ENVIRONMENTAL PLANNING

Regulatory Functions Branch

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Tennessee Department of Transportation
1200 James K. Polk Building
Nashville, Tennessee 37219

Dear Mr. Bush:

Reference is made to your letter concerning a proposed project on Kirby Parkway from north of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County. The project apparently will cross Fletcher Creek, Wolf River, and Nonconnah Creek. My staff has reviewed the proposal and I offer the following comments:

1. A new bridge and highway will cross the Wolf River within a reach of channel improvement completed by the Corps of Engineers in 1964. The original channel design in this area should be considered as a minimum for the proposed bridge to prevent problems with future channel maintenance. At the present time there is no ongoing project for this site.

2. The Corps of Engineers has recommended channel clearing of the reach of Nonconnah Creek which includes the Kirby Parkway crossing as part of a comprehensive flood control and recreation plan for the Nonconnah Creek basin. No alteration or relocation of the Kirby Parkway crossing was considered necessary; however, bridge protection consisting of a 120-foot long, 12-inch gabion revetment was included at the site. Assuming that a new Kirby Parkway crossing has the same opening as the existing structure and is adequately protected against erosion, no significant impact should result from the proposal.

3. Specific wetland mapping of the project area should be included in the proposal for future scoping to determine potential impacts and permit requirements.

I appreciate the opportunity to review the proposal and look forward to working with your office on the proposal. If any additional information is needed, please contact Mr. Tom Welborn of my Regulatory Functions Branch at telephone 901 521-3471.

Sincerely,

John F. Hatch, Jr.
Colonel, Corps of Engineers
District Engineer

U.S. Department
of Transportation
**Federal Aviation
Administration**

AIRPORTS DISTRICT OFFICE
3973 Knight Arnold Road, Suite 105
Memphis, TN 38118-3004

FEB 08 1984

RECEIVED
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Tennessee Department of Transportation
817 Highway Building; 6th and Deadrick
Nashville, TN 37219

Dear Mr. Bush:

Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County

We have reviewed your plans for subject highway improvements.

The proposed improvements will not adversely affect any work planned or programmed by this office. We have no suggestions or comments regarding these improvements or matters requiring special attention at this time.

We appreciate the opportunity to review and coordinate this proposal.

Sincerely,

Wayne R. Miles for
Otis T. Welch
Principal Planner/Programmer

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

APR 26 1984

4PM-EA/CMH

Mr. Charles E. Bush, Administrator
Environmental Planning Office
State of Tennessee Department
of Transportation
Nashville, Tennessee 37219

SUBJECT: Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County
EPA Log Number A-FHW-E40565-TN

Dear Mr. Bush:

We have reviewed the advanced information concerning the above referenced proposed highway improvement and extension project involving 12.48 miles. As you are aware, generic highway projects have the potential for causing ecological problems. Our main concerns involve potential adverse effects to wetlands, water quality, air quality, and noise. While highway improvements often need not have a significant effect on the environment, new alignment highway extensions can be disruptive of new environments.

Because new alignment is involved in the present advanced information, and because your information is still preliminary, it is difficult to make substantive project comments at this time. More information is needed, particularly regarding the environmental impact and alternatives to the new alignment sections. Additional environmental documents may be necessary to determine the environmental consequences of the proposed construction.

Since Nonconnah Creek and apparently other creeks or headwaters are scheduled to be crossed, we are able at this time to recommend the use of no or a minimum amount of fill, adequately long bridge spans, right angle bridge/creek intersections, and no channelizations. Effective Best Management Practices such as erosion control must also be instituted and maintained. As you know, the crossings may require a Section 404 permit from the U.S. Army Corps of Engineers. EPA also reviews these permits. Should the inland waters also be commercially navigable or susceptible to commercial navigation through dredging, a U.S. Coast Guard permit may also be necessary.

We would also like to encourage your consideration of mitigative measures in compensation for any possible unavoidable environmental impacts. Such measures might include the creation of wetlands or restoration of a hardwood forest unavoidably lost during highway construction.

As more information is provided, we would be pleased to further review the project from an environmental standpoint. To facilitate your project planning, we have attached a list of "Special Concerns" which outlines some of our environmental concerns relative to generic highway projects.

We look forward to your continued coordination and cooperation.

Sincerely yours,

Sheppard N. Moore

Sheppard N. Moore, Chief
Environmental Review Section
Environmental Assessment Branch

Attachment: "Special Concerns"

SPECIAL CONCERNS

The following list is a generalized synopsis of special concerns relevant to generic highway projects.

Wetlands/Water Quality

- Protection of wetlands pursuant to the Section 404 Guidelines of the Clean Water Act

- Avoiding/minimizing wetland activities such as:

  * channel realignments
  * dredging and filling
  * flow alterations causing wetland drainage or flooding
  * erosion and siltation
  * habitat loss
  * disturbance of rare and endangered species

- Conformance with Executive Order 11988 ("Floodplain Management") and Executive Order 11990 ("Protection of Wetlands"), if federal funds are involved

- Public complaints concerning construction-related wetland alteration.

Air Quality

- Conformance with National Ambient Air Quality Standards (NAAQS) of the Clean Air Act to determine whether a site is located in an attainment, non-attainment, or unclassifiable area

- Conformance with the State Implementation Plan (SIP)

- Conformance with the Prevention of Significant Deterioration (PSD) regulations

- Conformance with EPA and state modeling guidance

- Existing and predicted levels of various relevant air-quality parameters such as CO

- Public complaints concerning construction-related fugitive emissions.

Noise

- Conformance of on-site existing and predicted noise levels with design noise level criteria for commercial receptors and sensitive receptors (residences, churches, schools, etc.). Preferred representations of existing predicted, and design noise levels are the L_{eq} (1), L_{eq} (24) or L_{10} descriptors. The hour (1) of the L_{eq} (1) descriptor should be defined (e.g., peak rush hour).

- Project-related noise level elevations: all project-generated noise increases above the existing site noise level are considered important, particularly if above design levels and/or if long termed. An increase of 5dBA is considered significant and a 10dBA increase is considered very significant, even if the final elevated noise levels are below design criteria.

- Additional helpful information includes the existing and predicted percentage of trucks using the old/new highway and the existing and predicted number of sensitive receptors that are/will experience noise levels above design levels.

- Public complaints concerning construction-related noise emissions.

DEPARTMENT OF TRANSPORTATION

UNITED STATES COAST GUARD

Commander (obr)
Second Coast Guard Dist.
1430 Olive St.
St. Louis, MO 63103
Tel. 314-425-4607

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MAR 15 1984
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ENVIRONMENTAL PLANNING

16591.6
March 13, 1984

Mr. Charles E. Bush
Environmental Planning Office
Tennessee Department of Transportation
Nashville, TN 37219

Subj: KIRBY PARKWAY FROM NORTH OF SPLIT OAK DRIVE TO ST. ELMO ROAD AND SYCAMORE VIEW ROAD EXTENSION FROM MULLINS STATION ROAD TO KIRBY PARKWAY IN MEMPHIS, SHELBY COUNTY

Dear Mr. Bush:

This is in reply to your letter of February 1, 1984, requesting comments on the subject project. The proposed improvement involves a bridge crossing Nonconnah Creek.

Coast Guard jurisdiction for bridge administration purposes extends only to navigable waters of the United States. The Coast Guard does not consider Nonconnah Creek to be a navigable waterway for Bridge Administration purposes. The Coast Guard offers no comments on this project, and a Coast Guard bridge permit will not be required.

Sincerely,

Roger K. Wiebusch

ROGER K. WIEBUSCH
Chief, Bridge Branch
By direction of the District Commander

SPEED LIMIT 55
It's a law we can live with.

MISSISSIPPI - ARKANSAS - TENNESSEE COUNCIL of GOVERNMENTS / MEMPHIS DELTA DEVELOPMENT DISTRICT

157 Poplar Avenue • Memphis, Tennessee 38103 • Phone (901) 528-2770

HON. Rudolph E. Dickey
Chairman

HON. Beverle Rivera
Vice Chairman

HON. Rozelle Criner
Secretary Treasure

John W. Sicola
Executive Director

March 14, 1984

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MAR 2[illegible] 1984
ENVIRONMENTAL PL[illegible]

Charles E. Bush
Administrator
Environmental Planning Office
Tennessee Department of Transportation
James K. Polk Building
Nashville, TN 37219

SUBJECT: Kirby Parkway from North of Split Oak Drive to St. Elmo Road, and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County.

Dear Mr. Bush:

The proposed route and cross-sections for the above project have been reviewed by this office. The project was found to be consistent with the major road. Therefore, we have no comments regarding these subjects.

Since the project is entering the alignment and design phases, the following comment is made in a personal context. Possible consideration for incorporating a bikeway into the design should not be overlooked. This incorporation could use the proposed median as a road bed. The establishment of a bikeway is valid consideration given the proximity of the project to the Shelby Farms Area.

Should you have any questions regarding this subject, do not hesitate in contacting this office.

Sincerely,

John W. Sicola

John W. Sicola
Executive Director

JWS/rj

Mailing Address: 160 N. Mid America Mall, Memphis, Tennessee 38103

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37219

P. O. Box 17326

February 3, 1984

Mr. Charles E. Bush
Administrator
Environmental Planning Office
Suite 900, James K. Polk Building
Nashville, Tennessee 37219

Dear Mr. Bush:

SUBJECT: Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County

A review of the subject proposed project does not reveal any conflicts with our present or future programs.

Thank you for the opportunity to comment.

Sincerely,

OFFICE OF AERONAUTICS

David S. Futlon
Administrator

DSF:mmh

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ENVIRONMENTAL PLANNING

TENNESSEE DEPARTMENT OF CONSERVATION
701 BROADWAY
NASHVILLE, TENNESSEE 37203

March 12, 1984

RECEIVED
MAR 15 1984
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Tennessee Department of Transportation
Nashville, TN 37219

Subject: Kirby Pkwy. from north of Split Oak Drive to St. Elmo Rd. and Sycamore View Rd. Extension from Mullins Station Rd. to Kirby Parkway in Memphis, Shelby Co.

Dear Mr. Bush:

In reference to your letter concerning the above and dated February 1, please be advised that the proposed project may adversely affect two rare avian species. The first, considered to be threatened in Tennessee (TWRA and TNHP), is the grasshopper sparrow (Ammodramus savannarum). The second, deemed in need of management (TWRA) and of special concern (TNHP) within Tennessee, is the lark sparrow (Chondestes grammacus). Occurrences of these species are recorded (TNHP) for the lands within the boundaries of the Shelby County Penal Farm. Both species nest in open grassy fields which explains the recorded occurrences on the Penal Farm grounds. Breeding for each species begins in April. Nesting ends by late August.

Because of our concern for the grasshopper and lark sparrows, the DOC suggests that all construction of those road segments passing through Shelby County Penal Farm be scheduled to occur between mid-September and March. Pre-construction activities such as surveying which are not likely to distrub soil and vegetation could occur during any period.

We appreciate the opportunity to comment on this proposed program and would request that you respond to our suggestions by letter before formalization of plans. If any questions arise as a result of our comments, please feel free to contact us. Thank you for your cooperation.

Sincerely,

Walter L. Criley
Director of Planning

WLC/REH:d
cc: Saralee Terry

TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

February 2, 1984

RECEIVED
FEB 3 1984
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Department of Transportation
900 James K. Polk Building
Nashville, TN 37219

RE: Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County

Dear Charles:

This project occurs in suburban Memphis and much of it apparently involves the upgrading of existing roads. Because of these factors, there will be limited wildlife impacts along most of the corridor.

The Project Summary mentions the crossing of Nonconnah Creek, but not the crossing of the Wolf River which is even more significant to us since that crossing would occur on new road and the Nonconnah crossing would apparently involve the upgrading of existing road. We are interested in seeing how impacts on wetlands can be minimized as both the Wolf River and Nonconnah Creeks are crossed. It is also important, of course, that bridging is adequate to pass floodwaters in such a way as not to affect the hydrological regime behind upstream of the bridges.

There appears to be some relatively good wooded areas in the vicinity of the Penal Farm. Right of way clearing in such areas should be minimized.

Thank you for precoordinating with us.

Sincerely,

TENNESSEE WILDLIFE RESOURCES AGENCY

Dan Sherry

Dan Sherry
Wildlife & Fish Environmentalist

DS:jsf

cc: Frank Zerfoss
Harold Hurst

RICHARD C. HACKETT
MAYOR

CITY of MEMPHIS

DIVISION OF
PUBLIC WORKS

DIRECTOR'S OFFICE
Room 602
901-528-2742

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FEB 14 1984
ENVIRONMENTAL PLANNING

February 7, 1984

Mr. Charles E. Bush, Administrator
Environmental Planning Office
STATE OF TENNESSEE DEPARTMENT OF TRANSPORTATION
James K. Polk Building
505 Deaderick Street
Nashville, TN 37219

REF: KIRBY PARKWAY from north of Split Oak to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway

Dear Mr. Bush:

This is in response to your February 1, 1984, initial coordination letter covering the subject improvements to Kirby Parkway.

The City of Memphis is in strong support of this project and has included the portions of Kirby Parkway between Split Oak and Messick and between Massey Lane and U.S. 64 in our 5 Year Capital Improvements Program. The proposed roadway construction of Kirby Parkway, together with the construction of the section of Sycamore View Road, will open up a major north/south transportation corridor across the eastern part of Memphis and Shelby County. In particular, Kirby Parkway will provide the only north/south roadway between I-240 and Germantown Road, a distance of four miles, in the area of the Shelby County Penal Farm (Plough Farms). Kirby Parkway will provide a vital link in the Memphis/Shelby County transportation system and relieve congestion and delay on many east Memphis arteries thus improving travel time, air and noise quality, traffic safety, and gasoline consumption.

Our engineers have had an opportunity to meet with the TDOT staff on several occasions to review the preliminary alignment for this project as well as the typical sections and overall roadway design concept. We are particularly pleased with the proposed reconstruction of the Nonconnah Creek bridge, including streambed and bank stabilization, a new bridge over the Wolf River,. interchanges with Walnut Grove Road and at the Sycamore View/Kirby Parkway intersection, modifications to the Kirby Parkway/I-40 Interchange and overall improvements to the Kirby Parkway/Stage Road/ U.S. Highway 64 intersections. We are also pleased with the State's coordination efforts with Mrs. Ann McComic of the Plough Farms Board, and are in agreement with their assessment that the Kirby Parkway Project will provide vitally needed access to the proposed activity centers at Plough Farms including the Agricenter.

CITY HALL — 125 No. MID AMERICA MALL — MEMPHIS, TENNESSEE 38103

10.26

We appreciate this opportunity to comment on the initial coordination phase of this project, and can envision only positive impacts on the east Memphis and Shelby County area as a result of the Kirby Parkway construction. We look forward to working with you and other Department of Transportation Officials as this project proceeds through the design and construction phases.

Very truly yours,

Maynard C. Stiles
Director of Public Works

cd

cc: Marvin Jacobs
Richard Hoffman

Memphis and Shelby County
Office of Planning and Development

CITY HALL 125 NORTH MID AMERICA MALL MEMPHIS, TENNESSEE 38103 - 2084 (901) 528-2601

RECEIVED MAR 1984 ENVIRONMENTAL PLANNING

March 12, 1984

Mr. Charles Bush
Environmental Planning Office
Department of Transportation
Nashville, Tennessee 37219

RE: Kirby Parkway from North of Split Oak Drive to St. Elmo and Sycamore View Road Extention from Mullins Station Road to Kirby Parkway in Memphis, Shelby County.

Dear Mr. Bush:

We have reviewed the above captioned project for its impact on the public and its compatibility with local plans and programs.

Analysis of the project has shown that it is consistent with local plans and does not have a significant impact on the public.

Thank you for the opportunity to review this project.

Sincerely,

Phillip L. Whittenberg
Director

/bjj

MHA

MEMPHIS HOUSING AUTHORITY

Administration Building • 700 Adams Avenue (901)523-7620
Mailing Address • P.O. Box 3664, Memphis, Tennessee 38103

RECEIVED
FEB 1984
ENVIRONMENTAL PLANNING

February 6, 1984

Mr. Charles Bush, Administrator
Environmental Planning Office
State of Tennessee
Department of Transportation
Nashville, TN 37219

RE: Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis Shelby County

Dear Mr. Bush:

The improvements, as referenced above and in your letter of 2/1/84, will have no adverse affect on existing Public Housing managed by this Agency. All of the MHA units existing and in the planning stage are within the City limits, but a large separation exists from each to the proposed improvements. There should be no adverse environmental effect.

This Agency does not assess the overall planning needs for the City of Memphis and our comments are limited to those affecting the residents of Public Housing.

Sincerely,

Frank Pope,
Assistant Executive Director

FP/JLS/hrg

MAYOR
BOYD ARTHUR, JR.

ALDERMEN
WAYNE ADDISON
WANDA GOODMAN
JAY KAHN
RICHARD S. McNEESE
BOB OELKE

CITY ADMINISTRATOR
JAMES N. HOLGERSSON

City of Germantown
Germantown, Tennessee 38138-0309

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FEB 1984
ENVIRONMENTAL PLANNING

February 7, 1984

Charles E. Bush, Administrator
Environmental Planning Office
Department of Transportation
James K. Polk Bldg./Suite 900
505 Deaderick Street
Nashville, TN 37219

Re: Kirby Parkway from North of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County

Dear Mr. Bush:

The proposal as set forth is consistent with our interpretation of the adopted Urban Area Major Road Plan. We, in Germantown, enthusiastically support the proposal as it will provide some degree of traffic relief to our citizens in the west part of the City.

The importance of the Kirby Parkway can easily be seen by viewing a map showing that the only north-south route which crosses the Wolf River between I-240 and Germantown Road will be the Kirby Parkway.

Should you have any questions, please don't hesitate to contact me.

Yours truly,

Boyd Arthur, Jr.
Mayor

ba:vj

City of Bartlett

Bobby K. Flaherty, Mayor

February 13, 1984

RECEIVED
FEB
ENVIRONMENTAL

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Tennessee Department of Transportation
James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37219

RE: Kirby Parkway and Sycamore View
Road Extension
Memphis, Shelby County

Dear Mr. Bush:

We appreciate the opportunity to review the above referenced projects at this early stage in development. Both of these improvements would greatly enhance the development of Bartlett due to their direct affects in relieving the traffic congestion in our City.

We have forwarded a copy of your letter of February 1st to the Bartlett Chamber of Commerce which is the primary group in our community. They will notify any other interested community groups.

We would like to alert you to the fact that the majority of the land in the Kirby-Whitten Road corridor from Stage Road to St. Elmo Road is owned by the Baptist Children's Home. The project should be coordinated closely with this property owner.

The City of Bartlett is looking forward to working with your organization on these projects. Please contact us if we can be of assistance.

Sincerely,

Bobby K. Flaherty

Mayor Bobby K. Flaherty

cc: Gregory-Grace and Associates, Inc.

5727 WOODLAWN • P.O. BOX 341148 • BARTLETT, TENNESSEE 38134 • 901-386-1414

RECEIVED
MAR 22 1984
TDOT
ENVIRONMENTAL PLANNING

March 14, 1984

Mr. Charles E. Bush
Administrator
Enviromental Planning Office
Tenn. Dept. of Transportation
Nashville, TN 38103

Dear Sir:

This is the preliminary response from our Civic Association to the State's proposed project on Kirby Parkway from north of Split Oak Drive to St. Elmo Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway in Memphis, Shelby County.

The Greentrees Civic Association, representing over 500 families, is extremely opposed to this project. Kirby Parkway runs through the center of our subdivision and the increased traffic would significantly affect our property values and the safety of our families.

We have scheduled a meeting with Mr. Clark Odor, the Transportation Planning Coordinator for the Memphis and Shelby County Office of Planning and Development. We plan to give you more details on our objections after that meeting.

Sincerely,

Mary Frances Wheeler

Mary Frances Wheeler
President Greentrees Civic Association

MARY FRANCES WHEELER
875 HONEY LOCUST COVE
MEMPHIS, TN 38119

APPENDIX "B"

Ecological Studies

KIRBY PARKWAY
SHELBY COUNTY

AN ECOLOGICAL SUMMARY

1 August 1985

Prepared Pursuant to
Section 7(c) of the Endangered Species Act of 1973
As Amended

Prepared by
Dan Rust
Environmental Planning Office
Tennessee Department of Transportation

Introduction

This report presents those ecological impacts which are likely to occur with implementation of the Kirby Parkway project. Consideration was given to terrestrial ecology, aquatic ecology, and endangered or threatened plants and animals as designated by various State and Federal agencies. Because it was impossible to determine absolutely the presence or absence of a particular species of plant or animal, consideration was given to historic data in conjunction with field surveys for preferred or suitable habitats to make a determination as to the likelihood of a species being present.

Methods

The field survey was begun in May 1984. In preparation for this survey, several data sources were consulted to determine which endangered or threatened plant and animal species might be present within the project area. Additional information was received from those State and Federal agencies which responded to the Initial Coordination letter. A literature study of each species was done to understand the habitat required for a species survival. This was necessary because any species, notably animals, might not be observed during field surveys. So it was important to evaluate habitat and make a determination as to the likelihood of a species' presence. The field surveys could then eliminate the probability of a species being present if there was no suitable habitat.

A total of eight days over a five-month period was spent conducting field surveys. The first three days, May 8, 9 & 10, were

used to determine any likely areas of sensitive habitat where more study would be necessary. The field investigator walked along the entire proposed right-of-way to identify the dominant plant species and to determine the types of habitat available. Except for the Shelby County Penal Farm, the Wolf River woodlands, and a field south of Messick Road, most of the proposed right-of-way is a widening of existing facilities.

This on-foot survey covered that ground which is within the boundaries of the proposed right-of-way as well as 50'-100' additionally along each boundary to accommodate any construction easements deemed necessary by the project engineer. At the smaller creeks, an additional 300' was surveyed downstream from the project crossing point to check for any sensitive habitat or organisms which might be adversely affected by siltation or chemicals transported by the creek. Aquatic invertebrates were sampled by qualitatively sampling rocks and other objects in the streambed. A kick net was used to sample for invertebrates which would be found in substrates of gravel and sand. The larger streams, Fletcher Creek and Nonconnah Creek, were also surveyed in this manner with the only difference being the downstream distance; Fletcher Creek was surveyed for approximately one mile and Nonconnah Creek was surveyed for approximately 1.5 miles. These two streams were also sampled during late spring and summer when they were shallower. The Wolf River was not sampled for two reasons:

1. There is adequate data for water quality and aquatic life available from various State and Federal agencies.

2. Because of the ecological degradation of the Wolf River, field researchers believed historic data and correspondence from concerned agencies could provide any information concerning endangered or threatened species. This assumption precluded the expending of time and funds which field sampling would have required.

Kirby Parkway will be on new location in the Shelby County Penal Farm and through a field south of Messick Road. Except for an area of the "Farm" along the Wolf River, most of this ground was eliminated from further consideration during the initial field trip. The land along the Wolf River is old hardwood bottomlands. Approximately 150 acres were surveyed on five occasions. The first trip established those areas within the bottomlands which might support plants requiring a sensitive or unusual habitat. The additional trips were planned around the flowering periods of certain plant groups throughout the growing season. This plan afforded the field researchers maximum opportunity to locate and identify any endangered or threatened plants. This plan also made possible a more thorough understanding of those biotic communities present. Additionally, an extensive trail system within the bottomlands allowed greater freedom of movement and provided better access to the interior of this timber stand. On one trip, 14 June, two biologists from the Corps of Engineers-Memphis District, Tom Wellborne and Tom Heineke, accompanied T.D.O.T. biologists to assist with plant identification. Their experience with the local flora was deemed important to T.D.O.T. biologists because this area of the State supports a mix of hydric and mesic species, many of which are more common south or west of Memphis.

Terrestrial Assessment

The largest proportion of land affected by the Kirby Parkway project borders existing highway right-of-way. All of the land along Whitten Road north of the river and most along Kirby Parkway south of the river is residential, commercial or agricultural. Urbanization has irrevocably altered the natural ecology. The only natural habitat remains as "strips" or "fringe" along fence rows, roads, creeks, and the edges of field crops. These areas support the growth of plant species which would not ordinarily be planted or allowed to grow in yards or croplands. This habitat type supports song birds, small mammals and reptiles: usually those species which are able to compete well in a disturbed environment and to coexist with humans. Disregarding the Wolf River bottomlands, most of the trees along the right-of-way are located in these "fringe" locations. Clearing of these fringes for agricultural and residential development is occurring at a rapid pace, which probably won't be changed by this project. However, those areas impacted by road improvement will be temporarily lost, but replaced by new "fringe" with time.

The project will be on new location for most of its distance across the Shelby County Penal Farm. The majority of this land is being used for intensive agricultural purposes or for pasture. There are two areas of some ecological significance. One is a small, marshy site which has developed around one of the livestock ponds. It is located in a pasture approximately 1,500' southwest of the intersection at Whitten Road and Mullins Station Road.

The field surveys did not reveal anything significant. It is highly probable this site lacks any botanical significance; in addition to the lack of any endangered or threatened species being found, livestock grazing probably has a severe impact on those plants that are able to withstand its effect and still compete ecologically. Most likely, grazing diminishes the possibility of any unusual species being present. The mole salamander, Ambystoma talpoideum, is the only listed species which might be present. This salamander requires ponds for breeding and low-lying, damp ground for its habitat. Although it is not federally listed, it has been deemed in need of management by the State. Its preferred habitat should be avoided by construction if at all possible.

The second site is the previously mentioned bottomland hardwoods along the Wolf River. This land, adjacent to the river on both banks, is part of a system of "remnants" of the once extensive Wolf River bottomland forests. Although only a portion of what was once an important forest ecosystem, these remnants provide abundant wildlife habitat in an urbanized setting. The north bank vegetation is more extensive than that on the south bank; this can be attributed to the low degree of developemnt on the farm. The north bank woodlands are more mature, have a less developed understory, and cover roughly ten times the acreage of those woodlands on the south bank. Channelization of the Wolf River has hastened water loss, thus lowering the water-table. Consequently, the plant communities have become more mesic with the build-up of dryer soils. The

discarded dredge material from the channelization process has also helped the mesic flora dominate most of the old bottomlands; very little remains of the wetlands ecology. There are some old meanders and low swampy spots in the north-bank woodlands which are characterized by bald cypress/water tupelo communities. But these comprise a very small percentage of the flora. The most common community is typified by sugar maple (Acer saccharum), American elm (Ulmus americana), red mulberry (Morus rubra), American holly (Ilex opaca), ironwood (Carpinus caroliniana), and privet (Forestiera acuminata). A more thorough listing of plants is attached to this report.

These woodlands provide a variety of habitats for wildlife, particularly birds and mammals. It also serves as a protective "corridor" for the movement of larger wildlife (deer, bobcat, etc.) along the Wolf River, and as a haven for aquatic mammals. On two occasions field researchers found tracks and other signs of beavers (Castor canadensis) and river otters (Lutra canadensis). An otter slide, measuring 24"-30" wide and about 12' long, was found along a drainage stream just inside the northern edge of the Shelby Farms woodlands. Gnawed tree trunks and felled saplings were common around the streams and backwaters.

The varied habitats should support numerous prey species and so offer food sources for such carnivores as minks, foxes, bobcats, and feral dogs, all of which were noted by tracks. In addition to several species of rabbits and squirrels, the woodlands offer a wide variety of habitats to rodents, birds

and reptiles. The white-tailed deer might also be preyed upon. Although the coyote (Canis latrans) was not noted (sightings, tracks, scats) as an inhabitant of this area, it is reasonable to assume its presence. Numerous sightings have been reported by "farm" personnel. The coyote is found in every county in Tennessee and has been known to associate closely with humans; i.e. preying on livestock. The habitat available offers ample food and concealment and is of an extent to afford easy movement.

These woodlands exhibit a diversity of flora and fauna which is highly unusual for a major urban area. The current land use plan developed by Shelby Farms Planning Commission calls for limited development of these lands between the Wolf River and Walnut Grove Road. This development will be based on using these woodlands for ecological studies. Public recreation will also be served by the construction of trails for hiking and nature studies. The value of these woodlands to plants and wildlife is incalculable when compared with that habitat available in the remainder of the project area.

Aquatic Assessment

There are numerous ponds and streams along the length of the project. Four of these were considered especially significant to the local watershed. These four are Fletcher Creek, Nonconnah Creek, Wolf River and an unnamed wetland southwest of the intersection of Kirby Road and Knight Arnold Road.

The Wolf River is the most prominent water resource within the project area. It is typical of the larger streams in West Tennessee in that it has been extensively channelized. Water

fluctuates greatly in depth, is normally turbid, and is polluted with industrial and domestic wastes. The constant turbidity is the product of poor agricultural practices, soil erosion on developing residential and commercial sites, and the inherent instability of the river banks resulting from channelization. Obviously, these conditions have been very detrimental to water quality and aquatic organisms. Although water parameters (temperature, dissolved oxygen, etc.) in a river this size are moderated by the large volume, the limiting factor which is controlling the quality of habitat is the turbidity. This destroys breeding areas, smothers eggs and food organisms, and clogs the gills of less vigorous fish spcies. Principle fish species caught from the Wolf River are buffalo (*Ictiobus cyprinellus*), carp (*Cyprinus carpio*), and bullheads (*Ictalurus spps.*) Other fishes present are the green sunfish (*Lepomis cyanellus*) and the bluegill (*Lepomis macrochirus*). Principle invertebrate organisms are mayfly (*Ephemeroptera*) and crayfish (*Decapoda*) species.

Fletcher Creek and Nonconnah Creek were sampled several times during three months so the biologists could gain an idea about the fluctuation of water parameters. Historic data shows these two creeks to be of very poor quality with little fishing value. On 14 June 1984, the flow in both creeks was very low, the water was turbid, and water temperatures were very high; 24 ^{o}C in Nonconnah Creek and 35 ^{o}C in Fletcher Creek. On 21 June 1984, conditions had worsened acutely. Nonconnah Creek had a flow less than 5" deep with a water temperature at 33 ^{o}C. Fletcher Creek was dry. On 16 July 1984, conditions were much the same for both creeks.

These conditions were fairly constant into October 1984; the only changes occurred with run-off from rainstorms. With these conditions being persistent, it is readily obvious the quality of these two creeks has suffered. The habitat available to aquatic organisms is almost non-existent. These creeks also suffer from the heavy pollution which typifies that in the Wolf River. Fish and invertebrate species should be much the same as those in the Wolf River, although no invertebrates were found during the study period.

The wetland near Kirby Road and Knight Arnold Road was an old meander of the original channel for Nonconnah Creek. Channelization operations isolated this wetland but the topography and soils kept it viable. On the initial field trip, this wetland was plotted on a 7.5 minute topographic quad sheet and documented with photographs. This wetland was dominated by bald cypress/black willow stands. It was oriented on an east/west axis with the water being retained by an old beaver dam. The south bank was a steep ridge dominated by a mature mesophytic timber stand. The dominant species were various red and white oak (Quercus) species. The north bank was a low, flat grassland dominated by rush (Juncus) species and black locust (Robinia pseudoacacia) groves. The value of this wetland was not totally understood. However, since the initial field trip, the land on both banks has been cleared and graded for residential development. To date, there has not been any erosion mitigation measures, which has resulted in siltation of the wetland from the cleared banks. The development operations have seriously degraded, or possibly destroyed, this wetland.

Conclusions

The ecological impacts associated with the Kirby Parkway project should not be severe or of long duration if certain considerations are made in the design and construction process. There will be a significant amount of habitat loss, mainly because of the urban setting from which it will be taken. This cannot be avoided in a project of this magnitude but can be minimized. There will be no adverse impact to federally endangered or threatened plants and animals.

The greatest impact will be the loss or degradation of terrestrial wildlife habitat. This will be noticeable along the existing roads which are to be upgraded to design specifications. The existing "fringe" vegetation along the ditchlines will be cleared and unavailable to wildlife for a short time. Eventually, a new "fringe" will develop along the highway to replenish the habitat available. The same situation is true for any creeks, fence rows, or other margins where vegetation may grow unimpeded.

The most adverse loss will occur within Shelby Farms, where the facility will be almost entirely on new location. The proposed right-of-way north of Walnut Grove Road will traverse pasture and crops. As mentioned earlier, the only concern would be siltation of any livestock ponds and adjacent marshy sites. This impact can be minimized through the judicious application of those mitigative measures outlined in the Tennessee Department of Transportation's "Standard Specifications for Road and Bridge Construction".

That right-of-way south of Walnut Grove Road is mostly in hardwood timber along the river. This timber borders the river in a strip about 1/2 mile deep. The clearing of any vegetation for a six-lane highway will be a significant adverse impact to the available habitat and to the unobstructed movement of wildlife along the river. If the Wolf River Bridge cannot be built with enough length to span these woodlands, then only a minimum amount of canopy should be removed. This should be achieved by either cutting only to the toe of any fill or cutting only within the proposed right-of-way, whichever method conserves the most trees. Any stockpiling of materials or equipment for constructing the bridge should be north of the timber stand in the fields on the south side of Walnut Grove Road. This should effectively minimize loss of woodland habitat.

Another potential impact concerns the road fill acting as a barrier to the unrestricted movement of mammals. This has the potential to be a paticularly devastating impact because there currently is no vehicular traffic through these woodlands to impede free movement or cause road kills, such as with deer. To reduce the potential for the highway being a barrier, the bridge abutments should not be placed directly adjacent to the bank edge. If adequate space (100' feet) is kept between the edges of river bank and abutment, this might induce animal movement under the bridge and reduce the occurrence of road kills.

One other possible impact is the clearing of grassland habitat which could destroy the nests of two uncommon birds,

the lark sparrow (Chondestes grammacus) and the grasshopper sparrow (Ammodramus savannarum). Shelby County is within the range for these birds. Confirmed sightings and nests have been rare. But the habitat does exist sporadically along the project. This problem has been addressed previously, (see letters dated March 12, April 16 & 28, May 30), with discussion of the aspect of mowing pre-desingated areas of the proposed right-of-way before and early in the nesting season. Because of the small chance of either bird being present, this effort should be adequate to mitigate any potential impact.

Impacts to the aquatic ecology can be minimized if the "Standard Specifications" and other mitigative measures are properly used and enforced. The proposed facility will require an expansion of the existing bridges over Nonconnah and Fletcher Creeks and a bridge on new location over the Wolf River. Erosion and siltation cannot be totally eliminated, but can be effectively controlled.

The bridge over Fletcher Creek will have the least impact because the banks and bed of the creek have been concreted. This concrete extends approximately 150' upstream and 500' downstream. The banks have also been rip-rapped 200'-300' beyond the concrete. These structures already provide good erosion control and if left intact during construction, will help control any likely impacts to the creek. The bridge over Nonconnah Creek will be expanded from the existing structure, similar to the bridge over Fletcher Creek. However, there are no concrete or rip-rap creek structures. The creek banks are very steep and high, which will exacerbate

erosion. The worst pollution would come from the collapse of the banks during construction. The new structure over the Wolf River has the potential for the most adverse impact simply because there is not now any structure over the river.

Although these streams exhibit marginal ecological quality, this situation does not negate the application of State and Federal regulations concerning the maintenance of water quality during construction. Adverse impacts to the aquatic ecology can be effectively minimized through use of the following mitigative efforts:

(1) Canopy removal will be limited to an absolute minimum.

(2) Stream banks will be stabilized to prevent collapse during construction.

(3) Dredge material from coffer dams, especially bottom slurry, will be placed into settling ponds so solids can settle out before returning the water to the stream.

(4) All machinery parked along the banks for construction will be placed on gravel pads for erosion control. Pads will be removed, as much as possible, before completion of project.

(5) Appropriate erosion control measures (sediment traps, catch basins, silt fences, settling ponds, baled hay, straw, etc.) will be used to minimize erosion on all exposed earth.

(6) All erosion control measures will be maintained throughout the life of the project.

(7) Silt buildup in various traps, basins, and ponds or behind silt fences will not be allowed to accumulate at a depth greater than one-half (1/2) the capacity of any retention structure. This will minimize any excess siltation due to storm flooding of these structures.

(8) Trapped silt (Item 7) shall be disposed of away from the project sites.

(9) No machinery will be allowed in the streams unless placed on barges.

(10). Cut and fill slopes will be seeded to minimize siltation.

(11) Trees will be planted to help stabilize soils at the top of stream banks.

(12) The "Standard Specifications" for erosion and sediment control will be strictly followed.

WOLF RIVER WOODLANDS
SPECIES LIST
KIRBY PARKWAY PROJECT
June 14, 1984

Aristolochia tomentosa	-	Pipe-vine
Brunnichia cirrhosa	-	Ladies-Eardrops
Acer saccharum	-	Sugar Maple
Ulmus alata	-	Winged Elm
Ulmus americana	-	American Elm
Morus rubra	-	Mulberry
Ilex opaca	-	American Holly (large trees)
Quercus nigra	-	Water Oak
Quercus phellos	-	Willow Oak
Taxodium distichum	-	Bald Cypress
Nyssa aquatica	-	Water gum
Violaceae	-	Violets
Carya glabra	-	Pignut hickory
Carpinus caroliniana	-	Ironwood
Sambucus canadensis	-	Elderberry
Campsis radicans	-	Trumpet creeper
Anisostichus capreolata	-	Cross Vine
Passiflora lutea	-	Passion-Flower
Laportea canadensis	-	Wood-Nettle
Onoclea sensibilis	-	Sensitive Fern
Thelypteris palustris	-	Marsh Fern
Forestiera acuminata	-	Privet (thickets)
Arisaema dracontium	-	Green Dragon

BIRDS OF FEDERAL OR STATE SIGNIFICANCE
KIRBY PARKWAY PROJECT

Chondestes grammacus	-	Lark Sparrow	(H.P.)
Ammodramus savannarum	-	Grasshopper Sparrow	(H.P.)
Limnothlypis swainsonii	-	Swainson's Warbler	(H.P.)
Melanerpes erythrocephalus	-	Red-Headed Woodpecker	(S.)
Vireo gilvus	-	Warbling Vireo	(S.)
Vireo bellii	-	Bell's Vireo	(H.P.)
Ictinia mississippiensis	-	Mississippi Kite	(H.P.)
Accipiter straiatus	-	Sharp-Shinned Hawk	(W.V.)
Nyctanassa violacea	-	Yellow-crowned Night Heron	(H.P.)

H.P. - Habitat Present

W.V. - Winter Visitor

S. - Sighted in Field

MAMMALS OF SHELBY COUNTY FARMS
WOODLAND AND GRASSLAND HABITATS (HYDRIC-MESIC)
KIRBY PARKWAY PROJECT
(List Based on Available Habitat)

Didelphis marsupialis	-	Opossum
Cryptotis parva	-	Least Shrew
Sorex longirostris	-	Southeastern Shrew
Blarina brevicauda	-	Short-tail Shrew
Scalopus aquaticus	-	Eastern Mole
Reithrodontomys humulis	-	Eastern Harvest Mouse
Peromyscus maniculatus	-	Deer Mouse
Peromyscus leucopus	-	White-footed Mouse
Peromyscus gossypinus	-	Cotton Mouse
Ochrotomys nuttalli	-	Golden Mouse
Neotoma floridana	-	Eastern Woodrat
Oryzomys palustris	-	Rice Rat
Sigmodon hispidus	-	Hispid Cotton Rat
Marmota monax	-	Woodchuck
Ondatra zibethicus	-	Muskrat
Castor canadensis	-	Beaver
Tamias striatus	-	Eastern Chipmunk
Sciurus carolinensis	-	Eastern Gray Squirrel
Sciurus niger	-	Eastern Fox Squirrel
Sylvilagus floridanus	-	Eastern Cottontail Rabbit
Sylvilagus aquaticus	-	Swamp Rabbit
Mustela frenata	-	Longtail Weasel

Mustela vison	-	Mink
Mephitis mephitis	-	Striped Skunk
Lutra canadensis	-	River Otter
Procyon lotor	-	Raccoon
Lynx rufus	-	Bobcat
Urocyon cinereoargenteus	-	Gray Fox
Canis latrans	-	Coyote
Canis familiaris	-	Feral Dog
Odocoileus virginianus	-	White-tailed Deer

ADDENDUM TO THE ECOLOGICAL SUMMARY FOR KIRBY PARKWAY SHELBY COUNTY

3 December 1986

Prepared by
Dan Rust
Environmental Planning Office
Tennessee Department of Transportation

INTRODUCTION

Growing opposition to the proposed alignment and comments from the Federal Highway Administration has compelled the Tennessee Department of Transportation to consider some additional alternatives. The alignment through the Wolf River bottomlands needed a field review to determine the impacts to the habitats present. This aspect of the ecological studies was not thoroughly conducted in 1984 because the exact alignment through these woodlands was not surveyed and staked until 1985. The final outcome of the land use changes around an old meander of Nonconnah Creek at Kirby Parkway and Knight Arnold Road also needed reassessment. A route east around Whitten Park needed to be considered because of a possible 4(f) situation along Whitten Road and a park boundary.

The field review was conducted on 24 and 25 November 1986.

EXISTING ENVIRONMENTAL SETTING

The major area of concern is the Wolf River bottomlands on both sides of the river. The most extensive area lies on the north bank as part of the Shelby County Penal Farm. The alignment will move through an area of vegetation dominated by swamp chestnut oak (*Quercus michauxii*), cypress (*Taxodium distichum*), sweet gum (*Liquidambar styraciflua*), planertree (*Planera aquatica*), and boxelder (*Acer negundo*). All of these species have an affinity for wetter soils. This area is also traversed by several old backwater sloughs of the original Wolf River channel. Although these sloughs were dry, they are seasonally inundated; some are as deep as 8' - 10'. The majority of the cypress and planertree are located in or immediately adjacent to these sloughs. The understory growth is dominated by swamp privet (*Forestiera acuminata*). Otherwise, this area is adequately dealt with in the previous ecology report.

The area south of the river is an old oxbow meander which was cut off from the river by dredging spoil. This area contains about 6 cypress trees and many more planertrees. Water was standing 6" deep during the field survey. This area is also probably seasonally inundated. The majority of the vegetation is composed of sweet gum and red maple of sizes ranging to 4" in diameter. This area is not as remote or as extensive as that land along the north bank of the river. Residential developments have been encroaching upon these woodlands for twenty years.

The wetland at the intersection of Kirby Parkway and Knight Arnold Road, the southern project terminus, is an old meander of the original channel of Nonconnah Creek. In 1984, a developer cleared and graded all of the land around this wetland. Presently, this area is surrounded by multi-family housing units. There is some new tree growth, mostly black willow (Salix nigra), but the mature trees appear stressed; growth of new branches is poor. The wetland is suffering erosion and sedimentation from the landscaped residential lots surrounding it. This process may stop, but the future for this wetland is very dire.

The last area to be impacted was not considered during the original field study. This area is a detour from Whitten Road east around Whitten Park. This line was suggested in an attempt to avoid a possible 4(f) situation where the proposed alignment passes along the front of Whitten Park. The original alignment would take about 0.4 acres off the parking lot of Whitten Park. The proposed alternative would circumvent the park to the east. However, this land is an isolated woodland; surrounded by the park on the west, old fields on the north and south, and an apartment complex on the east. These fields and woodlands are not prime wildlife habitat, but they do provide good living space for small mammals and birds, especially since this habitat is like an "island" amidst the urban development. The woodlands are a mix of tree species, mostly saplings

and trees up to 4" - 5" dbh. But the dominant canopy trees are white oak (Quercus alba) and cherrybark oak (Quercus falcata). The most apt description of this woodland is a thick tangle of sapling trees, shrubs, honeysuckle, and sawbrier.

IMPACTS TO THE ECOLOGICAL ENVIRONMENT

The impact to the Wolf River woodlands in unavoidable with the proposed alignment, as was stated in the earlier document. Any shifting of the alignment will not lessen the impact to the habitats present. Only a major shift to an alignment running along the eastern border of the Shelby County landfill would lessen the impacts to these woodlands. As stated in the earlier document, any mitigation would be to clear the minimum amount of land for the road, to allow water movement through culverts to keep the meanders around the road fill wet, and to provide space between the edges of the river bank and the bridge abutment to allow animal movement along the river.

The old oxbow meander on the south bank will be partially filled if the proposed alignment is built. The abutment fill will encroach upon the eastern edge of this wetland. Although the extent of this fill is unknown, the wetland character would be altered. Some of the wetland vegetation will be removed. These impacts could be eliminated if the alignment could be shifted to the east or if a retention wall were placed to hold back the fill along this area.

The wetland at Kirby Parkway and Knight Arnold Road will not be affected by this project.

The woodlands behind Whitten Park will be totally obliterated if the alignment is shifted. The fields on either side will also be impacted, although some portions will remain. The shift in alignment to avoid possible 4(f) problems will enhance the development of the land around this park. The only way to mitigate the loss of this woodland is to stay out of it.

CONCLUSIONS

The proposed alignment will have severe impacts on the ecological environment where it crosses undeveloped land. Even minor shifts or adjustments in the alignment will not drastically change the degree of impact. However, careful construction practices in and near these woodlands will minimize the impacts. These mitigation steps have been prevously referenced in the original field study.

AN ADDENDUM TO THE ECOLOGICAL REPORT FOR KIRBY PARKWAY SHELBY COUNTY

29 January 1988

Prepared By
Dan Rust
Environmental Planning Office
Tennessee Department of Transportation

The City of Memphis submitted another proposed alternative across Shelby Farms for the Department's consideration. The new alternative is aligned along the proposed alternative which borders the dump. However, in crossing Wolf River, the new alternative bears east and crosses on a sharply skewed angle to the river. After crossing, it parallels the river for approximately 2,000' before interchanging with Humphreys Boulevard.

This alternative's close proximity to Wolf River practically ensures dredging and filling operations along the river. On the south bank, several remnant wetlands will be destroyed, including a wetland already designated as part of a mitigation plan for Humphreys Boulevard. The alternative's path is within the designated floodway. Not only will roadfill cause displacement of floodwaters, but the cutting action of the river against the south bank could eventually jeopardize the road itself. Some method of bank stabilization will probably be necessary, which will detract from the scenic aspects of the river. Even if the alternative is built totally on structure, some sort of bank stabilization will probably be necessary to protect the road from the river's cutting action.

42-0385

February 8, 1984

HDV-TN

Mr. Warren Parker
U.S. Fish and Wildlife Service
Endangered Species Field Office
100 Otis Street, Room 224
Asheville, North Carolina 28801

Dear Mr. Parker:

Subject: Kirby Parkway from Split Oak Drive
to St. Elmo Road, Memphis, Shelby County

The enclosed materials describe a proposed Federal-aid highway project in Tennessee. Please advise us if any species which are listed or proposed to be listed as threatened or endangered may be present in the area.

You may contact Mr. Larry Cameron at FTS 852-5373 if you should need addition information on the highway proposal.

Sincerely yours,

(For) E. G. Oakley
Division Administrator

Enclosure

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

February 22, 1984

Mr. E. G. Oakley
Division Administrator
U.S. Department of Transportation, FHA
801 Broadway, Room A926
Nashville, Tennessee 28801

Re: 4-2-84-302

Dear Mr. Oakley:

We have reviewed the proposed construction of Kirby Parkway from Split Oak Drive to St. Elmo Road in Shelby County, Tennessee as requested by letter of February 8, 1984, received February 10, 1984.

Based on our records, it is our 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. 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,

V. Gary Henry

V. Gary Henry
Acting Field Supervisor

CC:
Mr. Bob Hatcher, Tennessee Wildlife Resources Agency, Nashville, TN
Program Administrator, Tennessee Heritage Program, Nashville, TN
Commissioner, Tennessee Department of Transportation, Highway Building, Nashville, TN 37219
Field Supervisor, ES, FWS, Cookeville, TN

TENNESSEE DEPARTMENT OF CONSERVATION
701 BROADWAY
NASHVILLE, TENNESSEE 37203

March 12, 1984

RECEIVED
MAR 15 1984
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, Administrator
Environmental Planning Office
Tennessee Department of Transportation
Nashville, TN 37219

Subject: Kirby Pkwy. from north of Split Oak Drive to St. Elmo Rd. and Sycamore View Rd. Extension from Mullins Station Rd. to Kirby Parkway in Memphis, Shelby Co.

Dear Mr. Bush:

In reference to your letter concerning the above and dated February 1, please be advised that the proposed project may adversely affect two rare avian species. The first, considered to be threatened in Tennessee (TWRA and TNHP), is the grasshopper sparrow (Ammodramus savannarum). The second, deemed in need of management (TWRA) and of special concern (TNHP) within Tennessee, is the lark sparrow (Chondestes grammacus). Occurrences of these species are recorded (TNHP) for the lands within the boundaries of the Shelby County Penal Farm. Both species nest in open grassy fields which explains the recorded occurrences on the Penal Farm grounds. Breeding for each species begins in April. Nesting ends by late August.

Because of our concern for the grasshopper and lark sparrows, the DOC suggests that all construction of those road segments passing through Shelby County Penal Farm be scheduled to occur between mid-September and March. Pre-construction activities such as surveying which are not likely to distrub soil and vegetation could occur during any period.

We appreciate the opportunity to comment on this proposed program and would request that you respond to our suggestions by letter before formalization of plans. If any questions arise as a result of our comments, please feel free to contact us. Thank you for your cooperation.

Sincerely,

Walter L. Criley
Director of Planning

WLC/REH:d
cc: Saralee Terry

TENNESSEE DEPARTMENT OF CONSERVATION
701 BROADWAY
NASHVILLE, TENNESSEE 37203

April 28, 1984

RECEIVED
APR 30 1984
TDOT
ENVIRONMENTAL PLANNING

Mr. Clark W. Odor
Transportation Planning Coordinator
Memphis and Shelby County Office of Planning & Development
City Hall - 125 North Mid America Mall
Memphis, TN 38103

RE: Kirby Parkway Section through Shelby County Penal Farm

Dear Mr. Odor:

In a letter dated April 12 concerning the above, you requested exact locations of sightings of two rare avian species, Chondestes grammacus (lark sparrow) and Ammodramus savannarum (grasshopper sparrow), discovered via our TNHP review process (see our letter of March 12). Exact locations of the sparrow sightings on the Shelby County Penal Farm are as follows:

Species	Status Fed.	Status State	Status TNHP	Latitude	Longitude
1) Chondestes grammacus		D	S	35°08'38"	89°50'32"
2a) Ammodramus savannarum		T	T	35°07'57"	89°50'33"
b) Ammodramus savannarum		T	T	35°08'23"	89°48'33"

Nos. 1 and 2a above represent sightings of territorial males observed in 1976. Sparrows were observed again at these locations in 1978. No. 2b above represents the observation of a nest of the grasshopper sparrow in 1978. The open grassy fields of Shelby County Penal Farm provide the nesting habitat which attracts these birds. It is not likely that usage of the area by these species is restricted to exact points where sightings have been noted. Protection of the birds' habitat should extend at least over the grounds of the penal farm. It is particularly important to protect those habitat areas that might be used for nesting.

In response to your request for information on rare plant and animal species of the entire Shelby County area, we are enclosing a list which should indicate species, occurrence location and species status. As before with sparrow occurrences, preservation of any species cannot be limited to the protection of an exact point, but must insure protection of that area which will fulfill species-specific habitat requirements.

We hope this information will prove useful. Please let us know what measures to protect the grasshopper and lark sparrows will be included in your project plans. If any questions arise as a result of our comments, please direct them to Ms. Roberta E. Hylton. *

Sincerely,

Walter L. Criley

Walter L. Criley
Director of Planning

WLC/REH:d

cc: Saralee Terry
Charles E. Bush, Administrator, DOT, Environmental Planning Office

Enclosures

Copy to

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37219
Suite 700, James K. Polk Building

RECEIVED
APR 17 1984
TDOT
ENVIRONMENTAL PLANNING

April 16, 1984

Mr. Charles Bush, Administrator
Environmental Planning Office
Suite 900
James K. Polk Building
Nashville, Tennessee

SUBJECT: Kirby Pkwy. from north of Split Oak Drive to St. Elmo Road and Sycamore View Rd. Extension from Mullins Station Rd. to Kirby Parkway in Memphis, Shelby Co.

Dear Mr. Bush:

I have been furnished a copy of Mr. Walter L. Criley's letter to you dated March 12, 1984.

Mr. Criley expresses concern that the proposed construction may adversely affect two rare avian species and suggests that all construction of those roads segments passing through Shelby County Penal Farm be scheduled to occur between mid-September and March. The concern seems to be the possible interruption of the species' nesting activities in the existing grassy fields.

Although we certainly share Mr. Criley's concern, his suggestion of limiting all construction activities to the period he suggests may not be feasible. Construction during the winter months is often more difficult if not impossible. I wonder if a requirement to clear the affected area of all grass during the suggested time period and permit construction to proceed routinely would provide sufficient protection to the threatened species.

If this suggestion is acceptable and if a major portion of the work is through the Penal Farm, letting the contract in mid-summer would aid in proper scheduling of the work.

Please advise if you wish to discuss this matter further.

Asked Ray discuss this with Johnie. [illegible]

Very truly yours,

Johnie E. Davis
Director of Construction

JED:jrd
cc Mr. Lewis Evans
Mr. Henry Derthick
Mr. E. R. Terrell

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37219

MEMORANDUM

TO: Files

FROM: Dan Rust

DATE: May 30, 1984

SUBJECT: Mitigation of Impacts to Habitat of Grasshopper & Lark Sparrows Along the Proposed R.O.W. for Kirby Parkway in Memphis, Shelby County

In letters dated March 12, 1984 and April 28, 1984 to Messrs. Charles E. Bush and Clark W. Odor, respectively, Mr. Walter L. Criley, Director of Planning for the Department of Conservation, recommends measures to protect nesting individuals of grasshopper and lark sparrows. These measures would have restricted construction activity to the period between mid-September and late March.

This would pose construction problems, as stated in a letter dated April 16, 1984 from Johnie E. Davis, Director of Construction, T.D.O.T., to Charles Bush. Mr. Davis proposed cutting or removing grass before the nesting season begins, therefore eliminating the possibility of destroying any active nest sites.

I approached Paul Hamel, of the Department of Conservation's Natural Heritage Program, with this recommendation in a meeting on May 18, 1984. He and Roberta Hilton, also of the N.H.P., agreed that keeping any large grasslands mown would prevent nesting in the proposed right-of-way.

After discussion with Mr. Davis, it was agreed to cut and grub these areas prior to the nesting season before the project goes to contract, thereby eliminating any mowing during the nesting season. This plan will prevent nesting in the right-of-way and will not cause any delays in the construction timetable.

Our office will continue liaison with the construction office on this matter.

DR/zeg
cc: Johnie Davis
Charles Bush
Ray Brisson

DEPARTMENT OF THE ARMY
MEMPHIS DISTRICT, CORPS OF ENGINEERS
B-202 CLIFFORD DAVIS FEDERAL BUILDING
MEMPHIS, TENNESSEE 38103-1894

Reply to
Attention of:

December 21, 1987

Regulatory Functions Branch

RECEIVED
DEC 28 1987
TDOT
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, C.E.
Environmental Planning Office
Tennessee Department of Transportation
1200 James K. Polk Building
Nashville, Tennessee 37219

Dear Mr. Bush:

Reference your request for wetland mapping for the proposed Kirby Parkway project.

Drs. Richard Mochow and Tom Heineke, of our Regulatory Functions Branch, have checked the route at the three stream crossings. The only wetlands were located along the alternate routes adjacent to the Wolf River. As Dr. Mochow noted to Mr. Mike Crabb of your office in a recent telephone conversation, late successional wetlands were found along the originally proposed route (marked Alternative #1 on attached map), on both sides of the Wolf River. The riparian strip located just north of the Wolf River on the alternative marked #4 on the map you provided was found to be an early successional wetland.

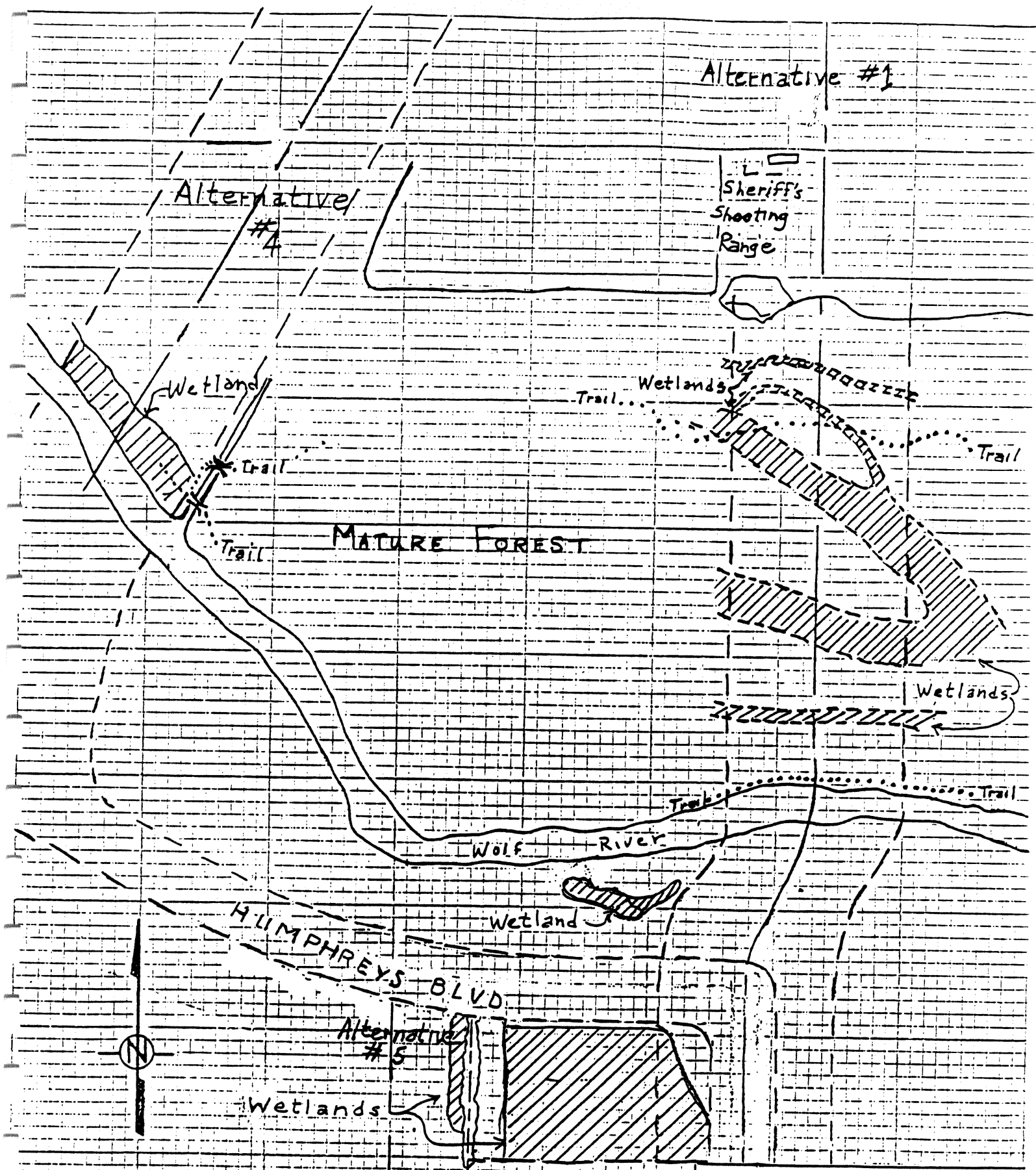
My staff looks forward to the opportunity to review the Draft EIS when it is ready. Should you have any additional questions, please contact Dr. Mochow, telephone (901) 521-3471.

Sincerely,

A. G. Davis

A. G. Davis
Assistant Chief
Construction-Operations Division

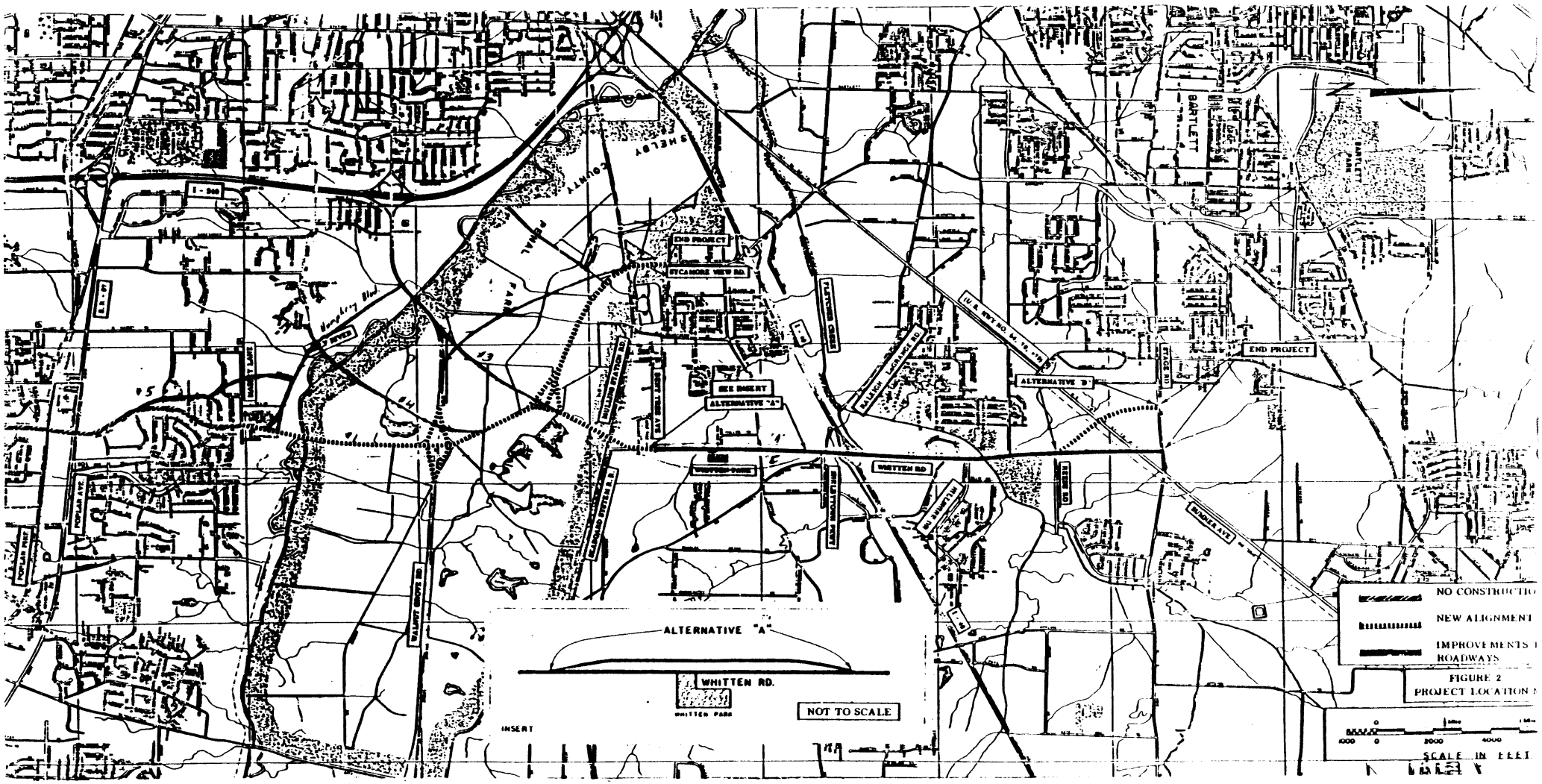
Enclosure



Scale 1 inch ≅ 500 feet

Kirby Parkway Wetlands
Wolf River @ Shelby Farms

Sheet 1 of 2 12-1-87



Kirby Parkway
Proposed Alignments
Sheet 2 of 2

APPENDIX "C"

Historical and Archaeological Studies

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37219

MEMORANDUM

TO: Raymond Brisson

FROM: Martha Carver MC

DATE: September 11, 1984

SUBJECT: Kirby Parkway From North of Split Oak Drive to St. Elmo Road, Memphis, Shelby County

Pursuant to regulations set forth in 36 CFR 800 guidelines, staff historians surveyed the area of potential environmental impact for this project on 28 August 1984 and 5 September 1984. This area surveyed included land needed for additional right-of-way as well as areas which might possibly be affected by changes in air quality, noise levels, setting, and land use.

No properties in the project impact area are currently listed in the National Register of Historic Places, nor have any been determined to be eligible for listing. This field survey mentioned above did not identify any previously unrecorded properties which might meet the criteria of the National Register as set forth in 36 CFR 60.6.

As a result of these investigations, it appears that the project, as presently designed, will have no effect on any buildings, structures, or objects listed in or eligible for listing in the National Register of Historic Places. However, if the design or location of the project is altered, its effect on such properties may need to be re-evaluated.

MC:ljg

cc: Margaret Slater
Randy Smith

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37219

September 11, 1984

Mr. Herbert Harper
Deputy State Historic Preservation Officer
Customs House, Basement
701 Broad
Nashville, Tennessee 37203

Dear Herbert:

Enclosed are two historical/architectural reports prepared by my staff. The projects discussed in these reports are the following:

Shelby Drive, Memphis, Shelby County
Kirby Parkway, Memphis, Shelby County

Please note that on Shelby Drive, I sent you a report previously that contained U.S. 61 as the western terminus of this project. Since then, this project has been expanded westward to Weaver Road. The enclosed report reflects that change.

Please review these reports and provide us with your comments.

Sincerely,

Raymond Brisson

Raymond Brisson,
Environmental Planning Office

RB:MC:ljg

cc: Tom Love
Randy Smith

TENNESSEE HISTORICAL COMMISSION
701 Broadway
Nashville, Tn. 37203
615/742-6716
October 16, 1984

Edward G. Oakley, Administrator
Tennessee Division
Federal Highway Administration
Federal Building, U. S. Courthouse
801 Broadway, Room A-926
Nashville, Tennessee 37203

Re: Archaeological Reconnaissance and Historical/Architectural Report, Kirby Parkway From North of Split Oak Drive to Stage Road and Sycamore View Road Extension From Mullins Station Road to Kirby Parkway, Memphis, Shelby County

Dear Mr. Oakley:

At the request of Mr. Raymond Brisson, Tennessee Department of Transportation (TDOT), our office has reviewed the above document in accordance with 36 CFR 800 (44 FR 6068-6081, Jan. 30, 1979). Based on the information provided by TDOT staff survey we conclude that the project impact area does not include properties on or eligible for the National Register of Historic Places.

All borrow area outside proposed right-of-way will require separate certification as specified under Section 107.06-Federal Aid Provisions.

If project plans are changed or archaeological remains are discovered during construction please contact us to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your continued cooperation is appreciated.

Sincerely,

Herbert L. Harper

Herbert L. Harper,
Executive Director and
Deputy State Historic
Preservation Officer

HLH:sd

xc: Raymond Brisson, TDOT

STATE OF TENNESSEE
DEPARTMENT OF TRANSPORTATION
NASHVILLE, TENNESSEE 37219

MEMORANDUM

TO: Mr. Raymond Brisson, Manager
Environmental Planning Office

FROM: Gerald W. Kline, Archaeologist Supervisor
Environmental Planning Office

RE: An Archaeological Reconnaissance of Kirby Parkway from North of Split Oak Drive to Stage Road and Sycamore View Road Extension from Mullins Station Road to Kirby Parkway, Memphis, Shelby County, Tennessee

DATE: October 9, 1984

An archaeological assessment of the captioned project was conducted on September 11, 1984 (Figure 1). The purpose of the assessment was to determine the effect of highway construction on any recorded or previously unrecorded archaeological sites listed in or potentially eligible for inclusion in the National Register of Historic Places.

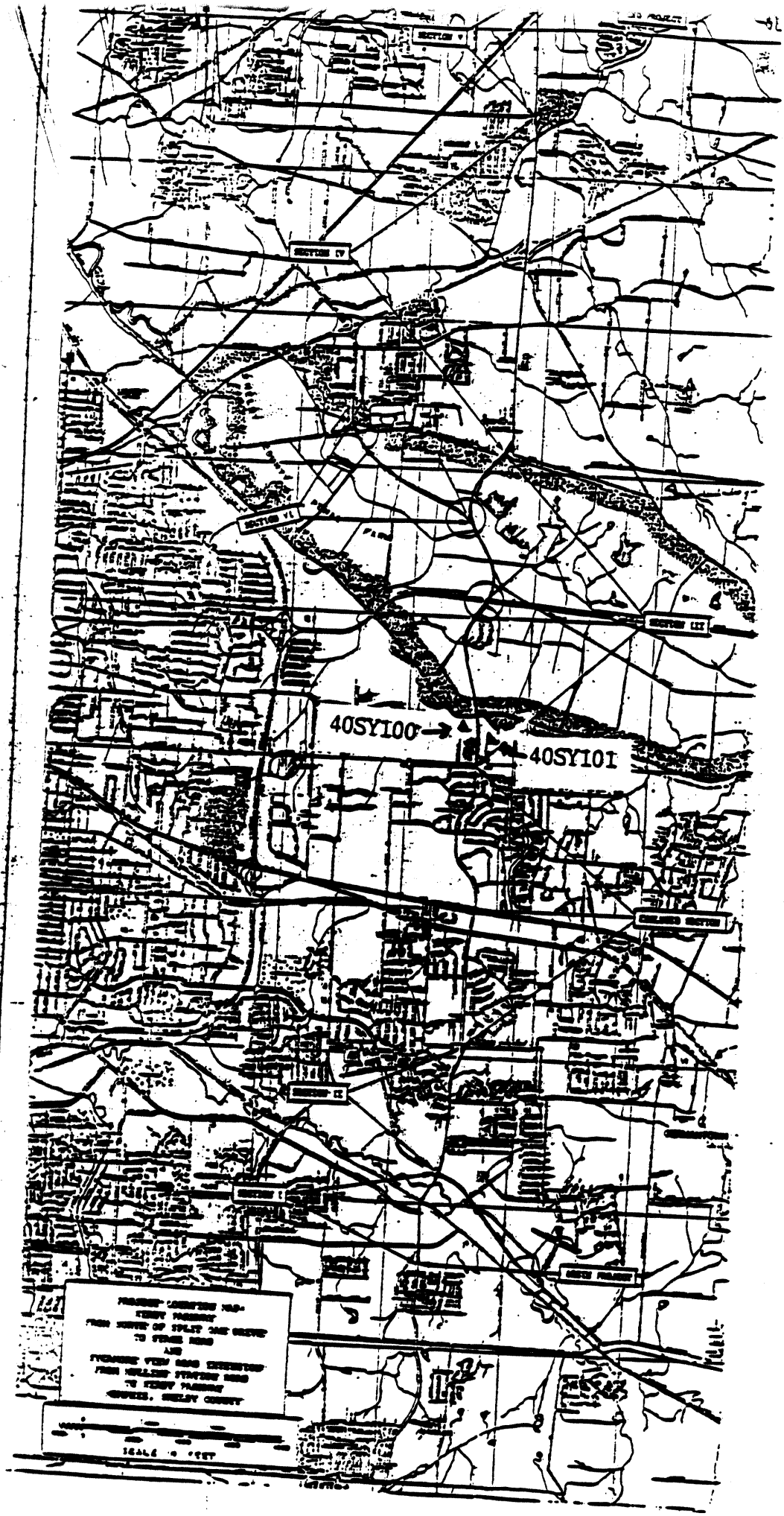
A search of the site survey files at the Tennessee Division of Archaeology indicated two previously recorded sites in the project area. Both sites, 40SY100 and 40SY101, were located in the vicinity of the southern end of Section III immediately south of the Wolf River. Sometime prior to 1966 both sites were apparently destroyed when the Wolf River was channelized. No evidence of either site remains.

This reconnaissance survey revealed no additional prehistoric archaeological sites in or adjacent to the project area. Based upon this finding, the proposed project will have no impact upon any property included in or potentially eligible for inclusion in the National Register of Historic Places pursuant to 36 CFR 60.6.

In the event landfill is required from areas outside of the proposed right-of-way, the special provisions pursuant to Section 107.06 (Special Provision #100), Federal Aid Provisions (attached), shall be met.

GWK:ljg

cc: Mr. Randall Smith


40SY100
40SY101

STATE OF TENNESSEE

100 (Rev. 10-26-81)

March 1, 1981
Sheet 1 of 1

SPECIAL PROVISION

REGARDING

SECTION 107.06 - FEDERAL AID PROVISIONS

107.06 - Federal Aid Provisons.

Add as a new paragraph at the end of Subsection 107.06.

All excavated materials from outside the Rights-of-Way shall be obtained in compliance with Section 106 of the National Historic Preservation Act (16 U.S.C. S470(f). The Contractor shall furnish the Engineer archaeological clearance certified by the State Historic Preservation Officer on all non-commercial material sources requiring excavation, except when the source is a previously certified area shown on the Plans. Previously certified sources adjacent to the Rights-of-Way will be identified on the Plans when the information tion is available.

Regardless of prior certification, if prehistoric remains are encountered, the Contractor shall cease all excavation and notify the State Historic Preservation Officer for his determination of the disposition thereof.

APPENDIX "D"

Conceptual Stage Relocation Plan

(Not included in all copies but available from TDOT and FHWA upon request)

APPENDIX "E"

Related Correspondence

And Information

United States
Department of
Agriculture

Soil
Conservation
Service

675 U. S. Courthouse
Nashville, TN 37203

July 11, 1986

RECEIVED
JUL 23 1986
TDOT
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, C. E. Manager II
Environmental Planning Office
Suite 700, James K. Polk State Office Bldg.
Nashville, TN 37219

Dear Mr. Bush:

Our Memphis Field Office staff has reviewed your request for completion of Form AD-1006 Farmland Conversion Impact Ratings in reference to construction on Kirby Parkway and Sycamore View Extension in Shelby County, Tennessee.

The area under consideration is completely within the city limits of Memphis. Part 658.2 of the Farmland Protection Policy Act states that, "Prime Farmland" does not include land already in or committed to urban development or water storage. Therefore this land would not be considered prime farmland and would be exempt from the Form AD-1006.

If additional information is needed, please let me know.

Sincerely,

Louis McAdoby, acting

DONALD BIVENS
State Conservationist

cc: Ray Bryant, Area Conservationist, Jackson
J. Kevin Brown, District Conservationist, Memphis

RICHARD C. HACKETT
MAYOR

CITY of MEMPHIS

DEPARTMENT
OF
ENGINEERING

RECEIVED
JUL 21 1986
ENVIRONMENTAL PLANNING

July 15, 1986

Mr. Mike Crabb
Tennessee Department of Transportation
Planning Division
James K. Polk Building
Nashville, TN 37219

RE: Kirby Parkway - Messick to Massey Lane

Dear Mike,

This is in response to your question regarding the City's plans for the section of Kirby Parkway from Messick to Massey Lane after the Kirby Parkway project has been completed. At this point, we anticipate that on the section between Messick and Poplar, which has an existing median, that the volumes will be such that we will need to stripe this for three lanes in each direction. The section from Cottingham to Massey Lane has sufficient pavement width for five lanes. We anticipate that the volumes will also require us to stripe this at five lanes after the Kirby project is completed. The section from Poplar to Cottingham varies in width and in some places has an existing median. Restriping in this area will be dependent upon the existing pavement width that is available to us.

I trust this answers your questions. If you need any additional information, please let me know.

Sincerely,

Bryant Bondurant

Bryant Bondurant, P.E.
City Engineer

BB:cm

cc: Charles Sullivan
James Collins

Shelby County Government

William N. Morris, Jr., Mayor

October 11, 1988

RECEIVED
OCT 12 1988
ENVIRONMENTAL PLANNING

Mr. Mike A. Crabb
Engineering Specialist II
Tennessee Department of Transporation
Suite 900
James K. Polk Building
Nashville, TN 37219

Dear Mr. Crabb:

The meeting held this morning in my office concerning the Draft EIS for Kirby Parkway was very informative. The following is a result of that meeting.

Concerning the portion of the project that goes through the Shelby Farms property and across the Wolf River, Shelby County appreciates having been included in the development of the various alternative routes SF1 - SF4. These alternatives were considered in an effort to provide a roadway facility which would meet the growing traffic demands in an economically and environmentally sound manner.

Concerning the portion of the project involving Whitten Park and the three alternatives, WP-1, WP-2 and WP-3; it appears that WP-1 or WP-3 alternatives would be preferred in order to reduce the number of displaced residents. If the WP-3 alternative is selected, Shelby County will need to have access provided to the park property.

After all studies have been completed and the results have been presented for public review and comment, Shelby County will support the alternatives that best meets the need of the community as it relates to traffic and environment.

I would like to take this opportunity again to express Shelby County's support of this project. Shelby County needs this north/south route in order to reduce the traffic problems we are experiencing along the Poplar corridor. This project is in keeping with our major road plan and needs to have the full attention of the State, City and County so construction can begin as soon as possible.

160 MID AMERICA MALL, MEMPHIS, TENNESSEE 38103

Should you need any additional information on this project, please advise.

Sincerely,

Robert I. Bowers, Director of
Public Works

cc: Mayor William N. Morris, Jr.
Phil Whittenburg, CAO
Wade Towles, County Engineer

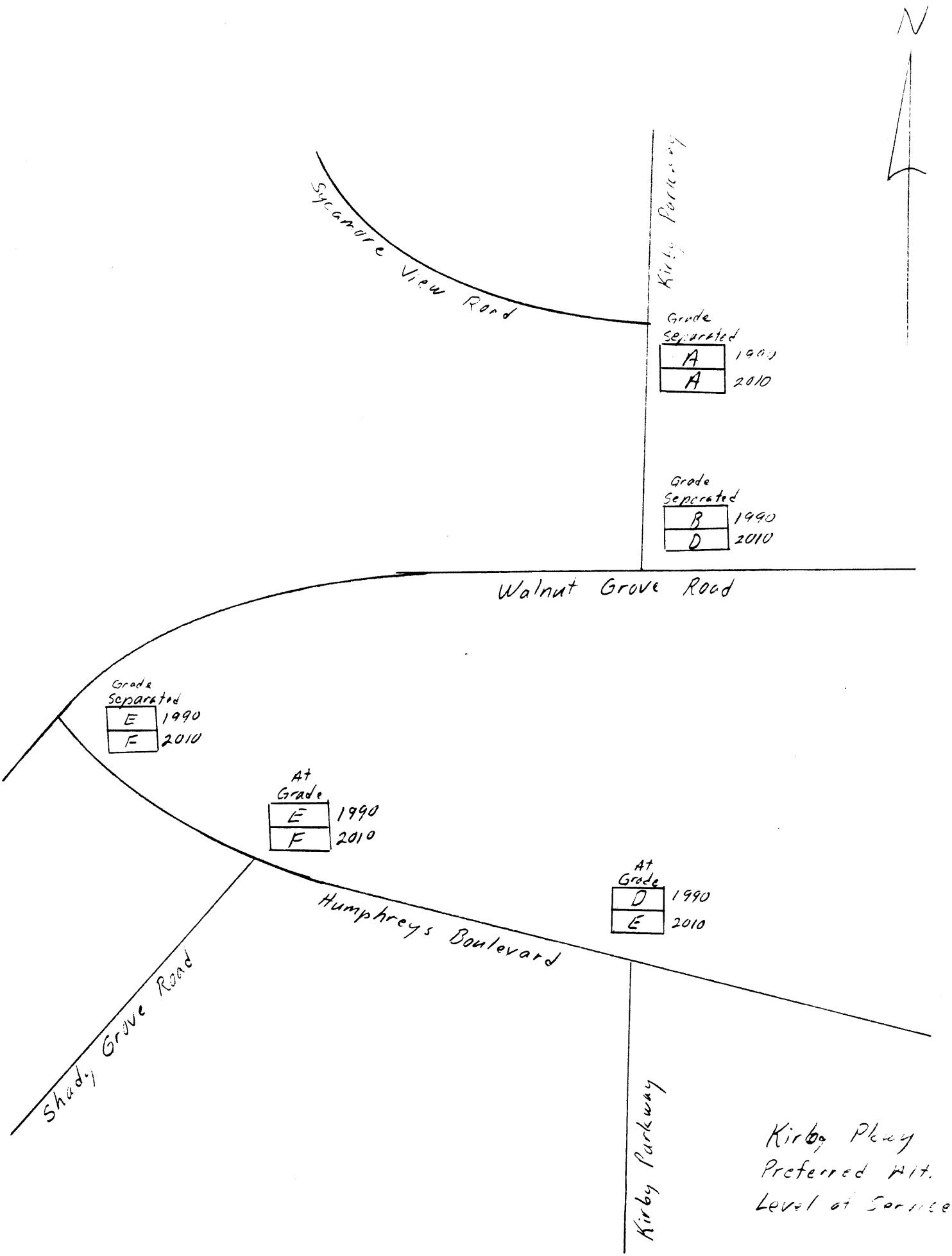
mlg

N

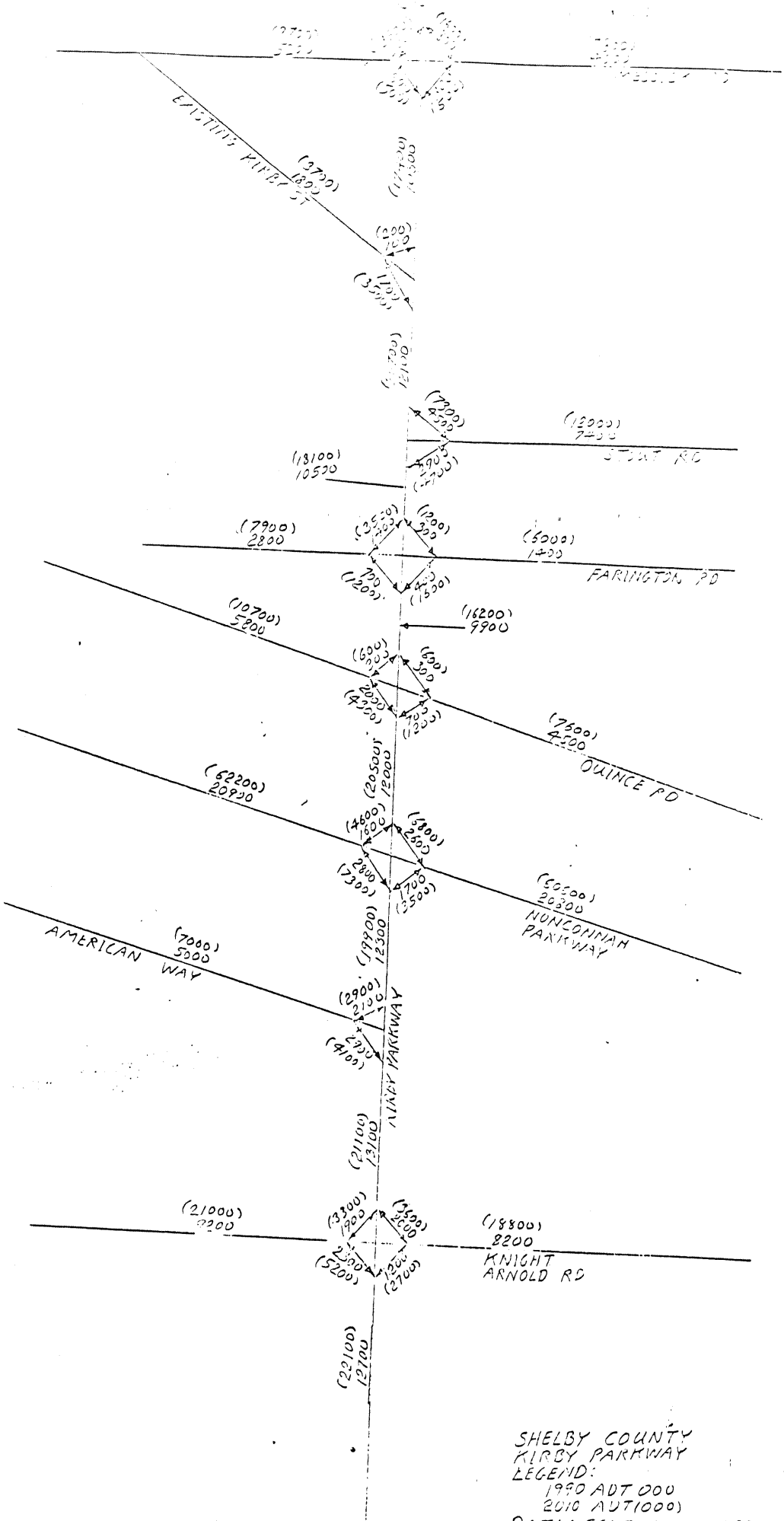
	Existing	Proposed		
Stage Rd.	C+	A		1990
	C-	A		2010
Summer Ave.	B+	A		1990
	C-	A		2010
Reese Rd.	B+	A+		1990
	E+	B+		2010
I-40	C+	B+		1990
	F	D-		2010
Dexter Rd.	C+	B+		1990
	F	D-		2010
Sycamore View Rd.		A+		1990
		B+		2010
Walnut Grove Rd.		A+		1990
		B+		2010
Humphreys Blvd.		at-grade D	grade separated C	1990
		F	C	2010
Nottingham Place		C		1990
Neshoba Rd.		E		2010
Poplar Ave.	D-	D-		1990
	F	F		2010
Messick Rd.	B+	A		1990
	C+	B		2010
Quince Rd.	B	A+		1990
	E	B		2010

SF-1 Alt.

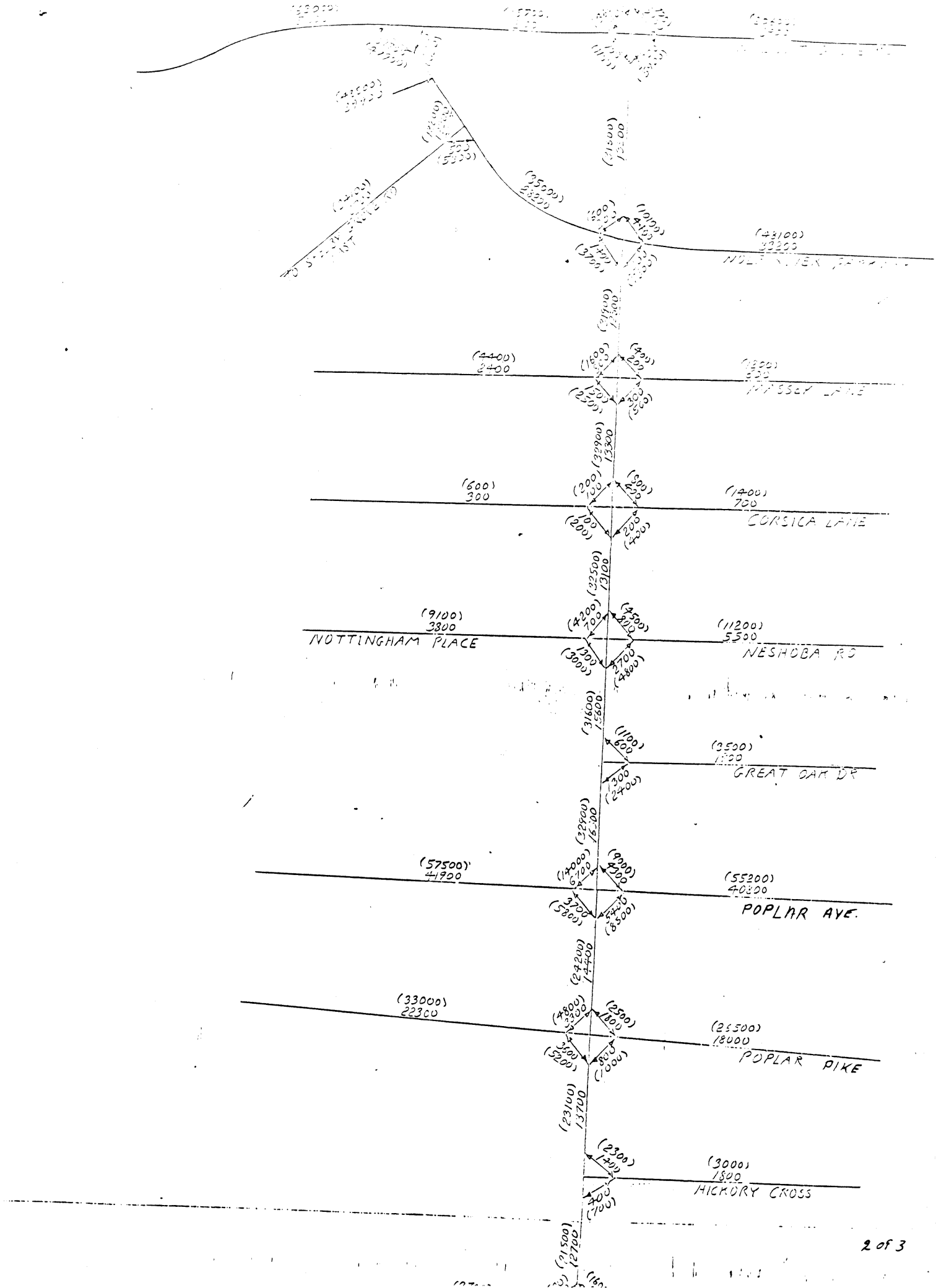
Kirby Pkwy.
Level of Service
Feb. 10, 1988



Kirby Pkwy
Preferred Alt.
Level of Service



SHELBY COUNTY
KIRBY PARKWAY
LEGEND:
1990 ADT 000
2010 ADT(000)
DATE: FEBRUARY 10, 1988
JRS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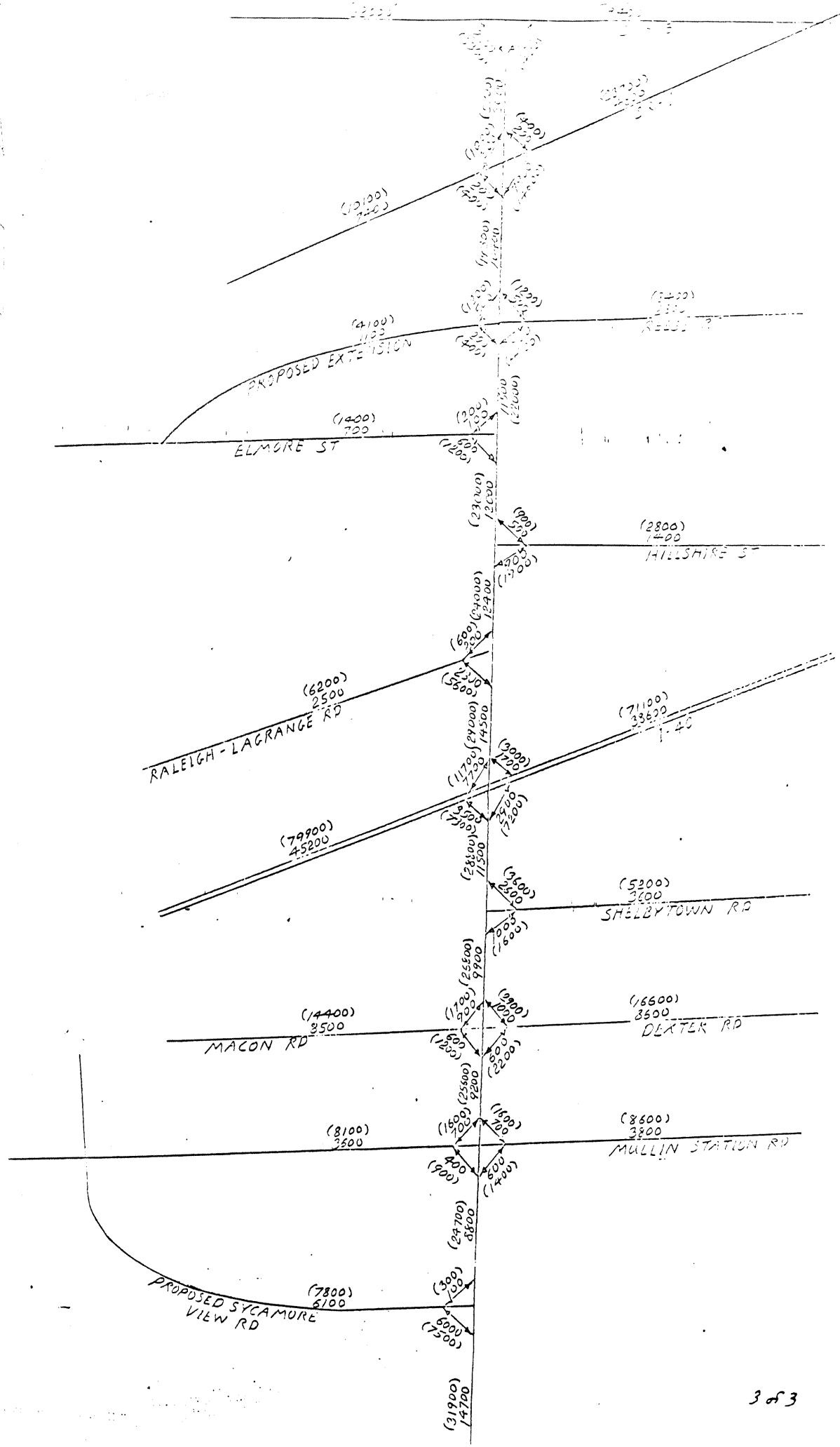
PROPOSED EXTENSION
ELMORE ST
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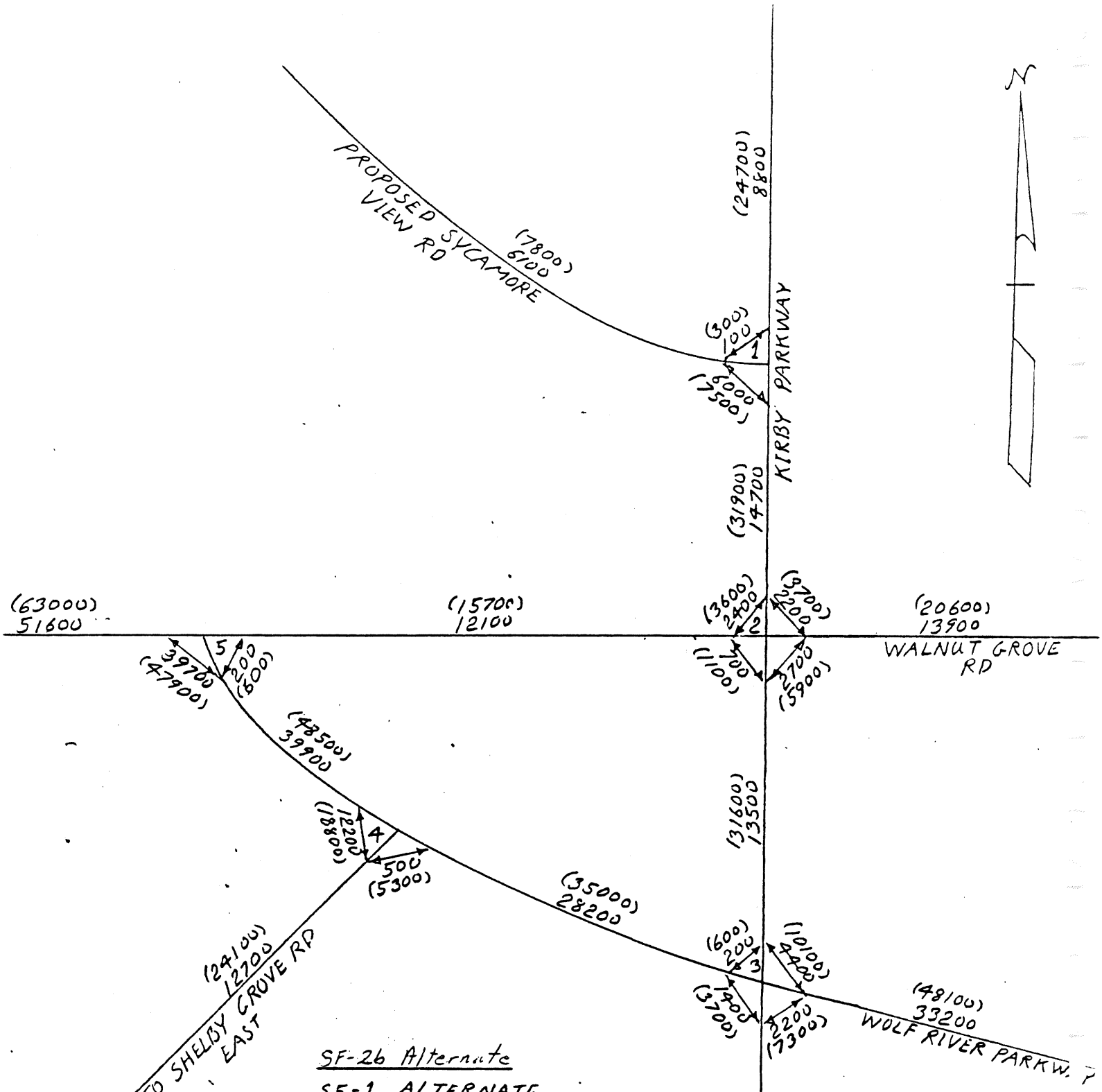
RALEIGH - LAGRANGE RD
I-40
SHELBYTOWN RD
MACON RD
DEXTER RD
MULLIN STATION RD
PROPOSED SYCAMORE VIEW RD



SF-26 Alternate

SF-1 ALTERNATE
SHELBY COUNTY
KIRBY PARKWAY
LEGEND:
1990 ADT 000
2010 ADT (000)
DATE: JANUARY 28, 1988
JRS

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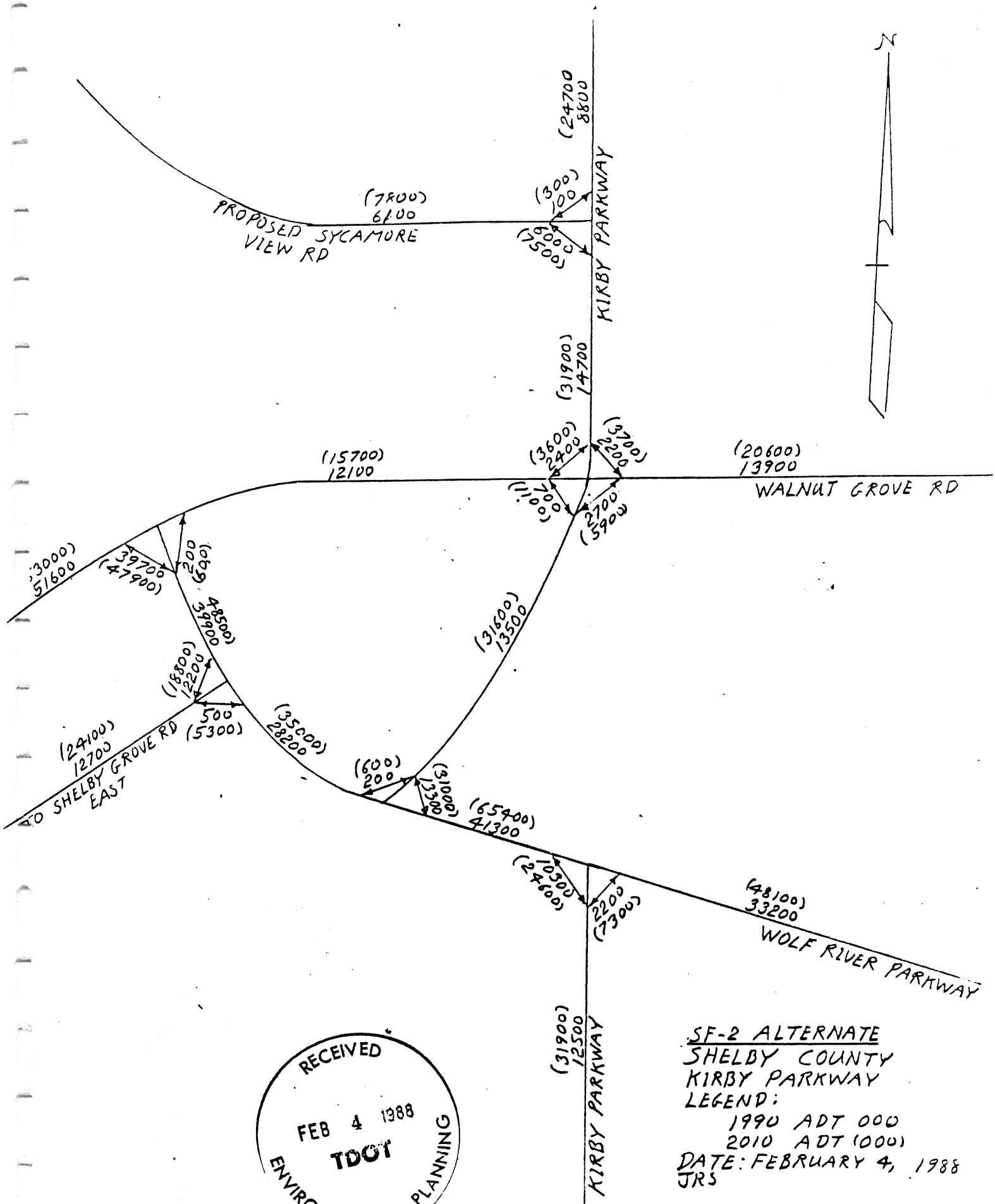

SF-2 ALTERNATE
SHELBY COUNTY
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LEGEND:
1990 ADT 000
2010 ADT (000)
DATE: FEBRUARY 4, 1988
JRS

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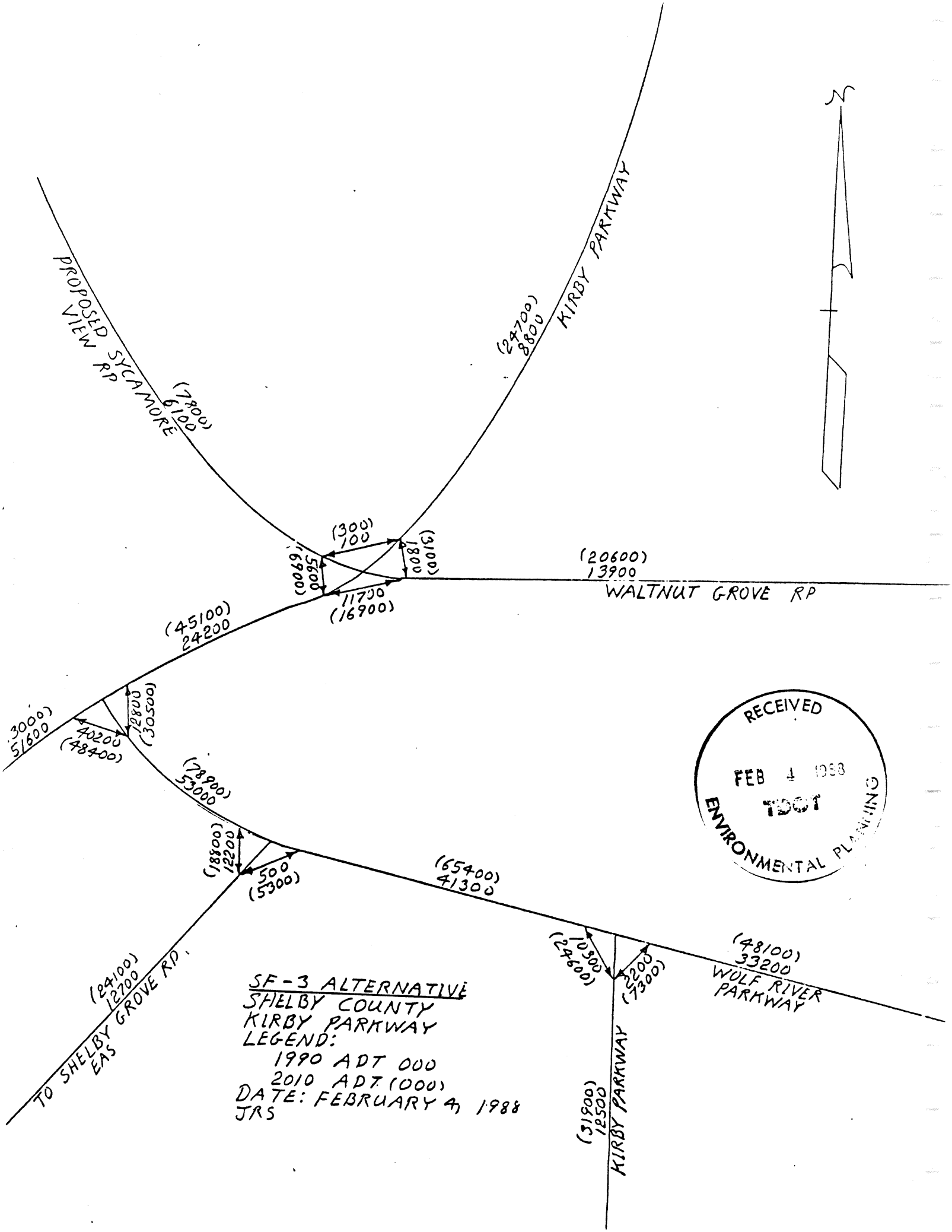
FEB 4 1988
TDOT
ENVIRONMENTAL PLANNING



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FEB 4 1988
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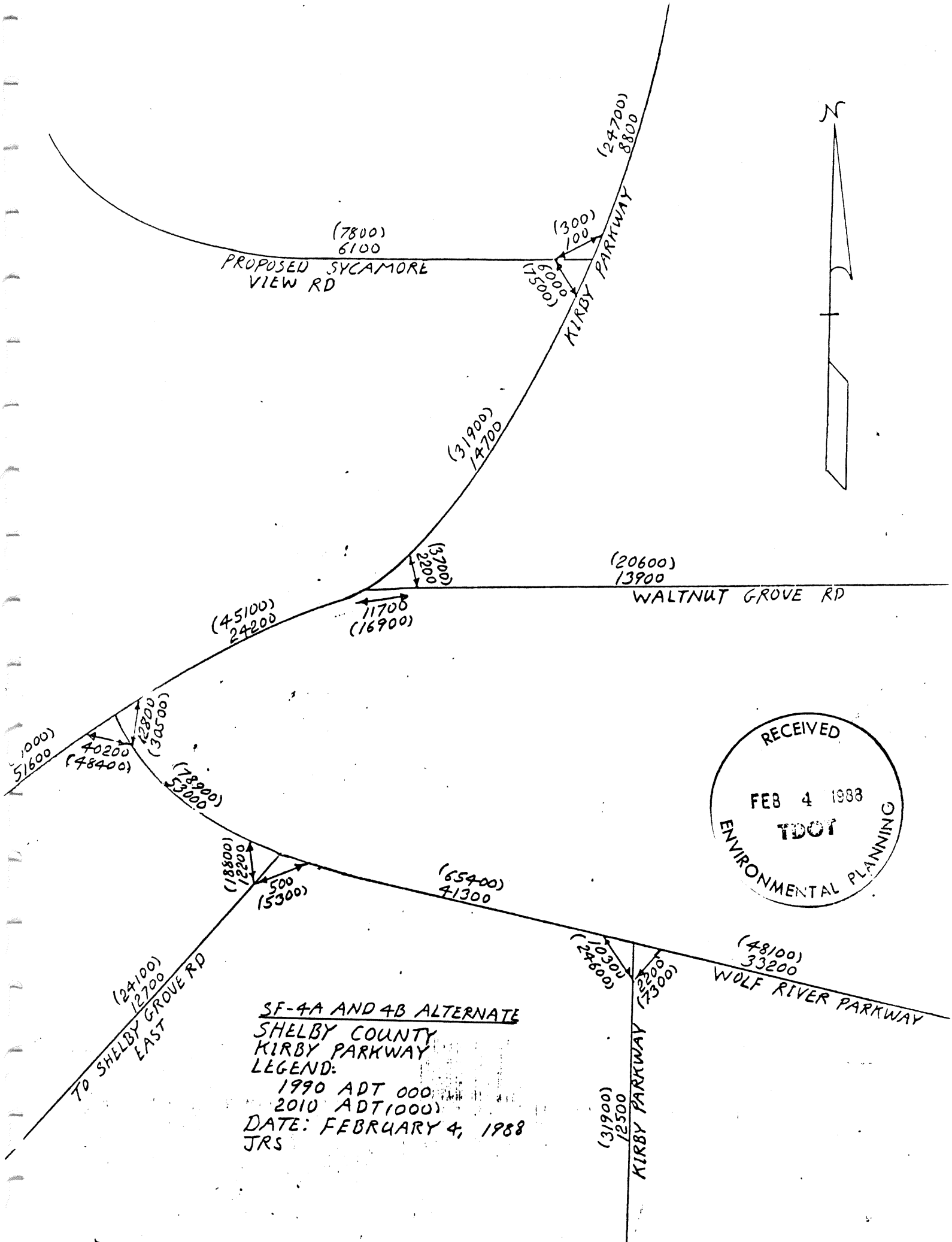
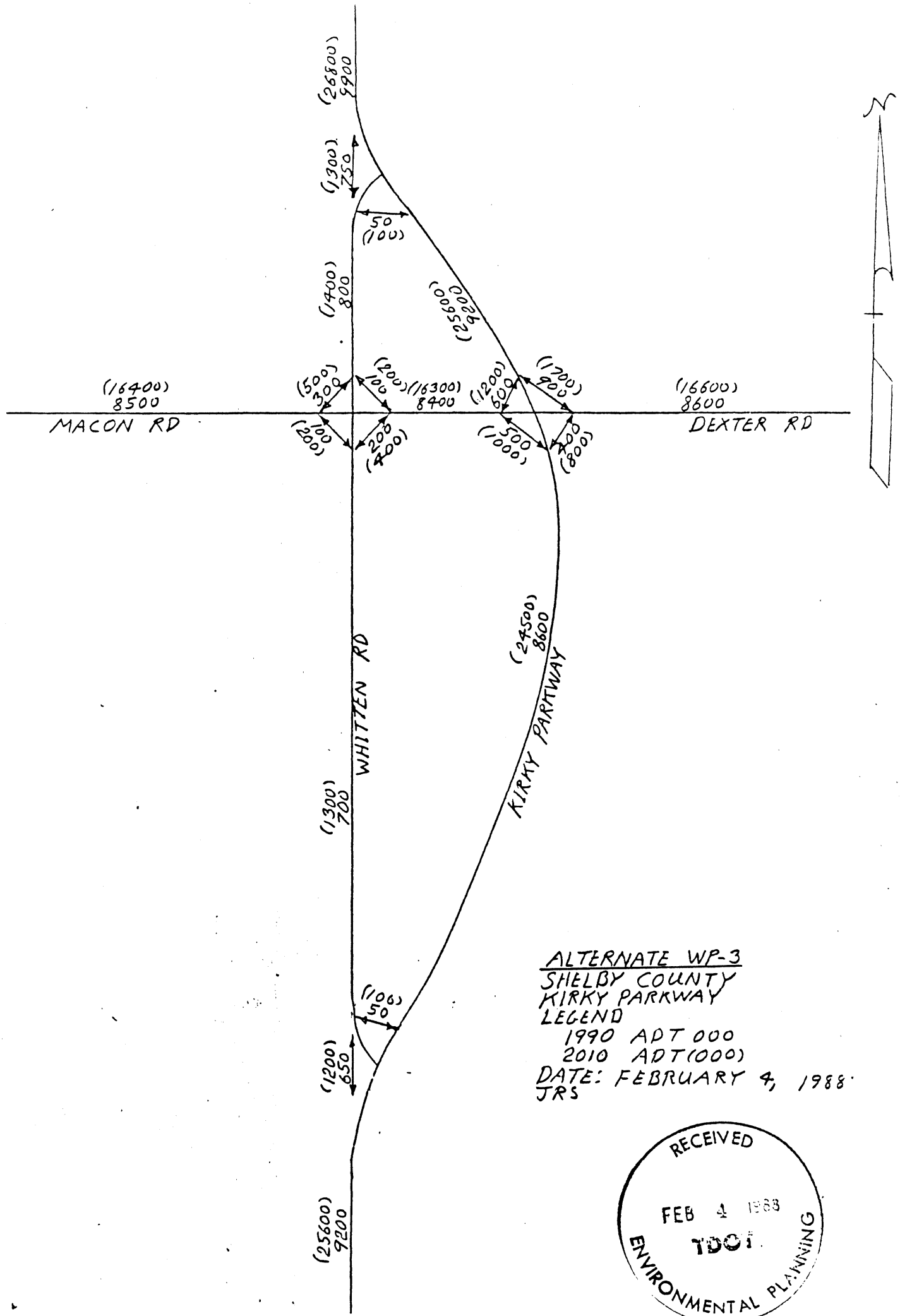
ENVIRONMENTAL PLANNING



SF-4A AND 4B ALTERNATE
SHELBY COUNTY
KIRBY PARKWAY
LEGEND:
1990 ADT 000
2010 ADT (000)
DATE: FEBRUARY 4, 1988
JRS

RECEIVED
FEB 4 1988
TDOT
ENVIRONMENTAL PLANNING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KIRKY PARKWAY
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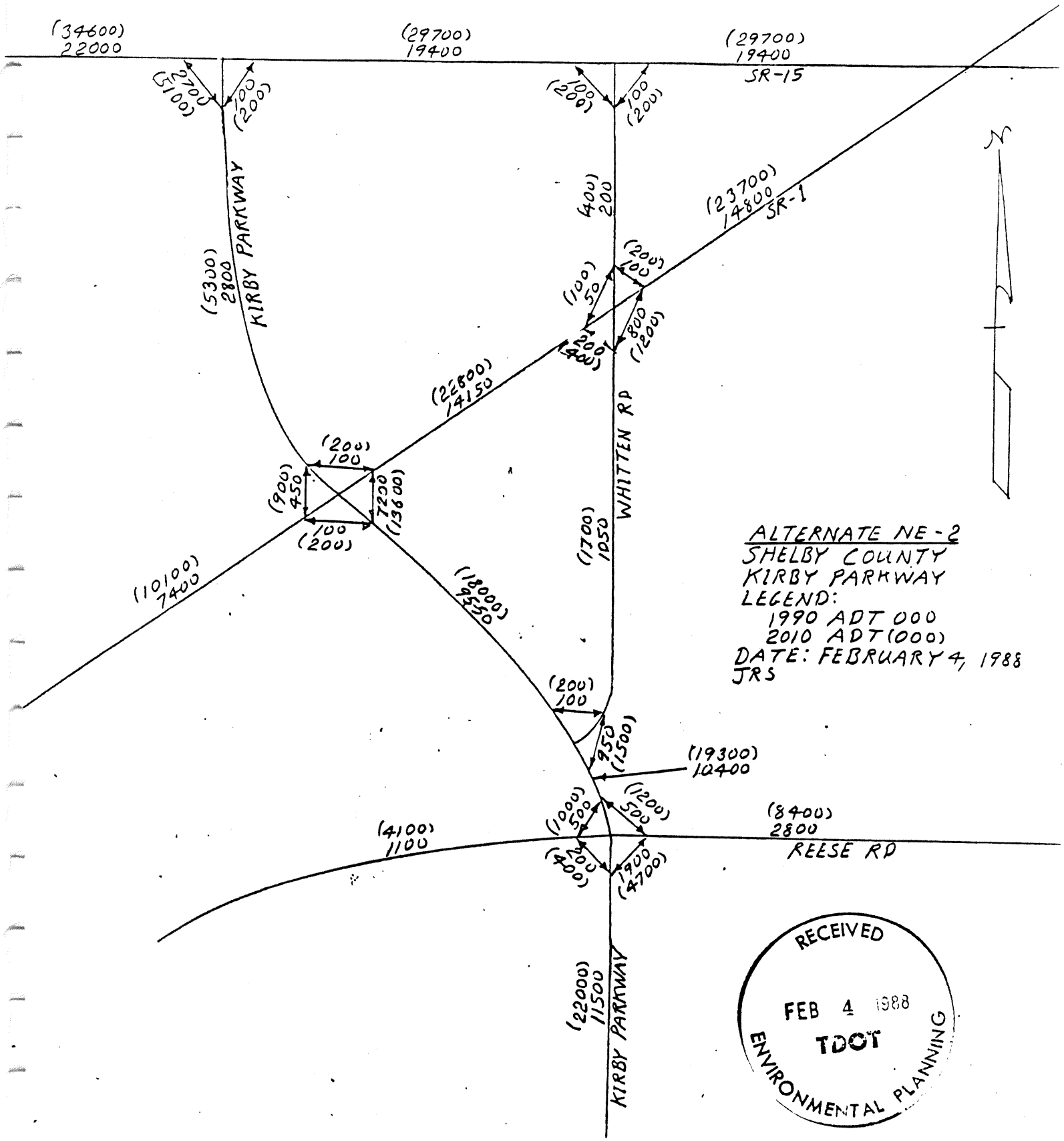
ALTERNATE WP-3
SHELBY COUNTY
KIRKY PARKWAY
LEGEND
1990 ADT 000
2010 ADT(000)
DATE: FEBRUARY 4, 1988
JRS
RECEIVED
FEB 4 1988
TDOT
ENVIRONMENTAL PLANNING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KIRBY PARKWAY
ALTERNATE NE-2
SHELBY COUNTY
KIRBY PARKWAY
LEGEND:
1990 ADT 000
2010 ADT (000)
DATE: FEBRUARY 4, 1988
JRS
RECEIVED
FEB 4 1988
TDOT
ENVIRONMENTAL PLANNING

United States Department of the Interior

GEOLOGICAL SURVEY
A-413 Federal Building
Nashville, TN 37203

TAKE PRIDE IN AMERICA

August 19, 1988

Mr. Mike Crabb
Tennessee Department of
Transportation
Suite 900
James K. Polk Building
Nashville, TN 37219

RECEIVED
AUG 23 1988
TDOT
ENVIRONMENTAL PLANNING

Dear Mr. Crabb:

In response to your request to Mike Bradley, from our staff, attached is the information on the Shelby County Landfill. The pink shaded area in the enclosed map shows the approximate extent of the landfill. The dashed red line shows the proposed path of the parkway. The tables describe the data from some of the wells in the vicinity of the landfill.

We believe that your concerns are very valid about the potential disturbance of contaminants in the landfill (or migrating from it) along the path of the parkway. The following facts support this hypothesis:

1. We have defined a plume leading from the landfill and extending toward wells 30 and 31 (in the map).

2. The occurrence of a plume and contaminants toward the southeast corner of the landfill is suspected but it has not been defined. The extent, depth and type of water, amount of cover, and quality of the ground water in this zone is unknown.

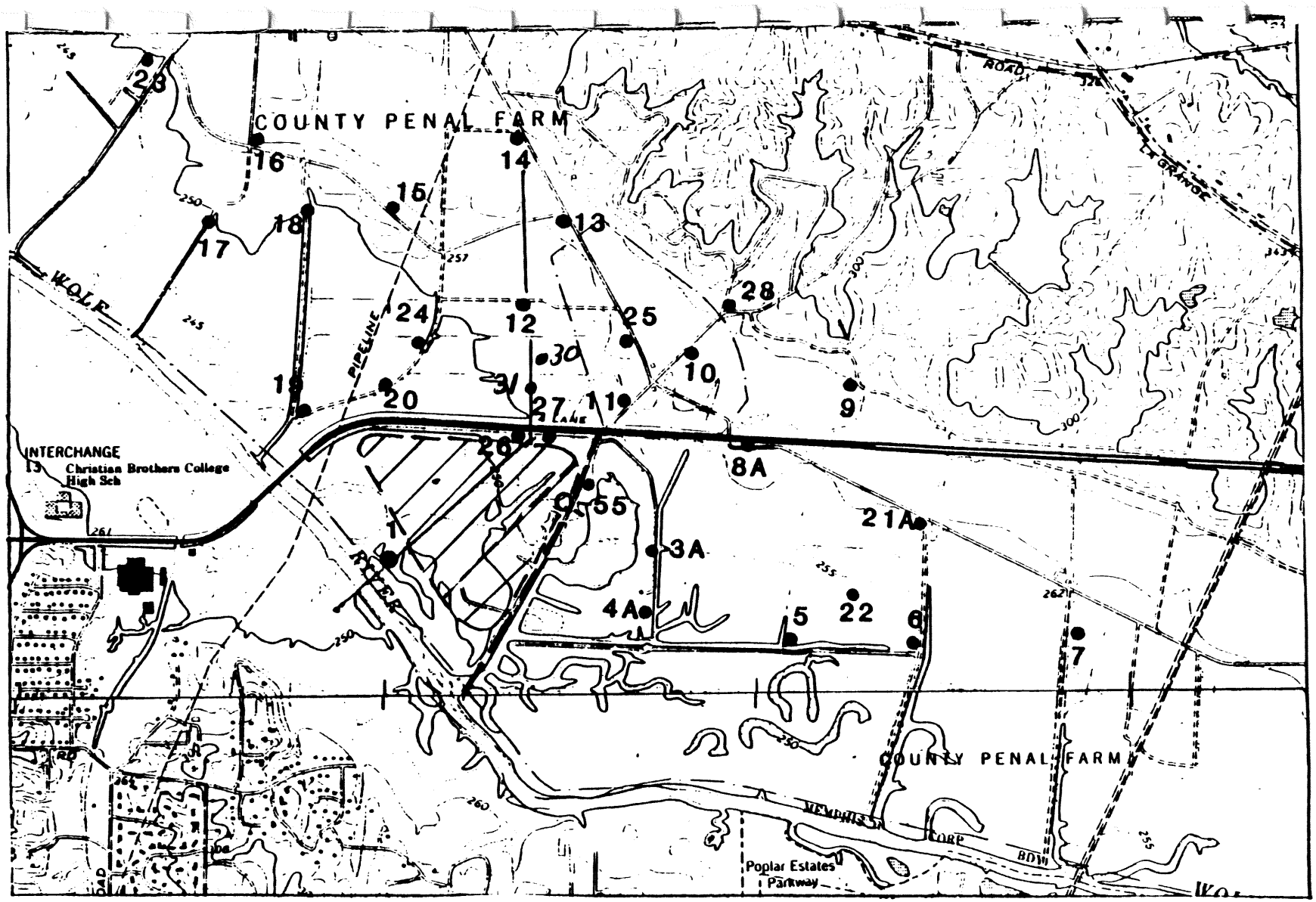
The resolution of these unknowns would require a drilling and sampling program. This program could be completed within the existing cooperative water-resources investigations between TDOT and the USGS. Under this program we would provide 50 percent of the cost of the investigation. The availability of auger rigs from TDOT could substantially reduce the cost of the project and expedite its completion.

At your convenience, we could meet with you to consider more details on the problem and its solution. Please call Mike Bradley or myself at 736-5424.

Cordially,

Ferdinand Quinones
District Chief

Attachments
FQ:jkd
cc: Billy Burke, TDOT



Location of well sites.

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 8-18-88

USGS NO	FIELD NO	DATE	PH (STANDARD UNITS)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)
SH:Q- 55	SH CO PENAL FRM	09-28-81	6.30	--	--	--	--	--	--	--	--
		11-18-86	6.60	120	28	13	13	4.2	12	20	0.10
SH:Q- 95	1	07-16-87	5.70	23	5.9	2.1	9.8	1.9	3.3	9.4	0.10
SH:Q- 96	2	07-16-87	5.60	20	6.8	0.82	4.2	1.2	2.7	3.2	<0.10
SH:Q- 98	4A	11-18-86	6.00	37	10	3.0	3.5	3.7	4.2	40	<0.10
SH:Q-101	7	11-17-86	6.20	160	38	16	34	1.4	8.8	140	<0.10
SH:Q-102	8A	11-18-86	6.30	130	32	12	48	1.7	43	64	<0.10
SH:Q-105	12	11-17-86	6.20	150	35	14	32	1.6	9.2	130	<0.10
SH:Q-109	16	11-17-86	6.00	140	33	15	54	1.3	85	30	0.10
SH:Q-112	19	11-19-86	6.00	43	9.7	4.4	5.6	1.8	3.9	2.2	0.20
SH:Q-113	20	11-18-86	5.80	88	22	8.1	12	1.2	4.2	79	<0.10
SH:Q-119	26	11-19-86	6.40	360	91	33	62	15	73	4.4	0.20
SH:Q-120	27	11-19-86	6.40	510	140	39	82	46	91	7.6	0.30
SH:Q-128	30	07-17-87	6.80	91	20	9.8	70	0.80	7.5	79	0.30
SH:Q-129	31	07-16-87	6.60	140	36	12	110	3.7	14	54	0.30

USGS NO	FIELD NO	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SPECIFIC CONDUCTANCE LAB (US/CM)	SILICA, DISSOLVED (MG/L AS SIO2)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
SH:Q- 55	SH CO PENAL FRM	163	260	266	--	--	--	--	--	--	--
		177	127	301	12	<1	29	<1	<10	<10	360
SH:Q- 95	1	72	35	105	12	2	61	1	<10	<10	4
SH:Q- 96	2	47	27	70	11	19	41	2	20	<10	4600
SH:Q- 98	4A	110	67	222	22	<1	83	3	<10	<10	31000
SH:Q-101	7	314	68	454	17	<1	70	<1	<10	<10	38
SH:Q-102	8A	296	99	459	21	<1	180	1	<10	<10	16
SH:Q-105	12	291	69	421	17	1	120	<1	<10	<10	1100
SH:Q-109	16	354	82	546	38	<1	210	1	<10	<10	31
SH:Q-112	19	86	60	108	13	1	130	<1	<10	<10	5500
SH:Q-113	20	170	34	255	17	<1	81	2	10	<10	3900
SH:Q-119	26	619	642	1030	13	1	340	8	<10	<10	92000
SH:Q-120	27	932	924	1650	14	1	610	8	<10	<10	83000
SH:Q-128	30	--	200	456	28	2	170	3	<10	<10	4
SH:Q-129	31	556	325	709	16	1	160	8	20	<10	310

UNITED STATES DEPARTMENT OF INTERIOR - GEOLOGICAL SURVEY PROCESS DATE 8-18-88

USGS NO	FIELD NO	LEAD, DIS-SOLVED (UG/L AS PB)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	ZINC, DIS-SOLVED (UG/L AS ZN)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	PHOS-PHOROUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
SH:Q- 55 SH CO PENAL FRM		--	--	--	--	--	--	--	--	--
		<10	2800	<1.0	120	14	<1	<0.100	<0.010	1.5
SH:Q- 95	1	<10	1	<1.0	40	31	<1	<0.100	0.010	13
SH:Q- 96	2	<10	340	<1.0	30	11	<1	<0.100	0.010	2.1
SH:Q- 98	4A	<10	1300	<1.0	46	16	<1	<0.100	<0.010	2.7
SH:Q-101	7	<10	15	<1.0	99	15	2	0.680	<0.010	1.5
SH:Q-102	8A	<10	380	<1.0	91	15	5	1.50	<0.010	1.1
SH:Q-105	12	<10	1400	<1.0	80	28	9	1.90	<0.010	5.4
SH:Q-109	16	<10	5	<1.0	210	22	2	7.90	0.020	1.7
SH:Q-112	19	<10	220	<1.0	86	12	<1	<0.100	0.020	3.2
SH:Q-113	20	<10	190	<1.0	62	24	<1	<0.100	<0.010	2.0
SH:Q-119	26	20	1900	<1.0	320	5	<1	<0.100	<0.010	18
SH:Q-120	27	20	2500	<1.0	980	<3	<1	<0.100	<0.010	18
SH:Q-128	30	<10	3200	<1.0	160	45	9	1.30	0.040	99
SH:Q-129	31	<10	590	<1.0	330	24	<1	0.100	0.020	8.0

Shelby County Government

William N. Morris, Jr., Mayor

June 17, 1991

Commissioner Jimmy Evans
Tennessee Department of Transportation
James K. Polk Building
505 Deaderick Street
Nashville, TN 37219

RE: Kirby Parkway Project

Dear Jimmy:

I would like to thank you and your staff for their work on the above project. Your assistance in developing various alternatives is to be commended.

I would like to voice my support for the alternative that was selected and submitted to the Federal Highway Administration in the Environmental Impact Statement. This route is a culmination of several alternatives and represents an alignment that satisfies the needs and goals of this area.

The route of Kirby Parkway will involve two very important properties that belong to Shelby County and its citizens; Shelby Farms and Whitten Road Park.

The alternate selected will not adversely impact the existing or planned use for the Shelby Farms area. We are developing a revised master plan for this area and we will use the final design considerations of the roadway to facilitate access into the area. We believe the final design can be accomplished in a manner that will benefit the Shelby Farms area by providing the access needed as the public visits the area.

Regarding the Whitten Road Park, Kirby Parkway and the widening of Whitten Road has been anticipated based on the Major Road Plan. The proposed widening of Whitten Road will not impact the park property boundary as it is currently designated.

Also, we continue to be in negotiations with a private developer to trade property at another location for this park. We believe the new location will give us the room we need to develop a well designated, multi-use park. Whitten Road Park is now limited due to its size and does not meet the needs of the surrounding area.

160 N. MID AMERICA MALL, MEMPHIS, TENNESSEE 38103

In closing, I would hope that the Environmental Impact Statement can be approved by the Federal Highway Administration as it was submitted so that this project may be ongoing and not delayed. We need to address certain areas along this route in order to improve safety and move the ever incurring traffic flow.

Your assistance is always appreciated and should you need any additional information, please feel free to contact me.

Sincerely,

Bill Morris

William N. Morris, Jr.
Shelby County Mayor

APPENDIX "F"

Replies to the Draft Environmental Impact Statement

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

Office of the Chief Scientist

January 5, 1989

RECEIVED
JAN 13 1989
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush
C. E. Manager 2
Environmental Planning Office
Department of Transportation
Nashville, Tennessee 37219

Dear Mr. Bush:

This is in reference to your Draft Environmental Impact Statement for Kirby Parkway from Split Oak Drive to Stage Road in Memphis, Shelby County, Tennessee.

We hope our comments will assist you. Thank you for giving us an opportunity to review the document.

Please send future EIS's to:

Director
Ecology and Environmental Conservation Office
HCHB, Room 6222
14th & Constitution Avenue, N.W.
Washington, D.C. 20230

Sincerely,

David Cottingham

David Cottingham
Director
Ecology and Environmental
Conservation Office

Enclosures

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL OCEAN SERVICE
OFFICE OF CHARTING AND GEODETIC SERVICES
ROCKVILLE, MARYLAND 20852

DEC 23 1988

MEMORANDUM FOR: David Cottingham
Ecology and Environmental Conservation Office
Office of the Chief Scientist

FROM: Rear Admiral Wesley V. Hull, NOAA
Director, Charting and Geodetic Services

SUBJECT: DEIS 8811.13 - Kirby Parkway from Split Oak Drive to Stage Road in Memphis, Tennessee

The subject statement has been reviewed within the areas of Charting and Geodetic Services' (C&GS) responsibility and expertise and in terms of the impact of the proposed actions on C&GS activities and projects.

A preliminary review of C&GS records has indicated the presence of both horizontal and vertical geodetic control survey monuments in the proposed project area. Attached are the published geodetic control data for quadrangle 350893 (Horizontal and Vertical) and Level Line L 24724 (Corinth, Mississippi to Memphis, Tennessee).

These data should be reviewed for identifying the location and designation of any geodetic control monuments that may be affected by the proposed project. If there are any planned activities which will disturb or destroy these monuments, C&GS requires not less than 90 days' notification in advance of such activities in order to plan for their relocation.

C&GS recommends that funding for this project include the cost of any relocation required for C&GS monuments. For further information about these monuments, please contact the National Geodetic Information Branch, N/CG17, Rockwall Bldg., room 20, National Geodetic Survey, NOAA, Rockville, Maryland 20852, telephone 301-443-8631.

Attachments

cc:
N/CG17 - Spencer

DEC 27 1988
RECEIVED

United States Department of the Interior

GEOLOGICAL SURVEY

A-413 Federal Building
Nashville, TN 37203

TAKE PRIDE IN AMERICA

November 18, 1988

RECEIVED NOV 21 1988 ENVIRONMENTAL PLANNING

Mr. Charles E. Bush
Administrator
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, TN 37219

SUBJECT: Draft Environmental Impact Statement for Kirby Parkway from Split Oak Drive to Stage Road in Memphis, Shelby County, Tennessee.

Dear Mr. Bush:

We have no comments on the environmental effects of the subject project, but some of the proposed alternatives, if selected, may impact our operations to some extent.

Since our response of February 23, 1984 to your original coordination letter on the subject project, there has been a change in our situation which the proposed construction may impact. In April 1986 we established a streamflow gaging station on Wolf River at Walnut Grove Road. The Draft Environmental Impact Statement transmitted by your letter of Nov. 10, 1988 indicates that several of the proposed alternatives (SF-3, SF-4a, SF-4b) may be routed over the Walnut Grove Road bridge. If this bridge will require widening as part of the subject project, then that could impact our gaging structure. Our gage would probably have to be moved during the construction period, the cost of which should be born by your agency. A preliminary estimate of this cost is $5,000. Please keep us informed as to which alternative route is finally selected.

FOR THE DISTRICT CHIEF

Charles R. Gamble

Charles R. Gamble
Hydrologist

CRG:tdh

United States
Department of
Agriculture

Soil
Conservation
Service

675 Estes Kefauver FB-USCH
801 Broadway
Nashville, Tennessee 37203

December 7, 1988

Charles E. Bush
Civil Engineer Manager 2
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, Tennessee 37219

Dear Mr. Bush:

My staff has reviewed the Draft Environmental Impact Statement for Kirby Parkway from Split Oak Drive to Stage Road in Memphis, Shelby County, Tennessee. The following suggestions are forwarded:

1. Review all scientific names of plant and animal species (see page 50, line 1- Ictiobus).

2. Page 50, line 2- the abbreviation for "species" (plural) is "spp." not "spps." as listed.

3. Page 54, paragraph 1, last 4 lines. Correct spelling:
   (a) Acer saccharum
   (b) Ulmus americana
   (c) Ilex opaca

4. Check the identification of "ironwood" with a local expert.

Based on the information contained in this DEIS and prior comments in Appendices "A" and "C", we have no additional comments.

Sincerely,

JERRY S. LEE
State Conservationist

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DEC 9
1988
ENVIRONMENTAL PLANNING

NED McWHERTER
Governor

TENNESSEE STATE PLANNING OFFICE
307 JOHN SEVIER STATE OFFICE BUILDING
500 CHARLOTTE AVENUE
NASHVILLE, TENNESSEE 37219-5082
(615) 741-1676

JIM HALL
Executive Director

December 13, 1988

89-0400

Mr. Charles Bush
Department of Transportation
Suite 900, James K. Polk Building
Nashville, Tennessee 37219

SUBJECT: CHTN121388-010 Draft Environmental Impact Statement for Kirby Parkway from Split Oak Drive to Stage Rd., Memphis, TN, Shelby Co.

Dear Mr. Bush:

In accordance with Presidential Executive Orders 12372 and 12416 and with Gubernatorial Executive Order 58, this office serves as the designated State Clearinghouse for federal activities and grants review.

State and local government evaluation of submitted materials has indicated no conflicts with existing or planned activities. Therefore, we are recommending that this proposal be approved based on the descriptive information made available to us. However, should additional information come to the attention of this office, we may wish to comment further.

This letter should be attached to the application and become a permanent part of the project file. Any involved federal agency should respond in writing to this office if there are problems in complying with this approval. The above State Clearinghouse Identification Number should be placed in the appropriate block on the federal application form.

The appropriate funding agency will now be reviewing our recommendation. If we can be of further assistance, please do not hesitate to contact us.

Sincerely,

Charles W. Brown

Charles W. Brown
Director, State Clearinghouse

CWB:mcp

cc: Memphis Delta Development District, Memphis BIM
Congressman Don Sundquist, Congressman Ed Jones
Congressman Harold Ford

TENNESSEE DEPARTMENT OF HEALTH AND ENVIRONMENT
Bureau of Environment
T.E.R.R.A. BUILDING
150 NINTH AVENUE NORTH
NASHVILLE, TENNESSEE 37219-5404

January 18, 1989

RECEIVED
JAN 24 1989
TDOT
ENVIRONMENTAL PLANNING

Mr. Charles Bush
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nahville, TN 37219

Re: DEIS, Kirby Parkway project in Memphis, Shelby County

Dear Mr. Bush:

Upon review the above referenced project, this Division has decided that alignments SF-3 and SF-4 are our preferred alternatives since they appear to have the least impact on wetlands. We caution you on the legal problems of SF-2 a or b alternatives because of its crossing of a mitigation land (North of Humphreys Boulevard and South of the Wolf river) for a previous road project.

We disagree with the statement of "the limiting factor which is controlling the quality of habitat is the turbidity." (section 4.8, page 49 of the DEIS). On Wolf River, lack of habitat for benthic and aquatic life, rather than turbidity alone, is the limiting factor. We strongly recommend that a thoroughly updated water quality impact study be conducted for this project.

If you have any questions, please contact Sherry Wang or me at 615/741-7883.

Sincerely,

Larry C. Bowers

Larry C. Bowers, Manager
Natural Resources Section
Division of Water Pollution Control

cc: Dan Sherry, TWRA
Betsy Bunting, TDOC
Tom Welborn, EPA
Charles Brown, State Clearing House

TENNESSEE VALLEY AUTHORITY
KNOXVILLE, TENNESSEE 37902

DEC 22 1988

Mr. Charles E. Bush, C. E. Manager 2
Environmental Planning Office
Tennessee Department of Transportation
Nashville, Tennessee 37219

Dear Mr. Bush:

The Tennessee Valley Authority has completed its review of the Draft Environmental Impact Statement for Kirby Parkway from Split Oak Drive to Stage Road in Memphis, Shelby County, Tennessee, and concurs with the analysis and conclusions.

We appreciate the opportunity to review this document and request that you forward a copy of your final determination on this proposed action.

Sincerely,

for M. Paul Schmierbach, Manager
Environmental Quality

TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

January 9, 1989

RECEIVED
ENVIRONMENTAL PLANNING

Mr. Charles Brown, Director
State Review Process
State Planning Office
1800 James K. Polk Building
Nashville, TN 37219

RE: DEIS, Kirby Parkway, Memphis

Dear Charles:

This letter provides comment on the Tennessee Department of Transportation Draft Environmental Impact Statement which addresses the proposed Kirby Parkway, Memphis. Kirby Parkway has been controversial in the past because of its potential damages in crossing the Wolf River bottoms. Sensitive areas associated with these bottoms include the forests which are part of Shelby Farms on the north side of the river, and mitigation lands associated with the recently constructed Humphreys Boulevard on the south side of the river.

The six alternatives to be considered are SF-1, which would bisect the south portion of the Shelby Farms Forest Natural Area; SF-2a and SF-2b, which would cross the Wolf River just west of the north portion of the Shelby Farms Forest Natural Area; and SF-3, SF-4a, and SF-4b, which would cross the Wolf River by improving the existing Walnut Grove Road crossing. This Agency strongly favors the latter three which would not involve a new Wolf River crossing.

We have long been concerned with the planning of Humphreys Boulevard, Kirby Parkway, and Nonconnah Parkway, three proposed roadways which are not being intercoordinated by the City of Memphis. As far as environmental review is concerned, each is being developed separately without regard to the others. A significant portion of Humphreys Boulevard is now complete, resulting in wetlands losses on the south side of the Wolf River. To partially mitigate these losses, a strip of land lying between Humphreys Boulevard and the river was donated to the Wolf River Conservancy for preservation. If planning of Humphreys Boulevard and Kirby Parkway had been coordinated together with environmental interests, more options (i.e., SF-2a and 2b) may

TENNESSEE DEPARTMENT OF CONSERVATION
701 BROADWAY
NASHVILLE
37219-5237

ELBERT T. GILL, JR.
Commissioner

January 4, 1989

RECEIVED
JAN 9 1989
TDOT
ENVIRONMENTAL PLANNING

Mr. Charles E. Bush
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, Tennessee 37219

Re. Proposed Kirby Parkway Draft Environmental Impact Statement (DEIS), Shelby County

Dear Charles.

The Department of Conservation has reviewed the referenced document, our detailed comments and recommendations are attached. Although there are a variety of issues presented in the DEIS, our focus has been protection of forests and wetlands along the Wolf River, particularly Shelby Farms Forest State Natural Area. The Tennessee Department of Conservation mission to protect natural communities, rare species, and department owned or managed lands has led me to recommend the SF-3 and 4 alignment, which crosses the Wolf River by utilizing and improving the existing Walnut Grove Road Bridge. I believe this route is the best compromise for improving traffic flow without undermining efforts to create a greenbelt corridor along the Wolf River. Except for a brief discussion of the SF-3 and 4 alternatives through Shelby Farms, the Department has no comments on other aspects of the DEIS, these seem more appropriate for local review.

If you have any questions, you may contact Betsy Bunting who coordinated the review of the DEIS. Her number is 615/742-6552.

Sincerely,

Elbert T. Gill / by SHR

ELBERT T. GILL, JR.
Commissioner

ETG:ebr
attachment
cc. Dan Sherry, TWRA
Jim Widlack, USFWS
Tom Welborn, EPA
Larry Bowers, WPC
Charles Brown, State Clearing House
Mike Countess, TDOC

have been considered environmentally acceptable regarding the subject Wolf River crossing. As things stand now, it appears unreasonable to consider taking Conservancy lands through Alternatives SF-2a and SF-2b after these lands have already been promised to the environment in exchange for the impacts of Humphreys Boulevard.

Alternative SF-1, while not crossing the Humphreys Boulevard mitigation lands, would bisect the south portion of the Shelby Farms Forest Natural Area and, for that reason, is objectionable to this Agency. We appreciate the efforts of the Department of Transportation to offer variations of this alternative which include one to completely bridge the forested area of the crossing. However, considering the existence of viable alternatives which would not involve a completely new crossing of the river (i.e., SF-3, SF-4a, and SF-4b), we feel that the impacts of even complete bridging of the forest should be avoided. Complete bridging of the forest would probably avoid most of the hydrological impacts associated with fill that would not be deposited. However, bisection of a large forested tract discourages its use by many animals, would limit forest development under the bridge, and would seriously impair the visual aesthetics of the natural area.

The Tennessee Wildlife Resources Agency can only support those alternatives which involve improvement of the existing Walnut Grove Road crossing of the Wolf River. These three alternatives variously affect nonforested acreage within Shelby Farms. We recommend that an alternative be selected between these three which would minimize the overall impact to the Farms.

Thank you for considering our comments and forwarding them to the Department of Transportation.

Sincerely,

Dan Sherry

Dan Sherry
Fish and Wildlife Environmentalist

DS:mjc
cc: WPC, DOC, USFWS, EPA,
[redacted]

Tennessee Department of Conservation Comments
Kirby Parkway Draft Environmental Impact Statement

The most significant environmental issues are related to three possible alignments proposed for the Kirby Parkway crossing of Wolf River. The Department has considered several factors before recommending a preferred alternative - to improve the existing bridge at Walnut Grove Road and route Kirby Parkway traffic along Humphreys Boulevard. As designated in the DEIS, this is the combined SF-3 and 4 alignments. Of the SF-3 and 4 options in the Shelby Farms area north of the Wolf and south of Whitten Road, there is no one option that appears clearly preferable. We suggest examination of a route utilizing the existing Mullins Station Road alignment to minimize disruption of the Shelby Farms public owned land.

At this point it is appropriate to provide some discussion of the factors considered in the department's recommendation of SF-3 and 4 rather than SF-2 or SF-1. Problems with the SF-1 alternative are obvious, as that route would bisect the southern part of the Shelby Farms Forest Natural Area. The section 4(f) provisions of the Department of Transportation Act of 1966 as well as the State Natural Areas Preservation Act of 1971, provide protection for designated park lands. The SF-1 route is also the most environmentally damaging because of the unavoidable impact to the wetlands and riparian forest both north and south of the Wolf River. As development in the Memphis urban area continues, the ecological significance and value of such forested river corridors increases dramatically.

The SF-2 alternative is less damaging than SF-1, but presents similar problems. Building on this alignment would create a third bridge over the Wolf between the Walnut Grove Road and Germantown Road bridges, which are only about 3.5 river miles apart. Even utilizing the best construction methods, degradation of the river and associated wetlands is inevitable, and there is likely to be an on-going maintenance and bank stabilization problem because of the erodibility of local soils. This alignment also bisects the river corridor forest, and the proximity of the road to the Natural Area immediately to the west would degrade the sense of remoteness which enhances the natural qualities of this area.

Additionally, the SF-2 a or b alignment presents a legal problem, as either route would cross a negotiated mitigation land north of Humphreys Boulevard and south of the Wolf River. This land was placed in a conservation easement as a condition of the U. S. Army Corps of Engineers Section 404 Permit and the State 401 Certification issued

for construction of Humphreys Boulevard. This permit was negotiated under intense public scrutiny and any alterations of its conditions would be contrary to the intent of the public review process through which it was developed.

The department recommendation for the Walnut Grove Road crossing of the Wolf is based on the apparent best approach to protection of natural resources. Any of the SF-3 and 4 alternatives will have some impact of the adjacent Shelby Farms Forest Natural Area and trails, but because the alignment at this point is less damaging overall, we have selected this alternative. Mitigation for encroachment on the Natural Area and wetlands should be negotiated, if this is the alignment selected. It is important that the expected 2 acre loss of the Natural Area be addressed through statutory procedures so the integrity of the Natural Areas Preservation Act is protected.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

JAN 9 1988

4PM-EA/AML

Mr. Charles E. Bush
Civil Engineer Manager 2
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, Tennessee 37219

Mr. Dennis C. Cook
Division Administrator
Federal Highway Administration
Federal Building, U.S. Courthouse
801 Broadway, Room A-926
Nashville, Tennessee 37203

SUBJECT: Proposed Kirby Parkway From Split Oak Drive to Stage Road and Sycamore View Road Extension From Mullins Station Road to Kirby Parkway in Memphis, Shelby County, Tennessee
EPA Log No.: D-FHW-E40716-TN

Gentlemen:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above referenced proposed project. In general the document adequately addresses most issues of concern to us. However, several issues should receive additional consideration.

The proposed project consists of new road construction and upgrading of existing roads for a ten-mile long, six lane highway between Split Oak Drive and Stage Road in the East Memphis area of Shelby County, Tennessee. A 1.3 mile extension of Sycamore View Road is also proposed. Potential environmental impacts of concern to us include those associated with crossing the Wolf River and Nonconnah Creek floodplains and the Shelby Farms Natural Area, and increased noise levels along the highway corridor.

Nine alternative alignments have been presented in the DEIS for the road segment crossing the Wolf River and Shelby Farms, three alternatives in the Whitten Park recreational area and two alternatives at the northern terminus of the project.

Future noise levels along the project alignments are projected to increase and to exceed FHWA Noise Abatement Criteria (70 dBA). Approximately 93 residences, 3 churches, two housing complexes, and the Shelby Farms Forest Natural Area will be subjected to noise levels of 71 to 75 dBA. A housing complex (Location Point 3, Figure 8) and Whitten Park (Location Point 3A) will be impacted by noise level increases of 25 dBA and 19 dBA, respectively. Additionally, ten receptor sites will experience noise level increases of

from 6 to 15 dBA.

Because of uncontrolled access along the proposed highway, noise barriers are considered to be not feasible by TDOT. Alterations in the vertical and/or horizontal alignments as well as traffic management procedures which could reduce noise levels were also considered to be non-feasible. TDOT states that any form of abatement measures are unlikely to be recommended for the highway generated noise impacts.

Obviously the benefits of a new highway within an urban area with its attendant increase in traffic cannot be realized without some noise impacts to urban residents. However, a large number of residents along the highway corridor may experience problems associated with projected highway noise levels that can include health problems, sleep disturbance, safety considerations and property value decreases. Since structural and alignment measures do not appear to be feasible, we believe consideration should be given to other mitigation measures such as sound proofing and monetary compensation to affected residents. We recommend that the number of residences or dwelling units in the two housing complexes (Location Points 3 and 8) be listed in the Final EIS to get a more accurate representation of the number of noise sensitive receptor sites that will be affected by the project.

Three alternatives are projected to impact wetlands in the Wolf River floodplain. Alternatives SF-1, SF-2a and SF-2b will impact from 0.6 acres to 1.3 acres of forested wetlands. If a grade separated intersection is used at Humphreys Boulevard, an additional 0.5 acres would be impacted on Alternatives SF-1 and SF-2a. Impacts would result from filling and/or spanning the wetlands with bridges. Spanning, obviously, would have less impact on wetlands than filling. The FEIS should specify the areal extent of each type of impact for each alternative.

Although wetland losses appear to be relatively small, every effort should be made to minimize these impacts or to offset any unavoidable losses through wetland creation and/or enhancement. Protecting existing wetlands to compensate for wetland losses as mentioned in the DEIS, by itself is not satisfactory compensation. This type of mitigation always results in a net loss of wetlands. Detailed plans to offset any unavoidable wetland losses should be presented in the FEIS. Alternatives SF-3 and SF-4 have no wetland impacts as described in the document and appear to be desirable from a wetland perspective.

Both banks of the Wolf River are forested with mature bottomland trees, remnants of a once extensive floodplain forest ecosystem. As described in the DEIS, these remnants provide abundant wildlife habitat and a travel corridor for wildlife in an urban area and should be considered very valuable in this regard. Because of its value, all efforts should be made to minimize impacts to the forest system along the river. Alterna-

tive SF-3 and SF-4 use the existing Walnut Grove Road Bridge over the Wolf River and the existing highway corridor through the floodplain. Utilization of either of these alternatives would impact several acres of forested floodplain but would not further segment the floodplain at a new location. The floodplain corridor would remain essentially as it presently exists. Habitat losses associated with the destruction of the forested areas at the edge of the Walnut Grove Road Bridge right-of-way could be offset with planting of hardwood trees elsewhere in the floodplain. Underpasses would be needed to allow animals movement under the roadway on both sides of the river. Mitigation measures for forest habitat losses and travel corridor disruption should also be detailed in the Final EIS.

Impacts to the natural areas of the Nonconnah Creek floodplain at the southern end of the proposed project corridor are not described. Impacts, if any, should be presented in the FEIS along with mitigation plans to reduce or offset any losses.

Although water quality in streams to be crossed by the proposed highway (Wolf River, Nonconnoh Creek and Fletcher Creek) is described as degraded and typical of channelized streams in west Tennessee agricultural areas, activities associated with construction of the proposed highway should be conducted in ways which minimize further degradation of water courses. Standard erosion control measures for highway construction should be implemented, monitored and strictly enforced by TDOT. The Nonconnah Creek crossing may require special erosion control measures.

Based on our review, we rate the DEIS EC-2; that is, we have environmental concerns associated with potential impacts proposed for this project as described above, and we believe additional information on these impacts and/or mitigation is needed in the FEIS.

We appreciate the opportunity to review this document. If you have any questions concerning our comments, please contact me or Al Lucas of my staff at 404/347-7109 or FTS 257-7109.

Sincerely yours,

Heinz J. Mueller

Heinz J. Mueller, Acting Chief
NEPA Review Staff
Environmental Assessment Branch

United States Department of the Interior

OFFICE OF ENVIRONMENTAL PROJECT REVIEW
WASHINGTON, D.C. 20240

TAKE PRIDE IN AMERICA

In reply refer to:
ER 88/1005

FEB 3 1989

RECEIVED FEB ENVIRONMENTAL PLANNING

Mr. Dennis C. Cook
Division Administrator
Tennessee Division Office
Federal Highway Administration
801 Broadway, Room A926
Nashville, Tennessee 37203

Dear Mr. Cook:

This is in response to the request for the Department of the Interior's comments on the draft environmental/Section 4(f) statement for Kirby Parkway (Split Oak Drive to Stage Road) and Sycamore View Road (Mullins Station Road to Kirby Parkway), Memphis, Shelby County, Tennessee.

SECTION 4(f) STATEMENT COMMENTS:

Whitten Park

We concur that Alternative WP-3 is a feasible and prudent alternative to the taking of park land from Whitten Park. Table I, Comparison of Alternatives, indicates this alternative requires fewer displacements and costs less to construct than either Alternatives WP-1, which requires the taking of park land, or WP-2 which avoids park land but results in considerably more community disruption.

We cannot concur that the statement adequately addresses the second provision of Section 4(f) and considers steps which will be taken to minimize adverse impacts to the park. The statement should consider the need for access to the park, both from the proposed Kirby Parkway as well as from Whitten Road. We recommend working with the Shelby County Recreation Board to determine specific access needs for the park and providing park access as a part of this project. Access should be clearly addressed in the final Section 4(f) statement.

We are concerned that projected noise levels will increase 19dBA from 46dBA to 65dBA in the park from Alternative WP-3. While we agree with the contention on page 75 that the specific recreational activities in the park are not impaired, the quality of the park is impacted. We recommend that the final Section 4(f) consider noise barriers, etc., to reduce the increased noise.

Shelby Farms Trail

We concur that there are no feasible and prudent alternatives to avoid Section 4(f) involvement with these trails. Our concurrence is based on the fact that it is not feasible to go around the greenbelt area because of its length. With respect to the second provision of Section 4(f), we believe Alternative SF-2a will have the least impact because it crosses the greenbelt in its most narrow section and crosses only one trail. The final Section 4(f) statement should provide a detailed description of the steps which will be taken with the bridge design to minimize adverse impacts to the trail.

Shelby Forest Natural Areas (North and South)

We concur that Alternative SF-2a is a feasible and prudent alternative to avoid taking land from the Shelby Forest Natural Areas. We also concur that all means to minimize harm have been considered.

PRELIMINARY SECTION 4(f) STATEMENT COMMENTS

It appears that crossing the Wolf River and Shelby Farms should be considered as Section 4(f) involvements.

The Wolf River is heavily used for public recreational purposes and the river should be considered as publicly owned. We would concur that there is no feasible and prudent alternative to avoid crossing the river. We would also concur that all means to minimize harm had been considered if the proposed bridge for Alternative SF 2 is designed to appropriately accommodate recreation use.

The statement does not recognize Shelby Farms as a Section 4(f) area, though it is publicly owned and is heavily used for recreational purposes. In addition, a golf course and other recreational facilities are proposed in the general area through which alternatives traverse the farms. We would concur that there is no feasible and prudent alternative to avoid the Section 4(f) involvement with Shelby Farms. With regard to second provision of Section 4(f), we would concur that Alternative SF 2 is less damaging to recreational resources than other construction alternatives.

Specific steps need to be taken to mitigate adverse visual and noise impacts, and additional coordination with Shelby County Farms Board is needed to assure that proposed recreational facilities are appropriately considered in highway use.

SECTION 6(f) OF THE LAND AND WATER CONSERVATION FUND ACT

Shelby Farms received a Land and Water Conservation Fund grant from the National Park Service (NPS). Based on the information provided in this statement and alternatives presented, the NPS has determined that Section 6(f) of the Land and Water Conservation Fund Act should not apply to alternatives proposed in this statement.

FISH AND WILDLIFE COORDINATION ACT COMMENTS

Corps of Engineer 404 permits should be required for this project. The U.S. Fish and Wildlife Service (FWS) is opposed to implementation of any alternative that would reduce the size of the bottomland hardwood habitat and wetland resources in the Shelby Forest Natural Area. In view of the fact that a reasonable alternative to avoid adverse impacts to the Shelby Forest Natural Area exists, the FWS favors selection of Alternative SF-2a as the preferred alternative. Also, the Final Environmental Impact Statement should contain descriptions of specific mitigation measures for unavoidable losses of wetlands resulting from construction of the proposed project. The FWS would support issuance of the Corps of Engineers Section 404 permits required for Alternative SF-2a, but would likely oppose issuance of such permits for other alternatives.

The Environmental Impact Statement addresses standard measures to be implemented by the Department of Transportation to reduce impacts to fish and wildlife resources. However, it does not provide detailed descriptions of the wetland resources in the project area. National Wetland Inventory maps indicate that wetlands along the Wolf River are more extensive than described in the impact statement. The area should be thoroughly inspected to accurately delineate existing seasonal wetlands. A general description of wetland mitigation options is presented, but no specific details are offered regarding potential locations or acreages of mitigation wetlands.

ENDANGERED SPECIES ACT COMMENTS

In the letter dated February 22, 1984, the FWS informed the Federal Highway Administration that no federally listed or proposed endangered or threatened species occurred in the project impact area. The FWS indicates that no new species have been added to the List of Endangered and Threatened Plants and Animals that may be affected by the project. Therefore, requirements of Section 7 of the Endangered Species Act are still fulfilled.

ENVIRONMENTAL IMPACT STATEMENT COMMENTS

The U.S. Geological Survey indicates that the site location is in the Uniform Building Code Seismic Risk Zone 3, indicating that major structural damage could occur in the event of a recurrence of a New Madrid type earthquake. The document should describe the geologic character of the region and site-specific geologic hazards. Some mention should be made of the intention to consider seismic and related hazards in the project design and to conduct a detailed site-specific geotechnical assessment to address the mitigation of seismic as well as slope stability and other geologic and geotechnical problems.

Summary Comments

The Department of the Interior offers no objection to Section 4(f) approval of Alternative WP-3 to avoid Whitten Park and Alternatives SF-2a for Shelby Farms Trail and Shelby Forest Natural Areas provided our recommendations to minimize adverse impacts are appropriately addressed.

The "Preliminary Section 4(f) Comments" in this letter are provided to give you an early indication of our thoughts about the Section 4(f) information and involvements. They do not represent the results of formal consultation by the Department of Transportation with this office, pursuant to the consultative requirements of Section 4(f) of the Department of Transportation Act. Such requirements would be fulfilled only when this office comments separately on any Section 4(f) statement which may be prepared and approved by you for circulation.

As we have a continuing interest in the project, we would be willing to cooperate and provide technical assistance in further project assessment and in the development of additional documentation for review. The field office assigned responsibility for coordination and technical assistance about park and recreation matters is: Regional Director, National Park Service, Southeast Region, 75 Spring Street, S.W., Atlanta, Georgia 30303 (telephone FTS 242-5835).

For technical assistance about fish and wildlife resources, wetlands, and dredge and fill, please contact the U.S. Fish and Wildlife Enhancement Field Office, 9 East Broad Street, P.O. Box 845, Cookeville, Tennessee 38503, telephone FTS 852-5057, or commercial 615-528-6481.

Thank you for the opportunity to comment on this statement.

Sincerely yours,

John H. Farrell
ACTING DIRECTOR

cc: Charles E. Bush
Civil Engineer Manager 2
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, Tennessee 37219

Memorandum

U.S. Department of Transportation

Office of the Secretary of Transportation

91-0088

Subject: Draft Environmental Impact Statement
Tennessee, Shelby County
Kirby Parkway, FHWA-TN-EIS-86-02-D

Date: DEC 21 1988

From: Eugene L. Lehr
Chief, Environmental Division

Reply to Attn of:

To: Eugene W. Cleckley
Chief, Environmental Operations Division, HEV-11

We appreciate the opportunity to review the subject DEIS. We have no comments.

TENNESSEE DEPARTMENT OF CONSERVATION
701 BROADWAY
NASHVILLE, TENNESSEE 37219-5237

January 25, 1989

RECEIVED
JAN 27 1989
TDOT
ENVIRONMENTAL PLANNING

Mr. Charles Bush
Environmental Planning Office
Tennessee Dept. of Transportation
900 James K. Polk Building
Nashville, TN 37219

RE: TDOC Comments on Kirby Parkway DEIS, Shelby County

Dear Charles:

As a follow-up to our conversation of today, January 25, 1989, I am forwarding a copy of the "Perpetual Open Space Conservation Easement" which was required by the Section 401 certification of the 404 permit for Humphreys Boulevard. This easement was negotiated among the grantors, including Boyle Investment Company, and the city of Memphis, the grantee. The conservation easement does allow for the construction of Kirby Parkway on the SF-2 alignment as noted by letter from Russell Bloodworth, of Boyle Investment Company, to the Tennessee Department of Transportation on January 18, 1989. My interpretation that the conservation easement precluded disruption of the area between Humphreys Boulevard and the Wolf River was based on the February 9, 1987, Section 401 water quality certification letter; however, the language of the easement, finalized on August 6, 1987, does provide for development of Kirby Parkway through the easement.

The remainder of our comments concerning protection of the greenbelt corridor along the Wolf River, and using existing alignments for completing Kirby Parkway are not altered by the easement issue.

Please continue to use our January 4, 1989 comments to you on the DEIS for our position on this project aside from the noted exception.

If you have any questions, please call me at 742-6552.

Sincerely,

Elizabeth B. Bunting

Elizabeth B. Bunting
Environmental Review Coordinator

EBB:sb

cc: Russell Bloodworth
Boyle Investment Company

Bryant Bondurant
City of Memphis

Commissioner Elbert T. Gill, Jr.
Tennessee Department of Conservation

Enclosures

PERPETUAL OPEN SPACE CONSERVATION EASEMENT

This Perpetual Open Space Conservation Easement made and entered into on this 6th day of August, 1987, by and between Boyle Investment Company, BIC-WH Partnership, Ltd., a Tennessee limited partnership, J. Bayard Boyle, Sr., Elizabeth Ragland Boyle, and The Jack Erb Company, Thompson & Russell Builders, Inc., collectively referred to as "Grantors" and the City of Memphis, a municipal corporation organized and existing under the laws of the State of Tennessee, referred to as "Grantee".

WHEREAS, the Grantors are the fee simple title owners of property described on Exhibit "A" (the "Property") attached hereto and incorporated herein by reference as if set forth verbatim and are now desirous of creating a Perpetual Open Space Conservation Easement (the "Easement") which restricts the Property.

WHEREAS, the Grantors are granting this Easement in order to preserve the Property pursuant to the Grantee's conservation-policy and for the scenic enjoyment of the general public, both of which will yield a significant public benefit.

NOW THEREFORE, in order to conserve and restrict the development of the Property, the Grantors do hereby declare the following protective covenants and restrictions which shall run as binding and enforceable servitudes in perpetuity, with the Property, to do and refrain from doing, upon the Property each of the following stipulations, which contribute to the public purpose and general welfare because they assure that the scenic and environmental features of the Property will be protected to the maximum extent possible for the benefit of future generations:

1. There shall be no removal, destruction or cutting of trees, shrubs or other vegetation except as may be necessary for the maintenance of walkways, utility lines or service entrances in conformity with sound horticultural practices.

2. No activities, actions or uses of the Property shall be permitted that would be detrimental or adverse to erosion control, soil conservation, or fish and wildlife habitat preservation.

3. No industrial or commercial activities shall be permitted or carried on on the Property.

4. Without the prior written approval of Grantors, there shall be no excavation, dredging or removal of dirt, gravel, soil, rock, sand or any other material nor any building of roads or other topographical changes, except as may be necessary to maintain presently existing walkways or service entrances.

5. Without prior written permission of Grantors, no utility transmission lines, except those required for existing purposes, may be created.

6. No dumping of trash, garbage, rubbish or any other materials shall be permitted.

7. There shall be no commercial advertising of any description permitted.

8. Grantors, and/or Humphreys Center Association of Owners, Inc., their representatives, successors and assigns shall be permitted at all reasonable times to inspect

the Property. In the event of a violation of any covenant or restriction herein, the Grantors and/or Humphreys Center Association of Owners, Inc. may institute a suit to enjoin such violation by ex parte, temporary or permanent injunction and provide for restoration of the Property to its prior condition. Alternatively, the Grantors, and/or Humphreys Center Association of Owners, Inc., their representatives, successors or assigns may enter upon the Property, correct any such violation and hold the party responsible for the cost thereof. Grantors and/or Humphreys Center Association of Owners, Inc., their representatives, successors or assigns shall also have all available legal and equitable remedies to enforce the provisions hereunder. Grantors, and/or Humphreys Center Association of Owners, Inc., for themselves, their successors and assigns may provide and maintain a plaque or plaques on the Property giving notice of the environmental importance of the Property, describing the environment, and further give notice that the Property is subject to the protective covenants and restrictions herein contained. No other signs, billboards, or advertisements shall be displayed or placed upon the Property except (a) such plaques or other markers as are appropriate for commemorating the historic importance of the Property; (b) such signs or markers as are necessary to direct and restrict the passage of persons or the parking of vehicles upon the Property; and (c) a sign or signs stating solely the title or address of the Property.

9. The covenants and restrictions imposed as aforesaid shall not only be binding upon the Grantors but also upon their successors and assigns, and all other successors to it in interest, and shall continue as a servitude running in perpetuity with the Property and shall survive any termination of Grantor's existence. Grantee shall assign this Easement only to those organizations described in Regulation §1.170A-14(c) of the Internal Revenue Code of 1986, as amended from time to time, and this easement shall be transferred only for the conservation purposes hereinabove noted. Notwithstanding the foregoing, the Grantors shall have the right to further restrict the Property or amend these restrictions, provided that all such restrictions shall be to effectuate this Perpetual Open Space Conservation Easement. All rights reserved herein to Grantors shall run for the benefit of and may be exercised by their successors and assigns, or by their designee duly authorized in a deed or appointment executed by its duly authorized officer.

IN WITNESS WHEREOF, this instrument executed on the day and date first above written.

BOYLE INVESTMENT COMPANY

By: _____

Title: Chm

J. Bayard Boyle Sr
by: J B Boyle
J. Bayard Boyle, Jr. attorney in fact

Elizabeth Ragland Boyle
by: J B Boyle
Elizabeth Ragland Boyle attorney in fact

THE JACK ERB COMPANY

By: _____

Title: Pres

BIC-WH PARTNERSHIP, LTD.

By: BOYLE INVESTMENT COMPANY

By: [signature]

Title: SVP

THOMPSON & RUSSELL BUILDERS, INC.

By: [signature]

Title: V.P.

STATE OF TENNESSEE

COUNTY OF SHELBY

Before me, Margie R. Samaha, Pub of the state and county aforesaid, personally appeared Lucius E. Blackwell, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged himself to be Sr. Vice President (or other officer authorized to execute the instrument) of Boyle Investment Company, ag general partner of BIC-WH Partnership, Ltd., the within named bargainor, a limited partnership, and that he as such Sr. Vice President, executed the foregoing instrument for the purpose therein contained, by signing the name of the limited partnership by himself as Sr. Vice President of BIC-WH Partnership, Ltd.

WITNESS my hand and seal, at office in Memphis, Tn, this 6th day of August, 1987.

Margie R. Samaha
Notary Public

My Commission Expires:
April 15, 1990

STATE OF TENNESSEE

COUNTY OF SHELBY

On this 6th day of August, 1987, before me personally appeared J. Bayard Boyle, Sr. to me known (or proved to me on the basis of satisfactory evidence) to be the person described in and who executed the foregoing instrument, and acknowledged that he executed the same as his free act and deed.

J. B. Boyle, Jr for attorney in fact

Margie R. Samaha
Notary Public

My Commission Expires:
April 15, 1990

STATE OF TENNESSEE

COUNTY OF SHELBY

On this 6th day of August, 1987, before me personally appeared Elizabeth Ragland Boyle to me known (or proved to me on the basis of satisfactory evidence) to be the person described in and who executed the foregoing instrument, and acknowledged that she executed the same as her free act and deed.

J.B. Boyle, Jr. for Attorney in fact

Margie R. Samaha
Notary Public

My Commission Expires:
April 15, 1990

STATE OF TENNESSEE

COUNTY OF SHELBY

Before me, Margie R. Samaha of the state and county aforesaid, personally appeared Jack E. Erb, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged himself to be president (or other officer authorized to execute the instrument) of The Jack Erb Company, the within named bargainor, a corporation, and that he as such President, executed the foregoing instrument for the purpose therein contained, by signing the name of the corporation by himself as President.

WITNESS my hand and seal, at office in Memphis, Tn., this 6th day of August, 1987.

Margie R. Samaha
Notary Public

My Commission Expires:
April 15, 1990

STATE OF TENNESSEE

COUNTY OF SHELBY

Before me, Margie R. Samaha of the state and county aforesaid, personally appeared John B. Thompson, with whom I am personally acquainted (or proved to me on the basis of satisfactory evidence), and who, upon oath, acknowledged himself to be vice president (or other officer authorized to execute the instrument) of Thompson & Russell Builders, Inc., the within named bargainor, a corporation, and that he as such Vice Pres., executed the foregoing instrument for the purpose therein con-

tained, by signing the name of the corporation by himself as [illegible] of Thompson & Russell Builders, Inc.

WITNESS my hand and seal, at office in Memphis, Tn, this 6th day of August, 1987.

Notary Public

My Commission Expires:

April 15, 1990

eww/jb2easement

This Instrument Prepared By:
EVANS, PETREE, COBB & EDWARDS
By E. Woods Weathersby
81 Monroe, Suite 600
Memphis, Tennessee 38103

Exhibit "A"

PERPETUAL CONSERVATION EASEMENT DESCRIPTION

Commencing at a point on the centerline of Walnut Grove Road at the south end of a bridge over the Wolf River; thence with said centerline S 49° 46' 19" W 222.44 feet to a point of curvature; thence with a curve to the right in a southwestwardly direction having a radius of 1,432.39 feet, an arc distance of 94.58 feet to the intersection of the certerline of Walnut Grove Road with the centerline of Humphreys Boulevard (proposed); thence with the centerline of Humphreys Boulevard S 36° 26' 36" E 145.51 feet to the north property line of the property described in instrument numbers Y6-2456 and Y6-2458 in the Shelby County, Tennessee Register's Office; thence with said property line N 61° 38' 05" E, 4.07 feet to a point; thence N48° 22' 45" E, 198.87 feet to the "Point of Beginning", said point being the intersection of the south R.O.W. line of Walnut Grove Road with the east R.O.W. line of Humphreys Boulevard (proposed); thence with the south line of Walnut Grove Road N 48° 22' 45" E. 122.74 feet to a point; thence N 49° 46' 25" E 280 feet more or less to the centerline of the Wolf River Drainage Canal; thence following said centerline in a southeastwardly direction 6,800 feet more or less to the intersection of said centerline with the west R.O.W. line of Kirby Parkway (proposed); thence with said west line S 14° 09' 36" W, 463 feet more or less to a spiral; thence with said spiral in a southwardly direction a distance of 67.57 feet more or less to the intersection of the north line of Humphreys Boulevard with the west line of Kirby Parkway; thence with said north line and with a curve to the right having a radius of 140.00 feet an arc distance of 212.13 feet to a point of tangency; thence N 78° 02' 44" W. 948.32 feet to a point of curvature; thence with a curve to the right in a northwardly direction having a radius of 3,147.00 feet an arc distance of 343.83 feet to a point of compound curvature; thence with a curve to the right in a northwestwardly direction, having a radius of 1,671.79 feet an arc distance of 1,127.16 feet to a point of tangency; thence N 33° 09' 19" W. 661.38 feet to a point of curvature; thence with a curve to the left in a northwestwardly direction , having a radius of 3,053.00 feet an arc distance of 749.79 feet to a point of tangency; thence N 47° 13' 36" W. 309.51 feet to a point of curvature; thence with a curve to the right in a northwestwardly direction having a radius of 4,947.00 feet an arc distance of 816.69 feet to a point; thence N 24° 16' 47" W. 498.43 feet to a point on a curve; thence with a curve to the right in a northwestwardly direction having a radius of 4,855.00 feet an arc distance of 194.20 feet to a point of compound curvature; thence with a curve to the right in a northwardly direction having a radius of 1,537.02 feet an arc distance of 341.94 feet to a point of tangency; thence N 17° 00' 00" W. 415.52 feet to a point of curvature; thence with a curve to the left in a northwestwardly direction having a radius of 672.96 feet an arc distance of 501.59 feet to the point of beginning.

Less and Except the following:

1.) Any easements necessary for the construction and maintenance of Humphreys Boulevard

2.) Any areas necessary for the improvement and/or construction of Walnut Grove Road and Kirby Parkway

3.) Any areas required for the U. S. Army Corps of Engineers to make any improvements to the Wolf River

4.) Any areas necessary for MLG&W to install any utilities and maintain any existing or proposed utilities.

Shelby State Community College
P.O. Box 40568 • Memphis, Tennessee 38174-0568 • 901/528-6700

27 November 1988

RECEIVED DEC 5 1988 ENVIRONMENTAL PLANNING

Mr. Charles E. Bush, C. E. Manager 2
Environmental Planning Office
Department of Transportation
900 James K. Polk Bldg.
Nashville, TN 37219

I am writing to comment on the Draft Environmental Impact Statement for Kirby Parkway from Split Oak Drive to Stage Road in Memphis, Shelby County Tennessee.

After considering the alternatives for the portion of Kirby Parkway crossing Shelby Farms, the alternative that would be most economically and ecologically feasable is SF-4a. Regardless of the alternative chosen, the Shelby Farms area will be somewhat divided by the highway, but alternative 4a will cause no disruption to wildlife habitat in Shelby Farms Forest, it will not necessitate relocation of the shooting range, it will not interrupt the resting place of hundreds of migratory waterfowl just east of the shooting range (which is not mentioned in the biological survey), it will not intrude on the only known breeding population of the spotted salamander, Ambystoma maculatum, in Shelby County, and it would cause only minimal temporary disturbance by widening of the Walnut Grove bridge. Economically, there can be no question that this alternative is superior to the others, since Humphreys Boulevard is already finished. However, a far better way to increase north-south flow of traffic in this area is to complete the project on Germantown Road, and to widen I-240 North from Walnut Grove to Sycamore View.

My criticism of the DEIS is mainly in the incompleteness of the biological surveys, which are very cursory and incomplete, to say the least, and in the fact that the effect on traffic of widening Germantown Road has not been considered. Many of the major bottomland hardwood species have not even been mentioned in the report, mush less studied ecologically. I was pleased to see that Ambystoma talpoideum was mentioned. While I have not yet found it, Shelby Farms Forest offers prime habitat for this species. My major concern is that the new roadway will not be used as an excuse for further development in the park in the future.

There are numerous typographical errors and minor inaccuracies throughout the document, but none that are totally misleading. I hope that they will be eliminated in the final report.

Sincerely,

Ray D. Burkett

Ray D. Burkett, Ph. D.
Professor of Biology

MAYOR
WARNER HODGES, III
ALDERMEN
WAYNE ADDISON
WANDA GOODMAN
SAM MASSEY
BILL McGAUGHEY
CHARLES SALVAGGIO
CITY ADMINISTRATOR
JAMES N. HOLGERSSON

City of Germantown
Germantown, Tennessee 38183-0809

RECEIVED
DEC
ENVIRONMENTAL

December 19, 1988

Mr. Charles E. Bush, C.E. Manager 2
Environmental Planning Office
State of Tennessee
Department of Transportation
Nashville, Tennessee 37219

Re: Draft Environmental Impact Statement for Kirby Parkway from Split Oak Drive to Stage Road in Memphis, Shelby County, Tennessee

Dear Mr. Bush:

Thank you for the transmittal of the above referenced E.I.S., and your request for our comments. Our support for this project was expressed in 1968, with the adoption of the Memphis Urban Area Transportation Study (MUATS) plan. This was just one element of a series of north-south and east-west road improvements that were designed to accommodate the rapid development foreseen in the Poplar Corridor. The development and the traffic increases have occurred even more rapidly than many expected. However, construction of the necessary road system has not kept pace with the growth, and traffic congestion of the Poplar Corridor has reached what most users consider to be an intolerable level.

We again expressed our enthusiastic support for this project in a letter to you in 1984, pointing out that it would afford some needed relief to the citizens in the western part of our city.

Now, in December, 1988, we reiterate our support for the Kirby Road project. The need is even greater than before. It is the only planned crossing of the Wolf River for the approximately three mile stretch between I-40 and Germantown Parkway. The Interstate Highway is operating near its capacity in peak hours and Germantown Parkway will be operating near its capacity in just a few more years. Poplar Avenue is already operating in a state of continuous congestion. Poplar Pike is loaded to its capacity, and Neshoba Road traffic is increasing every day. It is not feasible to continue loading the east-west streets with more traffic that is trying to get to a north-south route.

A look at the existing street plan clearly shows that while the Kirby Road project will not solve all the problems, it will provide a very important link in the solution. The idea of a "No Build Alternative" is not a solution and is not acceptable. The E.I.S. does not contain a specific recommended route but we support the route which first, would best handle the anticipated traffic and second, would minimize damage to the environment. We presume that any of the environmental impacts will be offset as much as possible by mitigation measures.

Yours truly,

Warner Hodges, III

Warner Hodges, III
Mayor

WH:dm

cc: Mayor Bill Morris, Jr.
Mayor Dick Hackett
Germantown Board of Mayor and Aldermen

SIERRA CLUB - Tennessee Chapter

January 13, 1988

RECEIVED
ENVIRONMENTAL

Mr. Charles Bush, P.E.
Environmental Planning
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, TN 37219

Dear Mr. Bush:

The Sierra Club recognizes the need for adequate transportation in the East Memphis area, including improved mass transit. We also recognize that the automobile, in the Midsouth is and will probably for some time remain the preferred means of moving from one part of the county to another. We therefore are not opposed to the proposed modernization of Kirby Parkway from Split Oak Road to Stage Road. We do oppose the alternatives in the vicinity of Shelby Farms Public Recreation Area and the recently authorized Shelby Farms Forest State Natural Area.

I will limit my comments to that portion of the EIS that deals with the several alternatives in the vicinity of the Wolf River and Shelby Farms.

A. Alternative SF-1. This alternative and its several variations are totally unacceptable. None of them take into account the damage that would be inflicted on this forested area by the daily use of cars and trucks. Both noise and air pollution would be increased to an unacceptable level. Can you imagine trying to use this area for an outdoor classroom at anytime between 8:00 am and 3:00 pm? The proposed alignment would destroy the last remnants of an old Cypress wetland, the replacement monetary value of which is incalculable. Your EIS places great monetary value on the several commercial businesses and homes that Boyle Investment is presently constructing knowing that they could be casualties of the road should reason prevail, yet the cost of mitigating wetland losses along SF-1 are not included.

B. Alternative SF-2. Although better than SF-1, this alternative presents some problems from an environmental standpoint, but we would probably not offer strenuous objection to this alternative if:

1) An engineering design is used for the Humprey's Boulevard - Kirby Parkway interchange and for the curve into the Wolf River bridge that would be safe at the high (45-50 MPH) speeds that will no doubt be used on Kirby Pkwy.

2) Problems associated with the Shelby County landfill can be resolved so that leachates will not be introduced into the Memphis aquifer.

C. Alternative SF-3. As shown on the maps accompanying the EIS, the Sycamore View connector in this alternative would come too close to the Natural Area and would likely displace the Senior Citizens garden plots in that part of Shelby Farms.

D. Alternative SF-4. This alternative contains the most acceptable features, however, as implied in B.(1) above it is the Sierra Club's position that any alternative selected should provide for safe grade separations between Kirby Pkwy and Humphrey's Blvd and Walnut Grove Rd.

The December 23rd accident at the I-40/I-240 interchange underlines the need to construct all interchanges as safe as possible for speeds that we all know will be used whether a lower speed has been posted or not. The environmental community and other opponents to crossing Overton Park with I-40 are being unfairly blamed for this situation. This might have been prevented if a safe interchange had been installed when it first became apparent that I-40 would not continue east through Overton Park.

I noticed that in several places the setting for the Kirby Pkwy corridor is mistakenly placed in "west Memphis" it is very much in east Memphis and in the center of Shelby County. The EIS fails to take into account the extension of Humphrey's Blvd to Germantown Rd. A public notice for a Section 404 permit for this road was issued last fall. I feel the impact of this extension should be considered in the EIS.

Sincerely,

Marjorie Raines

Marjorie Raines,
Conservation Chair

CC
Mr. Dennis C. Cook, FHWA

TENNESSEE TRAILS ASSOCIATION

INC.

P.O. BOX 4913
CHATTANOOGA, TENNESSEE 37405

Memphis, Tn.
Jan. 15, 1989

Mr. Charles E. Bush
Dept. of Transportation
Nashville, Tn. 37219

Re: Kirby Parkway
Shelby Farms Forest

Dear Sir:

The Memphis Chapter of TTA, comprised of some 80 members, would like to go on record as opposing the routing of above Kirby Parkway thru the 413 forest area in Shelby Farms and known as ShelbyFarms Forest. We feel that a seven lane highway would have a severe impact on wildlife habitat. Also, at present this forest is used by several groups and individuals for various recreational purposes including hiking, photography, birding, horseback riding, etc. The fact that this area has been declared a state natural area should be given consideration.

We can see the need for roads in the area, but feel that the SF-4 route as set forth in the EIS would be more economically feasible and would impact the least on the forest. Thank you for any consideration you can give in this matter.

Sincerely,

M. F. Bull

Mrs. Mavis F. Bull, Chair
Memphis Chapter TTA
2995 Garvel
Memphis, Tn. 38118

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MEMPHIS AUDUBON SOCIETY

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January 15, 1989

Mr. Charles Bush, C. E. Manager
Tennessee Department of Transportation
Suite 900, James K. Polk Building
505 Deaderick Street
Nashville, Tennessee 37219

Dear Mr. Bush,

I am writing as spokesperson for the Memphis Audubon chapter of the National Audubon Society. Our chapter is opposed to the present planned and surveyed route for extending Kirby Parkway north of the Wolf River through Shelby Farms Public Recreation Area.

We recognize the need for a roadway to carry traffic north and south through this area, but we are concerned about the impact such a road would have on this environment. The forested area on Shelby Farms Public Recreation Area was declared a State Natural Area by the State of Tennessee in 1988 and is a vital and unique habitat in Memphis and Shelby County. Peregrine falcons, Bald Eagles, and bobcats utilize this area, as well as school children, hikers, canoe clubs, and bird and wildlife watchers. The present route for Kirby Parkway, as surveyed and planned by Pickering Engineering, cuts the forested area into two separate parts and would eliminate some of the oldest and most valuable trees in the forest. If the roadway runs as planned, the integrity of the forest would be ruined beyond repair and its value to wildlife and recreationists lost.

Memphis Audubon Society believes that Shelby Farms Recreation Area is an extremely valuable site for wildlife, especially for migratory birds. Over 230 different species of birds have been sighted here -- this figure represents 70% of all the bird species sighted in the whole state of Tennessee, an astounding figure for such a limited area. The variety of fields, forests, and wetlands provides birds with irreplaceable food and shelter on their migration path. The aesthetic value of this area for the

Post Office Box 171432 Memphis, Tennessee 38117

people of Memphis and Shelby County is only now being realized. Its future use, if the area is left as intact as possible, is one of our city's biggest environmental and recreational assets.

We are also concerned about the impact that road construction and the need to build another bridge over the Wolf River would have on the forest habitat and on the water quality of the River itself. Even with the best of intentions, much harm may be done during construction with irreparable consequences to the wildlife and ecosystems involved.

We recognize the need for combining progress and long term, responsible guardianship of our natural resources. Therefore, we urge that Kirby Parkway should <u>not</u> be extended north of the Wolf River through the Shelby Farms Public Recreation Area as presently planned. Alternative routes utilizing already existing bridges should be used to move traffic around and through the park. Roads and commercial development in this area should be kept to the minimum possible level. Memphis is a city that is proud of her green trees and parklands -- these are the very factors that have caused many of us to choose to make our home here. There is a wave of public concern rising about protecting the environment on global, national and local levels, and we wish our city to be among the first to accept our environmental responsibility and use our land wisely.

Thank you for your attention to this matter.

Sincerely,

Betsy Shaver

Betsy Shaver
President, Memphis Audubon Society
130 Waring Road
Memphis, TN 38117

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December 19, 1988

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Mr. Charles E. Bush
ENVIRONMENTAL PROTECTION OFFICE
TENNESSEE DEPARTMENT OF TRANSPORTATION
900 James K. Polk Bldg.
Nashville, TN 37219

Dear Mr. Bush:

On November 30, 1988 the Wolf River Conservancy Board of Directors met for the purpose of making comments on the proposed alternative alignments of Kirby Parkway across the Wolf River and through Shelby Farms which are outlined in the EIS. After much study and discussion, our organization voted to make the following formal comments:

1. Regarding the proposed alignments outlined in the EIS, the Wolf River Conservancy endorses Alternatives 3 or 4 or any variation of them that limits a roadway crossing of the Wolf River to the current alignment of Walnut Grove Road.

2. While our organization views Alternatives 3 and 4 as being the least disrupted environmentally to the river and adjacent forest area, we feel the EIS failed to address an alternative that would involve an alignment which would have Kirby Parkway completely bypass Shelby Farms. The Conservancy feels that prior to selecting a final road alignment additional study be made of terminating Kirby Parkway on either side of Shelby Farms and diverting traffic around it through an improved network of peripheral roads (i.e. Humphrey Blvd., Mullins Station Rd., Germantown Parkway, I-240). This alternative differs from the no action alternative in that improvements to other roadways would be proposed to handle the additional traffic loads on surrounding roads as a result of diverting traffic around Shelby Farms.

Our organization's comments center on the state making every effort to minimize environmental impacts to Shelby Farms and the Wolf River in the course of meeting future traffic circulation needs for this urban area. It should, however, be remembered that what makes the natural areas of Shelby Farms along the Wolf River such a

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unique outdoor recreation area and urban wildlife refuge is its present unsegmented length.

The four to five mile uninterrupted hike or canoe float trip between Germantown Parkway and Walnut Grove Road is an urban outdoor recreational experience few if any other cities the size of Memphis can boast. It is as much the length of this stretch as it is the quality of the area that mandates we make every effort to avoid segmenting it by constructing Kirby Parkway through the middle of it.

While growing traffic circulation needs must be met, an alternative alignment bypassing Shelby Farms can be found and engineered if preservation of urban open space is given the primary importance it mandates.

We of the Wolf River Conservancy urge the State to exhaust every bypass option available prior to adopting any of the alternatives in the EIS. Roads can always be constructed in the future, but urban open spaces like Shelby Farms can never be recreated once they have been cleared and paved.

Thank you for you consideration of our comments and concerns.

Sincerely,

Charles M. Cooley, Jr.

Charles M. Cooley, Jr.

CMC/amh

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January 17, 1989

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Mr. Charles E. Bush
Environmental Planning Office
Tennessee Department of Transportation
900 James K. Polk Building
Nashville, Tennessee 37219

Re: Kirby Parkway/Shelby Farms

Dear Mr. Bush:

The Wolf River Conservancy previously submitted comments to the DOT addressing our opposition to the straight alignment and our preference for alignments crossing the Wolf River in the vicinity of Walnut Grove Road. We additionally indicated our concern that insufficient study has been made on the peripherally bypassing of Shelby Farms.

After further examination of the corridor report, we request answers to the following questions:

1. Why was a peripheral bypass alternative (improving the network of surrounding roads east, west, north and south of the area) not addressed in the report? This is a major deficiency of the report, we feel, in light of proposed road improvements to the area which are outlined in the MUATS report.

2. In all alignments, why wasn't a grade-separated interchange considered at Kirby and Humphrey Boulevard in light of Humphrey being extended to the east soon? If a grade separation has been designed, please provide the layout sketch. A left turn overpass from a T intersection at Kirby would provide continuous movement onto Humphrey if Kirby terminates there.

3. In view of Humphrey in the near future extending from Walnut Grove to Germantown Parkway, what percentage of north-bound traffic would choose a right movement if Kirby, south of Shelby Farms, terminated at Humphrey? Would not the extension of Humphrey to Germantown Road reduce the traffic volumes using the Walnut Grove intersection and thereby relieve some of the congestion concerns?

4. If Mullins Station and Releigh LaGrange were improved, similar to Humphrey, traffic could be diverted around the northern part of the Farm to Whitten or Sycamore View for east to west movement to I-240.

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Raleigh LaGrange represents a short route to I-40/I-240 for traffic east of Germantown Parkway as any other route. Why was this not considered?

5. What impact to traffic volume occurs with a completed eastern segment of Humphrey to Germantown Parkway and the opening of Nonconnah Parkway, the widening of Mullins Station and Raleigh LaGrange?

6. Why could Humphrey not be extended north-west across Walnut Grove Road to a point where it would intersect I-240 with a limited access entrance/exit ramp?

Our comments and questions basically pertain to deficiencies in the report that deals with inadequate study and design effort on bypass alternatives. Additional work needs to be done prior to making any decision on alignments. We would like the opportunity to address these issues with you and DOT staff firsthand, at your convenience.

Please call me at (901) 345-0610 so we can set up an appointment.

All possible alternatives should be considered with sufficient objective study prior to making a decision that would result in irreparable damage to Shelby Farms.

We appreciate your consideration of our additional comments.

Sincerely,

Charles M. Cooley, Jr.

Charles M. Cooley, Jr.
President, Wolf River Conservancy
CMC, Jr./lt

Kirby Parkway for Split Oak Drive to Stage Road in Memphis, Shelby County

5th Folder
Approved Final Environmental Impact Statment

Letter of submission to FHWA

FHWA comments letter and response

Letter from FHWA approving FEIS

Signed copy of the FEIS with maps, and cross sections

√ Signed circulation letters for approved FEIS with Environmental Action Report.

Response to FEIS

Record of Decision

News Release