FEASIBILITY STUDY OF TRANSPORTATION MANAGEMENT STRATEGIES IN THE POPLAR CORRIDOR, MEMPHIS, TENNESSEE

Urban Consortium

Urban Consortium
Energy Task Force

RICHARD C. HACKETT, Mayor
City of Memphis

Conducted by the
Memphis and Shelby County
Division of Planning and Development

Urban
Consortium
for Technology
Initiatives

THE ENERGY TASK FORCE OF THE URBAN CONSORTIUM FOR TECHNOLOGY INITIATIVES

The Urban Consortium for Technology Initiatives (UC) is composed of over forty of the largest cities and urban counties by population in the United States. The Consortium provides a unique forum to define urban problems common to its member governments and to develop, apply, transfer and commercialize technologies and innovative management techniques to address those problems.

With staff, management and business services provided by Public Technology, Inc., the Urban Consortium carries out its work through special projects and Task Forces that focus on specific functional areas of local government management. The UC Energy Task Force is the nation's most extensive cooperative local government program to improve energy management and technology applications in cities and urban counties. Its membership is composed of local government officials from twenty of America's largest urban centers.

The members of the UC Energy Task Force define annual work programs to meet three specific objectives:

- o definition of critical urban energy problems;
- o development of technologies and management practices to resolve these problems; and
- o transfer of resulting solutions to Urban Consortium and other local governments.

Proposals to meet the specific objectives of these annual work programs are solicited from the full UC membership. Projects based on these proposals are then selected by the Energy Task Force for direct conduct and management by staff of city and county governments. Projects selected for each year's program are organized in thematic units to assure effective management and ongoing peer-to-peer experience exchange, with results documented at the end of each program year.

This approach for the definition of priorities and the selection, conduct and documentation of applied research projects by staff from participating local governments is a unique strength of the UC Energy Task Force -- a "user-driven" focus to assure that projects conducted by city and county staff will produce results that effectively meet energy management needs critical to local governments.

PUBLIC TECHNOLOGY, INC. (PTI)

Public Technology, Inc. (PTI), is the research development and commercialization arm of the National League of Cities and ICMA, and a non-profit association of local governments dedicated to improving services and increasing efficiency through the use of technology and management systems.

PTI works with and supports its members in solving widespread and urgent problems facing local governments. This support is handled through a four-tier, interconnected series of service centers, which provide state-of-the-art information, electronic and personal networking with local governments and technical specialists, direct consultation and training with PTI staff experts, and practical research.

To ensure that its programs and research have the widest possible benefit, PTI is guided by a strategic plan that emphasizes partnerships with private industry, expertise in multi-disciplinary technologies, training in the art of change management, and participation in the international arena of local government to further the search for technological and management solutions.

Member cities and counties provide PTI's core financial support. Grants and contracts from foundations, Federal agencies, and corporations also support PTI activities.

PTI's activities are carried out from offices located in Washington, D.C. and Long Beach, California. International coordination is handled through an affiliate in London, England. PTI was founded in 1971 by the major associations of state and local governments.

Costis Toregas, President

The research and studies described in this report were made possible by grants from the Community Energy Program of the Office of Buildings and Community Systems of the United States Department of Energy through the Energy Task Force of the Urban Consortium for Technology Initiatives.

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FEASIBILITY STUDY OF TRANSPORTATION MANAGEMENT STRATEGIES IN THE POPLAR CORRIDOR, MEMPHIS, TENNESSEE

Energy Task Force
of the Urban Consortium
for Technology Initiatives

Memphis Area Rideshare
Memphis and Shelby County
Division of Planning and Development
Memphis, Tennessee

RICHARD C. HACKETT, Mayor
City of Memphis

Conducted by the
Memphis and Shelby County
Division of Planning and Development

PREFACE

The Urban Consortium for Technology Initiatives was formed to pursue technological solutions to pressing urban problems. the Urban Consortium conducts its work program under the guidance of Task Forces structured according to the functions and concerns of local governments. The Energy Task Force, with a membership of municipal managers and technical professionals from twenty-one Consortium jurisdictions has sponsored over 180 energy management and technology projects in forty-six Consortium member jurisdictions since 1978.

To develop in-house energy expertise, individual projects sponsored by the Task Force are managed and conducted by staff of participating city and county governments. Projects with similar subjects are organized into *Units* of four to five projects each, with each Unit managed by a selected Task Force member. A description of the Units and projects included in the Ninth Year (1986-89) Energy Task Force program follows:

UNIT -- LOCAL GOVERNMENT OPERATIONS

Energy used for public facilities and services by the nation's local governments totals about 1.5 quadrillion BTU's per year. By focusing on applied research to improve energy use in municipal operations, the Energy Task Force helps reduce operating costs without increasing tax burdens on residents and commercial establishments. This Ninth Year Unit consisted of six projects:

- **Kansas City, Missouri** -- *Direct Digital Control of an Air Washer System*
- **Memphis, Tennessee** -- *The Use of Transportation Management Associations to Achieve Energy Conservation Benefits in Urban Areas*
- **Montgomery County, Maryland** -- *Requirements for Energy Efficient Building Construction*
- **Phoenix, Arizona** -- *Energy Cost Reduction in Comfort Cooling Through Cogeneration*
- **Phoenix, Arizona** -- *HVAC Equipment Replacement for Best Size and Efficiency (Technology Transfer)*
- **San Jose, California** -- *Energy Master Planning for Local Government Facilities*

UNIT -- COMMUNITY AND ECONOMIC DEVELOPMENT

Of the nation's estimate population of nearly 240 million, approximately 60 percent reside or work in urban areas. The 543 cities an counties that contain populations greater than 100,000 consume 50 quadrillion BTU's annually. Applied research by the Energy Task Force helps improve the economic vitality of this urban community by aiding energy efficiency an reducing energy costs for the community as a whole. This Year Nine unit consisted of six projects:

- **Chicago, Illinois** -- *Chicago Energy Demonstration Zone*
- **Houston, Texas** -- *The Feasibility of Incorporating Alternative/Innovative Technologies in Mass Single Family Housing Rehabilitation Strategies*
- **New Orleans, Louisiana** -- *Small Business Assistance Program to Reduce Energy Consumption Through Innovative Financing Methods (Technology Transfer)*

- **New Orleans, Louisiana** -- *Development of an Energy Information an Referral Service*

- **New York, New York** -- *Marketing Energy Efficiency Programs to Commercial an Industrial Firms*

- **San Francisco, California** -- *Energy Planning for Economic Development*

UNIT -- ENERGY AND WASTE MANAGEMENT

Effective use of advanced energy technology an integrated energy systems in urban areas could save from 4 to 8 quadrillion BTU's during the next two decades. Urban governments can aid the capture of these savings an improve capabilities for the use of alternative energy resources by serving as test beds for the application of new technology. This Year Nine unit consisted of four projects:

- **Albuquerque, New Mexico** -- *Hazardous Waste as an Energy Manager's Issue*

- **Baltimore, Maryland** -- *Ammonia Oxidation by Separable Micro-supported Biomass for Nitrification of Sewage*

- **Denver, Colorado** -- *Regional Workshops on Waste-to-Energy and the Management of Special Wastes*

- **Detroit, Michigan** -- *Feasibility Assessment: Conversion of Resource Recovery Steam to Hot and Chilled Water Systems*

- **Hennepin County, Minneapolis** -- *Special Household Waste Management*

- **Seattle, Washington** -- *Implementation of Hazardous Waste Collection Option*

- **Seattle, Washington** -- *Computerizing Municipal Procurement Choices (Technology Transfer)*

Reports from each of these projects are specifically designed to aid the transfer of proven experience to staff of other local governments. Readers interested in obtaining any of these reports of further information about the Energy Task Force and the Urban Consortium should contact:

Applied Research Center
Public Technology, Inc.
1301 Pennsylvania Avenue, NW
Washington, DC
(202) 626-2400

ACKNOWLEDGEMENTS

This project was the result of a collaborative effort with a number of individuals and organizations from both the public and private sectors contributing towards its successful completion. It is a sincere pleasure to acknowledge and thank them for their efforts.

Mr. Dexter Muller, Director of the Memphis and Shelby County Division of Planning and Development and an Urban Consortium Energy Task Force member, served as the Project Director. Dr. Ted Newsom, Manager of Special Programs in the Office of Economic and Resource Development served as the initial Project Manager. During the implementation phase of the project, Ms. Debra Siniard replaced Dr. Newsom as the Manager of Special Programs and Project Manager.

Overall design and implementation of the project was accomplished through the teamwork of Dr. Ted Newsom, Ms. Gwen Dobbins and Ms. Debra Siniard. Project guidance was provided by the following individuals who served as members of the Poplar Corridor Study Team: Mr. Clark Odor, Manager of Transportation Planning in the Office of Planning and Development (OPD); Mr. Jud TePaske, Deputy Director of Land Use Control at OPD; Ms. Linda Powell, Memphis Area Rideshare; Mr. Randy Hume, Director of Operations,

Memphis Area Transit Authority (MATA); Mr. Charles Sullivan, Deputy City Engineer-Traffic; and Mr. Reginald Hendricks and Ms. Emily Adams Keplinger of Memphis State University. These individuals, along with those previously mentioned, merit special acknowledgement for their valuable contributions as project team members.

Debra Siniard is the principal author of this report. Editorial assistance was provided by Mr. Muller and Ms. Dobbins. Project marketing materials and graphics were prepared by Mr. David Walker and his staff of the Office of Planning and Development. Clerical and word-processing tasks were accomplished by Ms. Shirley Davis and Ms. Angela Mauldin of the Office of Economic and Resource Development. Staff members at Memphis Area Rideshare directly involved in the project development and implementation were, Ms. Alice Witter, Ms. Donna Kinzel, Ms. Laverne White, Ms. Brenda Taylor and Mr. Karl Koenig.

This energy technology transfer project was implemented by a grant from the U.S. Department of Energy through the Ninth-Year Work Program of the Urban Consortium Energy Task Force.

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ABSTRACT

This report documents the development and implementation of various transportation management strategies aimed at alleviating traffic congestion problems in the Poplar Corridor, a major transportation corridor located in a rapidly growing suburban area of Memphis, Tennessee. The project provided the opportunity for local governments to work with the private sector in a joint venture to address traffic congestion problems and to promote more efficient use of the area's transportation network.

The project was carried out by the staff of Memphis Area Rideshare, a joint city/county agency which provides transit information and free carpool/vanpool computer matching services to area commuters. Public sector participants in the planning process included transportation and land use planners from the Office of Planning and Development, city traffic engineers, and representatives from the Memphis Area Transit Authority (MATA). Private sector input came from major developers and employers in the Poplar Corridor and from officials of schools located in the area.

The major objectives of the project were as follows:

1) To assess the level of concern about traffic congestion and the associated air quality, energy, economic and land use problems among Poplar Corridor employers, employees, developers, businesses, and other organizations.

2) To evaluate the level of support that the private sector was willing to give to the formation of a transportation management association to deal with the transportation and other related problems.
3) To determine which traffic management strategies the public and private sectors were willing to implement to alleviate traffic congestion.
4) To implement transportation management strategies in the corridor through a Transportation Management Association (TMA) or less formal process.
5) To evaluate the effectiveness of the transportation management efforts in the Poplar Corridor.

The major project findings and conclusions as they relate to the stated project objectives include the following:

1) The general consensus of the groups assumed to be adversely affected by traffic congestion in the Poplar Corridor is that the traffic situation, although somewhat problematic, is not as serious as in other major cities. Area commuters have developed ways to cope with the situation and the perceived solution to the congestion problem is to expand existing roads and to build new roads.
2) The private sector has little interest in organizing a formal TMA but would be willing to further pursue the idea of a voluntary TMA.
3) Transportation management strategies implemented during the project period include traffic engineering improvements, mass transit improvements, the identification of a park-and-ride lot, and ridesharing.

Major areas of future concentration in the Poplar Corridor include:

1) An education campaign emphasizing the true costs of traffic congestion and the need for implementing traffic reduction strategies in the corridor.
2) Working with the private sector to establish ridesharing incentives.
3) Targeted marketing of commuters most likely to be interested in ridesharing.

PROJECT CONCEPT

Cities across the nation are facing serious traffic congestion and associated environmental and energy efficiency problems resulting from accelerated commercial and residential development within urban transportation corridors. Until recently, however, traffic congestion was not an issue that directly affected suburban areas. In the past, transportation planning for the suburbs has focused on how to efficiently move commuters from the suburbs to the central business district. The road network within and between suburban centers was assumed to have adequate capacity to handle anticipated development.

However, population and job opportunities in suburban areas have increased at much faster rates than in central cities. By 1984, 44 percent of the U.S. population lived in suburban areas compared to 32 percent living in central cities. Currently, almost half of all metropolitan area jobs are located in the suburbs. As a result, suburb-to-suburb commuting grew 58

percent between 1960 and 1980 compared to a 25 percent increase in suburb-to-central city commutes. In addition to these residential and employment trends, the number of households with three or more vehicles has risen nearly 1,000 percent in the last twenty years. Consequently, suburban traffic congestion has been described as potentially the number one problem in the suburbs by the 1990s.

In the past, the suburbs have dealt with mounting traffic congestion by building new highways and widening existing roads. However, this "supply-oriented" approach is not the ultimate solution. There are limits to the capacity that can be added to existing roads and the number of new roads that can be built without causing unacceptable levels of disruption to existing development and adversely affecting the overall quality of life in an area. In addition, development along new roadways often generates increased traffic, making the situation even worse than before the new roads were constructed.

Communities across the country have been attempting to address the traffic congestion problem from a new angle. Instead of increasing the supply of roadways, they are implementing transportation management strategies that reduce the demand on the transportation network. Demand management strategies include ridesharing (carpooling/vanpooling), the use of mass transit, employee flex-time programs, park-and-ride lots, lunch-time shuttle services and parking/zoning policies.

One method that a number of communities have used to develop and implement transportation management strategies is through organizing a transportation management association (TMA). TMAs provide opportunities to create partnerships between local governments and the private sector (employers, developers, property managers, and citizens) to deal directly with traffic congestion and the accompanying economic, air quality, land use, energy, and mobility issues. TMAs can provide the necessary community focus to solve transportation problems by involving the individuals and groups who contribute to and are affected by the impacts of traffic congestion problems.

The Poplar Corridor in Memphis has experienced accelerated commercial, office, and residential growth in the past few years. In a short period of time, the character of the Poplar Corridor has changed from a predominately residential area to one of the three largest employment centers in Memphis. This growth, although generating signficant economic benefits for the community, has resulted in dramatic increases in traffic on major roads as well as through previously secluded neighborhoods.

Concern over the increased traffic congestion expressed by residents, developers, commuters, and other public and private sector groups prompted the Memphis City Council to create a Poplar Corridor Task Force. The Task Force was charged with evaluating the existing situation and developing a land use and transportation plan and implementation policies for the future growth and development of the area. The City Council placed a moratorium on

high and medium-density zoning changes to prevent developments that would exacerbate existing transportation problems until the Task Force plan could be completed.

During the Poplar Corridor planning process, a subcommittee of the Poplar Corridor Task Force was formed to study the application of transportation management strategies in the corridor and to provide direction for implementing these strategies through the development of a transportation management association. The subcommittee initiated preliminary investigations into transportation management strategies for the Poplar Corridor.

The Poplar Corridor Task Force Plan recommends a comprehensive approach to dealing with the traffic congestion in the Poplar Corridor that includes new road construction coupled with the implementation of transportation management strategies. The report suggests that a TMA would evolve in the corridor as transportation problems are identified and as affected individuals and groups organize to develop alternative solutions.

The purpose of the research project documented in this report was to take the recommendations of the Poplar Corridor Task Force and proceed with evaluating the feasibility of organizing a TMA and developing and implementing specific transportation management strategies.

REPORT ORGANIZATION

Traffic congestion problems which accompany accelerated business and residential development within urban transportation corridors are common to many communities across the country. The intent of this report is to facilitate the transfer of the Memphis project experiences to other jurisdictions that are facing similar traffic management problems. The report is organized into the following major chapters:

Chapter 2 General Background

This chapter provides a description of the characteristics of the Poplar Corridor including existing land use and transportation resources, traffic volumes, proposed road improvements, public facilities, and demographic information. Also included in this chapter is a summary of the findings and recommendations of the Poplar Corridor Task Force and an overview of the purpose and organizational structure of transportation management associations used in other communities to address traffic congestion problems.

Chapter 3 Project Description

This chapter describes the major activities undertaken during the project period to evaluate the feasibility of implementing various transportation management strategies. The chapter also describes the transportation management strategies which were determined to be feasible.

Chapter 4 Project Findings and Lessons Learned

This chapter provides a summary of major project findings and conclusions regarding the achievement of the project objectives. Lessons learned during the project period and future plans and activities for continued implementation of transportation management strategies are also discussed.

CHAPTER 2
General Background

INTRODUCTION

This chapter provides a description of the characteristics of the Poplar Corridor including existing land use and transportation resources, traffic volumes, proposed road improvements, public facilities, and demographic information. Also included in this chapter is a summary of the findings and recommendations of the Poplar Corridor Task Force and an overview of the purpose and organizational structure of transportation management associations used in other communities to address traffic congestion problems.

DESCRIPTION OF THE CORRIDOR

Project Study Area

Poplar Avenue, which is also designated as U. S. Highway 72 and State Route 57, is a major east-west arterial serving the City of Memphis and Shelby County. Poplar Avenue runs from Downtown Memphis east to the Shelby County line and continues eastward as U. S. Highway 72 into Mississippi and Alabama. During this project, efforts to develop and implement transportation management strategies were focused on that portion of Poplar

Avenue between Interstate 240 eastward to Kirby Parkway and includes properties north and south of the corridor between Walnut Grove Road and Nonconnah Creek. See Plate 1.

This area was chosen because it contains the largest concentration of office development in the corridor; it is the area which has experienced the most drastic changes in land use in recent years; it has the heaviest traffic volumes; and it contains land available for development and redevelopment which could further increase existing problems.

However, the area considered to be the Poplar Corridor extends well beyond the Project Area boundaries as shown on Plate 2. The boundaries of the Poplar Corridor are Mendenhall Road to the west, Walnut Grove Road and the Wolf River to the north, Houston Levee Road to the east, and Nonconnah Creek to the south. The portion of Poplar Avenue between Mendenhall Road and the City of Germantown is a major commercial and employment center in Shelby County. Land use in this larger area has a direct influence on the traffic congestion in the Project Area. Germantown is predominately residential in nature and many residents work in the Project Area or must travel through it to reach Downtown Memphis or the airport area via Interstate 240. Motorists also travel through the Project Area to reach restaurants and retail developments located west of I-240. These uses are heavy traffic generators particularly between 12:00 Noon and 1:00 p.m. which is the peak traffic period for the area. Projections based on current trends and market demands indicate continued expansion of residential, commercial, and office development throughout the Poplar Corridor.

PROJECT AREA

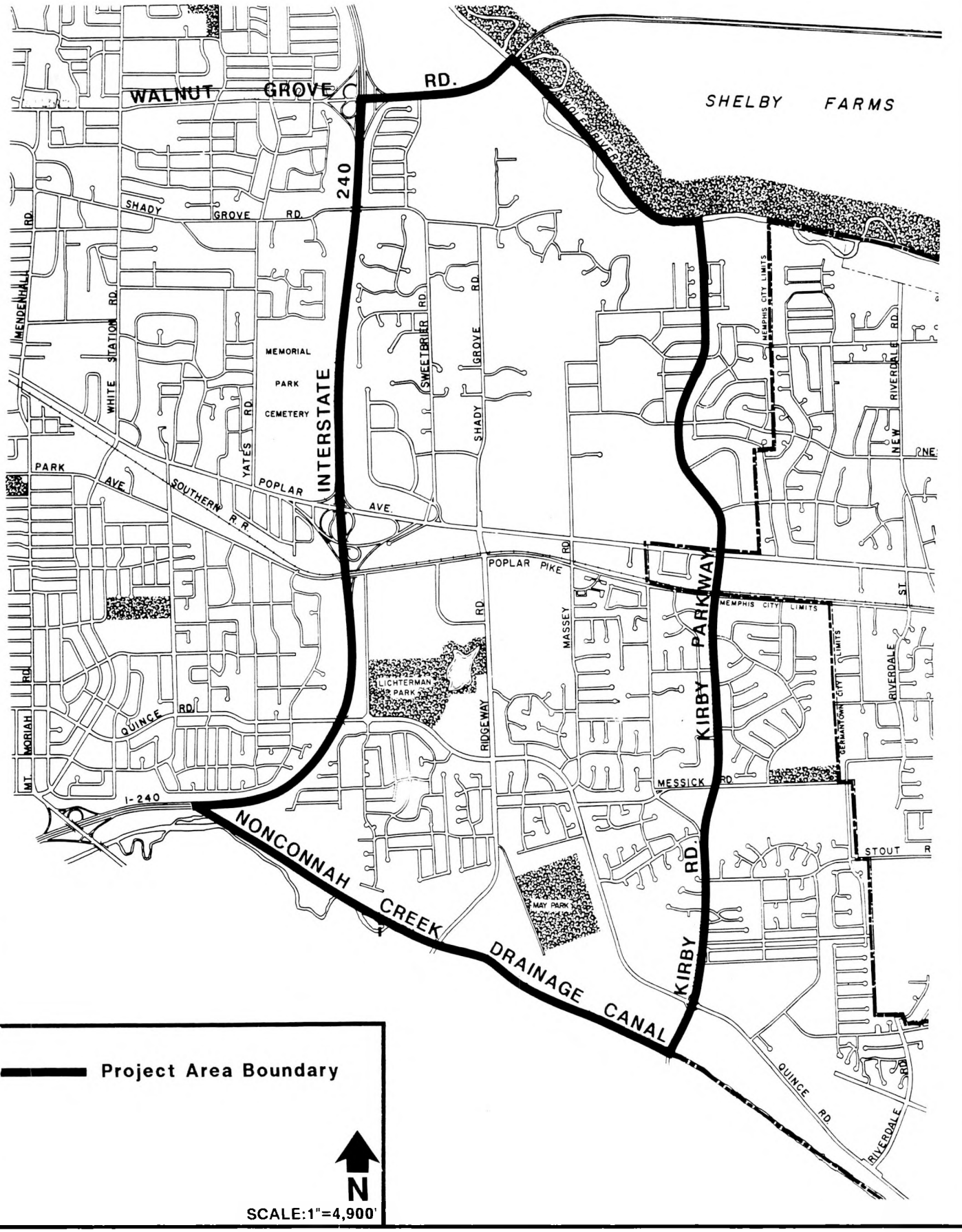
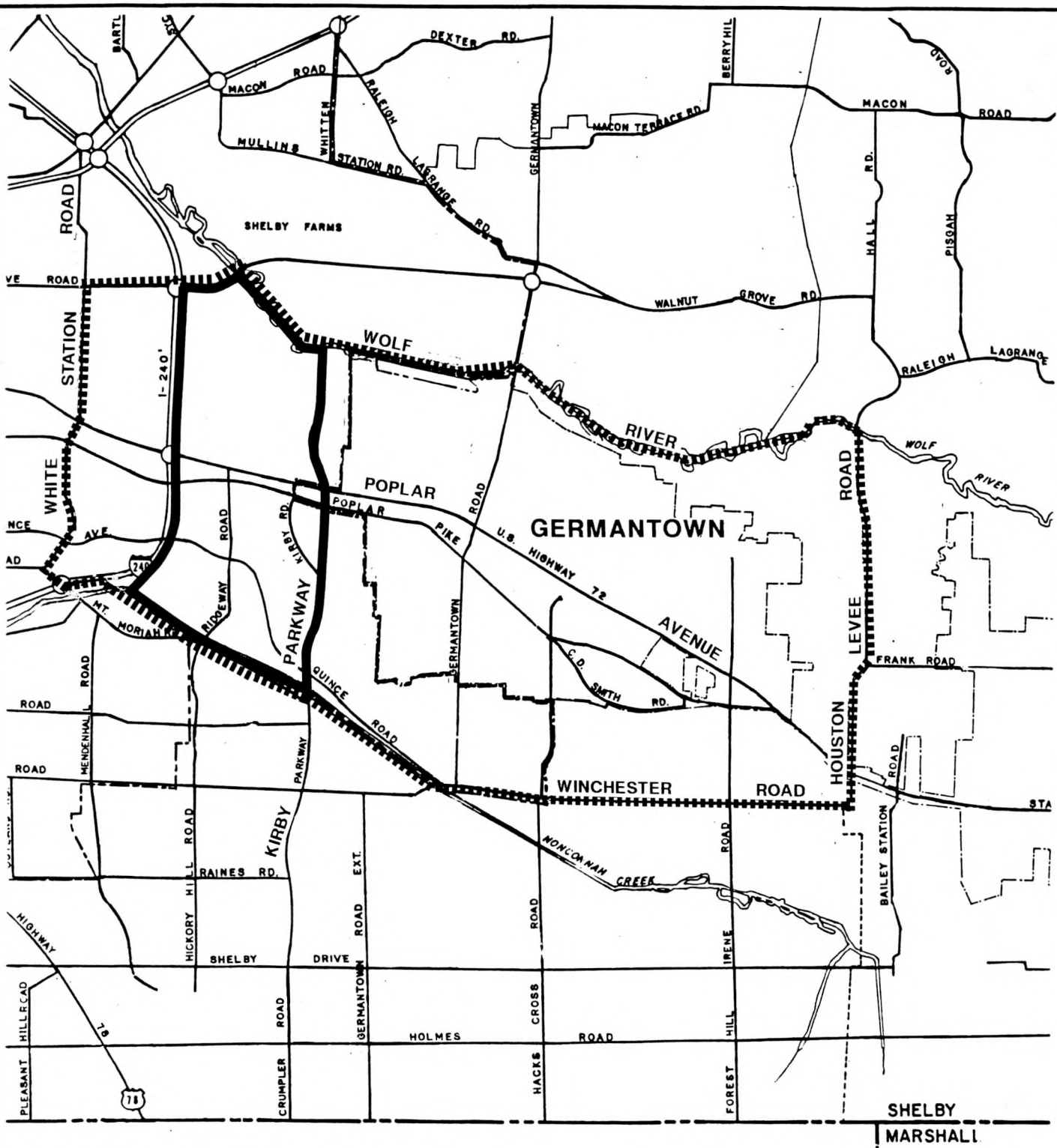


PLATE 1

POPLAR CORRIDOR AREA



Poplar Corridor Boundary

Project Area Boundary

N

SCALE:1"=8,700'

PLATE 2

Development History

Suburban development in Memphis had reached the Poplar Avenue/I-240 area by the mid-1960's. The construction of I-240 and an interchange at Poplar Avenue provided the area with superior access to the downtown and airport areas. Land use in the area prior to construction of the interchange was predominately residential with supportive church and school development. The only commercial and office activity was located west of I-240 in the vicinity of White Station Road and further west.

In addition to excellent access, the location of flood plains to the north and south of Poplar Avenue directed growth along the roadway. In the early 1970's, redevelopment of Poplar Avenue east of its intersection with White Station Road began. Much of this redevelopment consisted of large-lot residential uses changing to employment centers. Construction of major employment uses fronting Poplar has continued since the 1970's at a rapid pace.

Population and Housing

Population and housing construction in the Poplar Corridor grew rapidly between 1960 and 1980. In 1980, the population for the corridor was 53,418, a 235 percent increase over that of 1960. Housing units totaled 19,441 in 1980, a 356 percent increase over 1960. By 2005, population in the corridor is expected to be more than 81,000 persons and approximately 32,000 new housing units are projected. Approximately half of all the new housing units projected to be built in Shelby County by 2005 will be built in the

areas surrounding the Poplar Corridor. This growth will significantly increase the number of trips through the corridor.

Income and Employment

Income levels and housing values in the Poplar Corridor are among the highest in Shelby County. The residential areas east of I-240 and in Germantown have attracted a large number of high level executives and management personnel.

Poplar Avenue has become a major office center which provides convenient employment opportunities for residents of East Memphis and Germantown. Employment in the area between I-240 and Germantown Road increased 52 percent between 1980 and 1985. Total employment for this area was 18,000 in 1985. Of those 18,000 workers, 11,000 were employed in offices, 5,500 were employed by institutions, and 1,450 worked in retail outlets.

Land Use

The existing land use pattern within the Poplar Corridor is characterized by large office complexes clustered along Poplar Avenue, surrounded by low density residential development. Multi-family housing is located adjacent to the office development along Poplar Avenue and also along other major roads in the area. The multi-family uses serve as a transition between the lower density residential and more intensive office uses.

Institutional uses in the corridor include schools; churches and synagogues; two major hospitals; and recreational facilities such as the Young Mens Christian Association, Jewish Community Center, and Lichterman Nature Center. Commercial uses include hotels and several shopping centers.

Land use for the corridor is shown in Table 1. The largest concentration of office space is located within the Project Area (between I-240 and Kirby Parkway). Office space in the corridor is expected to increase to seven million square feet by 2005. Commercial space is projected to increase to approximately three million square feet.

The majority of the sites along the Poplar Corridor have single-purpose uses and were developed independently of the adjacent sites. However, there are two planned mixed-use developments in the corridor which occupy large tracts of land. The Ridgeway Center is located north of Poplar Avenue between I-240 and Sweetbriar Road and includes numerous office buildings, the Omni Hotel, a movie theatre, and several restaurants. The St. Francis Hospital/LakeCrest Office Park development is located south of Park Avenue along Primacy Parkway and includes the hospital, a convalescent center, and three office buildings.

Although the majority of the uses in the corridor were not constructed as part of a comprehensive development plan, there are clusters of development where several major roads intersect with Poplar Avenue. The Poplar Corridor Study, prepared by the Office of Planning and Development in 1985, recommends that these developments be linked with a system of private driveways, interconnecting parking lots, and pedestrian walkways to help reduce the amount of traffic on the major roadways in the area.

TABLE 1

POPLAR CORRIDOR 1985 LAND USE

AREA POPLAR AVE.	COMMERCIAL (Sq. Ft.)	OFFICE (Sq. Ft.)	INSTITUTIONAL	RESIDENTIAL (Units)
I-240 to Kirby Pkwy. (Project Area)	988,708	2,726,150	4,238 Employees 4,157 Students	5,773
Kirby Pkwy. to Germantown Rd.	331,281	147,220	1,250 Employees 2,952 Students	5,626
TOTAL	1,219,989	2,873,370	5,488 Employees 7,109 Students	11,399

Transportation

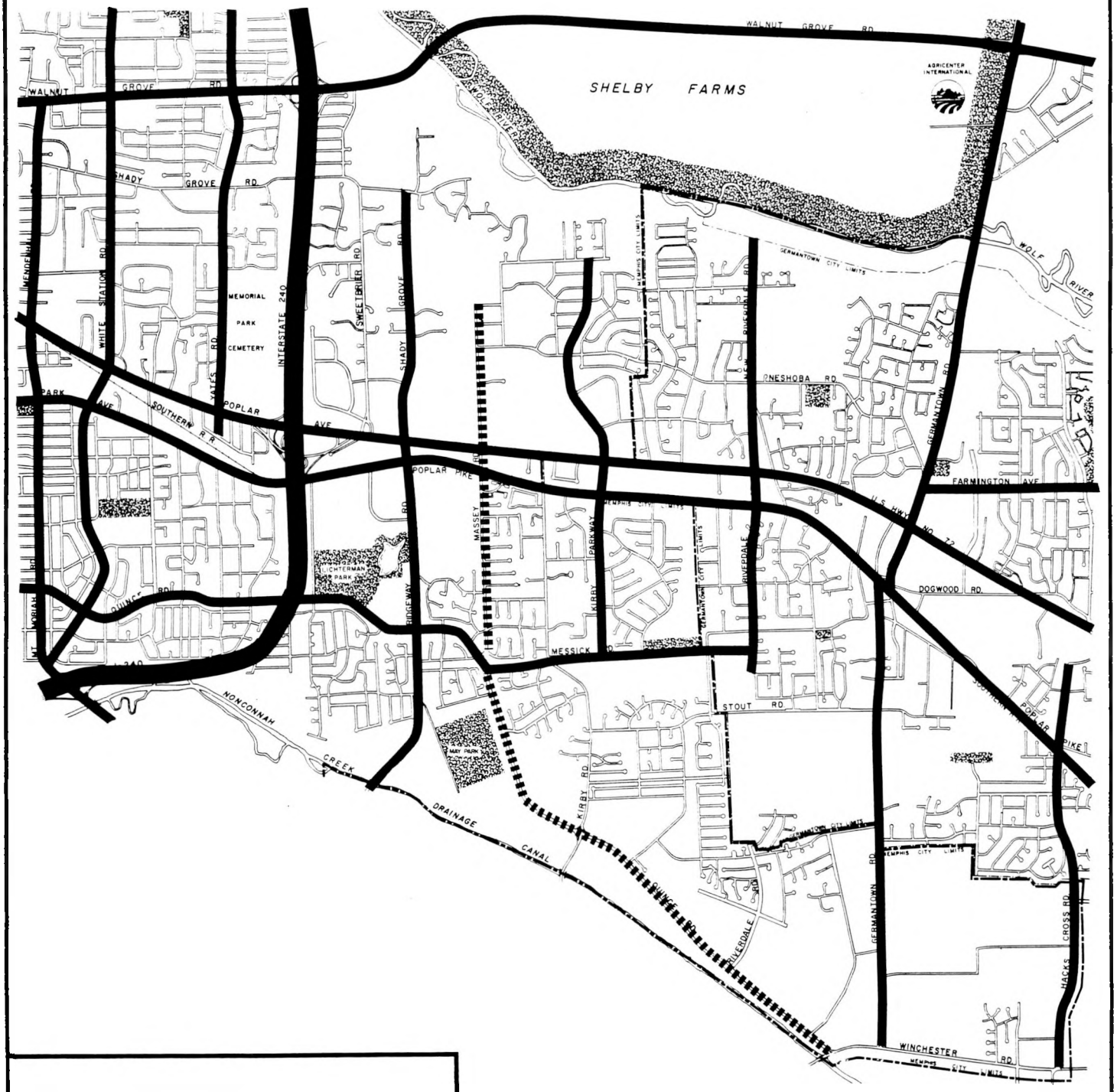
Major Road Network. The major road network serving the Poplar Corridor area is shown on Plate 3. Interstate 240 provides easy access to points north and south of the corridor. In addition to Poplar Avenue, other major east-west roads include Walnut Grove Road, Park Avenue/Poplar Pike, and Quince/Messick Road. Major north-south roads include Ridgeway Road, Kirby Parkway, and Germantown Road.

A major contributing factor to the traffic congestion problems in the Poplar Corridor is that the road network was originally designed to serve residential development. The extensive office and commercial development which has occurred over the past 20 years has resulted in increasingly congested conditions on the major arterials serving the area.

The major road pattern used in Memphis is the one mile-grid system. In the Poplar Corridor area, the grid system is incomplete with major roads being more than one mile apart. The north-south linkages are particularly deficient and this contributes to the traffic congestion in the area.

Mass Transit. The Memphis Area Transit Authority currently operates 11 bus routes that serve the Poplar Corridor. Ridership, as measured by the number of boardings and deboardings at bus stops within the corridor, totaled 2,026 during a weekday count in 1988 for six of the routes. Routes with the heaviest ridership include two routes on Poplar Avenue and a route on Park Avenue.

ROAD NETWORK



Interstate

Major Arterial

Collector

N

SCALE:1"=4,400'

PLATE 3

Traffic Volumes. Traffic volumes for all the major roads in the corridor are equal to or exceed the capacity of the roads. Of 15 signalized intersections located in the corridor, nine provide the lowest level of traffic service (Level of Service "F") during peak flow conditions. Characteristics of this level of service include: forced flow, backups from bottlenecks, and system failure. The capacity of Poplar Avenue is 42,500 average daily traffic (ADT). Traffic counts at major intersections on Poplar Avenue for 1988 ranged from 45,910 ADT to 76,890 ADT. Since 1984, traffic volumes on other major roads in the area have increased between 27 and 86 percent.

Due to the overloading of the transportation network, traffic accidents have also been increasing. For 1988, the intersection of Poplar Avenue and Ridgeway Road ranked as the sixth highest city street accident location in Memphis with 109 accidents. The Poplar Avenue/I-240 intersection was ranked as the sixth highest interstate accident location with 112 accidents.

Major Road Improvements. There are five major road construction projects in the Memphis Capital Improvement Program which will improve access and circulation in the Poplar Corridor area. The projects include the construction of three new roads which will cost approximately $263 million. The proposed roads are the Kirby Parkway Extension, Nonconnah Parkway, and Humphreys/Wolf River Boulevard. Nonconnah Parkway and Humphreys/Wolf River Boulevard will provide alternative routes for east-west through traffic. The extension of Kirby Parkway north and south of the existing road will improve north-south circulation through the area.

Two other projects include widening Poplar Avenue and Poplar Pike at the two primary bottlenecks in the corridor's street system. These improvements will cost approximately $3.1 million. All of the road improvements are expected to be completed by 1995.

These projects are intended to improve the traffic flow through the corridor area. However, city transportation planners do not expect these improvements to solve the traffic congestion problems in the Poplar Corridor. One reason is that construction of the new roads is expected to induce new development, and traffic generated by these uses may well reduce the benefits the new roads were intended to provide.

POPLAR CORRIDOR TASK FORCE

The Poplar Corridor Task Force was established by the Memphis City Council in 1985 in response to concerns expressed by residents, developers, commuters, and other public and private sector groups over the traffic congestion in the Poplar Corridor. The task force developed a land use and transportation plan for the future growth and development of the area.

General guidelines/recommendations in the Poplar Corridor Study for limiting congestion along roadways in the area and de-emphasizing the use of Poplar Avenue included the following:

- All proposed land use changes should use the planned development process.

- o On-site automobile access (non-dedicated roadways) should be provided to link developments.
- o Pedestrian links shall be required between mutually supportive uses.
- o Amenities such as plazas, fountains or other open spaces should be provided in accordance with the scale of development.
- o Garage parking is encouraged to place employees closer to buildings and to provide more open space and landscaping.
- o For all new employment uses and multi-family developments, a 15-foot-minimum landscaped area adjoining all major roads shall be established. Parking lots adjoining the landscaped area must screen the cars from view with hedges or other landscape material.
- o Timing of developments should coincide with road improvements.

The Poplar Corridor Study recommended several major road improvements. However, the study also stated that the traditional solution of building new roads to alleviate traffic congestion would not solve the problem in the Poplar Corridor. A comprehensive approach of implementing transportation management strategies and new road construction was recommended. The report also suggested that formation of a transportation management association to guide the development and implementation of transportation management strategies in the corridor be explored.

OVERVIEW OF TRANSPORTATION MANAGEMENT ASSOCIATIONS

A transportation management association is an organization of local businesses and government developed to deal with and solve any variety of local transportation-related problems. A TMA enables the public and

private sectors to work together on local transportation matters and gives the business community a voice in transportation decision-making and planning. TMAs provide employers, developers, office managers, and retailers the opportunity to combine their resources and collectively address transportation concerns.

While transportation management associations are usually developed in high growth suburban/metropolitan areas where critical traffic concerns exist, the decision to form a TMA can be initiated by a wide range of circumstances or reasons. In some instances, the fear associated with the possibility that traffic congestion could suppress prospective economic growth and unfavorably influence productivity has moved property owners and employers to establish a TMA. This was the motivation behind the organization of a TMA in Tysons Corner, Virginia, one of the largest and most congested suburban areas in the United States. In other cases, TMAs have been formed as a result of a local ordinance which limits the number of vehicle trips generated in an area and requires developers and tenants to establish transportation management strategies to keep traffic at the prescribed limits, (e.g. North Bethesda, Maryland; and Pleasanton and Irvine, California). At times, a TMA is the outcome of its members combining their resources to create joint programs and services that allow them to meet local guidelines at reduced costs. Some TMAs are the product of a decision by local governments and businesses to create a way of cooperatively addressing local transportation problems without being hampered by jurisdictional boundaries that might prevent areawide coordination, (e.g. the Parkway Center in North Dallas, Texas).

Although all transportation management associations are based on the premise that the private sector must share in the responsibility for dealing with traffic concerns, each association is developed to meet the specific requirements and conditions of its members and service area. TMAs may be developed around a single activity center or operate on a corridor-wide basis. A TMA may be wholly private, without any government funds, or be funded by a combination of public and private monies. While each association is unique in its structure and mission, a TMA will participate in the following activities with varying levels of emphasis:

- Policy Leadership And Advocacy - TMAs serve to express the concerns of the business community in the local transportation decision-making process. They monitor various transportation conditions including traffic flow, warn public officials of prospective transportation problems, and work with the local and state governments for needed improvements.

- Traffic Mitigation - TMAs give precedence and support to carpooling, vanpooling, and transit use among employees to make ridesharing easier and more accessible. They also try to develop flexible work hour programs, oversee parking management programs, and assist employees in locating applicable alternative commute options.

- Service Provision - Some associations focus on managing internal circulators such as subscription buses, park-and-shuttle systems, and even car rental services to move people from one place to another. In addition to their transportation responsibilities, some TMAs have

broadened their service functions to provide services such as daycare, telecommunications, and security.

- "Mobility Image" - These TMAs result when a suburban center has received the image of being highly congested. Local property owners will use the association to demonstrate to prospective tenants that they are concerned about the congestion and are trying to improve it. These associations will often focus on educational and public information activities to develop a positive "mobility image".

According to the Association For Commuter Transportation, there are several conditions that favor the establishment of successful TMAs:

- There must be a sense of a present or impending transportation problem (usually traffic congestion, although lack of commute alternatives can also be viewed as a problem);
- There must be strong corporate leadership that has a stake in preserving the economic and environmental well-being of the area and perceives traffic congestion as a threat to that well-being;
- The business community must perceive a benefit from pooling their resources and acting in concert;
- There must be a supportive public policy environment and sympathetic local government officials; and
- The TMA must have an energetic and imaginative staff.

Success of a transportation management association is dependent upon the private sector taking a larger role in traffic mitigation. The private

sector has the means to persuade and reward commuters with a series of incentives and disincentives that will influence commuters to abandon driving alone. For example, developers and property managers can institute paid parking and reward carpoolers and vanpoolers with designated preferential parking. They can also provide shuttle services for those participating in ridesharing so that they retain their mobility at the worksite. Employers can promote ridesharing by subsidizing carpool, vanpool and transit fares. Employers can also establish flexible work hours to reduce traffic congestion during peak hours.

Participation in a TMA benefits the private sector by the increased public goodwill they receive as they act to reduce traffic congestion. In addition, TMAs increase the ability of property owners to protect their investments and the continued productivity of their commercial activities which could be threatened by traffic congestion. Employers, developers, and office managers benefit because TMA activities can help avoid political pressure and action such as restrictive controls on site expansion and bans on further development which might result if they take a "do-nothing" attitude.

The only existing transportation management association operating in Tennessee is the Brentwood Area TMA (BATMA) which operates in Brentwood, Tennessee, a suburb of Nashville. BATMA is a private, non-profit corporation of public officials and private business people working together in an effort to reduce traffic congestion. The Brentwood Area TMA was organized in July of 1988 to familiarize developers with the concepts of TMAs and traffic demand management. Among its charter members are the

City of Brentwood, the Chamber of Commerce and five major developers. The goals of BATMA are to support high-occupancy transportation modes, serve as an assembly for transportation issues, identify the needs of commuters, appraise service options, and encourage city development policies that advocate actions managing congestion and provide leadership.

BATMA activities have included the endorsement of third-party vanpool providers; the development of a park-and-ride lot; development of a proposed reduced parking and increased ridesharing incentive amendment to the City Zoning Ordinance; and conducting seminars on vanpooling and land use planning and its effects on suburban mobility. Currently BATMA is evaluating the mitigation strategy of using trolley services to relieve midday congestion problems. Other services include the education of decision makers, relocation assistance and monitoring of ongoing rail studies. The results of an employee travel need survey will be used to develop a plan for future services. Participation in BATMA is voluntary, however, implementing additional ordinances and using the development process to mitigate traffic congestion will be considered as mid to long range measures.

CHAPTER 3
Project Description

INTRODUCTION

As was discussed in Chapter 2, the Poplar Corridor is one of the most desirable areas in Shelby County for residential, office, and commercial development, and as a result, the area has experienced tremendous growth in the past ten years. However, this growth has overburdened the road network and is reducing the desirability of the area.

One factor contributing to the traffic congestion is that there is a concentration of land uses in the area that have similar trip generating characteristics. Within the Project Area, there are five schools with an enrollment of 5,400 students; and 2.7 million square feet of office space, both of which generate high peak hour trips. Almost 1.9 million square feet of office space is located between I-240 and Massey Road surrounding the Poplar Avenue/Ridgeway Road intersection. This concentration of office uses accounts for two-thirds of the trips generated by offices in the corridor. Consequently, the majority of office trips are occurring on a very small section of roadway, resulting in a high level of congestion.

The hospital and commercial uses in the area are major traffic generators, although most trips for these uses occur during off-peak periods. The extensive residential development in the area is also a major factor in overloading the road network.

Given this situation, the purpose of this research project was to evaluate the feasibility of organizing a transportation management association and implementing various transportation management strategies (TSMs) to deal with the traffic congestion and related air quality, energy, economic, and land use problems in the Project Area.

INITIAL PROJECT PLANNING

During the Poplar Corridor planning process, the Poplar Corridor Task Force appointed a sub-committee on Transportation Management to initiate preliminary investigations into various transportation management strategies for the corridor. The sub-committee met with several developers, major employers, school officials, and staff of Memphis Area Rideshare and the Office of Planning and Development to discuss the implementation and expansion of adjustable work schedules and employee rideshare programs in the Poplar Corridor. Recommendations from this meeting included (1) conducting preliminary studies to gather background data regarding employee arrival and departure times; the current level of employee ridesharing; and employers' interest in developing flex-time and rideshare programs and (2) conducting traffic count studies to determine the potential positive impact of flex-time and rideshare programs in the area.

In 1985, the Poplar Corridor Task Force requested that one of the major developers in the corridor serve as the chairman of a transportation committee for the Poplar Corridor. Groups asked to participate in the

transportation committee included the administrators of the two hospitals located in the corridor, school officials from the five largest schools, and representatives from the four major developers.

During 1986 and 1987, the Memphis Area Rideshare Program conducted preliminary studies to gather background information regarding the current level of employee ridesharing, employee arrival and departure times, and employer interest in implementing various transportation management strategies. The preliminary studies revealed that between 92 and 95 percent of the employees in the Poplar Corridor drove to work alone. In addition, the majority of the companies contacted did not allow their employees to alter their work schedules to avoid peak traffic times. Traffic count data indicated that the implementation of flex-time and rideshare programs could significantly improve the level of traffic congestion in the Poplar Corridor and reduce the conflicts between school and employment traffic.

The transportation committee met twice to discuss transportation management strategies that they could implement such as flex-time and rideshare programs. The initial plan was for the transportation committee to meet on a quarterly basis and continue to work on implementing transportation management strategies. However, there was a general lack of commitment on the part of the group members to pursue the strategies. In addition, the general perception was that the construction of new roads was the real answer to the traffic congestion problems. The minimal amount of participation in the transportation committee indicated a need for a more intensive marketing and education effort with Poplar Corridor employers and employees.

In November 1987, the City of Memphis received a grant from the Urban Consortium Energy Task Force to pursue the feasibility of a formal TMA and to evaluate the receptivity of employers and employees to other transportation management strategies for the Poplar Corridor. To determine the perceived need for traffic management in the Poplar Corridor and interest among a broader base of organizations in organizing a TMA, the Memphis Area Rideshare Program contracted with Memphis State University to conduct a Focus Group Study including a telephone survey and focus group interviews.

Project staff organized a team that included transportation and land use planners from the Office of Planning and Development, a city traffic engineer, and a representative from the Memphis Area Transit Authority to establish the project boundaries, determine what groups should be included in the study, and formulate questions for the survey and interviews.

If the Focus Group Study indicated sufficient interest in organizing a TMA, project staff would recommend an organizational and management structure for the TMA and organize the public and private resources necessary to implement the TMA. The TMA would then evaluate and implement various transportation management strategies such as employee rideshare programs, transit shuttle services, parking policies, park-and-ride lots, and flex-time programs.

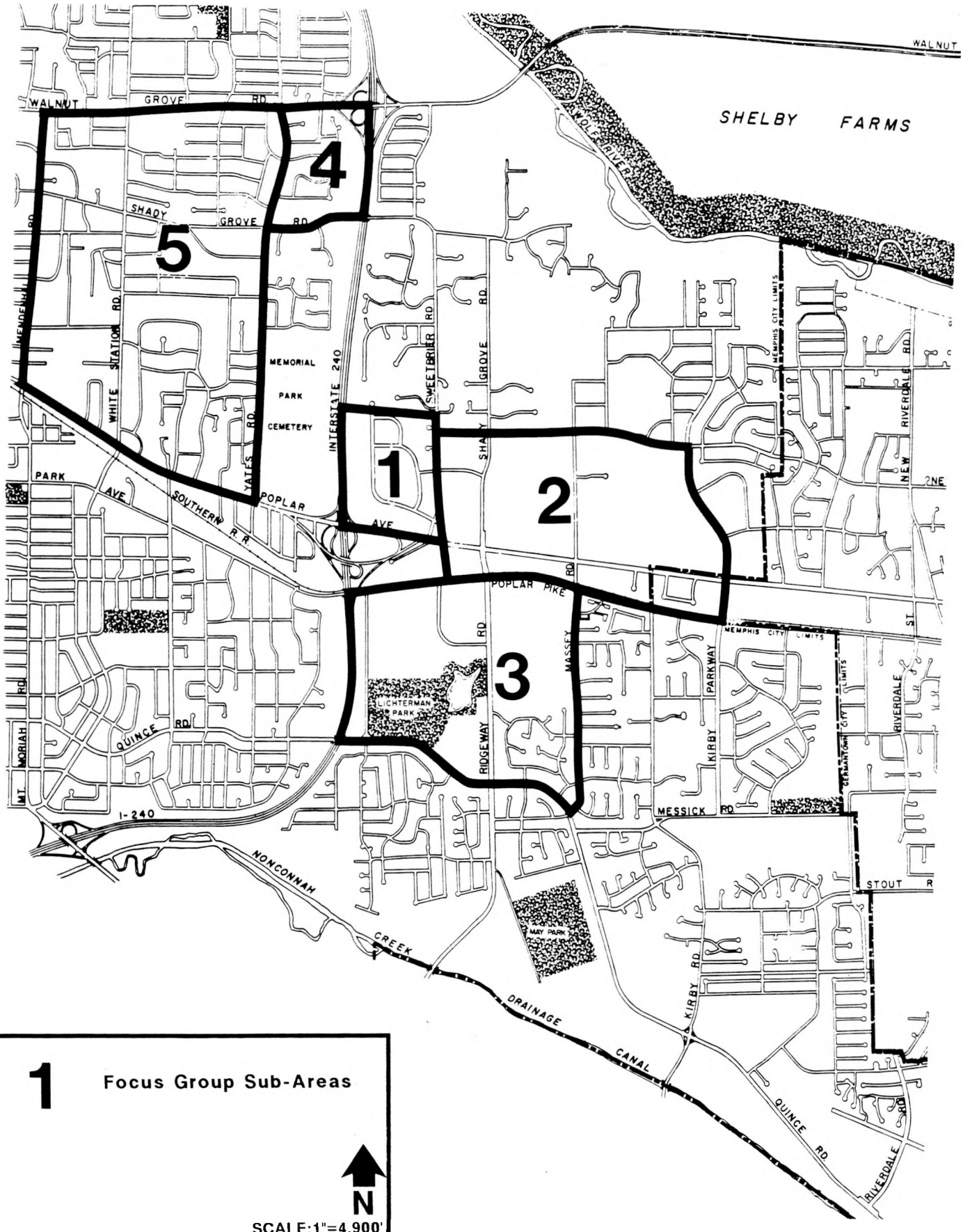
During the planning meetings, it was decided that there would be four focus group interviews. Two groups would be composed of major employers and real estate developers; one group would include school officials and employee organizations; and the final group would consist of office building property managers, restaurant owners, and representatives of shopping center associations.

For the purposes of this study, five sub-areas were defined within the Poplar Corridor. The boundaries of the sub-areas are shown on Plate 4 and are described below.

Area 1 - Bounded on the north by Ridge Bend Road, on the east by Sweetbriar Road, on the south by Poplar Avenue, and on the west by Interstate 240. The area contains Ridgeway Center, a multi-use development which includes numerous multi-tenant office buildings, the Omni Hotel, restaurants, and a movie theatre. Briarcrest School is also located in the area.

Area 2 - Bounded on the north by Neshoba Road, on the east by Kirby Parkway, on the south by Poplar Pike, and on the west by Sweetbriar Road. This area includes 16 major multi-story office developments including the Forum I, II, III; Towermarc I, II, III; the Crescent Center; and the Atrium I and II.

FOCUS GROUP SUB-AREAS



1 Focus Group Sub-Areas

N

SCALE:1"=4,900'

PLATE 4

Area 3 - Bounded on the north by Poplar Pike, on the east by Massey Road, on the south by Quince Road, and on the west by I-240. Large traffic generators in this area include St. Francis Hospital, Lakecrest and Lynnfield office complexes, Park Place Mall, Memphis University School, Hutchison School, and Ridgeway Junior and Senior High Schools.

Area 4 - Bounded on the north by Walnut Grove Road, on the east by Yates Road, on the south by Shady Grove Road, and on the west by I-240. This area contains Christian Brothers High School and Baptist East Hospital.

Area 5 - Bounded by Walnut Grove Road on the north, Yates Road on the east, Poplar Avenue on the south, and Mendenhall Road on the west. This area is intensively developed with fast-food and retail uses along Poplar Avenue. The area also contains two major office buildings, White Station Tower with 24 floors and Clark Tower with 35 floors.

Lists of employers and organizations in each sub-area were developed by project staff conducting a physical inventory of each major office and retail complex. The lists containing names and telephone numbers for each organization identified in these five sub-areas were provided to Memphis State University project staff.

Telephone Survey

A telephone survey was conducted to gather opinions about the traffic congestion in the Poplar Corridor and to recruit participants for the focus group interviews. To be eligible to participate in the focus group, the individual had to have decision-making authority within their organization in the area of transportation management, employee work schedules, or hours of operation. Individuals contacted were told that they would be paid $50.00 for their assistance if they participated in a focus group. The telephone survey guide used for this exercise is included as Appendix A.

Table 2 indicates the number of organizations by area contacted during the telephone survey, the number agreeing to participate in the survey and the focus groups, and the number of actual participants in the focus groups. Although 45 percent of those contacted participated in the telephone survey, only 2 percent actually participated in the focus group interviews.

TABLE 2

TELEPHONE SURVEY AND FOCUS GROUP PARTICIPANTS

AREA

	1	2	3	4	5	TOTAL
Organizations Called	62	18	147	2	180	409
Telephone Surveys Completed	20	14	71	1	80	186
Recruited for Focus Group	8	8	3	0	2	21
Actual Focus Group Participants	9	0	0	0	0	9

The responses to the questions in the telephone survey are summarized in the following tables. The first question asked about the interviewee's perception of the traffic situation in the Poplar Corridor. The responses are summarized in Table 3.

TABLE 3

PERCEPTION OF THE TRAFFIC SITUATION

Response	Number	Percent
Too Congested	127	68
Not A Problem	59	32
TOTAL	186	100

Responses to a question asking what problems the organizations were currently experiencing due to the traffic congestion in the corridor are summarized in Table 4. Thirty-five percent of the respondents indicated that their organizations were experiencing no problems.

TABLE 4

PROBLEMS EXPERIENCED BY ORGANIZATIONS

Problem	Number	Percent
Traffic Congestion	74	41
Forced To Take Alternate Route	31	17
Employee Tardiness	8	4
Unhappy/Frustrated Employees	2	1
Accidents	1	1
Waste of Time	1	1
None	63	35

In order to evaluate the amount of non-employee traffic generated by the businesses located in the Project Area, a question was asked concerning the number of people who visited each organization during a typical day.

Responses to this question are shown in Table 5. Approximately 75 percent of the organizations responding to this question had ten or fewer visitors per day. Therefore, these organizations are not heavy generators of off-peak-hour traffic. The second part of this question concerned parking problems experienced by the organizations. None of the organizations reported having parking problems for either their employees or customers.

TABLE 5

NUMBER OF VISITORS

Number of Vistors	Number of Companies	Percent
1- 5	65	43
6-10	49	32
11-15	23	15
16- Or more	16	10
TOTAL	153	100

As shown in Table 6, most of the organizations participating in the survey were not large employers. Seventy-nine percent of the organizations had thirty or fewer employees and only eleven percent had more than 50 employees.

TABLE 6

SIZE OF ORGANIZATIONS

Number of Employees	Responses	Percent
1-10	65	35
11-20	43	23
21-30	39	21
31-40	9	5
41-50	9	5
51 Or more	21	11
TOTAL	186	100

In response to the question on the percentage of employees who drive to work alone, 96 percent of the organizations said that 90 to 100 percent of their employees drive to work alone. The remaining 4 percent of the organizations indicated that about 80 percent of their employees drive to work alone.

Responses to the question concerning what organizations currently do to alleviate the traffic congestion are presented in Table 7. The most frequently offered traffic reduction program was to allow employees flexible work hours so that they could avoid peak commuting hours. However, the majority of the respondents (79 percent) offered no formalized methods aimed at reducing the traffic congestion.

TABLE 7

TRAFFIC REDUCTION PROGRAMS AVAILABLE

Program	Frequency	Percent
Flex-time	20	11
Provide Carpool Information	10	5
Changed Work Hours	9	5
No Specific Programs	147	79
TOTAL	186	100

Responses to the question concerning the one activity which would have the most effect on the traffic situation were quite varied. Table 8 summarizes these responses.

TABLE 8

SOLUTIONS TO THE TRAFFIC CONGESTION

Solutions	Frequency	Percent
Build Another East-West Artery	11	26
Re-Route Traffic	8	19
Don't Know	8	19
Widen Poplar Avenue	4	9
Stop Development	4	9
Improve Mass Transit	3	7
Allow Flex-time	2	5
Double-Deck Poplar Avenue	2	5
Carpooling	1	2

Forty percent of the responses involved building new roads or widening existing ones while improved mass transit, carpooling, and flex-time programs only accounted for 14 percent of the responses.

Focus Group Interviews

An interviewer's guide, included as Appendix B, was used by the group facilitator to stimulate discussion. The focus group sessions were videotaped to provide a complete record of the comments made during each session and to demonstrate the focus group methodology. Each participant was requested to sign the release form shown in Appendix B.

The focus group interviews were conducted at Memphis State University between 7:30 and 9:30 a.m. during August 1988. The interviews were held at this time to reduce the amount of time participants would have to be away from work. Present during each session were the participants, the group facilitator and an assistant, and a camera operator. Continental breakfast was provided. The facilitator used the interviewer's guide to direct the interview and to assure that the appropriate range, specificity, and depth of opinion were obtained. The introductory script was followed closely, but not necessarily verbatim.

Organizations. Originally, there were to be four focus group interview sessions, however, due to the difficulty experienced in recruiting participants, only two interview sessions were conducted. The two focus groups were made up of employers, all of which were located in Area 1, the Ridgeway Center. Apparently the other groups contacted to

participate in the focus group study (school and hospital administrators, developers, property managers, restaurant owners, and representatives of shopping center associations) either did not believe that the traffic problem was great enough to demand their time and participation in the focus group process or they were not confident that workable solutions would result from the process. Since all the participants came from Area 1, employers located in this area may perceive the traffic congestion on Poplar Avenue as impacting them more than other areas. There is only one point of ingress and egress for the Ridgeway Center from Poplar Avenue and this causes traffic to back up within the development.

Interview Responses. Responses to each of the primary questions in the interview are summarized in the following paragraphs.

Question 1. How would you describe the flow of traffic in the Poplar Corridor?

All of the group members agreed that Poplar Avenue is a congested artery, especially during the morning, lunch, and evening hours. Morning rush hour extends from 7:15 a.m. to 8:30 a.m. When school is in session, the morning rush hour begins at 6:45 a.m. The lunch rush hour occurs between 11:30 a.m. and 1:00 p.m. The evening rush hour lasts from 4:00 p.m. to 6:30 p.m. Lunch hour was considered the worst time because Poplar Avenue is heavily congested in both directions. In the morning and evening hours, traffic is somewhat heavier in one direction than the other.

Several group members stated that although traffic on Poplar Avenue was serious by Memphis standards, compared to other cities such as San

Francisco, Houston, or Atlanta, Memphis did not really have a traffic problem. However, they believed that if development in the corridor continues, the traffic situation would get worse. The consensus of the two groups was that the traffic on Poplar Avenue caused commuters frustration and aggravation, but it was tolerable. The major problems caused by traffic congestion are tardiness and negative employee attitudes during the morning hours.

Some group members have adjusted their driving patterns to avoid congestion on Poplar Avenue by driving through residential neighborhoods or by leaving home 20 to 35 minutes earlier than usual. Persons driving through residential areas stated that they had noticed an increase in the traffic flow through these residential areas. They also felt that the roads in the residential areas were not built to handle the traffic flow and this presented a potential traffic hazard.

All participants felt that schools in the area had an impact on the level of traffic congestion. Congestion decreases when schools are not in session. Memphis State University, located west of the corridor, was mentioned as a contributor to the traffic congestion in the Poplar Corridor.

Question 2. Will the traffic flow get better or worse over the next five years?

Individuals had mixed feelings concerning whether the traffic situation will get better or worse over the next five years. Those who felt it would get better cited road improvements that are being made or are

planned as the reason for their belief. Those who felt the situation would get worse stated that without additional road improvements, the new office buildings, retail stores, and hotels in the area would make the situation worse.

Question 3. What proportion of your employees make car trips during the work day?

Responses to this question ranged from 0 to 100 percent. The most frequent response was 50 percent. The purpose of these trips was to go to lunch, banks, or to conduct personal business. Participants felt that these types of trips did contribute to the traffic congestion.

Question 4. What specific transportation problems do you experience in the Poplar Corridor?

All participants mentioned the general traffic congestion as something that negatively affected them. Additional comments indicated that some participants felt there was an increased probability of being involved in an accident because of the traffic volume in the area. Construction in and near the area also presented a problem. One individual suggested that road work be done at night when traffic volumes are lower. Parking at worksites is not perceived to be a problem.

The participants suggested that the lack of mass transit to the actual work sites contributed to the problem. Participants felt that carpooling would not be well received by employees because it would be

difficult to coordinate departure times with members in the carpool due to irregular work schedules. Child-care arrangements and the need for a car during the day were also cited as hindrances to joining a carpool.

Question 5. Does your organization have any programs for adjusting to the traffic flow?

Five of the organizations represented had programs which addressed the situation. The most frequently mentioned program was flex-time. Some organizations had expanded their work hours by changing their start and stop times so that employees could avoid peak hour traffic times. The organizations which did not have formal programs did have informal arrangements with employees which allowed them to better deal with the traffic problems.

Participants felt that the traffic congestion affected employees' ability to get to work on time but that the frequency of tardiness was not a problem. None of the organizations felt that the traffic situation affected their ability to attract or retain employees or customers. Most group members agreed that employees and customers like the convenient and free parking areas.

Question 6. What should be done to alleviate the traffic congestion?

Suggestions offered in response to this question included the following:

- Build a new east-west arterial
- Offer rail or trolley service with shuttles from the train

stops to the work sites

- Build more roads
- Provide better access to Walnut Grove Road
- Widen bottle-necks on Poplar Avenue and Park Avenue
- Provide better access to Interstate 240 from Ridgelake Boulevard
- Improve access from the Ridgeway Center area to Interstate 240 South
- Increase transit service
- Improve traffic signal coordination

Question 7. Would a program similar to the one shown in the video work in Memphis?

The groups were shown a video entitled "Transportation Management Systems." The video depicted the operation of a transportation management association. The groups' consensus was that a similar program would not work in the Poplar Corridor. They felt that a TMA might work in an area where new office complexes were being developed, but would not work if superimposed on an existing traffic problem area.

They felt that in order for a TMA to be formed in the Poplar Corridor, the City Council would have to pass an ordinance. Group members did not think it would be a good idea to implement a mandatory trip reduction plan. One group member stated that Memphians do not take lightly to being regulated or legislated.

Reactions to some of the specific programs mentioned in the video were generally negative. Participants felt that a mid-day shuttle would not be used because there was not enough time at lunch for a person to leave the worksite and return by shuttle. They also expressed a negative opinion about the viability of a park-and-ride system. However, there was some optimism expressed concerning the use of preferential parking as an incentive for carpooling.

Question 8. What type of organizations would be most likely to participate in a TMA?

Participants felt that the most likely organizations to join a TMA were large organizations, builders, and neighborhood associations. The incentives they felt would motivate organizations to join included positive publicity for those that did join and providing the organizations an opportunity to interact with other groups which had similar problems.

Question 9. What type of activities should be conducted by a TMA?

Participants felt that if a TMA were formed it should promote programs and enforce compliance with established programs. None of the participants felt that a TMA should initiate programs.

Question 10. Would your organization be willing to participate in a TMA?

All participants said they would be willing to pursue the idea further. They would be willing to assist in terms of distributing surveys

and information about carpooling and mass transit. They also felt their organizations would be willing to adjust start and stop times to lessen the traffic congestion. The initial contact in the organization to pursue these options would be the person who attended the focus group interviews. They also recommended using a building coordinator rather than company representatives since numerous organizations share the same building.

One group member stated that he felt the questions were heading in the wrong direction. It seemed to him that the facilitator was trying to find ways not to build roads. He believes that Memphians are single-car-oriented and if the document resulting from this exercise did not recommend building new roads, then it would be useless.

Conclusions. The results of the Focus Group Study defined several issues relating to the traffic congestion in the Poplar Corridor, including 1) the schools in the area are contributing to the traffic congestion; 2) commuters are using residential roads to avoid Poplar Avenue and other major arterials; and 3) the perceived solution to reduce congestion is to build more roads. The study also revealed that 90 to 100 percent of area commuters drive to work alone and approximately 79 percent of the employers offer no traffic reduction programs to their employees.

Participation in the telephone survey was good (45 percent of those contacted); however, participation in the focus group interviews was very low (2 percent of those contacted). The difficulty experienced in getting people to agree to participate in a focus group and

the high no-show rate among those who agreed to participate (21 individuals were recruited but only 9 actually participated) likely reflects the perception of commuters regarding the severity of the traffic situation in the Poplar Corridor. In addition, many people contacted during the study were unwilling to assume the additional responsibility and paperwork perceived to be involved in forming a TMA.

Approximately 68 percent of the participants in the telephone survey and all of the participants in the focus group interviews stated that they felt the Poplar Corridor was too congested. However, even though the current traffic situation was perceived as being somewhat problematic, it apparently was not perceived as serious enough to warrant devoting time to participating in a focus group interview or a transportation management association. One of the participants stated that she did not want to come to the interview because she did not want to invest the time. She suggested that the interviews be made as convenient as possible. Participation in the focus group interviews may have been increased if the sessions had been held at the various major office complexes in the corridor instead of at Memphis State University. This would have required less effort on the part of the participants. An additional explanation for the lack of interest in participating in a focus group interview was that many people contacted felt they did not have enough information or knowledge about traffic management to have any meaningful input into the group discussion.

Those who did participate in the focus group interviews indicated a willingness to pursue the formation of some type of organization to address

transportation issues in the Poplar Corridor although they were not interested in forming a formal TMA. The Focus Group Study made it clear that an educational process and intensive marketing campaign were needed to increase individuals' understanding of the real impacts of the current and future traffic situation in the Poplar Corridor, including reduced air quality, energy consumption, and loss of desirability of the area.

MARKETING EFFORTS

To educate the key players in the Poplar Corridor and to further evaluate the interest in forming a transportation management association, project staff continued contacts with developers, major employers, and property managers. Letters were sent to these groups in three of the five sub-areas defined during the Focus Group Study. Follow-up calls were made to set up meetings with each of these organizations to discuss the traffic situation and strategies for dealing with the problem.

Developers And Property Managers

Full cooperation and support of rideshare program activities were received from three of the four major developers in the corridor. The three developers were Weston Companies, Trammell Crow Company and Boyle Investment Company. Office developments built and managed by these companies are concentrated in Areas 1, 2, and 3 between I-240 and Kirby Parkway (the Project Area). The Project Area contains the heaviest concentration of office space in the Poplar Corridor which greatly

contributes to the traffic congestion. Consequently, marketing efforts to raise public awareness and to promote ridesharing and other transportation management strategies were focused in the Project Area. No marketing efforts were made in Areas 4 and 5 during the project period.

One of the first promotional efforts was conducted in February 1988 at a Trammell Crow property located at Poplar Avenue and Ridgeway Road. Trammell Crow's property manager provided the project staff with a list of tenants in the building to be used in contacting individual employers for marketing activities. The property manager sent a letter of introduction and support of the rideshare program to each tenant before they were contacted by project staff. Follow up calls and/or site visits to tenants were then made by project staff to further discuss transportation management strategies including ridesharing and to solicit their support and cooperation.

The process of working through the developers and property managers to contact tenants of major office complexes was continued throughout the project duration. This proved to be a comprehensive and efficient way to reach the large number of employers located in multi-tenant office buildings. However, the process was also extremely time consuming. The property managers wanted to control the timing of any promotional or surveying efforts in their buildings, which often did not correspond to the project time schedule.

Employers

For transportation management strategies to be fully effective, there must be active participation from both the public and private sectors. Gaining the support of employers is the key to successfully identifying and implementing the various strategies. First, to gain information needed to evaluate the interest among employees for various demand-reduction strategies and to develop appropriate rideshare programs, employers must allow access to their employees for surveying and promotional efforts. Second, although the employees are ultimately the target market for reducing traffic congestion, employers can offer incentives to employees and adopt company policies which will encourage trip reduction. For example, employers can allow flexible working hours, provide employee transportation allowances, sponsor vanpools or, at the very least, encourage participation in rideshare programs. Support from top management is important because it can make employees more comfortable in participating in a program that is new to them.

During the first phase of the employer marketing activities, project staff met with nine property managers who were responsible for 53 multi-tenant office buildings in the Project Area and established an action plan and approximate time frame to begin promotional activities with their tenants. The action plan consisted of five major tasks as described in the following paragraphs.

Task I - Initiate Contact With Tenants Through Property Managers: Project staff provided property managers with a letter to send to their tenants. For the purposes of promoting ridesharing and other transportation management activities in the corridor, project staff created the Poplar Corridor Transportation Services Program. The property managers sent a letter of introduction to each tenant explaining the objectives of the Poplar Corridor Transportation Services Program and requesting their support of the program's activities. Examples of the tenant letters used are attached as Appendix C.

Task II - Project Staff Follow-Up Contact With Tenants. After the property manager had disseminated the letters to tenants, project staff conducted follow-up calls to set up meetings with company management representatives. The purpose of the meetings was to educate the employers about the importance of implementing transportation management strategies to reduce traffic congestion problems in the corridor and to discuss their willingness to participate in developing and promoting the strategies. Approximately sixty percent of the 110 employers contacted were interested enough to meet with project staff and further discuss promotional activities.

Task III - Conduct Employer Meetings. The employers who agreed to a meeting were very receptive to the program objectives and were interested in working with project staff to implement selected transportation management strategies. The employer meetings gave them the opportunity to express their opinions about the traffic congestion problems and to inquire about site specific transportation-related problems that were affecting

their employees, such as the need for a traffic light or a turn lane. The employer meetings also provided an opportunity for project staff to assess the level of interest of employers in instituting programs and policies to alleviate traffic congestion problems.

Task IV - Initiate Employer Promotional Activities. Project staff encouraged interested employers to conduct various promotional activities within their companies. These activities included disseminating employee rideshare information packets; conducting a survey of employees' commuting trends; identifying potential vanpool groups; posting rideshare information flyers in designated areas, and distributing and collecting rideshare applications from employees.

To keep the Poplar Corridor Transportation Services Program in the minds of employers, project staff published a quarterly newsletter which addressed transportation issues in the corridor. The newsletter promoted the benefits of ridesharing; informed employers of changes in or expansion of transit services; and included information on planned development, updates on road improvements and new road construction and other activities in the corridor. An example newsletter is included in Appendix D.

Task V - Project Staff Employee Follow-Up Promotions. Employer promotional activities in Task IV resulted in the identification of potential vanpool groups. Project staff then conducted follow-up

promotional activities with interested employees in efforts to establish vanpools. These activities included surveying several target groups to identify potential van drivers and to collect information on commuting characteristics and work hours. In addition, project staff conducted organizational meetings with prospective vanpoolers and offered the use of a demonstration van to get the vanpool group started. Employers were very supportive in working with project staff during these promotional activities.

The method of working through the developer/property manager to initiate contact with employers provided a comprehensive approach for promoting ridesharing and other transportation management strategies in multi-tenant office buildings. The cooperative efforts of the developers, property managers, and employers was the key element needed to further initiate the developent and implementation of transportation management strategies for the Poplar Corridor. However, the process of phoning and meeting individually with employers to determine their interest in participating in a transportation management association and implementing traffic reduction strategies was not an efficient method of identifying interested employers. Consequently, an employer survey was developed and distributed to 777 employers in the Project Area in order to gather background information regarding their hours of operation, perceived transportation-related problems, and what activities they would be willing to participate in to help alleviate traffic congestion; and to help identify target market groups for ridesharing.

Table 9 shows the distribution of the employer surveys and responses by the areas defined in the Focus Group Study. Although only representatives of Area 1 participated in the focus group interviews, respondents to the employer survey were evenly distributed among Areas 1, 2, and 3. Therefore, the employer survey should more accurately reflect employer interest in participating in a transportation management association and other transportation management strategies for the corridor as a whole.

TABLE 9

EMPLOYER SURVEY PROFILE

	Area 1	Area 2	Area 3	Total
Surveys Distributed	269	251	257	777
Major Office Bldgs. Surveyed	22	20	11	53
Individual Employers, Retailers, Restaurants Surveyed	5	65	46	116
Surveys Returned	112	113	144	369
Employers Indicating An Interest In TMSs	65	61	62	188
Employers Not Responding Or Indicating No Interest In TSMs	157	138	113	408

The Poplar Corridor Employer Survey and the detailed results of the survey are included in Appendix E. The following paragraphs summarize the survey results.

Of the 777 surveys distributed, 369 surveys were completed, which is a 47 percent return rate. There are approximately 6,240 employees working for the 369 responding companies. The majority of the businesses have working hours which fall between 8:00 a.m. and 5:30 p.m. Of those responding to a question asking if employees are allowed to adjust their work schedules through flex-time, 35 percent answered "yes" and 65 percent answered "no".

Persons with fixed work hours who customarily do not need to leave the worksite during the day for business, such as clerical and administrative personnel, are the primary target market for participation in ridesharing. The largest percentage of employees working for the responding companies are clerical and administrative (51 percent). The next highest job category is sales (23 percent). Professional or managerial positions are held by 15 percent of the employees and 11 percent fall into other job categories. Professional and managerial employees are often not good candidates for ridesharing due to variable work hours and sales personnel need their cars to visit clients during the day.

Table 10 shows the transportation problems identified by the 369 employers who responded to the survey.

TABLE 10

TRANSPORTATION PROBLEMS

	No. Of Responses	Percent
Traffic Congestion Entering/Exiting Worksite	218	59
Construction at or Near Worksite	62	17
Lack of Parking Spaces	24	7
Availability of Transit Services	32	9
Commuting Problems Causing Tardiness	57	15
Long Commuting Trips to Worksite	57	15
Commuting Costs Too High for Employees	4	1
Lack of Carpooling Opportunities	29	8
Lack of Eating Facilities at Worksite	115	31
Child Care Arrangements Inhibiting Employee Ridesharing	45	12

Traffic congestion entering/exiting the worksite was the most frequently noted problem. Lack of eating facilities at the worksite was the next most frequently noted problem.

Responses to a question asking where employees live revealed that 32 percent of the employees live in the general vicinity of the Poplar Corridor. Commute distance for most of these employees is five miles or less. Another 34 percent live in suburban areas located within ten miles of the corridor.

Activities which employers marked they would be willing to participate in to help alleviate traffic-related problems at or near their worksite are shown in Table 11.

TABLE 11

EMPLOYER ACTIVITIES TO REDUCE TRAFFIC CONGESTION

	No. Of Responses	Percent
Adjust Arrival and Departure Times	46	12
Join a Voluntary Association of Employers	45	12
Appoint an Employee Transportation Coordinator	36	10
Distribute Carpool/Vanpool/Transit Information	112	30
Conduct an Employee Survey	103	28
Allow Employees to Adjust Their Work Schedules to Carpool, Vanpool, or Use Transit Services	28	8

The activity which employers most frequently indicated they would be willing to participate in to reduce traffic-related problems was to distribute carpool, vanpool, and transit information. Approximately 28 percent of the respondents indicated that they would conduct an employee transportation survey to identify commuting trends and problems with commuting to work. Twelve percent of the employers indicated they would be willing to join a voluntary association to identify traffic congestion problems and develop solutions to the problems. Ten percent indicated they would appoint an employee to serve as a transportation coordinator and work with city officials in solving traffic problems.

The results of the employer survey revealed that although a target group (clerical and administrative personnel) for ridesharing exists in the Poplar

Corridor, 68 percent of the employees live within ten miles of their worksite. Nationwide surveys have shown that a person's propensity to rideshare increases as the distance they must travel to work increases. Therefore, project staff decided that a survey of employees should be conducted to determine the level of interest in ridesharing and other demand management strategies.

Employees

Although developers and employers are important groups for identifying and developing transportation management strategies, the target market group needed to successfully implement the strategies are the employees. An employee transportation survey was developed to further assess commuting behaviors; identify target market groups for ridesharing modes; and determine incentives needed to encourage ridesharing such as flex-time, preferential parking, and shuttle services. This information would provide the groundwork for developing and implementing a transportation management program for the Poplar Corridor. The employee transportation surveys were conducted at approximately 45 office buildings in the corridor. The majority of the buildings were owned or leased by major developers and property management companies. The process of conducting these surveys occurred in two phases.

Phase I - As employer surveys were completed and returned, project staff conducted follow-up contacts with the 112 employers who indicated they would conduct a survey of their employees. As a result of this follow-up procedure, employee transportation surveys were conducted with approximately 67 employers throughout the Poplar Corridor area.

Phase II - Since the initial survey effort resulted in only 67 employers actually conducting an employee survey, project staff decided to encourage additional employers to survey their employees so that the results would more adequately reflect employee commuting trends and transportation-related needs in the corridor. Project staff again contacted major developers/property managers and requested their support and cooperation in conducting the survey at their office buildings. Full support and cooperation was obtained from each developer. To initiate the survey process, the developer/property manager sent a personalized letter to each tenant prior to disseminating the survey which stated that the developer was conducting the survey in cooperation with Poplar Corridor Transportation Services in an effort to assess transportation-related problems. The letter further stated that the results of the survey would be used to develop solutions to the traffic problems so that the Poplar Corridor would remain the community's premier employment center. Employers were asked to give full support to project staff in conducting the survey. Project staff delivered the surveys to each office in the buildings owned or managed by the developers and property management companies. Major employers located in buildings not owned or managed by the developers and property management companies were mailed survey forms and self-addressed, postage-paid envelopes for returning their surveys to the project office.

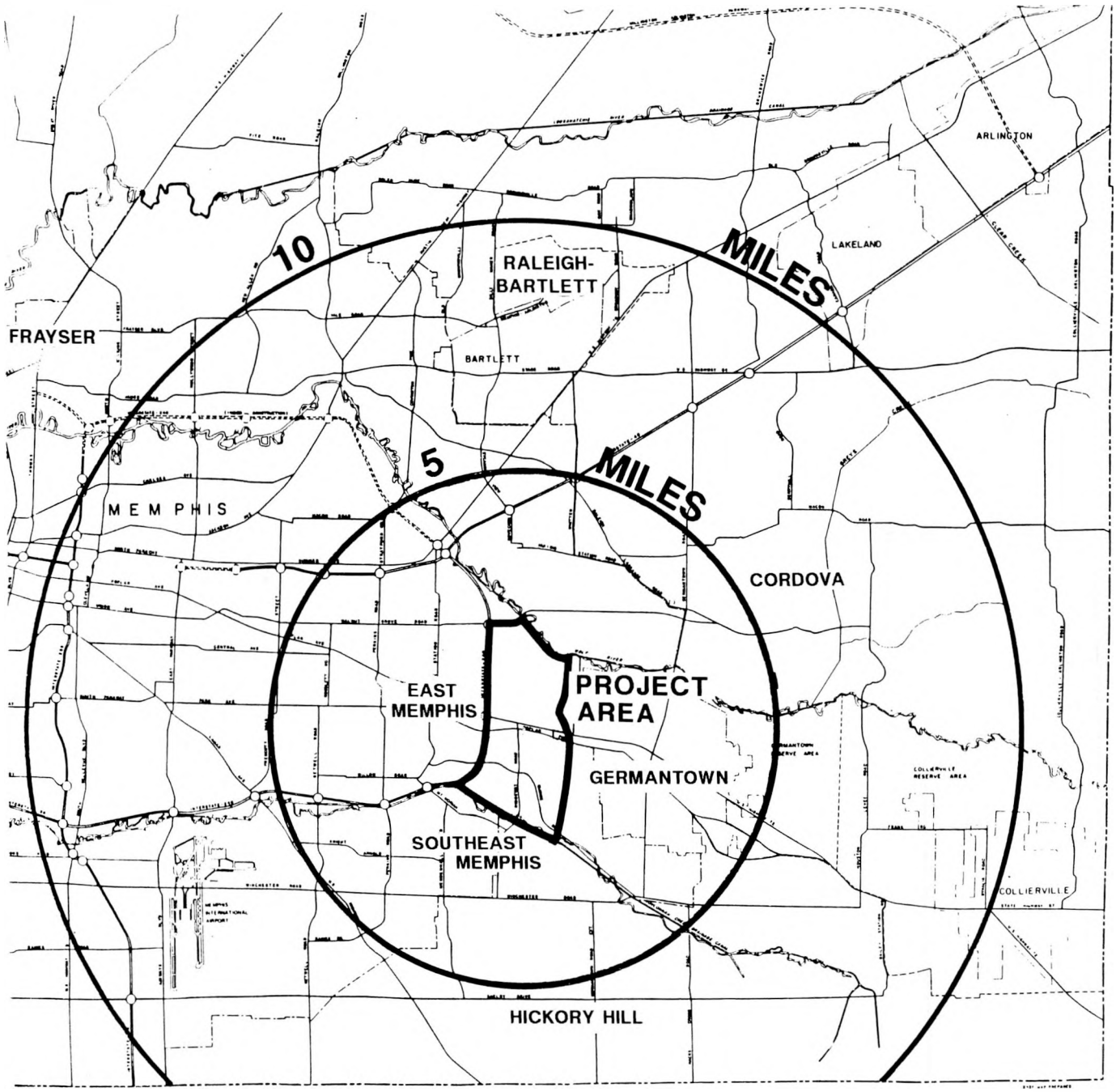
This survey process began the last week of July 1989 and continued through the second week of August. Approximately 2,000 employee surveys were distributed to more than 250 employers in 38 office buildings. A cover letter from Poplar Corridor Transportation Services was attached to each survey

explaining the purpose of the survey and requesting each employee to complete and return the survey to a designated person in their office. Approximately one week after the surveys were distributed, project staff returned to the offices of large employers to collect the completed surveys. Small employers were given a stamped, self-addressed envelope and requested to mail their surveys to the project office. The Employee Transportation Survey and the detailed results of the survey are included in Appendix E. The following paragraphs summarize the survey results.

Approximately 4,376 employee surveys were distributed and 1,345 were returned during Phase I and Phase II of the survey process, a 31 percent rate of return. Of those responding to the survey, 94 percent drive to work alone; 67 percent live within a ten-mile radius of their worksite; commuting time for 90 percent of the employees is 30 minutes or less and 15 minutes or less for 44 percent of the respondents. Approximately 75 percent of the Poplar Corridor employees live in four suburban areas surrounding the corridor. These areas are East Memphis, Germantown/Cordova, Southeast Memphis/Hickory Hill, and Raleigh/Bartlett. See Plate 5. Daily commute costs are $2.00 or less for 67 percent of the respondents and between $2.01 and $4.00 for an additional 22 percent.

Nationwide surveys have shown that the further employees live from their worksite, the more likely they are to rideshare. Marketing strategies promoting ridesharing usually emphasize cost savings, convenience, and time savings. However, these factors will not likely motivate employees in the Poplar Corridor to rideshare because the commuting distance, time, and costs are all very low. In addition, parking is free and very convenient.

COMMUTING DISTANCES



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SCALE: 1"=17,100'

PLATE 5

The results of the survey process indicated that 49 percent of the Poplar Corridor employees are classified as professional, managerial, sales, or part-time/temporary workers. These types of employees are usually not able to participate in rideshare programs because of variable work hours or the need to have access to a car during the work day. Also professional/ managerial staff usually have more flexibility in their work hours and can come to work before or after the peak commuting times.

Approximately 51 percent of the employees hold clerical or administrative positions. These employees are usually identified as the target market for ridesharing because they have regular work hours and are in the office all day. However, disincentives such as the need for a vehicle at work for personal errands and child care arrangements will inhibit a certain percentage of this group from participating in a rideshare program. Disincentives for all employees in the Poplar Corridor include free, convenient parking and the short commuting distances.

According to the employee survey, incentives that would encourage ridesharing include being allowed to adjust their work schedules; having a shuttle service available for personal errands; having use of a company vehicle for work appointments; child care facilities located at the worksite; free ridematching information; and eating facilities at the worksite. In response to a question asking if employees would use park-and-ride lots, only 9 percent responded yes, 21 percent marked maybe, and 70 percent responded no.

The results of the employee survey as well as personal interviews with employers and employees revealed that Poplar Corridor commuters are in general

not interested in giving up their cars. Therefore, it became apparent that the Poplar Corridor would require more intensive marketing and promotional efforts than more heavily urbanized areas.

Rideshare Awareness Week

In an effort to raise public awareness, particularly in the Poplar Corridor, about the benefits of ridesharing and the services offered by Memphis Area Rideshare, rideshare staff sponsored the first annual Rideshare Awareness Week in Memphis and Shelby County the week of August 6 through 12, 1989. The week was officially declared in resolutions passed by the City and County Mayors, the City Council and the County Commission. A kick-off ceremony was held downtown in front of City Hall on August 7. Comments regarding the benefits of ridesharing were made by the city/county Chief Administrative Officers and representatives from the Chamber of Commerce, Memphis Area Transit Authority, and the Tennessee Department of Transportation.

Rideshare promotional fairs were held at several locations throughout the city including three sites in the Poplar Corridor. The sites in the corridor were the Lakecrest and Lynnfield Office Parks (Area 3) and the Ridgeway Center (Area 1). Fair activities included vanpool and MATA vehicle displays, free popcorn, soft drinks and gifts. Project and MATA staff were available to answer questions and help people complete applications to participate in ridesharing. In addition, names of persons completing ridesharing applications were drawn at random to receive donated prizes including free lube, oil and filter changes, front end alignments, and tire rotations and balancing.

Over 100 applications for rideshare match lists were received during Rideshare Week, however, only 15 of them were from employees in the Poplar Corridor. Numerous employees in the Poplar Corridor told project staff that they were not interested in ridesharing because they lived within one or two miles of their worksite.

EVALUATION OF TRANSPORTATION MANAGEMENT STRATEGIES

The Focus Group Study and marketing efforts throughout the project period with developers and employers revealed a general lack of interest in participating in a formal transportation management association to address the traffic congestion and related problems in the Poplar Corridor. However, the developers and employers did express interest in evaluating the feasibility of various transportation management strategies on an informal basis. Consequently, project staff pursued promoting transportation management strategies such as flex-time, employer sponsored ridesharing programs, preferential parking policies for carpools/vanpools, and lunch-time shuttle services with individual employers and developers.

Project staff also worked with city transportation planners, traffic engineers, and MATA in evaluating other strategies such as improved transit services, park-and-ride lots, and traffic engineering improvements. Some of the strategies considered were aimed at increasing roadway capacities while others focused on reducing vehicle demand. The following paragraphs describe each of the transportation management strategies considered.

Traffic Engineering Improvements

Traffic engineering improvements that can aid in reducing traffic congestion include adding left/right turn lanes, widening portions of roadways, and reversible traffic lanes.

Meetings with school officials in the corridor revealed a need for a center turning lane on Ridgeway Road to facilitate access to Hutchison School. Parents waiting to turn left into the school in the mornings and the afternoons significantly disrupted traffic flow and also caused a safety hazard. Ridgeway Road is one of the most heavily travelled roads in the Project Area. Traffic volumes on the roadway have increased 40 percent in the last five years. Project staff discussed the situation with the City Engineering Office and they agreed that a turn lane was appropriate to serve not only the school but also other properties along Ridgeway Road. A center turn lane was added to Ridgeway Road as part of a resurfacing project.

Major bottlenecks are occurring on Poplar Avenue and Poplar Pike in the central portion of the Project Area. Widening projects to add roadway capacity for these two roads are scheduled to begin in 1990.

City traffic engineers do not consider reversible traffic lanes to be a viable solution to reducing traffic congestion on Poplar Avenue. In order for reversible lanes to be effective, traffic flow must be considerably heavier during peak hours than non-peak hours. In addition, traffic flow must be much heavier in one direction so that lanes headed in the other direction are

underutilized during peak hours. For instance, reversible lanes would be effective if 70 percent of the traffic was travelling east in the morning and west in the evening. These conditions do not exist on Poplar Avenue. The difference between peak hour and non-peak hour traffic volumes is no more than ten percent. Traffic volumes are heavy all day long and in both directions. Consequently, there are no lanes on Poplar Avenue which are underutilized during the morning and evening rush hours which could be reversed.

Traffic Signal Coordination

The purpose of traffic signal coordination is to allow traffic to travel through the highest number of signalized intersections with the fewest number of stops and at the rate of speed closest to the posted limit. When traffic signals are properly coordinated, congestion is relieved because traffic is able to flow through multiple intersections without having to stop. Air quality is also improved by efficient signalization because vehicles do not have to idle through numerous traffic light cycles.

The City Traffic Engineering Office has recently awarded a contract to a consulting firm to evaluate the impact signal coordination could have on improving the traffic flow in the Poplar Corridor. Signal coordination is most effective on roadways which do not have heavy traffic and forced flow conditions such as exist on Poplar Avenue. However, signal coordination could possibly improve traffic flow on some portions of Poplar Avenue.

High Occupancy Vehicle (HOV) Lanes

HOV lanes are traffic lanes designated for use only by vehicles containing two or more persons during peak commuting periods. The purpose of HOV lanes is to improve the carrying capacity of existing roadways by encouraging people to carpool, vanpool and utilize transit services. Travel times of commuters using HOV lanes can be significantly reduced. In addition, by reducing the number of vehicles on the roads, travel times for all commuters will be improved.

City of Memphis traffic engineers do not believe that HOV lanes have practical application for Poplar Avenue for several reasons. As is the case for reversible traffic lanes, the peak hour traffic flow and directional split of traffic travelling into and out of the corridor during peak hours is not at the level necessary to make HOV lanes effective. In addition, recent court decisions have made it illegal to designate existing traffic lanes as HOV lanes because it restricts the consititutional right to travel and can lead to increased traffic congestion if the same number of cars try to fit into a fewer number of lanes. In order to add HOV lanes to Poplar Avenue, additional right-of-way would have to be purchased. This would be extremely costly due to the high property values along Poplar Avenue. Given the single-occupant car orientation of Memphis commuters, the demand for HOV lanes would not justify the high cost of constructing new lanes for HOV use.

Park-And-Ride Lots

Park-and-ride lots located on the periphery of an activity center such as the Poplar Corridor can help reduce vehicle travel demand within and through the corridor. There are currently two park-and-ride lots located east and southwest of the Poplar Corridor and one park-and-ride lot located within the corridor.

The focus group interviews revealed interest in park-and-ride lots and shuttle facilities being provided to serve residents east of the corridor. The results of the Employee Transportation Survey also indicated some interest in park-and-ride lots. Of the 1,193 persons responding to a question asking if they would consider using a park and ride lot, 105 persons answered "yes", 249 answered "maybe", and 839 answered "no".

Due to the high property values in the corridor area, it would be unfeasible for local government to purchase land solely for use as a park-and-ride lot, especially if the demand for such a facility is uncertain. However, opportunities such as shopping center and church parking lots on the periphery of the corridor will be further explored.

Another opportunity is to include land for park-and-ride lots in the right-of-way acquisition for new roadways. Nonconnah Parkway is the major new east-west roadway planned to help reduce congestion on Poplar Avenue. One park-and-ride location has been included in the right-of-way plans for the new roadway and two others have been recommended. Memphis Area Rideshare and the Office of Planning and Development staff plan to pursue funding to be used in

evaluating the need for adding the two additional locations to right-of-way plans.

Parking Management

Parking for office and retail development in the Poplar Corridor is ample, free, and convenient. This is one of the incentives that has attracted businesses to the Poplar Corridor rather than to the central business district. Consequently, it is highly unlikely that a paid parking system would ever be instituted in the Poplar Corridor. However, there are other opportunities for parking management.

Since most parking in the corridor is relatively close to the buildings it serves, many employers and employees do not consider preferential parking for carpools and vanpools to be a strong incentive for ridesharing. However, it is an incentive worth pursuing with some companies and at some locations where parking is more limited and not quite as convenient.

One approach which has not yet been explored is to educate developers and employers about the true cost to them for providing "free" parking. Given the floor/area ratios allowed in the Poplar Corridor, more and more developers are having to construct multi-level parking structures to satisfy zoning restrictions. Parking garages are extremely expensive to construct. On the average, each parking space in a structure costs the developer $5,000 to provide. By reducing the demand for parking, developers could potentially save several million dollars on a large development. Employers could in turn reduce their leasing costs.

However, there is currently not a sufficient level of interest on the part of local government or developers to reduce the amount of parking provided in the Poplar Corridor. It is unlikely that local government officials will reduce the amount of required parking unless they are confident that commuters will significantly increase their level of ridesharing. Otherwise, they will be creating a parking shortage in addition to the traffic congestion in the area. Also, unless all area developers reduce the amount of parking they provide, those providing less parking space will reduce the marketability of their properties. Therefore, reducing the amount of parking will be extremely difficult to achieve in the Poplar Corridor.

A strategy that is more likely to be successful is to encourage developers to construct compatible mixed-use developments that can share parking. This would reduce the amount of required spaces and more efficently utilize the parking provided. For instance, if office space is combined with retail, hotel, and restaurant uses, the parking areas can serve these uses after regular business hours. Developers in the corridor are beginning to realize the benefits of mixed-use developments and should be encouraged to continue to plan this type of development.

Mass Transit Improvements

In response to the traffic congestion in the Poplar Corridor, the Memphis Area Transit Authority greatly expanded service to and from the area beginning in June 1988. There were six transit routes serving the Poplar Avenue and the surrounding residential areas before service was expanded. Through a demonstration grant received from the Tennessee Department of

Transportation, seven new routes were added. The new routes linked Poplar Avenue with residential areas in East Memphis and other surrounding suburban areas. Although two of the new routes were later dropped due to low ridership, the Poplar Corridor is credited with generating half of the 2.5 percent increase in MATA riders for 1989. Eleven of MATA's 35 routes currently serve some portion of the corridor and these routes account for approximately 11,000 passenger trips each week.

During the project period, developers and employers expressed interest in further increasing transit service in the corridor particularly in the Ridgeway Center. The Ridgeway Center is a mixed-use development located north of Poplar Avenue. See Plate 4, Area 1. In the past, MATA service did include a loop through the Ridgeway Center; however, this route was dropped due to low ridership. Currently the closest MATA service to the Ridgeway Center is Poplar Avenue, which is several blocks from many of the office buildings in the center. To assess current demand for additional transit service, MATA developed a survey which was distributed with the Employee Transportation Survey discussed earlier. The survey form and the detailed results of the survey are included in Appendix E.

Approximately 739 persons completed the MATA survey. In response to a question asking if persons would use transit service in the Poplar Corridor to commute to and from work if it were available, approximately 11 percent answered "yes" and 89 percent answered "no". There were 247 surveys received from persons working in the Ridgeway Center. Approximately 9 percent responded that they would utilize transit services while 91 percent responded "no". MATA is in the process of evaluating the results of the survey.

authority is very mindful of the traffic congestion problem in the corridor and will continue to evaluate demand for additional or altered routes in the area.

Another option being explored by MATA is a commuter rail system that would travel through the Poplar Corridor along existing rail lines and link east Shelby County with the downtown area. In conjunction with the commuter rail system, the bus network in the Poplar Corridor would be revised to provide feeder lines from employment areas to the rail stations. The transit authority has retained a consultant to study the project and provide recommendations on the type of commuter system needed and how it can be meshed with the existing transit system. The study will also address costs, funding sources, traffic impacts, and projected ridership. The $50,000 study should be completed by March 1990.

Shuttle Services

One of the deterrents to ridesharing in suburban employment centers is the dispersed development pattern. Since banks, restaurants, and shopping areas are often not within comfortable walking distances, persons want to have access to a car during the day so that they can take care of personal business or leave the worksite for lunch.

On certain portions of Poplar Avenue, the peak hour traffic period is between 12:00 noon and 1:00 p.m. Consequently, the project staff felt it was worthwhile to investigate demand for a mid day shuttle service along Poplar Avenue.

Participants in the focus group interviews were asked if they would utilize a mid-day shuttle and the consensus of the two groups was that they would not. They did not believe that they would be able to leave the worksite and return on time if they used a shuttle. However, the Southern Cab Company was willing to pursue the idea. During 1988, the cab company applied for an Urban Mass Transportation Administration (UMTA) Entrepreneurial Services Program grant to develop, implement, and operate a demand-responsive, fixed-route, para-transit service in the Poplar Corridor. The Memphis Area Rideshare Program sent a letter of support to UMTA stating that the proposed project would complement and reinforce the transportation planning and management efforts being carried out in the corridor. Unfortunately, the project was not funded.

In July 1989, the developer/property manager of several office buildings in the Ridgeway Center (Boyle Investment Company) expressed an interest in providing a lunch-time shuttle to transport their tenants to the Regalia Center, another Boyle development, located at Poplar Avenue and Shady Grove Road. The Regalia Center contains a hotel, restaurants, retail, and office uses. Later discussions with MATA revealed an interest on their part for providing a lunch-time shuttle service.

To assess demand for such a service, several questions regarding a shuttle were included in the MATA survey. The survey asked how many times a week persons travelled to a destination on Poplar Avenue between Mendenhall Road and Kirby Parkway during work hours and what were the purposes of the trips. The most frequent trip purpose was to purchase food (61 percent of the respondents). Approximately 48 percent of the respondents leave the worksite

to conduct personal business, 46 percent for banking, and 38 percent for shopping. The survey also asked if persons would consider using a shuttle service for the trips. Of those responding to this question, 166 (24 percent) said they would use a shuttle service and 514 (75 percent) said they would not. Persons indicating they would use the shuttle also indicated they would be willing to pay a fare for the service. MATA is in the process of evaluating the results of the survey. However, there appears to be enough interest to at least try the service on a limited basis.

Ridesharing

A successful ridesharing program can be one of the most effective and cost-efficient methods of reducing vehicle demand and increasing existing roadway capacity in highly congested areas. Consequently, a great deal of effort during the project period was focused on promoting ridesharing in the Poplar Corridor as was discussed in the section dealing with marketing efforts that begins on page 49.

An activity center such as the Poplar Corridor offers a great deal of opportunity to match commuters in carpools and vanpools due to the close proximity of a large number of employees. Experience in promoting ridesharing in the Poplar Corridor has shown that involvement by the employer is the key to successfully implementing rideshare programs. Company ridesharing programs are most effective when top management gives their support to the program and encourages employees to participate. The employer can offer incentives to their employees such as allowing flexible working hours, instituting preferential parking programs for rideshare vehicles, providing employee

transportation allowances, subsidizing vanpool programs, or establishing guaranteed ride home programs. For ridesharing to work in suburban areas like the Poplar Corridor, the private sector must offer employees incentives such as these to offset the disincentives of free parking, the need for a car during the day, and sacrificing their flexibility.

To enlist the support of employers, ridesharing professionals must educate them as to how ridesharing really benefits them by reducing tardiness and absenteeism, expanding their geographic labor force, reducing worksite congestion and parking demand, improving employee retention, and enhancing their community image.

Of all the transportation management strategies explored in the Poplar Corridor, ridesharing is the least costly and can be the most effective in reducing traffic congestion. However, it is also the most difficult strategy to implement on a broad scale because it involves behavorial changes. Marketing efforts in the Poplar Corridor will continue to focus on educating the employer who will hopefully in turn help promote the benefits of ridesharing among employees.

CHAPTER 4
Project Findings and Lessons Learned

INTRODUCTION

This chapter provides a summary of major project findings and conclusions regarding the achievement of the project objectives. Lessons learned during the project period and future plans and activities for continued implementation of transportation management strategies are also discussed.

PERCEPTION OF TRAFFIC CONGESTION

The first project objective was to assess the level of concern about traffic congestion and associated air quality, economic and land use problems among Poplar Corridor employers, employees, developers, businesses, and other organizations. The strategies used to determine these groups' perception of the traffic situation were the Focus Group Study, personal meetings with developers and employers, and the employee/ employer surveys. The general consensus of all the groups is that although the traffic situation is somewhat problematic, compared to other major cities such as Atlanta, Houston, and Los Angeles; it is not that serious and commuters have developed ways to cope with the situation.

This finding was surprising to project staff given that concern over the increased traffic congestion had prompted the Memphis City Council to create the Poplar Corridor Task Force; all the major roads in the corridor

are operating at or exceeding their capacity and traffic accidents in the corridor have increased significantly. However, consultants recently hired to evaluate the Memphis Mass Transit System validate the findings of this study. The consultants concluded that most cities do not make serious transportation improvements until the traffic gets more unbearable than currently exists in Memphis.

Many Poplar Corridor commuters deal with the traffic situation by leaving home 20 to 35 minutes earlier than usual or by travelling through residential areas to avoid Poplar Avenue. However, these are not desirable solutions to the problem. Commuters leave home early so that they can spend time sitting in traffic and still get to work on time. This results in increased energy consumption and reduced air quality. Using residential roads to avoid congested arterials not only increases the potential for accidents and wear and tear on the streets, it also results in increased vehicle miles travelled, energy consumption, and auto emissions. Therefore, the public needs to be educated about the true cost of traffic congestion; it is not just inconvenient, it has very real economic and environmental consequences.

City-wide, the perceived solution to traffic congestion is to build new roads. As was discussed in Chapter 2, there are several new roads and road improvements planned for the Poplar Corridor at a cost of approximately $266 million. These projects will not be completed until 1995 and thus will not immediately reduce the traffic congestion in the area. In addition, there is a limit to the number of new roads that can be built without causing unacceptable levels of disruption to existing development.

Ridesharing and other transportation management strategies can reduce traffic congestion much more quickly than building new roads and would result in the more efficient use of transportation resources. However, it was discovered that when faced with the prospect of giving up their cars, most commuters in the Poplar Corridor would rather deal with the inconvenience. It appears that area commuters believe the problem is serious enough to spend $266 million for road improvements, but not serious enough to prompt significant behavioral change.

Another issue is that development along the proposed new roads must be controlled or the benefit of the added capacity will be greatly reduced. The land uses and densities recommended in the Poplar Corridor Task Force Report allow new development along the proposed roadways at a level that will preserve the through-traffic carrying capacity of the roads. Thus far, the recommended land uses and densities have been followed and the major developers and local government officials appear to be committed to continue to follow the plan.

However, even with all the proposed road improvements, transportation planners predict continued traffic congestion problems in the corridor. The Poplar Corridor Task Force Report points out that road construction should be coupled with the implementation of transportation management strategies. Although people are able to adjust to the traffic situation now, it may not be so easy in ten years as the area continues to develop. A recent newspaper editorial predicts that "gridlock is on the way" for the Poplar Corridor. The general manager of MATA has also

predicted that if something is not done to alleviate the congestion in the Poplar Corridor, Memphis will be looking at "a transportation nightmare... a transportation gridlock."

In response to a recent study recommending mass transit improvements, a city councilwoman was quoted as saying "We have to decide whether we want to continue to put more money into roads, or if we are ready to put our money into light rail or improved transit service. We don't seem to be able to do both." These are decisions that the public and government leaders in Memphis are going to have to make. Will we continue to take the "supply-oriented" approach and build more roads or will we try to more actively manage demand through the implementation of transportation management strategies? Obviously, a great need exists for ridesharing, mass transit, and transportation planning professionals to educate the local government officials and the public about the real costs of traffic congestion and the benefits that can accrue to the community as a whole from traffic reduction strategies.

FORMATION OF A TRANSPORTATION MANAGEMENT ASSOCIATION

The second project objective was to evaluate the level of support that the private sector was willing to give to the formation of a transportation management association to deal with the transportation and related problems in the Poplar Corridor. The initial method used to evaluate private sector interest in forming a TMA was the Focus Group Study. This exercise revealed very little interest among developers, employers, property managers and school and hospital officials in

organizing a formal TMA. Of the 409 organizations contacted, only nine persons (2 percent) actually participated in a focus group interview. All nine participants were employers, no other groups were represented. Those persons who did participate in the interviews felt that the City Council would have to pass an ordinance requiring the formation of a TMA and trip reduction before this would occur. They also stated that Memphians do not take lightly to being regulated or legislated and they would not like to be forced to participate in a TMA.

All of the focus group participants indicated they would be willing to further pursue the idea of a voluntary TMA. They also indicated a willingness to distribute ridesharing information and surveys and to adjust their companies' work hours to reduce peak hour traffic volumes. Project staff followed up with the focus group participants by distributing rideshare information and requesting that they complete employer/employee surveys. However, the consensus of the participants was that the real answer to the traffic congestion problem is to build new roads and expand existing ones.

Although no developers or property managers participated in the Focus Group Study, they gave project staff full support during the grant period in allowing access to their tenants for surveying and promotional efforts. Since employers were the only group to participate in the Focus Group Study, project staff decided to work individually with employers in evaluating interest in a TMA and transportation management strategies. The employer survey was developed to determine the level of interest in participating in these activities.

The results of the employer survey also indicated little interest in forming a TMA. Of the 369 employers responding to the survey, only 45 (12 percent) responded that they would be interested in joining a voluntary association of employers. The survey did indicate that 30 percent of the employers were willing to distribute carpool/vanpool/transit information and 28 percent were willing to conduct an employee transportation survey. Project staff felt that concentrating on these activities would be more productive than continuing to try and convince employers to participate in a TMA.

Although there seems to be a small group of employers interested in participating in some sort of TMA, overall, employers, developers and property managers do not perceive the traffic problem in the Poplar Corridor to be serious enough to require the formation of a special organization to deal with the situation. Unless local government mandates participation in a TMA or implements a trip reduction ordinance, (which is highly unlikely, given the community's pro-growth attitude), the traffic situation in the Poplar Corridor will likely have to worsen considerably before these groups will be interested in forming a TMA.

DEVELOPMENT OF TRANSPORTATION MANAGEMENT STRATEGIES

The third project objective was to determine which traffic management strategies the private sector was willing to implement to alleviate traffic congestion. Project staff had originally intended to accomplish this

objective through the mechanism of a TMA. However, project staff proceeded by meeting with developers and employers on an individual basis.

Developers

Area developers are very mindful that the traffic congestion in the corridor can affect their property values and their ability to attract tenants. Some employers in the corridor stated that they chose not to locate in certain office developments because traffic problems at those sites were perceived to be worse than at other locations in corridor. The developers also want to avoid any official legislative actions that would set limits on trip generation. Therefore, developers probably have the greatest motivation to help reduce traffic congestion in the corridor.

Three of the four major developers in the corridor were very cooperative with project staff throughout the project period. They not only allowed access to their tenants for surveying and promotional efforts, but also encouraged their tenants to participate in various activities. Developers have also allowed project staff to conduct rideshare fairs and other promotional activities on their properties and have offered to donate office space for a Poplar Corridor rideshare office. One developer/property manager has expressed interest in operating a lunch-time shuttle service for their tenants to a retail/restaurant development also owned by them. Project staff plan to continue to work with the developer in developing this service.

Employers

Results of the employer survey indicated that employers were most willing to participate in traffic reduction activities which required the least amount of effort on their part, such as distributing rideshare information and conducting an employee survey. Employers were much less likely to agree to participate in activities which would require their time or their staff's time, such as participating in a TMA or appointing an employee transportation coordinator. Also, few employers were interested in activities that would require changes in company policy, such as instituting flex-time or allowing employees to adjust their work schedules in order to take advantage of carpool, vanpool, or transit opportunities.

IMPLEMENTATION OF TRANSPORTATION MANAGEMENT STRATEGIES

The fourth project objective was to implement transportation management strategies in the Poplar Corridor. As was discussed in Chapter 2, TMSs implemented during the project period include traffic engineering improvements, mass transit improvements, the identification of a park-and-ride lot, and ridesharing.

PROJECT EFFECTIVENESS

The final objective was to evaluate the effectiveness of the transportation management efforts in the Poplar Corridor. Overall, project efforts have been successful in helping to reduce traffic congestion in the Poplar Corridor although the results thus far have not been as effective as was initially envisioned.

Traffic Engineering Improvements

The addition of a center turn lane on Ridgeway Road has significantly improved traffic flow on this heavily travelled roadway, particularly during the morning hours when children are being dropped off at Hutchison School.

Park-And-Ride Lot

A park-and-ride lot is included in the right-of-way plans for Nonconnah Parkway, the major new east/west roadway planned to help reduce traffic congestion on Poplar Avenue. Two other park-and-ride locations have been recommended along this roadway for inclusion in the right-of-way plans. These lots will serve the rapidly growing southeast portion of Memphis and help to reduce traffic travelling into and through the Poplar Corridor.

Mass Transit Improvements

During the project period, MATA greatly expanded service to and from the Poplar Corridor area by adding seven new transit routes to the six existing routes. Five of the new routes are still in operation. The eleven transit routes serving Poplar Avenue and the surrounding residential areas account for approximately 11,000 passenger trips per week. These routes are credited with generating half of the increase in MATA riders in 1989.

Ridesharing

Ridesharing was heavily promoted in the Poplar Corridor during the project period. Approximately 213 ridesharing match lists have been generated thus far. Although ridesharing is an efficient and cost-effective method of reducing transportation demand, the concept has had limited success in the corridor. Ridesharing has not been more successful because of corridor commuter characteristics and characteristics of the corridor itself.

Nationwide surveys have shown that the most important factors affecting a commuter's decision to rideshare are the distance they must travel to work; the length of time it takes them to get to work; and how much money ridesharing saves them over driving alone. The results of the employee survey revealed that none of these factors will likely motivate a large number of the employees in the Poplar Corridor to rideshare.

Approximately 67 percent of the respondents live within a ten mile radius of their worksite; and commuting time for 90 percent of the employees is 30 minutes or less and 15 minutes or less for 44 percent of the respondents. Daily commuting costs are $2.00 or less for 67 percent of the respondents and between $2.01 and $4.00 for an additional 22 percent. Drive alone costs are very low compared to other large cities and income levels for employees in the Poplar Corridor are some of the highest in Shelby County.

Obviously, these factors alone offer little motivation to rideshare. Other disincentives that are inherent in suburban office developments include ample, free, convenient parking; park-like and campus-style office park design, which creates long walking distances for bus riders and requires a car for travel between buildings; and the lack of on-site or nearby services, such as eating facilities, day care, banking facilities, postal services, and retail stores which pre-ordains automobile use. In addition to all these factors, Poplar Corridor commuters have a very strong desire for personal independence and they do not want to give up their cars. The result is a very hard market to sell on the idea of ridesharing. Project experience has shown that the Poplar Corridor will require some very strong incentives from the private sector to encourage ridesharing. These incentives might include flexible working hours, lunch-time shuttles, guaranteed-ride-home programs, employee transportation allowances, subsidized vanpool programs, and on-site eating facilities, day care centers, and other services. Project staff will continue to encourage employers to provide ridesharing incentives to their employees.

LESSONS LEARNED

The following discussion outlines the significant lessons learned from this research project which should be useful in the design and implementation of similar programs.

Initial Project Planning

Before embarking on costly approaches such as hiring outside consultants or devoting a large amount of staff time and money to developing and distributing surveys to determine interest in implementing a TMA and other transportation management strategies, a community should engage in a great deal of background research. The target market areas should be clearly established, travel patterns analyzed and, commuter characteristics evaluated so that an appropriate plan of action can be developed.

Identifying The Target Market Area. One of the first steps in developing a transportation management plan is to clearly define the boundaries of the target market area. Is the entire community having traffic congestion problems or is it limited to specific activity centers such as the downtown or medical center area or a major transportation corridor? Project staff should talk to local government officials, transportation and land use planners, and city traffic engineers to establish what areas are currently experiencing or are anticipated to experience heavy traffic congestion, parking problems, etc., and to what degree.

There is no doubt that traffic congestion in the Poplar Corridor has increased significantly in the past few years and it is expected to continue to increase in the future. Concern expressed by residents, developers, commuters, and other groups regarding the level of traffic congestion led to the formation of the Poplar Corridor Task Force and this project.

Evaluating Area Characteristics. Depending upon the characteristics of the area experiencing transportation problems, some transportation management strategies will be more suitable than others. In the Poplar Corridor, for instance, preferential parking for carpool/vanpool vehicles was not considered a significant incentive because parking is free and, for the most part, very convenient for everyone. The characteristics of the project area should be thoroughly evaluated at the beginning of the project so that a large amount of money and time are not spent on marketing efforts that promote unfeasible transportation management strategies.

Evaluating Area Travel Patterns. Area travel patterns should be thoroughly researched. The Urban Transportation Planning Package (UTPP), Journey To Work Data compiled by the U. S. Census provides extensive transportation data including travel patterns, means of transportaton to work, frequency of carpooling, travel time to work, persons per vehicle, etc. This information is compiled by origin/destination zones and is available by place of residence, place of work, and place of residence by place of work. If a community has experienced rapid growth in certain areas since 1980, the UTPP Journey To Work Data will not accurately reflect current travel patterns. This data will need to be updated by using building permit information and recent traffic counts. The Journey To Work Data resulting from the 1990 Census will be the most accurate source for identifying travel patterns and target markets in the next few years.

For the purposes of this study, three groups of commuters were identified whose work trips originated or ended in the Poplar Corridor.

These groups included employees who reside in and work in the corridor; employees who reside in, but work outside the corridor; and employees who reside outside, but work in the corridor. According to 1980 UTPP data adjusted for 1985, employees who lived and worked in the corridor accounted for only approximately 12 percent of area commuters; employees who resided in, but worked outside the corridor accounted for 41 percent; and employees who resided outside, but worked in the corridor made up 47 percent of the commuters. Commuter groups with longer travel distances are more likely to participate in traffic reduction programs such as ridesharing. These are the commuter groups that should be targeted for marketing efforts.

Employees who live and work in the corridor are not good candidates for ridesharing programs because of their short commuting distances. By surveying employees at their worksites, it was discovered that 30 percent of the respondents lived five miles or less from their worksite. Another 37 percent of the respondants lived between 6 and 10 miles from their worksite. A very frequent comment heard from employees during various promotional events at office complexes in the corridor was that they were not interested in ridesharing because they lived nearby either by distance or time-wise.

Given the UTPP data, a much lower percentage of Poplar Corridor employees residing within the corridor was anticipated. However, the extensive movement of office development to a previously predominantly residential area and the new residential development resulting from that move appears to have had a significant impact on travel patterns within and through the Poplar Corridor area. Apparently the percentage of commuters

living and working in the corridor and the percentage of commuters living in residential areas outside the corridor but still relatively nearby has increased substantially in the past few years.

This project focused on surveying commuters and promoting ridesharing at their worksites within the corridor. However, by taking this approach, two commuter groups may have been missed. These groups may have a significant impact on traffic congestion in the corridor; namely commuters who live in but work outside the corridor, and those who live and work outside the corridor, but travel through the corridor to and from their worksites.

Overall, the results of the surveys and promotional efforts for this project have revealed limited interest in traffic reduction strategies by Poplar Corridor employees. Residents of the corridor who work outside the corridor and commuters travelling through the corridor to their destination may be more receptive to various transportation reduction strategies. Project staff plan to further evaluate the UTPP origin/destination zone information for these commuter groups. These groups might be reached through marketing efforts in other white-collar employment centers such as the downtown, medical center, and airport areas.

Evaluating Commuter Characteristics. Census tract information and the UTPP data can provide valuable background information on population, income levels, occupations, means of transportation to work, travel time to work, etc. This type of data provides clues as to whether the population may be interested in ridesharing and other transportation demand management strategies and what type of incentives might motivate them to

participate in such programs.

Evaluating Target Market Perception

Once a project area is established, it is important to evaluate the perception of the problem by those groups which are assumed to be affected by the traffic congestion. For instance, we discovered in this project that the groups we assumed to be adversely affected by the traffic congestion (developers, employers, employees, school and hospital officials) had learned to cope with the situation and did not perceive the problem to be that serious. As a result, it was difficult to convince these groups to participate in a transportation management association or to make significant changes in their commuting behaviors.

The Focus Group Study was a useful exercise in determining how various groups in the corridor viewed the traffic situation. As in this study, more than one method of gauging perception, such as a telephone survey and group interviews, should be used to obtain as much input as possible. Although participation in the focus group interviews was very low, 45 percent of those contacted participated in the telephone survey.

As we discovered, unless those individuals targeted for a focus group study believe that an area is experiencing serious traffic congestion problems or participation in a transportation management process has been mandated by a community, persons will likely be reluctant to give their time to participate in such an exercise. Therefore, participation in a

focus group study needs to be as convenient as possible. We may have had increased participation if the focus group interviews had been held at various locations within the Project Area.

The Focus Group Study served to define several issues related to the traffic congestion in the Poplar Corridor and to clarify how various groups perceived the congestion was affecting them. It also revealed the need for an education process and intensive marketing campaign to increase individuals' understanding of the real impacts of the current and future traffic situation in the corridor. The employer and employee surveys were developed to further evaluate the interest in participating in a TMA and various transportation management strategies. The Focus Group Study and the survey process combined provided the project staff with the information necessary to direct the marketing and education efforts.

Education

If, as we found in this project, the key players in an area do not perceive that the traffic congestion poses a significant problem, then a prudent strategy would be to engage in an education process that points out the true costs of traffic congestion. Some of the costs include reduced air quality, reduced desirability of an area, increased energy consumption, increased safety hazard, and increased wear and tear on the street system.

The concepts of transportation demand management and transportation management associations are unfamiliar to many communities. Therefore,

local government officials, developers, employers, employees, residents, etc. need to be informed about what other communities are doing to reduce traffic congestion, what benefits have accrued from these efforts, and what benefits can result by implementing similar strategies in their community. Methods of raising community awareness about these concepts might include conducting public forums; conducting seminars or workshops with guest speakers from areas that have successfully implemented TMAs or TMSs; developing a slide or video presentation to be shown to local government officials, major employers, and various public and private organizations; and taking advantage of community activities such as fairs, festivals, business expositions, etc. to promote the concepts.

Given the level of traffic congestion in the Poplar Corridor and the success other communities have had with organizing TMAs and implementing various transportation management strategies, we assumed that persons working in the corridor would be very receptive to our efforts to organize a TMA and implement TMSs. Unfortunately, this was not the case. The results of the Focus Group Study, the employer and employee surveys and personal contacts have indicated a strong need for an intensive educational campaign in the corridor which we plan to pursue in the future.

Developing Private Sector Support

More and more, private sector participation is being considered the essential element in the success of traffic mitigation efforts. Short of mandatory regulation, all the public sector can do is educate and prevail upon the private sector's sense of civic pride and responsibility.

However, as was discussed in Chapter 3, the private sector possesses the incentives that can influence commuter behavior. Therefore, it is extremely important to obtain the support and cooperation of the private sector.

Throughout the project period, good support for our promotional and surveying efforts was received from area developers and employers. The employer survey was a useful tool in determining the transportation management strategies in which employers are willing to participate. The employee survey provided valuable information about what incentives would encourage employees to stop driving to work alone. The next step is to persuade the private sector to implement various transportation management strategies. The surveying process took longer than was expected and as a result, we have not as yet completed our follow-up procedures with those employers indicating an interest in traffic reduction activities, such as joining a voluntary association of employers, appointing a employee transportation coordinator, instituting flex-time or allowing employees to adjust their work schedule to take advantage of carpool, vanpool, and transit opportunities.

As was mentioned earlier, major developers and property managers may be the groups with the greatest motivation to reduce traffic congestion because it can lead to reduced property values, a loss of tenants, and mandatory regulation. These groups have been the core participants in forming TMAs and implementing transportation management strategies in other communities. They can open the door to hundreds of tenants as occurred in this project. Therefore, it is very important to educate this group and obtain their support early in the project.

Development Of A Strong Marketing Plan

The Focus Group Study and survey process revealed the traffic reduction activities in which the various target groups were interested in participating. We then learned that a strong marketing strategy was needed to encourage developers and employers to implement traffic reduction strategies and to encourage employee participation. Before employers and developers will invest their time and money in various activities, they must be convinced that they will benefit from the actions. This requires that project staff meet individually with developers and major employers to outline the benefits and design a traffic reduction program that will best fit their needs.

As we discovered, some very strong disincentives to ridesharing exist in the Poplar Corridor including free parking, the park-like design, and the lack of on-site services. Human nature resists change and loss of independence, therefore, employees must be offered strong incentives to alter their commuting behaviors. Such incentives might include lunch-time shuttles, employer subsidized vanpools, guaranteed-ride-home programs, and a commitment from management to allow flexible work hours so that employees can carpool/vanpool or ride the bus.

Experience in the Poplar Corridor has shown that even when people are already carpooling they are reluctant to change to riding a van because it is something new. Project staff worked with employee groups from two companies with long commute distances who were already carpooling. However, we were unable to persuade them to even try a van on a trial

basis. Strong encouragement from employers is needed for employees to feel comfortable with trying something new. If employers do not want to provide transportation allowances or sponsor vanpool programs, simply having an official company policy encouraging ridesharing would be helpful.

Project experience also revealed a need for strong, organized follow-up procedures with employers and employees. With a target market as hard to sell on transportation management strategies as the Poplar Corridor, any interest should be strongly encouraged and participation in various activities should be made as easy as possible. For instance, just providing potential vanpoolers with rideмatch lists is not enough. It is going to require project staff helping potential van drivers call prospective riders, conducting "get acquainted" or organizational meetings, providing free demonstration vans, or subsidizing van fares for a short period of time.

The marketing program in the Poplar Corridor will be an ongoing effort. National surveys have revealed that even when commuters start ridesharing, nearly 50 percent revert to driving alone over a two year period. The resistance of Poplar Corridor commuters to participating in traffic reduction strategies indicates the need for high visibility and prolonged exposure to transportation management services. This might be accomplished through locating a satellite rideshare office in the corridor to provide information and commuter ridematching services. We will evaluate the feasibility of providing this service in the future. In addition, we hope to persuade employers to designate employee

transportation coordinators to provide their employees with information about ridesharing and other traffic management programs. The coordinator could also provide rideshare staff with information necessary to update the computer database, such as changes in addresses and work status.

Timing

When this project began, project staff assumed that a TMA could be organized, transportation management strategies implemented, and the effectiveness of the activities evaluated within one year. This estimation was extremely optimistic. According to the Association Of Commuter Transportation, it takes an average of three years to organize a TMA.

We did not anticipate the general lack of interest on the part of developers, employers, etc. in participating in a TMA and various transportation management strategies. Therefore, identifying key players and then building awareness of what a TMA and transportation management strategies are and how they can benefit the community took a great deal of time. Surveying approximately 777 employers and 4,400 employees to determine what programs they may be interested in was also a very time consuming activity. The survey process was prolonged because property managers wanted to control the time schedule for distribution of the surveys to their tenants. Although marketing efforts promoting ridesharing have continued throughout the project period, after two years, we are just now to the point where we are ready to begin working with developers and employers on implementing various incentive programs that would encourage ridesharing.

FUTURE PLANS

Managing the traffic congestion in the Poplar Corridor is an ongoing process that has just begun. A great deal of background data has been collected and analyzed and this information will be used to guide future efforts in the corridor. The following paragraphs discuss the major areas of concentration for the future.

Education. There is still a great need to educate local government officials, developers, employers, employees, residents, and other groups and organizations about the true costs of traffic congestion and the need for implementing traffic reduction strategies in the corridor. The establishment of Rideshare Awareness Week was a big step in this direction. Project staff will continue to promote transportation management strategies through various community activities and special events. Project staff are also in the process of preparing video presentations for marketing TMSs to employers and employees.

Establish Ridesharing Incentives. Developers and property managers have the power to create an environment that either encourages or discourages auto use. Site design characteristics that can reduce dependence on the automobile include providing on-site services such as eating facilities, daycare centers, banking and postal services, etc.; clustering buildings so that they are within easy walking distance; and providing pedestrian walkways. Developers/property managers can also provide lunch-time shuttle services and institute preferential parking policies for rideshare vehicles. We plan to continue to work with

developers to encourage them to implement ridesharing incentives and to use site designs that reduce auto dependence.

We also plan to continue to encourage developers and property managers to form a TMA or similar organization that will foster cooperation in addressing common problems. By working together, these groups can reduce traffic congestion and provide services in a more cost-effective manner.

For example, property managers of buildings that do not have on-site eating facilities could publicize the availability of restaurants in other nearby buildings. Also, providing circulation between office complexes with a system of non-dedicated roadways can reduce traffic congestion on the major arterials.

Targeted Marketing. Given the limited interest expressed during this study by Poplar Corridor developers, employers, employees, etc. in participating in a TMA and other transportation management strategies, future marketing efforts will be much more selective. Major employers will be targeted and encouraged to establish rideshare programs and implement incentives for ridesharing. Marketing efforts will be aimed at employee groups that are most likely to rideshare such as clerical, administrative, and service employees. Commuters living in and working outside the corridor and those living and working outside the corridor will also be targeted. In addition, project staff plan to take a more active role in the formation of vanpool groups by working with potential drivers to organize groups and by offering incentives to potential van riders.

Application Of Lessons Learned. Several other areas of Memphis have been identified which could benefit from the formation of a TMA and/or implementation of transportation management strategies. The Downtown, Medical Center, and Airport areas have a high concentration of employees, traffic congestion, and parking problems. The lessons learned during this project will be applied to developing traffic reduction plans for these areas.

APPENDIX A

TELEPHONE SURVEY GUIDE

TRANSPORTATION MANAGEMENT ASSOCIATION

Telephone Survey Guide

The following questions are to be asked of a select target group to determine their perspectives on the traffic situation along the Poplar Corridor, as well as to assess their subsequent interest in participating in focus groups addressing traffic alternatives.

Please introduce yourself and explain that you are part of a research project involving Memphis State University and the City of Memphis which is investigating the traffic situation along the Poplar Corridor (as defined by Mendenhall - west side; Kirby Parkway - east side; Walnut Grove - north side; Quince/Messick - south side). Express that all answers are confidential and please be sure to record each survey participant's response in its fullest.

Questions:

1). a. Whose role is it in the company to address transportation situations of the company and its employees?

b. Does this person have decision-making authority in order to adjust work hours, allocate funds, etc.?

2). a. What is your perspective on the traffic situation along the Poplar Corridor?

b. What are some specific problems experienced by your organization (see survey form)?

Examples:

____ Traffic congestion entering/exiting worksite.
____ Construction at or near worksite.
____ Availability of bus service.
____ Trafffic problems cause tardiness.
____ Lack of carpooling opportunites.
____ Other _____
_____

3). a. What is the nature of the organization's business?

b. If the above is a restaurant, retail store, or employee service organization, what is the average number of people through your facility in a day? Is customer parking a problem?

4). a. How many people are employed by your organization at this location?

b. What type of employees (i.e. percentage in management, sales, clerical, etc.)?

5). a. What percentage of your employees drive to work alone?

b. What percentage of your employees who drive to work carpool?

6). a. What are your company's hours of operation?

b. If there are shifts involved, what are the hours of the different shifts and how many people work on each shift?

7). a. Does your organization presently offer any traffic alternatives to alleviate traffic congestion?

Examples:

_____ flex-time

_____ condensed work weeks

_____ carpooling information and parking

_____ company vehicles for van pooling

_____ reimbursement of transit fares

_____ other _____

b. What activities would your organization be willing to do to resolve traffic congestion (see survey form)?

c. In your opinion, what one activity would be most effective in alleviating traffic congestion in the Poplar Corridor?

8). Would you have an interest in participating in a focus group to express your views of the traffic situation in question?

Tell them that the focus groups will be conducted at Memphis State University from 7:30 a.m. - 9:30 a.m. on August 2nd and 4th. The focus groups will take approximately two hours and each participant will be paid $50 for their time. If they agree to participant tell them we will send them directions to the meeting room and a parking pass. (Obtain address where they want the information delivered.)

Thank them for the time and participation.

APPENDIX B

FOCUS GROUP INTERVIEW GUIDE AND PARTICIPANT RELEASE FORM

INTERVIEWER'S GUIDE

FOCUS GROUPS -- POPLAR CORRIDOR STUDY

Introduction

Good morning. Thank you all for coming here this morning to help us with this project. My name is Reg Hendricks and this is my colleague, Emily Adams Keplinger. Each of you was carefully selected and invited here today to assist us with a project concerning traffic congestion and related transportation problems in the Poplar Corridor. Memphis State University is conducting this study on behalf of the City of Memphis and the Urban Consortium. The Urban Consortium is a coalition of large cities and counties throughout the United States. Their goal is to pursue solutions to pressing urban problems. Data from this study will be used by the City of Memphis in its efforts to better manage traffic flow, and address transportation problems, in the Poplar Corridor.

Before we start the group discussion, we want to let you know that we will be recording this session so that we will have an accurate and complete record of what you tell us.

Also you should know that Emily and I are not transportation management experts. Our expertise is in group interviewing. We are here to collect information, not to educate you or convince you of a particular viewpoint.

In this session, the opinions and ideas of each of you are important to us. We are not seeking anything more than your ideas. There are no right or wrong answers to the questions we will ask. Your honest opinions are important. To get started, let's go around the table and have each person introduce themself and tell where they work.

Once again, we thank you all for assisting us with this project. For the purposes of this research study we have defined the Poplar Corridor as the area bounded on the east by Kirby Parkway, on the west by Mendenhall Road, on the north by Walnut Grove Road and on the south by Quince/Messick Roads.

Before we start the discussion, are there any questions?

A. ASSESSMENT OF TRAFFIC CONDITIONS

Main: How would you describe the flow of traffic in the Poplar Corridor?

Probe:
a. Is it too congested?
b. What time of day is congestion worse?
c. What problems does the traffic congestion cause for you or your organization?
d. Have you, or others you know, adjusted driving patterns so as to avoid the Poplar Corridor?
e. Do schools contribute to the traffic problems?

Main: Will the flow of traffic in the Poplar Corridor get better or worse over the next five years?

Probe: a. Why do you think it will get better (worse)?
b. What assumptions (e.g. more office complexes, improved roads) are you making when judging if traffic will get better (worse)?

Main: What proportion of your employees/colleagues make trips by car during the work day? For example, to go to lunch.

Probe: a. What is (are) the purpose(s) of these trips?
b. Do these trips contribute to the traffic congestion?

Main: What specific transportation problems do you, or others you know, experience in the Poplar Corridor?

Probe:
a. Traffic congestion entering/existing worksite
b. Construction at or near worksite
c. Lack of parking spaces
d. Availability of transit services
e. Commuting problems cause tardiness
f. Long commuting trips to worksite
g. Commuting cost too high for employees
h. Lack of carpooling opportunities
i. Lack of eating facilities at worksite
j. Child-care arrangements inhibiting employee ridesharing

Main: Does your organization have any programs in place or planned, for adjusting to the traffic flow or related transportation problems in the Poplar Corridor?

Probe:
a. If yes, please describe.
b. Does the traffic congestion effect your organization's ability to attract or retain employees/customers?
c. Does the traffic congestion effect employee tardiness?

Main: What methods, strategies or programs do you think should be used to alleviate the traffic congestion?

Probe: What one major action would you recommend?

Before continuing the discussion we would like to show you a video of an approach used by a community to address traffic congestion. (Show Video)

B. INTEREST IN/SUPPORT FOR A TRANSPORTATION MANAGEMENT ASSOCIATION

Main: Do you think a program similar to the one shown in the video would work in the Poplar Corridor area? Why?

Probe:

a. What changes in the program would need to be made?
b. What other approaches would you suggest?
c. Would a mid-day (lunch time) shuttle service be utilized?
d. Would an ordinance or city counsel action be required to get things done? What would city counsel have to do?
e. Would employees ride a bus to work? What changes would have to be made in the bus service?
f. Would a rail transit system help?
g. What can organizations do to reduce traffic congestion in the Poplar Corridor?
   - Flex-time
   - On-site day care centers
   - Shuttle buses
   - Car/van pools
   - Preferential parking
   - Park and ride
   - More transit routes
   - Better traffic signal coordination
   - Lane improvements
   - Private financing of road construction
   - Transit fare reimbursement

Main: What types of organizations would be most likely to participate in a Transportation Management Association which would facilitate private sector involement in local traffic and transportation matters? Why?

Probe:
a. What incentives could be offered to an organization to get them to participate?
b. What role should city and county governments play?
c. Should the TMA be formal (dues paying) or informal?

Main: Would your organization be willing to participate in a TMA?

Probe: a. Would your organization be willing to:

- Adjust arrival and departure times to reduce congestion;
- Appoint an employee to serve as a transportation coordinator and work with city transportation officials in solving traffic problems;
- Disseminate information to employees about carpool/vanpool services available to them through Poplar Corridor Transportation Services;
- Conduct a survey of your employees to identify commuting trends and problems with commuting to work;
- Provide opportunities for your employees to adjust their work schedules in order to carpool, vanpool, or use transit for commuting to work.

b. Who, in your organization, should be contacted concerning participation?

PARTICIPANT RELEASE

I _____ grant permission to the Urban Consortium for Technology Initiatives and the City of Memphis to use the videotape and recording of my participation in this group interview concerning transportation in the Poplar Corridor. I further understand that this videotape will only be used for the following purposes:

1. To provide a complete record of comments made during the interview for later analysis and summary.

2. To demonstrate the focus group methodology to other members to the Consortium.

3. To train other members of the Consortium in how to use focus groups to assess attitudes and opinions.

_____
Signature

_____
Date

APPENDIX C

TENANT LETTERS

Weston Companies

6075 Poplar Avenue • Suite 725 • Memphis, Tennessee 38119 • (901) 682-9100

Dear Tenant:

In a continuing effort to develop solutions for reducing traffic congestion in the Poplar Corridor, Weston Companies and Poplar Corridor Transportation Services are conducting a Transportation Survey of employee commuting trends.

Poplar Corridor Transportation Services is a city/county sponsored program established to develop transportation management strategies and to provide transportation services in the Poplar Corridor. Services available to employees include personalized ridematching for carpools and vanpools, providing passenger vans to vanpool groups and providing transit route information. Ridesharing is one of several solutions that can help reduce traffic congestion in the corridor.

We are requesting your assistance in developing a transportation management program for the corridor by asking your employees to complete an Employee Transportation Survey (sample copy attached). The purpose of the survey is to assess travel patterns and transportation-related needs. This information will then be used in developing transportation management strategies to help reduce traffic congestion along the corridor.

A representative from Poplar Corridor Transportation Services will call on your office on July 21, 1989 and provide you with the correct number of surveys. They will return to your office on July 31, 1989 to collect the completed surveys.

I strongly encourage your participation and support in helping us gather this important information from all employees.

If you have any questions or desire additional information, please call Debra Siniard or Gwen Dobbins at 576-7433.

Sincerely,

Bert Canfield

WESTON COMPANIES
Bert Canfield
Senior Vice-Pres./Marketing

Attachment

Dear Tenant:

I would like to introduce to you a new service available to Weston Companies' tenants. The service is called Poplar Corridor Transportation Services and is designed to address transportation related problems which are experienced by commuters. The availability of this service is one of several solutions to help alleviate traffic congestion problems in the Corridor.

Poplar Corridor Transportation Services works in cooperation with Memphis Area Rideshare, a City/County sponsored transportation management program. Transportation services available to employees includes personalized ridematching for carpools, providing passenger vans to vanpool groups, and informing interested employees about available services. Significant benefits can be realized by employees using these services. For example, employees can substantially lower commuting costs, reduce wear and tear on personal vehicles, arrive at work refreshed and relaxed, save energy and alleviate traffic congestion.

Weston Companies is working with Poplar Corridor Transportation Services to identify site specific transportation problems at office complexes along the Corridor. To assist the staff in gathering needed information, I am requesting your cooperation in completing the attached Transportation Survey and mailing it to:

Poplar Corridor Transportation Services
c/o Memphis Area Rideshare
125 N. Mid-America Mall - Room 468
Memphis, Tennessee 38103

I strongly encourage your participation and support in helping to alleviate traffic problems experienced by all commuters in the Poplar Corridor. If you have any questions, or would like additional information about Poplar Corridor Transportation Services, please contact Gwen Dobbins or Alice Witter at 901/576-7433. Thank you for your cooperation.

Sincerely,

WESTON COMPANIES

Bert Canfield
Senior-Vice President/Marketing

Attachment

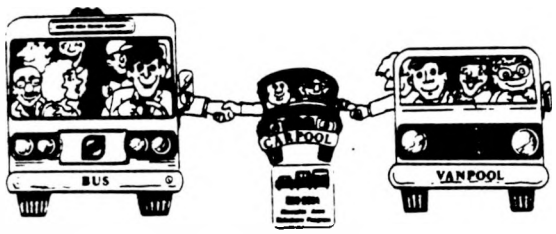
APPENDIX D

POPLAR CORRIDOR NEWSLETTER

POPLAR CORRIDOR NEWSLINE

Fall 1988 Volume 1 Numb

Poplar Corridor Transportation Services Bring Rideshare Message To The Corric



Ridesharing means carpooling, vanpooling, or using transit services. It's a convenient and economical means of traveling to and from work. With the influx of new businesses and the increasing traffic congestion in the corridor, ''sharing a ride'' will become a more attractive means of commuting to and from work.

Poplar Corridor Transportation Services works in cooperation with Memphis Area Rideshare, a City/ County sponsored transportation management program. Transportation services available to employees include personalized ridematching for carpools, providing 15-passenger luxury vans to vanpool groups, and providing transit route information.

Poplar Corridor Transportation Services also works with area employers to develop other alternatives to help alleviate traffic congestion. Some of these alternatives include transportation management strategies such as worksite rideshare programs, transit shuttles, and employee flex-time programs. These strategies along with new road construction provide a comprehensive approach in dealing with traffic congestion.

MATA New Routes -- Going Your Way!

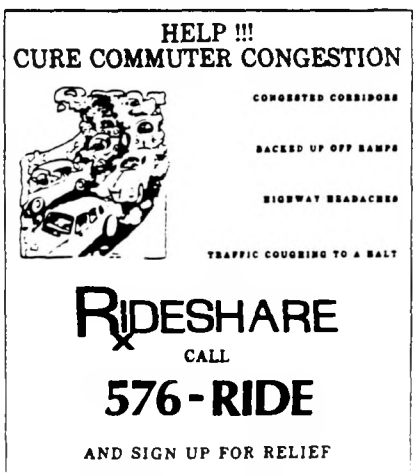
On June 27th, MATA added seven new routes into the corridor. These new routes will improve existing service into the Poplar Corridor by providing direct services for the first time from Frayser, Raleigh, South Memphis, Whitehaven and Quince/Riverdale areas. MATA's aim is to help reduce traffic congestion along Poplar and to improve prime time services. For additional information on these new routes, please call **MATA at 274-6282.**

What's Going ''UP'' In The Corridor

REGALIA AT RIDGEWAY CENTER - This is a 90,0 square foot retail center located at the northwest c ner of Poplar and South Shady Grove. Boyle Inve ment Company is the developer.

The retail complex will include two large, free-stan ing restaurants, both of which will be new to Me phis. Prime retail within the center is targeted towa upscale apparel stores. The mix of merchants will aimed at office tenants and residents in the area. least one restaurant is expected to open by this fa while other retailers may open later this year.

OTHER DEVELOPMENTS - A 60,000 square foot ce ter on Humphreys Blvd., south of Walnut Grove. T center will be more neighborhood oriented, with me chants such as boutiques, drug stores, home fu nishings, cleaners, and others. A large grocery sto has been ruled out because of the limited space a the traffic it would generate in the area.



Poplar Corridor Road Construction Updates

eak season for road construction is here and Poplar orridor Transportation Services wants to help guide u around "orange barrels." Current road construc- n projects have been provided to us by Memphis/ helby County Transportation Planning.

uail Hollow from Massey to Kirby Parkway will be idened to 5 lanes, construction work began in June.

assey from Poplar to Quail Hollow extended to Quail ollow as 4 lanes.

weetbriar from Poplar to Ridgebriar is complete at e northern half of interchange and widening Sweet- iar to 5 lanes begins this August.

plar Pike from Kirby Road to Germantown city limits widened to 5 lanes. Construction scheduled to begin August of this year.

mphreys Blvd. from Walnut Grove to Kirby Parkway ened May 1988.

Poplar Corridor Transportation Services
125 N. Mid-America Mall,Room 440
Memphis,TN. 38103-2084

SPECIAL THANKS to Connie McIntyre of **TRAMMELL CROW COMPANY**, and Gregg Herman and Andy Avgeris of **WESTON COMPANIES** (formerly Vantage Companies) for their support and cooperation in helping to introduce Poplar Corridor Transportation Services to their tenants. Both companies have been very instrumental in implementing the program services. We look forward to their continued support in helping to contribute to a well balanced transportation system.

A Special Thanks to all the employers who participated in a major campaign effort to promote Poplar Corridor Transportation Services.

This is the first issue of "**Poplar Corridor Newsline**," a publication of Poplar Corridor Transportation Services. It will be a quarterly newsletter about employer rideshare services, corridor announcements, construction updates, vanpool/carpool programs and other related information. If your company would like to make an announcement or develop an employee rideshare program, please call Gwen Dobbins or Donna Kinzel, Employer Services representatives at 576-7433.

APPENDIX E

SURVEY FORMS AND RESULTS

EMPHIS AREA
RIDESHARE

MEMPHIS AREA COMMUTER VANS

POPLAR CORRIDOR EMPLOYER SURVEY

1. COMPANY NAME: _____

2. ADDRESS: _____
CITY STATE ZIP CODE

3. PERSON COMPLETING SURVEY: _____
POSITION/TITLE: _____
PHONE: _____

4. WHAT ARE YOUR NORMAL BUSINESS HOURS?
A.M. A.M.
FROM _____ P.M. TO _____ P.M.

* 5. ARE YOUR EMPLOYEES ALLOWED TO ADJUST THEIR WORK SCHEDULES THROUGH FLEX-TIME, ADJUSTABLE WORK HOURS, OR STAGGERED WORK HOURS? YES 31% NO 58% NO ANSWER 11%

6. NUMBER OF EMPLOYEES BY TYPE:
15% Professional/Managerial
51% Clerical/Administrative Support
23% Sales
11% Others

7. PLEASE CHECK THE TRANSPORTATION RELATED PROBLEMS LISTED BELOW THAT DIRECTLY AFFECT YOUR EMPLOYEES AND ORGANIZATION:

59% Traffic congestion entering/exiting worksite
17% Construction at or near worksite
7% Lack of parking spaces
9% Availability of transit services
15% Commuting problems causing tardiness
15% Long commuting trips to worksite
1% Commuting costs too high for employees
8% Lack of carpooling opportunities
31% Lack of eating facilities at worksite
12% Child-care arrangements inhibiting employee ridesharing

*Percentages are based on 369 returned surveys.

OVER

8. PLEASE CHECK ALL OF THE ACTIVITIES LISTED BELOW THAT YOUR ORGANIZATION WOULD BE WILLING TO PARTICIPATE IN TO HELP ALLEVIATE TRAFFIC RELATED PROBLEMS AT AND NEAR YOUR WORKSITE:

12% Adjust arrival and departure times to reduce peak hour congestion

12% Join a voluntary association of employers in your area to identify traffic congestion problems and develop problem solutions

10% Appoint an employee to serve as a transportation coordinator and work with city officials in solving traffic problems

30% Disseminate information to employees about carpool/vanpool services available to them through Poplar Corridor Transportation Services

28% Conduct a survey of your employees to identify commuting trends and problems with commuting to work

8% Provide opportunities for your employees to adjust their work schedules in order to carpool, vanpool, or use transit for commuting to work

9. PLEASE ESTIMATE THE PERCENTAGE OF YOUR EMPLOYEES WHO COMMUTE FROM THE MEMPHIS METROPOLITAN AREAS LISTED BELOW:

5%	North Memphis	4%	Collierville
3%	South Memphis	6%	S.E. Mphs./Hickory Hill
33%	East Memphis	10%	Raleigh/Bartlett
6%	Midtown	1%	Millington
0%	Frayser	1%	Crittenden County, Arkansas
4%	Whitehaven	4%	DeSoto County, Mississippi
23%	Germantown/Cordova	0%	Tipton County, Tennessee

_____ Other (Specify) _____

Please Return To:
Poplar Corridor Transportation Services
c/o Memphis Area Rideshare
125 N. Mid-America Mall/Rm. 454
Memphis, TN. 38103-2084

EMPLOYEE TRANSPORTATION SURVEY

THE PURPOSE OF THIS SURVEY IS TO ASSESS TRAVEL PATTERNS AND TRANSPORTATION NEEDS. PLEASE ANSWER QUESTIONS 1 THROUGH 9. IF YOU WOULD LIKE INFORMATION ON CARPOOL, VANPOOL OR TRANSIT SERVICES, PLEASE COMPLETE THE RIDESHARE SERVICE APPLICATION ON THE REVERSE SIDE.

1. HOW DO YOU USUALLY GET TO WORK? (Check more than one, if applicable.)
   Drive Alone 94% Carpool 3% Vanpool 0 Bus 1% Other 2%

2. APPROXIMATELY HOW FAR DO YOU LIVE FROM YOUR WORK LOCATION?

30%	0 - 5 Miles	37%	6 - 10 Miles	17%	11 - 15 Miles
6%	16 - 20 Miles	4%	21- 25 Miles	4%	More than 25 Miles

3. HOW LONG DOES IT TAKE YOU TO TRAVEL TO YOUR WORK LOCATION?

44%	0 - 15 Minutes	46%	16 - 30 Minutes	6%	31 - 45 Minutes
2%	46 - 60 Minutes	.4%	61 - 75 Minutes	.2%	More than 75 Minutes

4. APPROXIMATELY HOW MUCH DOES IT COST YOU PER DAY TO TRAVEL TO AND FROM WORK (INCLUDING PARKING FEES)?

67%	$0 - $2.00	22%	$2.01 - $4.00	4%	$4.01 - $6.00
2%	$6.01 - $8.00	1%	$8.01 - $10.00	1%	More than $10.00

5. IN WHAT PART OF THE MEMPHIS METROPOLITAN AREA DO YOU LIVE?

3%	North Memphis	14%	Raleigh/Bartlett	1%	Millington
1%	South Memphis	19%	Germantown/Cordova	1%	Crittenden County, AR
25%	East Memphis	3%	Collierville	4%	Desoto County, MS
5%	Midtown	16%	S.E. Mphs./Hickory Hill	1%	Tipton County, TN
4%	Whitehaven	1%	Other (Specify) _____		

6. IF YOU CARPOOL TO WORK, HOW MANY PEOPLE INCLUDING YOURSELF USUALLY RIDE IN THE VEHICLE?

88%	Two	12%	Three	0	Four
0	Five	0	Six	0	Seven or More

7. IF PARK-AND-RIDE LOTS WERE LOCATED WHERE YOU COULD MEET YOUR POOL OR THE BUS WOULD YOU CONSIDER USING THEM? YES 9% NO 70% MAYBE 21%

8. WHICH OF THE FOLLOWING FACTORS MOST AFFECT YOUR CHOICE OF TRAVEL MODE TO WORK? (Check all applicable items).
   - 14% Commuting Costs
   - 44% Commuting Time
   - 12% Parking Arrangements at Work
   - 65% Need For a Vehicle at Work
   - 29% Dependence on Others
   - 58% Work Schedules
   - 21% Child Care Arrangements
   - 16% Availability of Restaurants/Personal Services at Worksite
   - 9% Traffic Congestion Near Worksite
   - 9% Availability of Alternate Transportation Services
   - 6% Other (Specify)

9. PLEASE CHECK THE FOLLOWING INCENTIVES WHICH WOULD ENCOURAGE YOU TO SHARE RIDES TO WORK:

- 11% Free ridematching information
- 5% Reserved parking for vanpools/carpools
- 6% Sale of bus passes at worksite
- 8% Additional transit routes serving worksite
- 14% Adjustable work schedules
- 4% Subsidized transit/vanpool fares
- 11% Child care facilities at worksite
- 11% Worksite employee cafeteria
- 14% Shuttle services for personal errands
- 13% Company vehicles for work appointments
- 3% Other (Specify)

*

Percentages are based on 1,345 returned surveys. Percentage totals may be less than 100 percent because every person did not answer every question.

RIDESHARE SERVICE APPLICATION

NAME _____

(LAST) (FIRST) (MIDDLE INITIAL)

ADDRESS _____

STREET CITY ZIP CODE

APARTMENT #_____ HOME PHONE #_____

MAILING ADDRESS (IF DIFFERENT) _____

MAJOR INTERSECTION NEAREST YOUR HOME _____

COMPANY NAME _____

WORK ADDRESS _____

WORK PHONE #_____ EXT. _____ DEPARTMENT _____

WORK HOURS _____ AM/PM TO _____ AM/PM SHIFT ( ) IRREGULAR ( )

1. DO YOU HAVE A VEHICLE AVAILABLE TO DRIVE TO WORK? Yes _____ No _____

2. I WOULD LIKE INFORMATION ON:
   Carpools ( ) Vanpools ( ) MATA Buses ( )

3. IN A VANPOOL, I WOULD PREFER TO BE A:
   Driver ( ) Back-Up Driver ( ) Passenger ( )

4. IN A CARPOOL, I WOULD PREFER TO:
   Drive Only ( ) Ride Only ( ) Share Driving ( )

5. HAVE YOU EVER REQUESTED INFORMATION FROM OUR PROGRAM BEFORE?
   Yes ( ) No ( )

Please return survey to:
Memphis Area Rideshare
125 N. Mid America Mall/Rm. 454
Memphis, TN 38103-2084

MATA SURVEY

* 1. Would you use transit service in the Poplar Corridor to commute to and from work if it were available? Yes 11% No 89%

2. During work hours, approximately how many times per week do you travel to any destination on Poplar Avenue between Mendenhall and Kirby Parkway?
8 or more 18% 5 - 7 17% 3 - 4 15% less than 3 49%

3. For what purposes? (mark all that apply)
Meals 61% Shopping 38% Banking 46% Business 48% Other 16%

4. If a shuttle were available during the day along Poplar Corridor, would you take advantage of the service for the above trips?
Yes 24% No 76%
If so, during what hours would you need the shuttle to operate?
_____
_____

5. Would you be willing to pay a fare for the service? Yes 37% No 63%
If so, how much? _____

COMMENTS: _____
_____
_____
_____
_____

* Percentages are based on 739 returned surveys.

REPORT AND INFORMATION SOURCES

Additional copies of this report, Feasibility Study of Transportation Management Strategies In the Poplar Corridor, Memphis, Tennessee, are available from:

Publications and Distribution
Public Technology, Inc.
1301 Pennsylvania Avenue - N.W.
(202) 626-2400

Further information regarding the project discussed in ths report is available from:

Memphis and Shelby County
Division of Planning and Development
Special Programs Section
125 N. Mid America Mall, Room 468
Memphis, Tennessee 38103
(901) 576-7433

Publication Order No.:

DG-88/301
03/91-150

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