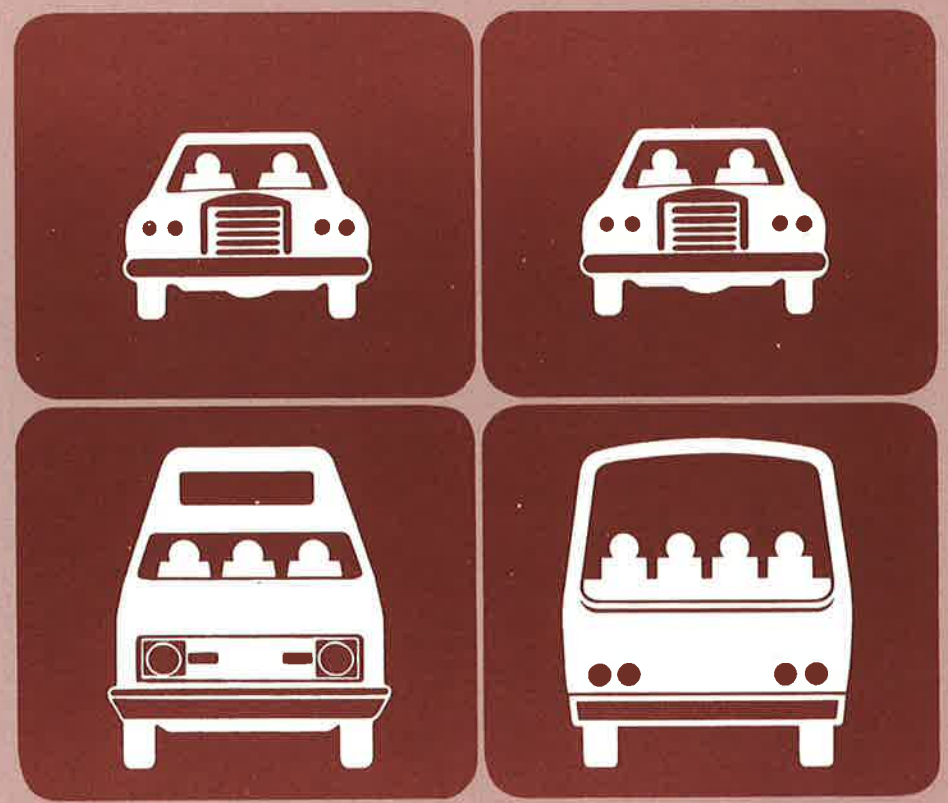




# National Ridesharing Demonstration Program: Employer-Based Rideshare Promotion in Atlanta, GA

UMTA/TSC Evaluation Series

Final Report  
May 1985



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16. Abstract <p>The Atlanta Ridesharing Demonstration represented an expansion of existing ridesharing promotion activity in the metropolitan Atlanta region. The demonstration used federal funds from several sources, including the National Ridesharing Demonstration Program (a joint program of three U.S. Department of Transportation agencies), the Federal Highway Administration, and the Urban Mass Transportation Administration. Federal sources accounted for 69 percent of the project budget of \$600,520, while state sources accounted for 31 percent.</p> <p>An existing Georgia DOT ridesharing program had been promoting ridesharing through employers, with a focus on employers with more than 1000 employees in one location. The major elements of the demonstration were expansion of ridesharing promotion to: 1) single employers with more than 100 employees at one location; and 2) multi-employer work locations in the Central Business District.</p> <p>The evaluation measured the impact of the demonstration through workplace-based surveys of employers and employees in the Atlanta region. These surveys indicated that the demonstration was successful in reaching the large employers in the region, but that the direct impact of the program on employers' decisions to provide ridesharing could not be determined. Employers most likely to provide employee ridesharing assistance were those with inadequate parking.</p> <p>The employee survey indicated that 17 percent of the region's employees were aware of the ridesharing demonstration. Although it was not possible to determine the direct impact of the demonstration on employee commuting decisions, employers who participated in the program showed higher rates of both ridesharing and transit usage among their employees. Ridesharing employees tended to travel farther to work than non-ridesharing employees and were more likely to be concerned about commuting cost and auto wear.</p> <p>The evaluation showed that promotion of ridesharing programs to employers should emphasize direct benefits, such as improved management of scarce parking facilities and improved labor market position through fringe benefits.</p>					
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## PREFACE

This case study was prepared by Charles River Associates Incorporated (CRA) for the Transportation Systems Center (TSC) of the U.S. Department of Transportation which evaluated the Atlanta project under the Service and Methods Demonstration (SMD) Program of the Urban Mass Transportation Administration (UMTA). Within CRA, Daniel Krechmer prepared this report. Others contributing to the project included Daniel Brand, CRA's Officer-in-Charge of work conducted for the SMD program, John Stuart, and previous project managers Paul Mason, Eric Ziering, and Katherine O'Neill. Joel Freilich and Rosemary Booth of TSC served as technical advisors and monitors, while additional input was provided by Bruce Spear and Lawrence Doxsey of TSC. Lynn Sahaj was the UMTA project manager. Wayne Jackson of Georgia DOT provided valuable information and assistance during the project, including extensive work on the preparation and implementation of project surveys.

# METRIC CONVERSION FACTORS

## Approximate Conversions to Metric Measures

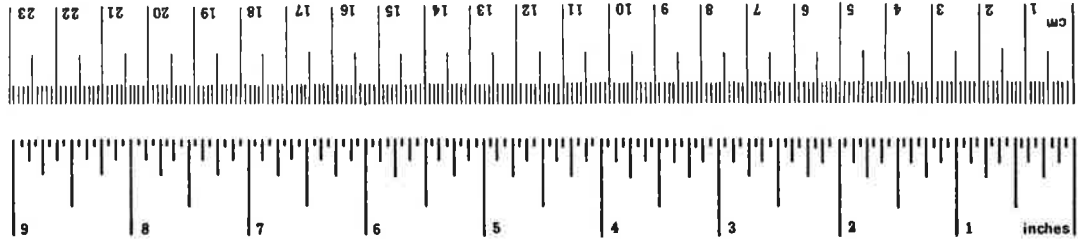
Symbol	When You Know	Multiply by	To Find	Symbol
<b>LENGTH</b>				
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
<b>AREA</b>				
in <sup>2</sup>	square inches	6.5	square centimeters	cm <sup>2</sup>
ft <sup>2</sup>	square feet	0.09	square meters	m <sup>2</sup>
yd <sup>2</sup>	square yards	0.8	square meters	m <sup>2</sup>
mi <sup>2</sup>	square miles	2.6	square kilometers	km <sup>2</sup>
	acres	0.4	hectares	ha
<b>MASS (weight)</b>				
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
<b>VOLUME</b>				
teaspoon	teaspoons	5	milliliters	ml
Tablespoon	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft <sup>3</sup>	cubic feet	0.03	cubic meters	m <sup>3</sup>
yd <sup>3</sup>	cubic yards	0.76	cubic meters	m <sup>3</sup>

<b>TEMPERATURE (exact)</b>	
°F	Fahrenheit temperature
°C	Celsius temperature
5/9 (after subtracting 32)	

## Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
<b>LENGTH</b>				
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
<b>AREA</b>				
cm <sup>2</sup>	square centimeters	0.16	square inches	in <sup>2</sup>
m <sup>2</sup>	square meters	1.2	square yards	yd <sup>2</sup>
km <sup>2</sup>	square kilometers	0.4	square miles	mi <sup>2</sup>
ha	hectares (10,000 m <sup>2</sup> )	2.5	acres	
<b>MASS (weight)</b>				
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
<b>VOLUME</b>				
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
m <sup>3</sup>	cubic meters	35	cubic feet	ft <sup>3</sup>
m <sup>3</sup>	cubic meters	1.3	cubic yards	yd <sup>3</sup>

<b>TEMPERATURE (exact)</b>	
°C	Celsius temperature
°F	Fahrenheit temperature
9/5 (then add 32)	



\* 1 in = 2.54 (exactly). For other exact conversions and more detailed tables, see NBS Misc. Publ. 286, Units of Weights and Measures, Price \$2.25, SD Catalog No. C13.10-286.

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## EXECUTIVE SUMMARY

### INTRODUCTION

As a result of the two major gasoline shortages that occurred during the past decade, ridesharing has come to be recognized by both government and industry as offering great potential for energy conservation. To further promote ridesharing, the U.S. Department of Transportation (DOT) established a National Ridesharing Demonstration Program (NRDP) in 1979. The NRDP was jointly sponsored by three agencies of DOT: the Federal Highway Administration (FHWA), the Urban Mass Transportation Administration (UMTA), and the Office of the Secretary of Transportation (OST); 17 sites around the country were evaluated as part of the program. Various ridesharing arrangements, including carpooling, vanpooling, and subscription service, were promoted with such incentives as preferential parking rates and spaces, preferential treatment on highways, flexible work hours, vanpool subsidies, community-based transportation coordinators, and residential neighborhood incentive programs.

The Transportation Systems Center (TSC) has primary responsibility for evaluation of these demonstrations under the Service and Methods Demonstration (SMD) Program. Atlanta was one of five demonstration cities selected by TSC for post-demonstration surveys and in-depth evaluation. Surveys of both employers and employees addressed the socioeconomic and trip characteristics of employees most likely to respond to ridesharing inducements, as well as the impact of incentives and promotional techniques on employer and employee participation.

### PROGRAM DESCRIPTION

The Atlanta Ridesharing Demonstration represented an expansion of existing ridesharing promotion activity in the metropolitan Atlanta region. The Atlanta metropolitan region encompasses seven counties and had a population of approximately 1.8 million in the 1980 U.S. Census.

Georgia DOT initiated a ridesharing program in metropolitan Atlanta in 1976. Known as the Georgia Ridesharing Program, it used a brokerage concept to provide information on a combination of ridesharing alternatives such as public transportation, carpooling, vanpooling, private bus, and park-and-ride to employees of the area's major firms. In 1978, Georgia DOT initiated an outreach effort to employers with 1,000 or more employees in one location. Promotional literature was provided to employers, and employees were surveyed about their commuting patterns. A dedicated phone line to Georgia DOT was made available for persons requesting ridesharing information.

The major elements of the demonstration were expansion of ridesharing promotion to: 1) single employers with more than 100 employees at one location; and 2) multi-employer work locations in the Central Business District. The budget for the two-year program was \$600,520 (see page 23). Approximately \$180,156 of this amount consisted of NRDP funds.

Two unique elements were part of the demonstration plan: 1) the use of retired, middle- to high-level corporate marketing or public relations executives to make initial contact with employers; and 2) use of telephone coordinators, located at Georgia DOT, to facilitate the introduction of potential poolers. Both of these elements were not successful in meeting program goals, however, and were discontinued early in the demonstration.

## RESULTS OF EVALUATION

During the employer contact phase of the program, Georgia DOT kept records of employers contacted, employers who joined the ridesharing program, employees who responded to a ridesharing questionnaire, and employees who reported switching work travel mode after the implementation of a ridesharing program. These records are incomplete, however, since some companies did not want information about them published by Georgia DOT.

Primary sources of evaluation data were employer- and employee-based surveys conducted specifically for the evaluation. Samples of employees and employers were selected according to stratification by employer size. The evaluation was designed around three major issues: 1) employer willingness to participate in ridesharing activities; 2) employee response to ridesharing promotion; and 3) individual and aggregate benefits of the ridesharing program.

## EMPLOYER ATTITUDES TOWARD RIDESHARING

The Georgia Ridesharing Program was successful in reaching its target market of large employers. Large employers were far more likely than others to offer ridesharing assistance programs to their employees. The direct impact of the Georgia Ridesharing Program on employer decisions to provide assistance, however, could not be determined. The strategy to market the program to large employers appeared to be sound, since a large number of employees were reached through a small number of firms.

Employers most likely to offer ridesharing assistance were those with limited parking supply available. Employers with adequate parking showed little interest, and employers who provided no parking tended to rely on available parking nearby.

Employers felt the benefits of ridesharing programs accrued primarily to the general public in terms of energy conservation and reduced traffic congestion. They saw as disbenefits, however, elements that directly

affected them, such as difficulties in initiating the program, potential liability risks, and the fact that carpoolers do not work late. Employers who saw direct benefits such as improved standing in the labor market and better utilization of parking space were more likely to implement ridesharing assistance programs. Many of the employers offering assistance cited energy conservation or fuel shortages as their reason for doing so and thus appear to have been influenced by the last fuel shortage.

#### EMPLOYEE ATTITUDES TOWARD RIDESHARING

The employee survey indicated that ridesharing as a commuting mode increased its share slightly during the 1980-82 period at the expense of both the drive-alone and transit modes, although the change was not statistically significant. Approximately 17 percent of the employees in the Atlanta region were familiar with the Georgia Ridesharing Program. It was not possible to determine the direct influence of the program on employee commuting decisions. However, employers who participated in the ridesharing program and offered ridesharing assistance showed higher rates of both ridesharing and transit usage among their employees. In addition, ridesharing employees working for employers who provide ridesharing assistance had been in their carpools longer. Because carpools tend to break up due to job or residence changes, it is important that a ridesharing program help keep existing carpools together. This is illustrated by the fact that between 1980 and 1982, approximately 50,000 Atlanta commuters shifted from drive-alone to ridesharing, but 45,000 shifted from ridesharing to drive-alone.

Most employees who were ridesharing cited commuting cost and auto wear as primary reasons for their mode choice. Commuters not ridesharing were more likely to cite convenience and travel time. Ridesharers were more likely than non-ridesharers to have longer work trips and fixed work hours. Demographic differences between ridesharers and those who drive alone were minimal. The major demographic differences found were between transit and auto commuters. Transit riders were far more likely to have low incomes and be members of minority groups.

#### CONCEPT FEASIBILITY AND TRANSFERABILITY

Ridesharing promotion aimed toward large employers appears to be an effective use of program resources. Over 13 percent of the region's employees worked for 149 employers who had both contact with the Georgia Ridesharing Program and an ongoing ridesharing assistance program.

The demonstration evaluation showed that promotion of ridesharing programs to employers should emphasize the direct benefits to the employer in terms of improved management of scarce parking facilities, and improved labor market position through the provision of an additional fringe benefit. Ridesharing programs should attempt to target employees with long work trips since they are much more likely to rideshare.

Survey data showed that employees who worked variable hours were less likely to carpool. This indicates that successful carpooling may require regularity in working schedules among participants. For this reason programs promoting variable work hours and carpooling should be carefully targeted to assure that they do not conflict with each other.



## 1. INTRODUCTION

### 1.1 OVERVIEW OF THE NATIONAL RIDESHARING DEMONSTRATION PROGRAM

Ridesharing is defined as "motor vehicle travel in which the driver is accompanied by at least one passenger, the driving function is uncompensated or compensated in only nominal fashion and the vehicle is owned or leased by an individual for personal use or by an institution for the use of its employees."\* After auto driver, auto passenger is the most common mode of commuting in the United States, with over 15 million people, or 21 percent of those commuting to work in any kind of vehicle.\*\*

As a result of two major gasoline shortages in the past decade, ridesharing has come to be recognized by both government and private industry as promising great potential for energy conservation. To further promote ridesharing, the U.S. Department of Transportation (DOT) established a National Ridesharing Demonstration Program (NRDP) in 1979. The program was jointly sponsored by three agencies of DOT: the Federal Highway Administration (FHWA), the Urban Mass Transportation Administration (UMTA), and the Office of the Secretary of Transportation (OST), with FHWA taking the lead in administering the program. The program involved 65 sites and a full range of ridesharing arrangements including carpooling, vanpooling, and subscription services; 17 sites were evaluated. In addition to a variety of outreach and matching services, specific ridesharing incentives were incorporated in the program, including preferential parking rates and spaces, preferential treatment on highways, flexible work hours, vanpool subsidies, community-based transportation coordinators, and residential neighborhood incentive programs. In some programs, federal demonstration funds were used to initiate new programs, while in others, funds were used to augment or continue innovative programs that had been initiated at the state or local level.

The Transportation Systems Center (TSC) has primary responsibility for evaluating these demonstrations. The evaluation process includes three separate but coordinated elements: 1) documentation of ridesharing program efforts in 17 cities; 2) extensive data collection efforts and more in-depth evaluation in five of these cities; and 3) a cross-cutting, comparative analysis of results.

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\*Transportation Systems Center, National Ridesharing Demonstration Program: Evaluation Plan (Cambridge, MA: TSC, 1980).

\*\*1980 U.S. Census Journey-to-work survey.

The five cities designated for post-demonstration surveys and in-depth evaluation are Atlanta, Cincinnati, Houston, Portland, and Seattle. Standardized survey instruments and procedures were designed by TSC to ensure consistency. These provide an opportunity to compare the effectiveness of different approaches to ridesharing promotion and program structure. Surveys of both employees and employers addressed the socioeconomic and trip characteristics of employees most likely to respond to ridesharing inducements, as well as the impact of incentives and promotional techniques on employer and employee participation.

The remainder of this report describes the ridesharing demonstration conducted in Atlanta and includes an evaluation based on both program records and the post-demonstration surveys. The comparative analyses of the five in-depth site data collections are being pursued in parallel by TSC and will constitute a separate report.

## 1.2 ATLANTA DEMONSTRATION PROJECT DESCRIPTION

### 1.2.1 Pre-Demonstration Program Summary

The Atlanta Ridesharing Demonstration represented an expansion of existing ridesharing promotion activities in the metropolitan Atlanta region. The Atlanta metropolitan region encompasses seven counties (Clayton, Cobb, DeKalb, Douglas, Fulton, Gwinnett, and Rockdale), with a 1980 combined population of 1,779,202 persons (1980 U.S. Census).

The Georgia Department of Transportation began working on the development of a ridesharing program for the Atlanta metropolitan area in 1976. Known as the Georgia Ridesharing Program, it used a brokerage concept to provide information on a combination of ridesharing alternatives such as public transportation, carpooling, vanpooling, private bus, and Park-and-Ride to employees of the area's major firms.

In 1978, Georgia DOT initiated an outreach effort to employers with 1,000 or more employees in one location. As of 1979, when Georgia DOT applied for a National Ridesharing Program grant, about half the firms contacted had agreed to participate in the ridesharing program. A status report submitted with the grant application indicated that for a sample of 9 major employers, with over 1,000 employees who participated in the program, over 31 percent of the employees had responded to a ridesharing questionnaire. The program included a follow-up survey among employees of participating employers that was used to track changes in modal choice. In addition, a dedicated phone line to Georgia DOT was made available for persons requesting ridesharing information. Another related action of Georgia DOT was successful sponsorship in 1979 of legislation that exempted vanpools from the need to obtain a Public Service Commission certificate of public convenience and necessity.

### 1.2.2 Description of Ridesharing Demonstration

The Atlanta Ridesharing Demonstration involved expanding existing ridesharing activities. This included expansion of ridesharing promotion to:

- Single employers with more than 100 employees at one location; and
- Multi-employer work locations in the Central Business District.

The Atlanta demonstration, therefore, was employer-based, targeted to large single employers and multi-employer work locations. It contained two marketing strategies of particular interest for evaluation: 1) use of retired executives for the first employer contact; and 2) use of telephone coordinators to facilitate the introduction of potential poolers. Georgia DOT used (paid) retired, middle- to high-level corporate marketing or public relations personnel, based on the hypothesis that employers would respond more favorably to the program if approached by a field representative with a similar background. The telephone coordinators were located at Georgia DOT and had the capability of organizing a conference call among potential poolers. Georgia DOT envisioned the telephone coordinator as a non-threatening medium for introducing potential poolers.

A limited general public promotion for Central Business District commuters was also undertaken. Although Georgia DOT was responsible for demonstration activities, other cooperating organizations included the Metropolitan Atlanta Rapid Transit Authority (MARTA), the City of Atlanta, Fulton County, the Atlanta Regional Commission, and local business organizations.

Specific elements of the ridesharing demonstration program included:

- Identifying eligible employers;
- Soliciting employers to sponsor ridesharing activities;
- Designing employer-specific ridesharing programs to offer employees;
- Marketing the ridesharing program at the employment site;
- Distributing and collecting ridesharing applications;
- Processing applications through the Georgia DOT computer matching program;
- Distributing match lists to employees; and
- Performing follow-up activities.

Both the original state-funded program and the demonstration relied on employer-based promotion of ridesharing. Brokering and matching services were provided rather than direct transportation service.

### 1.2.3 Goals and Objectives of the Atlanta Ridesharing Demonstration

The goals established for the Atlanta Ridesharing Demonstration were based on the adopted transportation objectives of the Regional Transportation Plan and of the Georgia Transportation Plan. The overall goals were to:\*

- 1) Provide a transit system that would offer alternative means of travel in those areas with highway congestion -- in particular, to provide additional access to the Central Business District.
- 2) Provide a high level of mobility for all citizens, measured by factors such as travel time, vehicle availability, congestion, and comfort.
- 3) Restructure transportation funding to preserve the user financing concept while accommodating and promoting energy efficiency.
- 4) Coordinate transportation improvements to accommodate economic growth consistent with state, regional, and local development plans.
- 5) Provide a transportation system that is safe and well-operated to minimize accidents, injuries, and property damage.
- 6) Protect and even enhance the environment through the use of sound environmental principles in transportation planning, design, construction, maintenance, and operation.

Specific goals of the project were to:\*

- 1) Reduce peak-hour congestion by 5 percent.
- 2) Make contact with major office complexes and individual firms in order to reach 50 percent of all employees within the defined Central Business District.
- 3) Increase vehicle occupancy from 1.2 to 1.4 persons per car.
- 4) Effect a 10 percent reduction of critical mobile source pollution levels in the Atlanta area.

---

\*Letter of Thomas Moreland, Commissioner of Georgia DOT, to Herschel Bryant, Federal Highway Administration, dated May 29, 1979.

- 5) Increase public awareness of the ridesharing program through an intensive marketing and publicity campaign.

### 1.3 EVALUATION OVERVIEW

This Atlanta evaluation focuses on two key elements of the demonstration: the effect of the marketing strategy on employer participation; and the effect of the promotion strategy and incentives offered to employees on employee participation and on increased levels of employee ridesharing. The primary sources of evaluation data were employee- and employer-based surveys conducted specifically for the evaluation. Samples of employees and employers were selected according to stratification by employer size.

During the employer contact phase, Georgia DOT kept records of employers contacted, employers who joined the ridesharing program, employees who responded to a ridesharing questionnaire, and employees who reported switching work travel mode after the implementation of the ridesharing program activity. The last two items, however, were not complete, since some firms did not want the information they supplied to be published by Georgia DOT.

#### 1.3.1 Evaluation Issues

Three major evaluation issues were identified, with a number of specific research questions formulated under each. Table 1-1 lists these questions and the specific information (measures) that will be used to answer them. The three major issues addressed are:

- 1) Factors influencing employer participation in ridesharing programs.
- 2) Factors influencing employee participation in ridesharing programs.
- 3) Individual and aggregate costs and benefits of ridesharing programs.

TSC prepared separate employer and employee questionnaires that solicited information on ridesharing assistance provided or received, work commute mode, and other trip characteristics, both prior to and after the demonstration. The sample included firms that: 1) both had and had not been solicited by the Georgia Ridesharing Program; and 2) both had and had not provided employee transportation assistance.

TABLE 1-1. DEMONSTRATION ISSUES AND EVALUATION METHODOLOGY

<u>ISSUE</u>	<u>RESEARCH QUESTIONS</u>	<u>MEASURES</u>
<ul style="list-style-type: none"> <li>● Factors influencing employer participation in ridesharing programs.</li> </ul>	<ul style="list-style-type: none"> <li>● What is relationship between ridesharing program contact and employer participation?</li> </ul>	<ul style="list-style-type: none"> <li>● Number of employers contacted</li> <li>● Number of employers in ridesharing programs</li> <li>● Number of employers providing ridesharing assistance</li> <li>● Type of contact made</li> </ul>
	<ul style="list-style-type: none"> <li>● What are the levels and types of employer ridesharing participation?</li> </ul>	<ul style="list-style-type: none"> <li>● Number of employers in ridesharing program</li> <li>● Number of employers providing ridesharing assistance</li> <li>● Types of ridesharing assistance provided</li> </ul>
	<ul style="list-style-type: none"> <li>● What employer characteristics tend to foster ridesharing program participation?</li> </ul>	<ul style="list-style-type: none"> <li>● Employer size</li> <li>● Industry type</li> <li>● Work-hour flexibility</li> <li>● Downtown location</li> <li>● Parking availability</li> </ul>
	<ul style="list-style-type: none"> <li>● Why do employers provide transportation program assistance?</li> </ul>	<ul style="list-style-type: none"> <li>● Attitudes toward providing transportation assistance</li> <li>● Types of transportation programs provided</li> </ul>

Table continued on following page.

TABLE 1-1 (Continued). DEMONSTRATION ISSUES AND EVALUATION METHODOLOGY

<u>ISSUE</u>	<u>RESEARCH QUESTIONS</u>	<u>MEASURES</u>
<ul style="list-style-type: none"> <li>● Factors influencing employee participation in ridesharing programs</li> </ul>	<ul style="list-style-type: none"> <li>● What are differences between employees who rideshare and those who do not?</li> </ul>	<ul style="list-style-type: none"> <li>● <u>Employer Characteristics</u> Size Type of organization Number of parking spaces per employee Employer contact with GRP Employer ridesharing assistance provided Paid parking within one-quarter mile Cost per space Transportation program characteristics Attitudes toward ridesharing Work schedule</li> </ul>
	<ul style="list-style-type: none"> <li>● What are characteristics of employees most likely to be familiar with carpooling program?</li> </ul>	<ul style="list-style-type: none"> <li>● <u>Employee Travel Characteristics</u> Commuting mode Previous commuting mode Miles to work Minutes to work MARTA available</li> </ul>
	<ul style="list-style-type: none"> <li>● What are characteristics of employees most likely to use ridesharing as their primary commuting mode?</li> </ul>	<ul style="list-style-type: none"> <li>● <u>Employee Attitude Characteristics</u> Driver's license Gender Age Ethnic/racial HH income Occupation</li> </ul>

Table continued on following page.

TABLE 1-1 (Continued). DEMONSTRATION ISSUES AND EVALUATION METHODOLOGY

<u>ISSUE</u>	<u>RESEARCH QUESTIONS</u>	<u>MEASURES</u>
<ul style="list-style-type: none"> <li>● Individual and aggregate costs and benefits of ridesharing programs</li> </ul>	<ul style="list-style-type: none"> <li>● What are employer costs and benefits?</li> </ul>	<ul style="list-style-type: none"> <li>● Parking costs saved</li> <li>● Labor market position</li> <li>● Meet legal requirements</li> <li>● Costs of administration</li> <li>● Loss of work-hour flexibility</li> </ul>
	<ul style="list-style-type: none"> <li>● What are employee costs and benefits?</li> </ul>	<ul style="list-style-type: none"> <li>● Differences in days driving</li> <li>● Cost savings                             <ul style="list-style-type: none"> <li>-- Gasoline</li> <li>-- Reduced auto use</li> </ul> </li> <li>● Additional commuting time</li> <li>● Loss of work-hour flexibility</li> </ul>
	<ul style="list-style-type: none"> <li>● What are costs and benefits to general public?</li> </ul>	<ul style="list-style-type: none"> <li>● VMT reduction</li> <li>● Dollar savings in fuel</li> <li>● Public cost of program and promotion</li> </ul>

SOURCE: Charles River Associates.



The data were weighted to reflect variable rates of sampling within employer size categories and non-response bias among different employer-employee subgroups. A one-question travel mode postcard was distributed to control samples of employees in order to indicate the degree of non-response bias on the long survey form. (See Appendix A for additional details on survey design and methodology.)

#### 1.4 ORGANIZATIONAL ROLES IN THE EVALUATION

The roles of the principal actors in the evaluation are described below:

- 1) The Transportation Systems Center (TSC) was responsible for the evaluations performed under the National Ridesharing Demonstration Program as part of its evaluation function for UMTA's SMD program. This role included designing the survey instruments, administration techniques, and sampling scheme for the five sites as well as developing the evaluation framework.
- 2) The Georgia Department of Transportation (Georgia DOT), the grantee, was responsible for supplying Charles River Associates, the evaluation contractor, with basic demographic and travel data, an inventory of firms by employment size and type, and a description of the regional transportation system. In addition, the grantee was responsible for supplying records of program activity and costs. Georgia DOT also assisted with selection of the survey sample and supervised survey distribution and data collection activities.
- 3) Charles River Associates (CRA) provided assistance to Georgia DOT during survey planning and administration, edited and cleaned the data, performed data tabulation and analysis, and wrote the final report. From project records, CRA also compiled and analyzed the data for the case study evaluation.

#### 1.5 ORGANIZATION OF THE REPORT

This report is divided into five sections. Following this introductory section is a brief description of the demonstration setting (Section 2). Section 3 describes the demonstration project implementation and organization. The evaluation of the demonstration is presented in Section 4, along with summaries of program records and survey results. Section 5 discusses case study conclusions and implications for transferability.



## 2. DEMONSTRATION SETTING

### 2.1 GENERAL DESCRIPTION

Atlanta, the capital of the state of Georgia, is the industrial, commercial, and financial center of the Southeast. It is representative of many cities in the South that are experiencing rapid growth along with active urban renewal programs. Some 1,800 industrial plants manufacture over 3,500 different commodities, including aircraft, automobiles, furniture, textiles, chemicals, and iron and steel products. Recent estimates of employment show 890,000 jobs in the Atlanta region, with approximately 94,000, or 10.6 percent, located in the Atlanta CBD. During the 1970s, employment growth was greatest in the northeast part of the region.\*

The Atlanta metropolitan area encompasses seven counties (Clayton, Cobb, DeKalb, Douglas, Fulton, Gwinnett, and Rockdale) and has a population of approximately 1,779,202 persons (1980 Census); the two largest counties are Fulton and DeKalb. The city of Atlanta (1980 Census population of 425,022) is predominantly contained in Fulton County, with parts of the municipal boundaries extending into DeKalb County. Despite the regional growth rate of 1.5 percent per year in the 1975-1980 period, Fulton County experienced a population loss. This indicates a strong trend of movement to the suburbs. Table 2-1 shows the breakdown of the 1975 population by county, as well as population figures obtained from the 1980 Census.

During the five-year period from 1975 to 1980, the overall Atlanta metropolitan population increased by approximately 8 percent. Most of this growth, however, occurred outside the counties of Fulton and DeKalb.

### 2.2 HIGHWAY SYSTEM CHARACTERISTICS

Population densities in the Atlanta region are relatively low, ranging from 880 persons per square mile over the seven-county area to 3,125 persons per square mile in the city of Atlanta. The region has a very well-developed freeway system with a full circumferential highway (I-285) and six major radial freeway corridors converging on the CBD. Atlanta is an important hub

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\*Material for this section is developed from Grant Paul and Robert Casey, Atlanta Wheelchair Accessible Bus Project (Cambridge, MA: Transportation Systems Center, April 1978).

TABLE 2-1. TOTAL POPULATION IN ATLANTA BY COUNTY

<u>COUNTY</u>	<u>1975 POPULATION (ESTIMATE)</u>	<u>1980 POPULATION (CENSUS)</u>
Clayton	133,200	150,357
Cobb	249,800	297,694
DeKalb	463,600	483,024
Douglas	45,600	54,573
Fulton	618,100	589,904
Gwinnett	115,400	166,903
Rockdale	<u>28,300</u>	<u>36,747</u>
TOTAL	1,654,000	1,779,202

SOURCE: 1975 Population: Grant Paul and Robert Casey,  
Atlanta Wheelchair Accessible Bus Project (Cambridge, MA:  
Transportation Systems Center, 1978).

1980 Population: Phone conversation, U.S. Bureau of the Census,  
 January 1984.

for long-distance travel, with all three of the major freeways (I-75, I-85, and I-20) providing crucial interregional connections. Although the transit system is also well-developed, the automobile is clearly dominant in the Atlanta region.

Estimates prepared in 1970 through the Regional Transportation Planning Model showed that 96.3 percent of all trips and 90.8 percent of work trips in the Atlanta region were made by automobile. Auto drivers accounted for 64.7 percent of all trips and 80.5 percent of work trips, while auto passengers made 31.6 percent of all trips and 10.3 percent of work trips. The auto occupancy rate was 1.13 persons per automobile for work trips and 1.49 for all trips. These figures clearly indicate that there is substantial opportunity for increasing work trip auto occupancy in the region.\* With nearly 90 percent of regional employment located outside the Atlanta CBD, it is clear that the automobile will continue to be the dominant work-trip mode of transportation.

### 2.3 TRANSIT CHARACTERISTICS

The primary provider of public transportation services in the Atlanta region is the Metropolitan Atlanta Rapid Transit Authority (MARTA). When it came into existence in 1966, following approval by the voters of Fulton, DeKalb, Clayton, and Gwinnett counties as well as those in the city of Atlanta, one of MARTA's initial tasks was to plan a comprehensive bus and rail transit system for the metropolitan Atlanta area.

After rejecting previous efforts, the voters of Fulton and DeKalb counties approved, in November 1971, a plan for improving and subsidizing existing bus service and for constructing a rapid transit system, with financing to come from a 1 percent local sales tax. On February 17, 1972, MARTA purchased the Atlanta Transit System, Inc. (a private bus operation) and on March 1, 1972, fares were reduced from \$0.40 to \$0.15 (with two free transfers) on all routes operated in Fulton and DeKalb counties. Since then, MARTA has made numerous improvements to transit routes and schedules.

Fares remained at the \$0.15 level for seven years until they were increased to \$0.25 on March 1, 1979. Fares doubled to \$0.50 on July 26, 1980, and in July 1981, they increased to \$0.60. Both of these increases occurred during the period of the ridesharing demonstration.

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\*Atlanta Regional Commission, 1977 Regional Transportation Plan: 1978-2000, p. 32.

MARTA is currently constructing a 61-mile rapid transit system in DeKalb and Fulton counties. Phase A of that system includes the 6.7-mile East Line that opened on July 1, 1979; the 5.1-mile West Line that opened on December 22, 1979; and the 1.9-mile North-South Line that began revenue service on December 1, 1981.

In some cases, ridesharing and transit may become competitive. Part of the demonstration involved coordination of ridesharing promotional efforts with MARTA in order to improve the efficiency of both modes (see program description, p. 14).

### 3. PROGRAM DESCRIPTION

#### 3.1 PROJECT BACKGROUND

The Atlanta Ridesharing Demonstration constituted an extension of already-existing ridesharing activity in the Atlanta region. The Georgia Department of Transportation (hereafter "GaDOT") began promoting ridesharing in the Atlanta region in 1976, through implementation of a broad-based plan that included marketing strategies and database development, as well as physical plans for park-and-ride lots and high-occupancy vehicle lanes. These activities were conducted through the Georgia Ridesharing Program, which used the brokerage concept to provide information on ridesharing alternatives to employees of the region's major firms.

In 1978, GaDOT instituted a program specifically aimed at employers with 1,000 or more employees in one location. Over half of the firms contacted implemented the program, which involved dissemination of promotional material and distribution of ridesharing questionnaires to all employees. A status report in May 1979 showed that the program had been implemented by 9 employers with a total of 21,033 employees. Over 31 percent, or 6,639 employees, had responded to the agency questionnaire distributed to all employees at the 9 firms.

The original pre-demonstration program included an evaluation phase in which questionnaires were distributed six months later to employees who had responded to the original survey.

As part of its promotional efforts, GaDOT sponsored a legislative initiative that removed a requirement that vanpools with nine or more persons obtain a Public Service Commission certificate of public convenience and necessity. This served to encourage vanpool activity by both private entrepreneurs and employers.

#### 3.2 DEMONSTRATION PROGRAM DESCRIPTION

##### 3.2.1 Program Strategy

The Georgia Ridesharing Demonstration was designed as a cooperative effort between the Georgia Department of Transportation, the Metropolitan Atlanta Regional Transit Authority (MARTA), the City of Atlanta, Fulton County, the Atlanta Regional Commission, and local business organizations. Although the demonstration was designed to encourage ridesharing throughout the Atlanta region, special efforts were focused on the downtown area, and specifically on the use of existing park-and-ride lots by downtown commuters.

GaDOT used the demonstration funds to enhance its program of employer-based promotion. This strategy was based on the hypothesis that direct contact with high-level management was the most effective method of obtaining employer commitment to the ridesharing program. GaDOT attempted to recruit retired middle- to upper-level executives to make initial contact with employers. GaDOT felt that these individuals would facilitate such contact.

Follow-up surveys and scheduled annual program updates were introduced as mechanisms for continuing contact between employers and GaDOT. Participating employers were encouraged to designate an individual to handle employee transportation activity on a regular basis.

The program marketing strategy used appeals based on both individual economic benefits to riders and public benefits resulting from energy conservation, reduced traffic congestion, and improved air quality. The marketing campaign depended upon a combination of general media advertising (newspapers, radio, and brochures oriented to the public) and specialized material tailored to employers. An advertising agency was hired by GaDOT to coordinate these activities.

The program strategy included a continued and close working cooperation with MARTA that would allow MARTA to benefit from ridesharing program activities. Potential positive impacts included:

- Diversion of some transit riders to carpools/vanpools to alleviate overcrowding and peaking problems on the MARTA system;
- Use of match lists to identify riders who could use low-visibility/low-ridership MARTA routes but were not doing so; and
- Improved marketing of MARTA services at no additional cost to MARTA.

### 3.2.2 Program Logistics

Specific elements of the ridesharing demonstration program included:

- Identification of employers;
- Solicitation of employers to sponsor ridesharing activities;
- Design of employer-specific ridesharing programs to offer employees;
- Marketing of the program at the employment site;
- Distribution and collection of ridesharing applications;
- Processing of applications through the GaDOT computer matching program;



- Distribution of match lists to employees; and
- Performance of follow-up activities.

GaDOT approached employers to request support for individualized matching activities, and encouraged implementation of on-site ridesharing activities.

During the initial year of the ridesharing demonstration (1979-80), the program concentrated on large single-employer sites. Before the demonstration, GaDOT concentrated on employers with 1,000 employees or more, but with the increased resources available from the demonstration funds, the target population was expanded to employers with 100 or more employees. Employers were identified with the assistance of the Georgia Department of Labor and the local Chamber of Commerce. GaDOT then contacted all employers in this group and collected data on employer characteristics and existing transportation programs.

The Chamber of Commerce assisted GaDOT by inviting employers to breakfast meetings limited to 10 or 12 individuals. A presentation on the ridesharing program was made and employers were asked for a commitment to the program. The breakfasts enabled GaDOT to use resources more efficiently by reaching groups of employers through a single presentation. Participation by the Chamber of Commerce helped to improve credibility with private sector employers.

The procedure used for implementation of the Atlanta Ridesharing Demonstration at individual sites is described below:\*

- 1) A ridesharing field representative personally contacted corporate management (in single-employer sites) or building management (in multi-employer sites) and asked for a commitment to implement a ridesharing program. This commitment implied allocation of resources rather than a simple endorsement of the program.
- 2) The employer designated a coordinator to serve as the contact with the ridesharing program representative and distribute material and information within the company. The coordinator was required to have sufficient authority to commit company resources to the ridesharing effort.
- 3) A GaDOT field representative met with the ridesharing coordinator to develop a promotional strategy for the company and to present various ridesharing options, including:

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\*Letter of Thomas Moreland, Commissioner of Georgia DOT, to Herschel Bryant, Federal Highway Administration, dated May 29, 1979.

- Individualized matching for pools and buses;
- Preferential parking for poolers;
- Work-hour adjustments to meet pool and bus schedules;
- Sponsorship of vanpools and buspools;
- Special loading zones and shelters for pools and bus riders; and
- Provision for emergency transportation needs of employees.

GaDOT emphasized the first option, individualized employee matching, since it required the lowest level of employer commitment. If the employer agreed to this option, the GaDOT representative continued to discuss additional activities.

- 4) After the employer's role had been defined, GaDOT provided promotional material for display at the worksite. Included were posters and notices in employee bulletins and newsletters. Ridesharing coordinators were encouraged to develop their own promotional programs.
- 5) The GaDOT representative and the ridesharing coordinator prepared a procedure for publicizing employee distribution of ridesharing applications. Procedures may have included live presentation by a GaDOT representative or the ridesharing coordinator, or notices sent by mail. The employee was asked to provide the following information:
  - Origin address and geocoded coordinates;
  - Work hours;
  - Current mode;
  - Distance and cost of commuting alone;
  - Desired modal alternatives; and
  - Desired driving arrangements.

The geocoded coordinates were available from a map provided to each employee. The drive-alone cost data were utilized to compute anticipated savings by other modes. Instructions and information on ridesharing were included on the back of the application.

- 6) After survey forms were returned, employers returned completed lists to GaDOT for processing. A separate file was created for each

employer and combined with a transit database to develop ridesharing match lists. The matching routines identified other potential ridesharers and nearby MARTA bus routes. Travel distances and driving preferences (driving, riding, or sharing) were generated along with alternative-specific cost data. Half-hour scheduling flexibility was built into the program but could have been removed at employer request.

- 7) Ridesharing match lists were returned to the employer by GaDOT and distributed to employees by the ridesharing coordinator. After ridesharing match lists were distributed, employees were given the opportunity to use GaDOT's conference call capability to contact potential ridesharing partners located in another office. A GaDOT representative was available to provide further assistance, if needed.
- 8) GaDOT did conduct follow-up surveys with some major employers six months after program implementation. Follow-up contact was made with employers 6 to 12 months after program implementation, but extensive data collection was not undertaken on a regular basis.

### 3.2.3 Multi-Employer Ridesharing Program

The multi-employer ridesharing program was initiated in September 1980 and was directed at large office buildings and other high concentrations of employees in the Atlanta CBD. GaDOT provided speakers to business organizations such as Kiwanis and the Lions in order to reach large numbers of small employers efficiently.

GaDOT worked through the Chamber of Commerce to obtain listings of major office building tenants. Where necessary, field representatives contacted building managers or compiled a tenant database through a door-to-door survey. Because employers at these sites tended to be smaller, field representatives made personal presentations only if requested. Initial contacts were made by letter rather than in person.

Marketing for the program was conducted in a manner similar to that for single-employer sites. Fewer options were emphasized, however, since office building tenants often do not have control over parking and may be too few in number to justify employer-based bus service.

Options considered to be available to tenants at multi-employer sites were:

- Individualized matching pools and bus schedules;

- Work-hour adjustments to meet pool and bus schedules; and
- Provision of emergency (backup) employee transportation.

Tenants were also encouraged to make options such as preferential carpool/vanpool parking and employer-based subscription service more feasible.

Processing of applications and distribution of rideshare information was conducted in a manner similar to that for single-employer sites, with these exceptions:

- Each site was given a code, and applications were processed with this code as well as the employer code.
- The work location database was maintained for a longer period than the six-month period for single employers, in order to allow more employers to join.
- GaDOT relied more on telephone contact and less on personal contact in marketing the program to multi-employer sites.

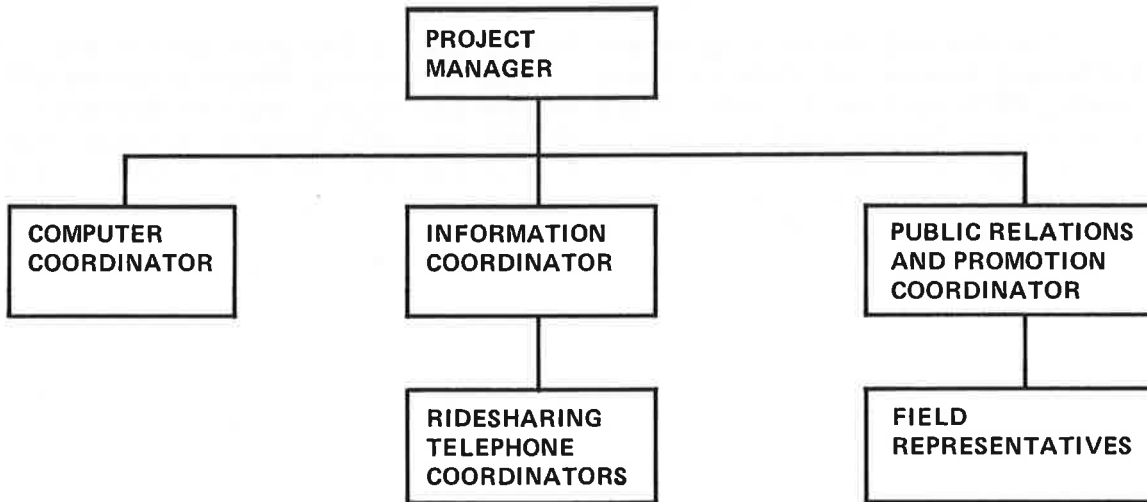
#### 3.2.4 Program Organization

The demonstration program included four full-time and four part-time employees. The organization chart is shown in Figure 3-1.

The Project Manager was a full-time employee with responsibility for overall project management and direction. Responsibilities also included coordination of ridesharing activity among various agencies.

A part-time Computer Coordinator was responsible for generating and maintaining computerized match lists, while a full-time Information Coordinator was responsible for telephone coordination activity as well as preparation and distribution of survey and marketing material to company ridesharing coordinators. Several Ridesharing Telephone Coordinators worked under the Information Coordinator to receive telephone information requests and to process and distribute marketing and survey material.

A full-time Public Relations and Promotion Coordinator was responsible for making business, governmental organizations, and the general public aware of the ridesharing program. This person also coordinated the activities of part-time Field Representatives, who were responsible for making contact with employers. GaDOT attempted to hire retired middle- and upper-level executives for these positions.



SOURCE: Moreland, Thomas D., letter to Herschel Bryant, Federal Highway Administration, May 29, 1979.

Figure 3—1

ATLANTA RIDESHARING DEMONSTRATION ORGANIZATION CHART

### 3.2.5 Project Funding

Between 1976 and 1979, GaDOT's ridesharing activities were funded primarily by general department appropriations. Other funds were provided by the Federal Aid to Urban Systems (FAUS) program and the Georgia Office of Energy Resources. Program expenditures totaled approximately \$190,000 for the three-year period.

The demonstration program was funded over a two-year period with four different sources of federal funds: Federal Highway Administration HPR funds, UMTA Section 5 funds, State of Georgia funds, and the National Ridesharing Demonstration grant. The HPR and UMTA Section 5 funds required a 20 percent state match, while the Ridesharing Demonstration funds did not. The contribution from each source is shown below, and a more detailed budget breakdown is provided in Table 3-1.

#### DEMONSTRATION FUNDING SOURCES\*

<u>Source</u>	<u>State and Local Share</u>	<u>Federal Share</u>	<u>Total</u>	<u>Percentage of Total</u>
FHWA-HPR	\$ 36,031	\$144,125	\$180,156	30%
UMTA-Section 5	90,078	90,078	180,156	30%
National Ridesharing Demonstration	<u>60,052</u>	<u>180,156**</u>	<u>240,208</u>	40%
TOTAL	\$186,161	\$414,359	\$600,520	
Percentage of Total	31%	69%		

\*SOURCE: Georgia DOT.

\*\*Total NRDP federal funding for Georgia Ridesharing Demonstration was \$250,156, but the portion allocated to the Atlanta project was \$180,156.

TABLE 3-1. ATLANTA RIDESHARING PROGRAM BUDGET

Year 1

Personnel:	
Professional	\$ 51,759
Clerical	15,763
Fringe Benefits	22,461
Travel	4,600
Computer Expenses	34,223
Marketing	86,758
Other Project Costs (Communications)	1,600
Material and Supplies	28,850
Contingencies (10%)	<u>24,902</u>
<u>Total</u>	\$270,916

Year 2

Personnel:	
Professional	\$ 54,347
Clerical	26,826
Fringe Benefits	26,671
Travel	5,290
Computer Expenses	30,221
Marketing	117,072
Other Project Costs (Communications)	5,280
Material and Supplies	31,405
Contingencies (10%)	<u>32,492</u>
<u>Total</u>	<u>\$329,604</u>
	\$600,520

SOURCE: Georgia Department of Transportation.





#### 4. PROJECT EVALUATION

Atlanta was one of five National Ridesharing Demonstration Program (NRDP) sites selected for extensive data collection to supplement the case study evaluations. This section makes use of workplace data to evaluate the major elements of the demonstration. The evaluation is organized according to three major evaluation issues and their associated research questions, described in Table 1-1. The three evaluation issues are:

- Impact of the ridesharing program on employer ridesharing activity;
- Impact of the ridesharing program on employee ridesharing activity; and
- Individual and aggregate program benefits.

The next subsection discusses these evaluation issues in some detail, including the questions to be answered in the demonstration. The remainder of the section presents the results of the evaluation.

Both project records and survey results were used in the demonstration evaluation. Project records of program contacts were kept from early 1980 until October 1981. Employee and employer surveys were conducted specifically for the evaluation, and samples of both groups were selected according to a stratification by employer size. The sample included firms that 1) both had and had not been solicited by the Georgia Ridesharing Program; and 2) both had and had not provided employee transportation assistance. Employers contacted were asked to distribute ridesharing questionnaires to employees and to appoint an individual to disseminate information from the Georgia Ridesharing Program. Georgia DOT kept records of employers contacted, employers who joined the ridesharing program, employees who responded to a ridesharing questionnaire, and employees who reported switching work travel mode after the implementation of the ridesharing program activity. Follow-up surveys were conducted of participating employees six months after program implementation; employees were asked if they had started ridesharing in the past six months. Georgia DOT released survey results from 15 major employers but stated that many employers did not want the results published. Thus, program records were only useful in determining how many employers and employees were contacted through the program and how many responded through the questionnaire.

The data were expanded to reflect variable rates of sampling within employer size categories and non-response bias among different employer-employee subgroups. A one-question travel mode postcard was distributed to control samples of employees in order to indicate the degree of non-response bias on the long survey form. (See Appendix A for additional details on survey design and methodology.)

Individual evaluations have two purposes in the overall NRDP evaluation process. One is to provide input to a cross-cutting study of the five extensive data collection sites by the Transportation Systems Center (TSC). This objective requires that evaluation procedures be standardized across all studies to the greatest extent possible. The other purpose of individual evaluations is to identify any unique program characteristics or results that may be transferable to other sites.

#### 4.1 EVALUATION ISSUES

This subsection discusses each of the three major issues and associated research questions by which this evaluation was organized. A summary of these issues is contained in Table 1-1.

##### 4.1.1 Factors Influencing Employer Participation in Ridesharing Programs

Four questions address the issue of employer participation in ridesharing programs. These are:

- 1) What is the relationship between ridesharing program contact and employer participation?

The impact of the Georgia Ridesharing Program can be measured in part by examining those employers who have had contact with and/or received assistance from the Georgia Ridesharing Program, as well as the characteristics of those employers who offer transportation or ridesharing assistance. Also of interest is the type of contact and assistance received from the Georgia Ridesharing Program. The impacts of specific promotional activities will have transferable implications for other ridesharing programs.

- 2) What are the levels and types of employer ridesharing participation?

The general term "participation" is used to describe employer ridesharing activity because the Georgia Ridesharing Program (GRP) offered few direct services to employees and did not provide transportation service. The primary purpose of the GRP was to encourage employers to implement in-house ridesharing programs on their own. Thus, participation refers to a range of activities, from posting notices and issuing bulletins to providing vehicles and/or financial incentives to encourage employee ridesharing. Measurement of the change in employer-based ridesharing activity is the key step in determining whether the GRP did have an impact on employer participation in ridesharing.

- 3) What employer characteristics tend to foster participation in ridesharing programs?

Certain employer characteristics are hypothesized to influence employer propensity to participate in ridesharing. These include size, type of business, ratio of parking spaces to number of employees, availability of transit service, attitudes about fringe benefits and the labor market, and attitudes toward work-hour flexibility.

- 4) Why do employers provide transportation program assistance?

The variables described under Question #3 as well as employer attitudes toward providing transportation assistance will influence their decisions to provide transportation programs. These characteristics will also influence the employer's decision to implement some other type of transportation program, such as a transit pass subsidy.

#### 4.1.2 Factors Influencing Employee Participation in Ridesharing Programs

Three research questions that address the issue of employee participation in ridesharing programs are discussed below:

- 1) What are the characteristics of employees who are most likely to be familiar with the Georgia Ridesharing Program?

The GRP was primarily employer-based, but several program elements involved direct contact with employees. These activities included presentations and the implementation of a phone service for ridesharing matching. Examination of both the demographic and commuting characteristics of employees who were reached by the program provides both a measure of the types of employees who are interested in ridesharing and a measure of the program's success in reaching its target market.

- 2) What are the characteristics of employees who are most likely to use ridesharing as their primary commuting mode?

Ultimately, the decision to commute by the ridesharing mode is made at the employee level. Characteristics such as occupation, income, work-hour flexibility, and distance of work trip are hypothesized to influence the decision to rideshare. Knowledge of those employee characteristics that influence this decision can help rideshare program coordinators target their programs more accurately. Also, employee attitudes toward commuting are helpful in answering these questions.

- 3) What are the differences between employees who rideshare and those who do not?

Ridesharing is a relatively dynamic phenomenon, with carpools forming and disappearing as riders change residences and jobs. Examination of the characteristics of ridesharers and non-ridesharers can aid evaluation of ridesharing program marketing strategies. Potential areas of difference include demographic characteristics, work-related characteristics, commuting times and distances, attitudes toward commuting, and employer participation in ridesharing programs.

#### 4.1.3 Individual and Aggregate Costs and Benefits of the Georgia Ridesharing Program

Three research questions that address the issue of ridesharing program costs and benefits are discussed briefly below:

- 1) What are the costs and benefits of the ridesharing program to employers?

The Georgia Ridesharing Program was designed to limit employer expense in the early stages. Employers were, however, encouraged to develop ongoing ridesharing programs that required a commitment of personnel and other resources. Employers were asked a number of questions about program benefits that generally involved both quantitative considerations (avoid construction of new parking spaces, allow expansion of facilities) and qualitative considerations (respond to fuel shortage, provide additional fringe benefits).

- 2) What are the costs and benefits of the ridesharing program to employees?

The decision to rideshare generally involves a tradeoff between increased commuting time and reduced commuting costs. A reasonable hypothesis is that ridesharing becomes more attractive with increased commuting distance. Potential cost savings are greater for commuters with long work trips; any additional time required to pick up passengers involves a smaller proportion of total travel time. It may, however, involve more effort for a commuter with a long work trip to find a ridesharing partner.

- 3) What are the costs and benefits of ridesharing programs to the general public?

The element most easily quantified is the cost of the program to the public in terms of government expenditures. Benefits that include reduced fuel consumption and reduced road congestion are generally more difficult to quantify but can be estimated on the basis of the number of

individuals shifting from the auto driver mode to the ridesharing mode, and the average cost per mile of auto travel.

## 4.2 EVALUATION OF EMPLOYER RIDESHARING ACTIVITY

This subsection of the report evaluates the demonstration with regard to the factors influencing employer participation in the ridesharing program. The evaluation responds to the four research questions listed under this issue in Section 4.1.1. The employer profile survey (provided in Appendix B of this report) served as the primary source of data, with Georgia Ridesharing Program records used as a secondary data source. Results of both the employer and employee surveys have been expanded to represent the estimated number of employers and employees in the Atlanta SMSA. Raw sample sizes are presented along with the weighted results to assist the reader in evaluating the statistical reliability of the data.

It should be noted that the survey findings on low-response questions must be read carefully, due to the heavy weighting assigned to the response of small firms. Since each employer in the 1-19 employee category receives a weight of 590, illogical responses by only one or two small employers can skew the results on low-response questions.

Tests of statistical significance were conducted on selected tables; specifically those for which a further explanation of the findings would be helpful to the reader. In general, the employee survey produced more reliable results. This was due to both the larger sample size and the fact that the ratios of population to sample size in each strata were relatively similar. In the employer survey, smaller employers received a much greater weight than larger employers, thereby reducing the reliability of the aggregate sample.

### 4.2.1 Ridesharing Program Contact

In its initial phase, the resources of the GRP were concentrated on employers with over 1,000 employees. The addition of National Ridesharing Demonstration Program funds resulted in the inclusion of employers with 500 to 1,000 employees. In the later stages of the program, the GRP began to concentrate on major downtown Atlanta office buildings with multiple smaller tenants, a focus that brought a large number of smaller employers into contact with the program.

Data on which to evaluate program activity are limited for two reasons. One of the objectives of the GRP was to encourage employers to become involved in employer transportation by appointing an individual(s) to coordinate transportation-related activity. The GRP made follow-up contact with major employers six months after the original visit. Although employers

and employees were encouraged to use the resources of the GRP and Georgia DOT to develop carpools and vanpools, the GRP generally did not initiate further contact. A second reason for the limited availability of detailed records involved the desire on the part of many large firms for confidentiality. Employee ridesharing questionnaires were returned on the condition that the information not be released.

Project records received in October 1981 showed that 91 employment sites (with a total of 112,528 employees) had been contacted by the GRP during 1980 and 1981 and had distributed ridesharing questionnaires. It should be noted that this total does include several major office buildings that contained multiple employers. The average employment site population of 1,237 illustrates the emphasis on large employers, but as the program progressed, a greater number of smaller employers were contacted.

Table 4-1 summarizes the activity of 15 major employers as of 1981, based on GRP's evaluation. Although it is not known whether this sample is representative of all employers contacted, it does indicate that the GRP was effective in reaching significant numbers of employees at major employment sites.

Table 4-2 summarizes the employer profile survey results related to program contact. The survey shows that 19 percent of all employers in the Atlanta region were familiar with the activities of the GRP. Given that the GRP was primarily oriented toward a few major employers, this is a high rate of market penetration and indicates that the multi-employer site program was successful.

Question B on Table 4-2 indicates that over 22 percent of employers reporting contact with the GRP initiated the contact themselves. This provides further evidence that publicity about GRP activities spread beyond the large firms contacted in the outreach program. Most firms receiving assistance from the GRP received information only, and the overwhelming majority expressed satisfaction with the service received.

Table 4-3 includes information on employer contact with the GRP by employer size. As expected, large firms are far more likely to know about and be involved with GRP. Interestingly, 73 percent of the employers in the largest category (500 employees or more) reported having contact with GRP, but only 64 percent claimed that they were knowledgeable about GRP activities. It thus appears that 9 percent of the large employers in the region were contacted by GRP but did not bother to learn about the program. Nineteen percent, however, sought out the GRP on their own initiative.

TABLE 4-1. GRP EVALUATION RESULTS

COMPANY	EMPLOYEES	RECEIVED QUESTIONNAIRE	PERCENT OF EMPLOYEES	NUMBER OF EMPLOYEES RESPONDING TO QUESTIONNAIRE	RESPONDENTS AS PERCENT OF ALL EMPLOYEES	CHANGED MODE TO RIDESHARING	PERCENT OF EMPLOYEES RESPONDING TO QUESTIONNAIRE WHO CHANGED MODE
C & S National Bank	1,250	198	16%	59	5%	5	8%
Equifax	1,400	411	29	356	25	45	13
Equifax (Century Center)	400	84	21	29	7	9	31
Life of Georgia	800	82	10	75	9	10	13
Department of Offender Rehabilitation	800	72	9	34	4	6	18
Sears Roebuck and Company	2,800	392	14	147	5	34	23
Georgia Regional Hospital	600	224	37	87	15	1	1
Trust Company Bank	2,200	1,204	55	646	29	35	5
American Telephone and Telegraph	1,000	56	6	39	4	9	23
Southern Bell (Peachtree Industrial)	900	422	47	249	28	26	10
Southern Bell (Perimeter Center)	2,700	1,569	58	1,239	46	190	15

Table continued on following page.

TABLE 4-1 (Continued). GRP EVALUATION RESULTS

COMPANY	EMPLOYEES	RECEIVED QUESTIONNAIRE	PERCENT OF EMPLOYEES	NUMBER OF EMPLOYEES RESPONDING TO QUESTIONNAIRE	RESPONDENTS AS PERCENT OF ALL EMPLOYEES	CHANGED MODE TO RIDESHARING	PERCENT OF EMPLOYEES RESPONDING TO QUESTIONNAIRE WHO CHANGED MODE
Cobb General Hospital	600	99	17%	30	5%	2	7%
Coca-Cola Company	2,400	355	15	295	12	81	28
Anaconda Aluminum	450	72	16	43	10	2	5
Federal Reserve Bank	800	271	34	171	21	9	5
TOTAL	19,100	5,511	29%	3,499	18%	464	13%

SUMMARY

15 major employers representing over 19,000 employees.

29% of employees received questionnaires; 18% returned questionnaires.

13% of employees responding to questionnaire changed mode to ridesharing; 2.4% of all employees changed mode to ridesharing.

COMPANY-SPONSORED VANPOOL PROGRAMS

As a result of the GRP, 32 vanpools have been added to the Company-Sponsored Vanpool Programs in the Atlanta metro area, representing approximately 480 riders.

SOURCE: Georgia Ridesharing Program, 1981.



TABLE 4-2. EMPLOYER EXPOSURE TO THE GEORGIA RIDESHARING PROGRAM

	ESTIMATED NUMBER OF FIRMS	PERCENT	SAMPLE SIZES	CONFIDENCE INTERVAL OF PERCENTAGE ESTIMATE (95%)
<b>A. ARE YOU FAMILIAR WITH THE ACTIVITIES OF THE GEORGIA RIDESHARING PROGRAM?</b>				
Yes	7,249	19.0%	76	+/- 8.6%
No	30,910	81.0	168	+/- 8.6%
TOTAL	<u>38,159</u>	<u>100.0</u>	<u>244</u>	
<b>B. HAVE YOU EVER CONTACTED OR BEEN CONTACTED BY THE GEORGIA RIDESHARING PROGRAM?</b>				
Yes--we initiated contact	650	1.7	16	+/- 2.9%
Yes--GRP initiated contact	2,224	5.8	50	+/- 5.2%
No	35,230	92.5	173	+/- 5.9%
TOTAL	<u>38,104</u>	<u>100.0</u>	<u>239</u>	
<b>C. WHICH OF THE FOLLOWING DID YOU RECEIVE FROM GRP?</b>				
Information only (brochures, briefing)	2,774	80.2	35	+/- 17.3%
Matching assistance (in-house GRP match lists)	667	19.3	19	+/- 17.1%
Assistance in obtaining or operating vanpool vans	16	0.5	9	+/- 3.1%
TOTAL	<u>3,457</u>	<u>100.0</u>	<u>63</u>	

Table continued on following page.

TABLE 4-2 (Continued). EMPLOYER EXPOSURE TO THE GEORGIA RIDESHARING PROGRAM

D. WERE YOU GENERALLY SATISFIED WITH THE SERVICE RECEIVED FROM THE GRP?	ESTIMATED NUMBER OF FIRMS	PERCENT	SAMPLE SIZES	CONFIDENCE INTERVAL OF PERCENTAGE ESTIMATE (95%)
Yes	3,991	97.4%	58	+/- 7.0%
No	105	2.6	4	+/- 7.0%
TOTAL	<u>4,096</u>	<u>100.0</u>	<u>62</u>	

SOURCE 1982 Employer Profile Survey.

TABLE 4-3. ESTIMATED EMPLOYER FAMILIARITY AND CONTACT WITH GEORGIA RIDESHARING PROGRAM, BY FIRM SIZE

	FIRM SIZE (Number of Employees)						Total	
	Less than 20	20-99	100-499	500 or More	All Firms			
	#	#	#	#	#	%	%	
<b>A. FAMILIAR WITH GRP ACTIVITIES</b>								
Yes	6,488	440	250	71	7,249	64.1*	19.0	
No	25,952	4,221	697	40	30,910	35.9	81.0	
TOTAL	32,441	4,660	947	111	38,159	100.0	100.0	
<b>B. CONTACT WITH GRP</b>								
Yes-we initiated	590	0	39	21	650	19.0*	1.7	
Yes-GRP initiated	1,769	264	132	59	2,224	54.0*	5.8	
No	30,081	4,397	723	29	35,231	27.0	92.5	
TOTAL	32,441	4,660	894	109	38,104	100.0	100.0	
<b>C. EMPLOYER CONTACT AND SPONSORSHIP OF RIDESHARE PROMOTIONS</b>								
In contact with GRP and have employee rideshare program	0	0	105	43	149	39.7*	0.4	

Table continued on following page.

TABLE 4-3 (Continued). ESTIMATED EMPLOYER FAMILIARITY AND CONTACT WITH GEORGIA RIDESHARING PROGRAM, BY FIRM SIZE

	FIRM SIZE (Number of Employees)								Total		
	Less than 20		20-99		100-499		500 or More		All Firms		
	#	%	#	%	#	%	#	%	#	%	
C. EMPLOYER CONTACT AND SPONSORSHIP OF RIDESHARE PROMOTIONS (Continued)											
Not in contact with GRP but have rideshare program	0	0.0	352	7.5*	66	7.3*	7	6.4*	424	1.1	
In contact with GRP but do not have rideshare program	2,359	7.3	264	5.7	66	7.3	36	33.3*	2,725	7.2	
Neither in contact nor have rideshare program	30,081	92.7	4,045	86.8	658	73.6*	23	20.6*	34,806	91.3	
TOTAL	32,441	100.0	4,660	100.0	894	100.0	109	100.0	38,104	100.0	
SAMPLE SIZE (Total)	(59)		(58)		(73)		(64)		(254)		

\*Significant difference from mean for all firms at 95 percent level of confidence.

SOURCE: 1982 Employer Profile Survey.

GRP efforts were also effective in reaching employers in the 100-499 employee category. Over 26 percent of these employers were familiar with the program and nearly one in five reported having some contact. Less than 10 percent of employers in the two smaller categories reported having contact with the GRP. Although 20 percent of the employers in the 1-19 employee category reported that they were familiar with the project, this result is suspect due to the heavy weighting employed in this category.

The likelihood that an employer will offer a ridesharing program is almost directly related to size (Question C, Table 4-3). Over 46 percent of the largest employers offer ridesharing programs, compared to 19.1 percent in the 100-499 employee category and 7.5 percent among the 20-99 employee category. None of the employers in the smallest category offered a ridesharing program -- a logical result, since informal contacts would be sufficient to establish carpools in a firm with fewer than 20 employees.

The employer profile survey indicates that the GRP successfully reached its target market of large employers. The fact that employers in the largest category were much more likely than other employers to have ridesharing programs indicates that this strategy was productive. It is also probable, however, that larger firms are more likely than smaller ones to initiate ridesharing programs on their own. Ridesharing promotion that aimed at the 100-499 employee group also appears to have been productive, since nearly 62 percent of employers (105 of 171) in this group who had contact with GRP reported having an employee ridesharing program (Table 4-3).

#### 4.2.2 Levels and Types of Employer Ridesharing Program Participation

4.2.2.1 Employer Ridesharing Activities - Table 4-4 summarizes the types of ridesharing assistance provided by employers to their employees. The majority of employers who offer any kind of transportation assistance to employees provide company cars for employee commuting. About 1.5 percent of the employers supply information on commuting options or assistance in carpool formation. Other methods of assistance are provided by only a tiny fraction of area employers.

Stratification by size in Table 4-4A shows that company cars constitute the major form of employee transportation assistance offered by smaller employers. Seventy-four percent of the 5,609 companies offering company cars for commuting are in the small employer (1-19 employee) category. The two middle categories, however, have the highest percentage of firms offering company cars, 25 percent for the 100-499 employee category, and 26 percent for the 20-99 employee category. The respective percentages are 11 percent for the largest firms (2,500 employees) and 12 percent for the smallest firms (1-19 employees).

TABLE 4-4. TYPE OF EMPLOYER RIDESHARING ASSISTANCE PROVIDED

<u>ASSISTANCE</u>	<u>ESTIMATED NUMBER OF FIRMS</u>	<u>ESTIMATED PERCENT OF FIRMS*</u>	<u>SAMPLE SIZE</u>	<u>CONFIDENCE INTERVAL OF PERCENTAGE ESTIMATE (95%)</u>
Company Cars	5,609	14.2	46	+/- 7.5%
Information on Commuting Options	609	1.5	37	+/- 2.6%
Assist in Carpool Formation	581	1.5	44	+/- 2.6%
Special Carpool Incentives	53	0.1	11	+/- 0.6%
Provide Vanpool Vans	17	0.04	3	+/- 0.4%
Sell MARTA Passes	7	0.02	4	+/- 0.3%
Contract Bus Service	2	0.004	1	+/- 0.1%

\*Multiple responses permitted; sample sizes are based on number of responses.

SOURCE: 1982 Employer Profile Survey.

TABLE 4-4A. EMPLOYEE RIDESHARING ASSISTANCE STRATIFIED BY SIZE

	PERCENT OF CATEGORY EMPLOYERS PROVIDING ASSISTANCE			
	Employer Size			
	< 20 Employees	20-99 Employees	100-499 Employees	500 or More Employees
Company Cars (N=46)	12.3%	25.9%*	25.0%*	11.1%
Information on Commuting Options (N=37)	0.0	9.1*	13.7*	34.4*
Assist in Carpool Formation (N=44)	0.0	7.3*	19.2*	41.3*
Special Carpool Incentives (N=11)	0.0	0.0	4.2*	12.9*
Provide Vanpool Vans (N=3)	0.0	0.0	1.4*	3.2*
Sell MARTA Passes (N=4)	0.0	0.0	0.0	6.4*
Contract Bus Service (N=1)	0.0	0.0	0.0	1.6*

N = SAMPLE SIZE.

\*Significant difference from mean for all firms at 95 percent level of confidence.

SOURCE: 1982 Employer Profile Survey.

Firms providing ridesharing assistance tend to be concentrated in the larger categories, as is evident in Table 4-4A. Firms with under 20 employees show no participation in ridesharing or transit-related assistance. Actions requiring substantial investments of time and/or resources, such as provision of vans or sale of bus passes, are concentrated almost exclusively among the largest employers.

4.2.2.2 Employer Carpool/Vanpool Promotional Activities - Table 4-4B summarizes specific employer actions involving carpool/vanpool assistance. Most activities involve information dissemination or official encouragement. The number of employers who reported using the GRP match lists was small (87) and over three times as many employers (268) reported having their own in-house matching service. It should be noted, however, that in-house matching services can include relatively low-cost actions, such as the provision of a bulletin board for ridesharing notices.

The majority of firms providing carpool/vanpool assistance to employees help relatively few people each month. Of 266 firms responding, 221, or 83 percent, reported that they assist fewer than 5 employees each month. Approximately 26 percent of the 581 firms providing carpool/vanpool assistance reported that a specific office or individual within their organization had responsibility for ridesharing. Most of those firms (69 percent) reported that one person was responsible for ridesharing activity.

#### 4.2.3 Employer Characteristics That Foster Georgia Ridesharing Program Participation

4.2.3.1 Type of Organization - Selected employer characteristics as related to participation in the GRP and provision of ridesharing assistance are summarized in Table 4-5. The GRP was most effective in reaching employers in three industries: financial services, health and social services, and government/military. Government/military and health and social services employers were relatively more likely to have contact with the GRP and not necessarily a ridesharing program. Employers instituting ridesharing programs on their own initiative were most likely to fall into the educational, government/military, and other commercial service sectors.

4.2.3.2 Work Hour Flexibility - Only one-third of employers permitted their employees to vary starting times. Over two-thirds (68 percent) of those employers who were in contact with the GRP, however, reported that their employees could vary their starting times. This was hypothesized to be a



TABLE 4-4B. TYPE OF CARPOOL/VANPOOL ASSISTANCE PROVIDED

<u>TYPE OF ASSISTANCE</u>	<u>ESTIMATED NUMBER OF FIRMS</u>	<u>ESTIMATED PERCENT OF FIRMS PROVIDING ASSISTANCE (TOTAL=581)*</u>	<u>SAMPLE SIZE</u>	<u>CONFIDENCE INTERVAL OF PERCENTAGE ESTIMATE (95%)</u>
Official Encouragement by Management	303	52.2	29	+/- 20.1%
In-house Matching Service	268	46.1	22	+/- 20.0%
Employee Meetings to Facilitate Carpool Formation	213	36.7	10	+/- 19.4%
Distribute Carpool/ Vanpool Brochures	179	30.8	31	+/- 18.5%
Distribute Carpool/ Vanpool Posters	132	22.7	30	+/- 16.8%
Georgia Rideshare Program Matching	87	15.0	17	+/- 14.3%

\*Multiple responses permitted; sample sizes are based on number of responses.

SOURCE: 1982 Employer Profile Survey.

TABLE 4-5. SELECTED EMPLOYER CHARACTERISTICS  
BY EMPLOYER CONTACT WITH GRP AND PROVISION OF RIDE SHARING ASSISTANCE

A. INDUSTRY TYPE	CONTACT WITH GRP AND ASSISTANCE PROGRAM		NO CONTACT WITH GRP BUT ASSISTANCE PROGRAM		CONTACT WITH GRP BUT NO ASSISTANCE PROGRAM		NO CONTACT WITH GRP AND NO ASSISTANCE PROGRAM		ALL EMPLOYERS	
	#	%	#	%	#	%	#	%	#	%
Manufacturing	17	0.6	13	0.5	32	1.1	2,784	97.8*	2,845	7.6
Retail, Wholesale, or Supplier	16	0.2	0	0.0	603	6.1	9,196	93.7	9,817	26.1
Financial Services	0	0.0	13	0.5	599	22.9*	1,998	76.6*	2,610	7.0
Legal, Business Services	7	0.1	13	0.3	88	1.8	4,821	97.8*	4,929	13.1
Other Commercial Services	2	0.03	101	1.9	2	0.03	5,098	98.0*	5,203	13.9
Health and Social Services	24	0.7	2	0.05	606	16.7*	2,994	82.6*	3,626	9.6
Transportation, Communications, Utilities	7	0.4	13	0.8	10	0.6	1,728	98.3*	1,758	4.7
Educational	0	0.0	178	8.9*	15	0.8	1,799	90.3	1,992	5.3
Government/Military	76	2.6*	91	3.1	771	26.1*	2,013	68.2*	2,952	7.9
Other	0	0.0	0	0.0	0	0.0	1,784	100.0*	1,784	4.8
	149	0.4	424	1.1	2,725	7.3	34,216	91.2	37,515	100.0

Table continued on following page.

TABLE 4-5 (Continued). SELECTED EMPLOYER CHARACTERISTICS  
BY EMPLOYER CONTACT WITH GRP AND PROVISION OF RIDESHARING ASSISTANCE

	CONTACT WITH GRP AND ASSISTANCE PROGRAM		NO CONTACT WITH GRP BUT ASSISTANCE PROGRAM		CONTACT WITH GRP BUT NO ASSISTANCE PROGRAM		NO CONTACT WITH GRP AND NO ASSISTANCE PROGRAM		ALL EMPLOYERS	
	#	%	#	%	#	%	#	%	#	%
<b>B. EMPLOYEES MAY VARY WORK START TIME</b>										
Yes	83	0.7	13	0.1	1,868	15.8*	9,862	83.4*	11,826	33.3
No	64	0.3	398	1.7	856	3.6	22,394	94.4	23,712	66.7
TOTAL	147	0.4	411	1.2	2,724	7.7	32,256	90.8	35,538	100.0
<b>C. RATIO OF PARKING SPACES/EMPLOYEES</b>										
43										
No Parking Offered	18	0.1	0	0.0	1,273	9.5	12,126	90.4	13,417	43.0
0.01-0.25	15	10.0*	13	8.8*	3	2.3	118	78.9*	149	0.4
0.25-0.50	24	2.0*	116	9.6*	5	0.4	1,058	88.0	1,202	3.8
0.50-0.75	14	0.6	0	0.0	30	1.3	2,217	98.1*	2,260	7.2
0.75-1.00	17	0.2	116	1.7	683	9.7	6,212	88.4	7,028	22.5
> 1.00	45	0.6	91	1.3	103	1.4	6,929	96.7	7,168	23.1
TOTAL	133	0.4	336	1.1	2,097	6.7	28,660	91.8	31,224	100.0
SAMPLE SIZE (Total)	33		13		33		160		239	

\*Significant difference from employer category mean at 95 percent level of confidence.

SOURCE: 1982 Employer Profile Survey.

function of employer size, but a breakdown by size class shows little variation by employer size. A further analysis indicates that 30 percent of employers in the largest category allow employees to vary starting times, compared to 25 percent in the 100-499 employee category, 20 percent in the 20-99 employee category, and 34 percent in the under-20 employee category. One possible explanation is that employers allowing work-hour flexibility are more attuned to employee transportation needs, and thus more likely to respond to the GRP.

4.2.3.3 Parking Availability - It was expected that the availability of parking would influence the level of employer interest in ridesharing. Table 4-5 shows that ridesharing program participation varies as expected with constrained parking supply, but only among employers who provide some parking. Approximately 19 percent of employers with four or more employees per parking space provide some ridesharing assistance. Employers with 2 to 4 employees per space show a ridesharing assistance rate of 11.6 percent, while the figure drops to under 2 percent for employers with 2 or fewer spaces per employee.

The lack of interest in ridesharing activity by employers who offer no parking is a surprising finding. Part of the explanation is that most of the firms that do not provide parking themselves are located near free-parking facilities. Over 85 percent of employers who reported that they did not provide employee parking stated that free parking was available within one-quarter mile of their locations; this compares to 76 percent for employers who do provide parking. The difference is even more striking when paid parking is considered. Among employers not providing employee parking, 27 percent reported that paid parking was available within one-quarter mile; this compared to only 3 percent for employers who did provide parking. These findings indicate that employers who do not offer parking tend to be located in higher-density areas where paid parking and transit service are available.

A further explanation involves employer size. In the three largest employer categories, between 10 percent and 13 percent of employers did not provide employee parking. Among firms in the under-20 employee category, however, nearly 60 percent did not provide employee parking. Because the GRP emphasized large employers and because formal ridesharing programs are not necessary in very small organizations, the predominance of small employers among those not providing parking helps to explain their lack of participation in the GRP and in ridesharing activity.

The experience of the GRP indicates that ridesharing programs should, within the limits of their resources, orient their marketing efforts toward employers who are providing an inadequate amount of employee parking but are attempting to manage the shortage. Employers who provide no parking and those who offer adequate amounts of parking are less likely to respond to a ridesharing promotion.

#### 4.2.4 Employer Attitudes Toward Ridesharing Activity

Employer attitudes toward employee transportation activity in general and ridesharing activity in particular provide insight into potentially effective ridesharing program marketing strategies. Examining the attitudes of both employers who do provide assistance and those who do not can assist in the structuring and marketing of ridesharing programs.

4.2.4.1 Attitudes of Employers Providing Assistance - Table 4-6 summarizes the reasons given by employers for providing transportation assistance. Section a shows that most employers are motivated by a desire to respond to employee needs. Transportation assistance offers advantages as a fringe benefit in that most forms of assistance are relatively inexpensive to provide and not all employees avail themselves of them.

"Response to fuel shortages" was given as a reason for providing transportation benefits by only 5.3 percent of all employers offering transportation assistance, but by almost half of the employers supplying ridesharing assistance (Section B). The survey was taken approximately two years after the last fuel shortage ended, indicating that the shortage had a significant influence on those employers who have implemented ridesharing programs.

It might be expected that employers with limited parking are more likely to provide transportation and ridesharing assistance. When giving reasons for such assistance, however, few employers mentioned parking requirements. Most gave more altruistic reasons, such as a desire to improve employee benefits, response to employee requests, and response to the fuel shortage.

Table 4-6A furnishes a breakdown of reasons for transportation assistance by type of assistance provided. Almost all employers offering carpool assistance cite the fuel shortage as a reason for doing so. Employers providing company cars gave only two reasons for doing so: to provide a fringe benefit and to respond to employee requests.

4.2.4.2 Attitudes of All Surveyed Employers Toward Ridesharing - The advantages and disadvantages of employer-sponsored ridesharing as perceived by employers are shown in Table 4-7. Employers were asked to check a first, second, and third priority in both the "advantage" and "disadvantage" columns. The advantages of these programs, as perceived by employers, are benefits that accrue to the general public: energy conservation and alleviation of traffic congestion. The disadvantages cited by employers, on the other hand, are problems that directly affect the employer, including difficulty in initiating the program, potential legal liability, and the fact that carpoolers do not work late. It thus appears that most employers view ridesharing assistance in terms of a sacrifice for the general public good.

TABLE 4-6. EMPLOYERS' REASONS FOR PROVIDING  
EMPLOYEE TRANSPORTATION ASSISTANCE

A. RESPONSES FROM EMPLOYERS PROVIDING ALL KINDS OF  
EMPLOYEE TRANSPORTATION ASSISTANCE\*

<u>Reasons Checked</u>	<u>Estimated Number of Firms</u>	<u>Percent**</u>	<u>Sample Size</u>	<u>Confidence Interval of Percentage Estimate (95%)</u>
Provide Employee Fringe Benefit	1,951	30.7	33	+/- 18.5%
Response to Employee Requests	957	17.7	24	+/- 15.3%
Response to Fuel Shortage	338	5.3	40	+/- 9.0%
Improve Standing in Labor Market	119	1.9	6	+/- 5.5%
Allow Move to New Location	91	1.4	3	+/- 4.7%
Reduce Parking Requirements	78	1.2	12	+/- 4.4%
Comply with Local Zoning or Government Requirements	17	0.2	3	+/- 1.8%
Allow Expansion at Current Location	2	0.03	1	+/- 0.6%
Other	672	11.8	9	+/- 13.0%

\*Includes distribution of transit information and passes, use of company cars, and carpool/vanpool assistance.

\*\*Multiple responses permitted per firm.

Table continued on following page.

TABLE 4-6 (Continued). EMPLOYERS' REASONS FOR PROVIDING  
EMPLOYEE TRANSPORTATION ASSISTANCE

B. RESPONSES FROM EMPLOYERS PROVIDING RIDESHARING ASSISTANCE

<u>Reasons Checked</u>	<u>Estimated Number of Firms</u>	<u>Percent**</u>	<u>Sample Size</u>	<u>Confidence Interval of Percentage Estimate (95%)</u>
Response to Fuel Shortage	279	48.4	32	+/- 20.0%
Provide Employee Fringe Benefit	168	29.1	14	+/- 18.2%
Response to Employee Requests	141	24.4	12	+/- 17.2%
Improve Competitive Standing in Labor Market	105	18.2	4	+/- 15.5%
Reduce Parking Requirements	61	10.5	9	+/- 12.3%
Comply with Local Zoning and Government Requirements	17	2.9	3	+/- 6.7%
Allow Move to New Location	3	0.5	2	+/- 2.8%
Allow Expansion at Current Location	2	0.3	1	+/- 2.2%
Other	15	2.6	2	+/- 6.4%

SOURCE: 1982 Employer Profile Survey.

TABLE 4-6A. EMPLOYERS' REASONS FOR TRANSPORTATION ASSISTANCE  
BY TYPE OF ASSISTANCE PROVIDED

<u>REASONS FOR ASSISTANCE</u>	<u>INFORMATION ONLY</u>	<u>CARPOOL ASSISTANCE</u>	<u>SUBSCRIPTION BUS</u>	<u>COMPANY CARS</u>
Reduce Parking Requirements	3.1%	10.6%	33.3%	0.0%
Respond to Fuel Shortage	10.4	48.4	33.3	0.0
Improve Labor Market Standing	0.5	18.2	0.0	0.2
Make Move Possible	21.3	0.5	0.0	0.0
Allow Expansion of Facilities	0.0	0.3	0.0	0.0
Provide Fringe Benefit	0.5	29.0	55.6	33.0
Respond to Employee Requests	28.1	24.4	77.8	12.7
Comply with Government Requirements	0.0	2.9	0.0	0.0
Estimated Number of Employers Providing	413	577	9	5,349
SAMPLE SIZE	13	42	5	35

SOURCE 1982 Employer Profile Survey.



TABLE 4-7. ADVANTAGES AND DISADVANTAGES  
OF EMPLOYER-SPONSORED RIDESHARING PROMOTION

	<u>FIRST PRIORITY</u> (%)	<u>SECOND PRIORITY</u> (%)	<u>THIRD PRIORITY</u> (%)
<b>A. <u>ADVANTAGE CHECKED</u></b>			
Energy Conservation	46.3	23.7	12.1
Relieve Traffic Congestion	31.1	39.9	11.3
Provide More Visitor Parking	5.7	4.6	11.2
Reduce Parking Requirements	4.5	3.0	17.7
Improve Employee Punctuality	4.4	4.8	8.3
Provide Fringe Benefit	2.3	0.1	9.0
Reduce Absenteeism	2.3	6.2	2.8
Improve Employee Morale	2.2	10.8	5.4
Expand Available Labor Market	0.3	4.3	11.7
Competitive Standing in Labor Market	0.3	0.3	4.6
Improve Public Image	0.3	0.3	5.4
Reduce Overtime Requirements	< 0.1	0.0	0.1
Expand Facilities	0.0	1.9	0.4
Other	0.3	0.0	0.1
<b>B. <u>DISADVANTAGE CHECKED</u></b>			
Difficult to Initiate	32.4	16.2	12.2
Potential Liability Risks	16.3	8.8	10.0
Carpoolers Do Not Work Late	16.1	20.8	20.1
Inappropriate Employer Role	14.7	6.9	11.6
Few Employees Benefit	11.9	14.6	4.2
Insurance Costly	2.2	12.2	9.7
Carpoolers Are Not Punctual	2.1	3.5	9.7
High Start-up Costs	1.0	2.9	5.8
Potential Labor Problem	0.7	0.4	4.7
High Staff Time Requirements	0.4	2.8	3.9
High Operating Costs	0.1	3.1	7.5
Regulatory Restrictions	< 0.1	2.4	0.1
Carpoolers Work Fewer Hours	0.0	4.9	0.4
Other	2.1	0.5	0.1

SOURCE: 1982 Employer Profile Survey.

In general, those employers who have implemented ridesharing programs see more direct benefits from them. Approximately 30 percent of employers providing transportation and ridesharing assistance cited employee fringe benefits as a reason for doing so (Table 4-6). In the general sample, however, (Table 4-7) only 2 percent of employers cited "fringe benefits" as their first priority advantage, and only 11 percent checked it as one of their first three priorities. Nearly 12 percent of all employers cited limited employee benefit as the major perceived disadvantage of ridesharing assistance, while nearly 30 percent checked it (over the three priority categories). It is clear that a major challenge in marketing ridesharing programs to employers is to persuade them to view the employee fringe benefit question in a positive rather than a negative light.

Table 4-8 shows the first priority disadvantages stratified by type of ridesharing assistance provided. This table demonstrates that employers who do promote carpooling have different attitudes from those who provide no transportation assistance. In particular, employers who promote carpooling are less negative about the role of employers in employee transportation, the difficulties in initiating transportation assistance, and the fact that few employees benefit. They do, however, show much greater concern about the fact that carpoolers do not work late. The concern of employers who provide company cars over liability risk is understandable, but the strong conviction on the part of these employers that ridesharing assistance is not an appropriate employer activity is surprising.

### 4.3 EMPLOYEE RIDESHARING ACTIVITY

This subsection of the report evaluates the demonstration with regard to the factors influencing employee participation in ridesharing activities. Information for this subsection is drawn from the employee workplace survey (presented in Appendix B) conducted in the spring of 1982. The sample of approximately 4,000 Atlanta area employees has been weighted on the basis of company size, survey response rate, and commute mode (rideshare/non-rideshare). The weighted sample is 860,000, which is within 4 percent of the estimated total SMSA employment of 890,000.

#### 4.3.1 Employee Familiarity with the Georgia Ridesharing Program

According to the survey results, approximately 145,000 employees, or 17 percent of the Atlanta SMSA workforce, are familiar with the activities of the Georgia Ridesharing Program (Table 4-9). Nearly one-third of those responding to questions about assistance received from the GRP reported that they at least received transit information. Approximately 20 percent reported receiving either assistance in carpool formation or a list of potential carpoolers.

TABLE 4-8. EMPLOYER ATTITUDES ON RIDESHARING ASSISTANCE

DISADVANTAGE	PERCENTAGE OF EMPLOYERS CHECKING DISADVANTAGE AS FIRST PRIORITY			
	ASSISTANCE PROVIDED			
	Information Only	Carpooling Assistance	Company Cars	No Assistance
Inappropriate Employer Role	27.1%	4.7%	37.8%	11.8%
Difficult to Initiate	35.7	21.7	27.2	33.4
Few Employees Benefit	5.1	5.3	5.5	13.0
Liability Risk	0.5	16.7	21.3	15.8
Carpoolers Do Not Work Late	27.1	44.5	5.9	16.7
SAMPLE SIZE	12	38	25	125

SOURCE: 1982 Employer Profile Survey.

TABLE 4-9. EMPLOYEE FAMILIARITY WITH GEORGIA RIDESHARING PROGRAM

	<u>ESTIMATED NUMBER OF EMPLOYEES</u>	<u>PERCENT</u>	<u>SAMPLE SIZE</u>	<u>CONFIDENCE INTERVAL OF PERCENTAGE ESTIMATE (95%)</u>
A. FAMILIAR WITH ACTIVITIES OF GRP?				
Yes	144,726	17.3%	692	+/- 1.3
No	689,667	82.7	3,049	+/- 1.3
Total	<u>834,393</u>	<u>100.0</u>	<u>3,741</u>	
B. RECEIVED FROM GRP				
Transit Information Assistance in Carpool Formation	40,418	31.5*	257	+/- 1.6
List of Potential Carpoolers	23,858	20.0*	131	+/- 1.3
Other	21,772	18.2*	182	+/- 1.3
	12,723	11.0*	99	+/- 1.1

\*Percentage of those reporting that they were familiar with GRP and who answered each question Yes or No; multiple responses permitted.

SOURCE: 1982 Employee Workplace Survey.

Tables 4-10 and 4-11 provide a breakdown of this information by firm size. As expected, employees of large firms are both more likely to be familiar with the GRP and more likely to have received some form of assistance. These data also confirm the findings of the employer survey: that the GRP reached a significant number of employers in the 100-499 employee category. In terms of transit information and carpool formation assistance, employees in the 100-499 category who were familiar with the GRP were slightly less likely than those in the 500-and-over category to have received this information.

The high rates of familiarity with the GRP and the level of assistance received in the smallest employer category (1-19 employees) are somewhat surprising. The employee sample in the small employer category is smaller relative to population size than in the other categories, and thus is not as statistically reliable. The 7,914 employees in the 1-19 category who reported receiving carpool assistance were expanded from only 5 actual responses. It is possible, however, that the multi-employer site promotional program implemented by the GRP was effective in reaching small employers located in large downtown office buildings.

Table 4-12 provides a more detailed view of the relationship between employer participation in the GRP and employee familiarity with the program. Four categories are used to classify employees:

- 1) Working for employer in contact with GRP and providing ridesharing assistance to employees;
- 2) Working for employer in contact with GRP and not providing ridesharing assistance to employees;
- 3) Working for employer not in contact with GRP, but employee is familiar with GRP;
- 4) Working for employer not in contact with GRP and employee is not familiar with GRP.

As expected, larger firms are heavily represented in the first two categories, while smaller firms are over-represented in the latter two categories. When compared with Table 4-3, the effectiveness of a program oriented toward large employers becomes clear. Table 4-3 showed that only 149, or 0.4 percent, of all area firms reported that they were both in contact with the GRP and provided ridesharing assistance to employees. Table 4-12 shows, however, that these firms have a total of 105,784 employees, or 13.3 percent of the regional total.

The mean number of employees in each category shown at the bottom of Table 4-12 confirms that large employers were far more likely to provide ridesharing assistance than were small employers. Those firms who were in

TABLE 4-10. EMPLOYEE FAMILIARITY WITH GRP BY EMPLOYER SIZE CLASS

EMPLOYER SIZE (Number of Employees)	FAMILIAR WITH GRP?				Sample Size
	Yes	Percent	No	Percent	
500 or More	38,539	28.2*	98,094	71.8*	1,383
100-499	28,900	15.5	157,720	84.5	1,288
20-99	31,150	12.8*	212,110	87.2*	774
1-19	<u>46,142</u>	<u>17.2</u>	<u>221,766</u>	<u>82.8</u>	<u>270</u>
	144,731	17.3	689,689	82.7	3,715

\*Significant difference from the mean at 95 percent level of confidence.

SOURCE: 1982 Employee Workplace Survey.

TABLE 4-11. EMPLOYEE ASSISTANCE RECEIVED FROM GRP BY EMPLOYER SIZE

EMPLOYER SIZE Number of Employees	ASSISTANCE RECEIVED*									
	Transit Information		Carpool Assistance		Formation		List of Potential Carpoolers		Other	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
500 or More	18,084 (176)	51.4	7,362 (90)	24.8	15,916 (146)	49.2	8,286 (77)	27.6		
100-499	11,609 (58)	44.3	4,382 (23)	18.5	6,232 (30)	25.8	3,359 (18)	15.3		
20-99	1,569 (11)	5.8	2,114 (13)	8.2	489 (3)	2.0	489 (3)	1.9		
1-19	9,155 (11)	22.9	7,914 (5)	19.6	1,222 (2)	3.2	590 (1)	1.6		

\*Percentage refers to employees who reported that they were familiar with the GRP and who answered the question asking whether or not they received assistance.

Sample sizes in parentheses.

SOURCE: 1982 Employee Workplace Survey.

TABLE 4-12. EMPLOYER INVOLVEMENT AND EMPLOYEE FAMILIARITY WITH GRP\*

EMPLOYER SIZE	EMPLOYER IN CONTACT WITH GRP		EMPLOYER SPONSORS EMPLOYEE RIDESHARING ASSISTANCE?		EMPLOYER NOT IN CONTACT WITH GRP EMPLOYEES FAMILIAR WITH GRP?				ALL EMPLOYEES**		SAMPLE SIZE
	Number	Percent	Number	Percent	Number	Percent	YES		Number	Percent	
							Number	Percent			
500 or More	77,169	73.0	33,622	40.4	2,691	3.2	24,971	4.8	140,485	16.4	1,361
100-499	28,616	27.0	25,723	30.9	12,683	15.1	106,839	20.4	190,888	22.2	1,314
20-99	0	0.0	12,134	14.6	28,124	33.6	181,347	34.7	248,671	28.9	813
1-19	0	0.0	11,797	14.1	40,244	48.0	209,384	40.1	278,983	32.5	258
All Firms	105,784	100.0	83,276	100.0	83,742	100.0	522,541	100.0	859,027	100.00	3,746
Row % of Total Responses (795,343)	13.3		10.5		10.5		65.7				
Number of Firms	149		2,725				35,320***		40,971		
Mean Number of Employees	710		31				17***		21		

\* Numbers refer to employee survey responses. Does not assume that all employees in contacted firms are familiar with GRP.  
 \*\* All employees in sample are included in this column. Row totals do not add exactly due to non-responses.  
 \*\*\* Combined YES and NO categories.

SOURCE: 1982 Employee Workplace Survey.



contact with the GRP but did not provide ridesharing assistance had a mean of only 31 employees, compared to 21 for all employers in the sample. The fact that nearly 84,000 employees who work for employers not in contact with the GRP were aware of the program indicates program public relations efforts were effective in reaching the general commuting public.

#### 4.3.2 Employee Use of Ridesharing

4.3.2.1 Changes in Ridesharing for Commuting - The employee workplace survey shows that in the Atlanta region, as in most regions throughout the country, most commuters drive to work alone, while the second most common mode of commuting is ridesharing. Table 4-13 summarizes employee commuting patterns at the time of the workplace survey in the spring of 1982 and as recalled by commuters in the spring of 1980.

While there have been no major changes in the modal split among those surveyed, it appears that ridesharing has gained very slightly, mostly at the expense of transit. Rather than drawing commuters away from auto, the opening of the MARTA rail system appears to have drawn most of its riders from the local bus system. An additional comparison of "before and after" commuting modes shows that approximately 70 percent of those using MARTA rail in 1982 used local bus, express bus, and private bus prior to the MARTA rail opening, while 14 percent drove alone and 7 percent carpooled.

The survey also indicates that although the overall modal split did not change very much, a large number of commuters did change their mode of travel. Table 4-13A shows that over one-third of those carpooling in 1982 drove alone in 1980. While only 8 percent of those driving alone in 1982 reported carpooling in 1980, their number totaled almost 46,000 -- only 5,000 fewer than the number who shifted the other way. This confirms the importance of efforts to keep existing carpools together. The GRP did provide assistance to carpools who were attempting to replace a member. While only 2.7 percent of those who reported driving alone in 1982 had shifted from transit, their number (15,120) represents nearly 22 percent of those who reported transit as their 1982 commuting mode (69,252).

This information illustrates the dominance of the drive-alone auto mode and the fact that percentage increases in carpooling and transit ridership that appear to be large may mean little in terms of reducing the drive-alone mode share.

TABLE 4-13. COMMUTING MODE: 1980 AND 1982

	<u>SPRING 1982</u>	<u>SPRING 1980*</u>
Drive Alone	71.7%	72.0
Rideshare	17.7	16.9
Local Bus	3.3**	5.7
MARTA Rail	2.8	---
Walk	1.9	2.1
Express Bus	1.3**	1.8
Private Bus	0.7	1.1
Taxi	0.3	---
Cycle	0.2	0.2
Other	< 0.01	0.2
Combined Transit (Local Bus, MARTA Rail Express Bus, Private Bus)	8.1	8.6

\*Approximately 1 percent of the weighted sample reported that they were not working in 1980, and 8 percent failed to respond to the question. These employees were removed to permit a direct comparison of results. MARTA rail was not open in 1980 and respondents were not given taxi as a choice when asked their commute mode of two years ago.

\*\*Significant change between 1980 and 1982 at 95 percent level of confidence.

SOURCE: 1982 Employer Workplace Survey.

TABLE 4-13A. CHANGE IN COMMUTING MODE

COMMUTING MODE: 1980	1982 COMMUTING MODE					
	Carpool*			Drive Alone*		
	Number	Percent	Confidence Interval of Percentage Estimate (95%)	Number	Percent	Confidence Interval of Percentage Estimate (95%)
Carpool	79,482	57.4	+/- 3.6	45,696	8.0	+/- 1.1
Drive Alone	50,658	36.5	+/- 3.6	499,418	87.6	+/- 1.3
Transit	4,919	3.5	+/- 1.4	15,120	2.7	+/- 0.6
Other	728	0.5	+/- 0.5	5,011	0.9	+/- 0.4
Not Working	2,863	2.1	+/- 1.1	4,629	0.8	+/- 0.4
TOTAL	138,650	100.0		569,874	100.0	
SAMPLE SIZE	775			2,638		

\*Persons not responding to the commuting mode: 1980 question was removed.

SOURCE: 1982 Employee Workplace Survey.

The constant formation and disintegration of carpools is emphasized by the data in Table 4-14. Approximately two-thirds of those survey respondents who reported carpooling as their primary commuting mode indicated that they had been commuting with at least one other member of their current carpool less than two years.

Among those employees whose employers sponsored ridesharing assistance, (Columns 1 and 2, Table 4-14) however, only just over half reported that their carpools were less than 2 years old, and over 10 percent stated that their carpools had been together for over 10 years. It appears that the GRP and employer ridesharing programs may have been effective in preventing the breakup of existing carpools. The question of employer size again rises, however, in examining Table 4-14. Employers in Columns 1 and 2 tend to have greater numbers of employees than other employers in the sample. The number of employees carpooling for longer than two years is significantly greater for employers in columns 1 and 2 than for other employers. When a carpool member leaves a large employer, the chances are good that another employee living in the same area can be found to fill that vacancy. The existence of an internal ridesharing program will make this search even easier. When a carpool member leaves a small employer, however, there may simply be no one else available to fill the vacancy. The smaller size of the employers in columns 3 through 6 may help to explain the shorter duration of carpools.

4.3.2.2 Commuting Mode Related to GRP Contact and Ridesharing Assistance - Table 4-15 provides information on the relationship between commuting mode and exposure to ridesharing promotional activity, using the same four employee groups shown in Table 4-12. Employees working for employers in contact with the GRP were more likely to use carpool or transit as their primary commuting mode. Among this group, employees working for employers sponsoring ridesharing assistance were significantly more likely to carpool or use transit than other employees. Among those whose employers were in contact with the GRP and sponsored ridesharing assistance, 27.1 percent reported carpooling and 13.1 percent reported using one of the four transit modes (local bus, express bus, MARTA rail, and private bus). The comparable percentages for those whose employers were in contact with GRP and did not provide ridesharing assistance, but who were not familiar with the program were 18.5 percent (carpooling) and 11.0 percent (transit).

For the entire sample, 17.7 percent reported carpooling as their primary mode while 8.1 percent reported using transit. Interestingly, the group with the lowest rate of carpooling (10.2 percent) and transit usage (2.5 percent) consisted of employees who were familiar with the GRP but whose employers did not have any contact with the program.

It thus appears that a combination of employee awareness and employer participation in carpooling is most effective. Another factor that may be more important, however, is the finding (Table 4-12) that firms in contact with the GRP who offer ridesharing assistance tend to be very large, averaging

TABLE 4-14. EXPOSURE TO GEORGIA RIDESHARING PROGRAM AND LENGTH OF RIDESHARING ARRANGEMENT

DURATION OF RIDESHARING	EMPLOYER IN CONTACT WITH GRP EMPLOYER SPONSORS EMPLOYEE RIDESHARING ASSISTANCE?				EMPLOYER NOT IN CONTACT WITH GRP				SAMPLE SIZE
	YES		NO		(5) YES		(6) NO		
	(1) YES Percent	(2) NO Percent	(3) YES Percent	(4) NO Percent	Percent	Percent	Percent	Percent	
2 years or less	53.4	54.9	59.8	71.3	78.4	70.7	67.3	371	
2 to 4 years	29.0	9.4	22.8	16.9	4.1	11.3	13.0	95	
4 to 6 years	5.0	12.7	10.8	4.4	13.4	11.1	10.2	48	
6 to 10 years	2.3	9.9	0.0	3.7	4.1	3.5	4.3	36	
Over 10 years	10.3	13.1	6.6	3.7	0.0	3.4	5.2	32	
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	582	
Employees	9,930	15,065	2,218	11,098	6,499	67,633	112,443		
Row Percentage	8.8	13.4	2.0	9.9	5.8	60.1			

SOURCE: 1982 Employee Workplace Survey, Weighted Results.

TABLE 4-15. COMMUTE MODE, BY EMPLOYER-SPONSORED RIDESHARING ASSISTANCE AND FAMILIARITY WITH GRP

COMMUTE MODE	EMPLOYER IN CONTACT WITH GRP EMPLOYER SPONSORS EMPLOYEE RIDESHARING ASSISTANCE?				EMPLOYER NOT IN CONTACT WITH GRP EMPLOYEES FAMILIAR WITH GRP ACTIVITIES?				ALL EMPLOYEES*		SAMPLE SIZE
	YES		NO		YES		NO		Number	Percent	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Drive Alone	62,635	59.2	58,379	70.1	72,065	86.1	375,975	72.0	615,936	71.7	2,649
Rideshare	28,621	27.1	15,427	18.5	8,587	10.2	92,432	17.7	152,057	17.7	775
Local Bus	4,785	4.5	3,431	4.1	387	0.5	14,197	2.7	28,070	3.3	121
MARTA Rail	5,868	5.6	3,281	3.9	920	1.1	13,269	2.5	23,701	2.8	134
Express Bus	2,266	2.1	2,133	2.6	142	0.2	4,469	0.9	11,442	1.3	67
Private Bus	946	0.9	321	0.4	632	0.7	3,265	0.6	6,039	0.7	34
Taxi	664	0.6	80	0.1	260	0.3	1,780	0.3	2,785	0.3	16
Walk	0	0.0	0	0.0	469	0.6	15,557	3.0	16,615	1.9	20
Cycle	0	0.0	224	0.3	280	0.3	1,500	0.3	2,312	0.3	12
Other	0	0.0	0	0.0	0	0.0	77	< 0.01	77	< 0.01	1
TOTAL	105,785	100.00	83,276	100.00	83,742	100.00	522,521	100.00	859,034	100.00	3,835

\*Includes all employees who answered commute mode question. Because of non-response to other questions, row totals do not add to totals in "all employees" column.

SOURCE: 1982 Employee Workplace Survey.

over 700 employees per employer. Larger employers provide greater opportunity for ridesharing simply because they have a larger pool of employees available. Another possible explanation is that many large employers such as banks, insurance companies, and corporate headquarters tend to locate in the CBD, where transit is accessible as a backup mode and parking costs provide an additional incentive to carpool.

4.3.2.3 Carpooler Attitudes Toward Ridesharing - Table 4-16 includes data on those who reported that they participate in a carpool. Section a shows the reasons given for carpooling based on first, second, and third priorities. Clearly, economic reasons are dominant, with one-third of carpoolers listing "cheaper than drive-alone or transit" as their primary reason for carpooling, and nearly two-thirds (63.8 percent) checking it as one of their top three priorities.

"Save wear on auto," which was the first priority of 15.9 percent and was checked by 59.0 percent of carpoolers, is also an economic reason. "Like commuting with family members" (13.2 percent of first priority and 33.1 percent of total) and "prefer not driving" (9.4 percent of first priority and 55.8 percent of total) were other prominent reasons mentioned for carpooling. "Convenient to others" was the first priority of 11.1 percent of carpoolers and was checked as a priority by 24.0 percent. A possible explanation is that this group carpools out of necessity rather than choice, and consists of persons who must drive others or persons without a car available for the work trip. These employees appear more likely to shift from ridesharing to drive-alone if the opportunity arises.

Section B of Table 4-16 summarizes the methods of carpool formation provided by respondents. Over 44 percent of carpools are the result of family members commuting to work together. Nearly half (48.1 percent) reported informal contact at work as the basis for carpool formation, and 12.1 percent reported informal contact in the neighborhood. Both these categories may overlap with household-based information and each other where carpools have more than two people (i.e., two members of the same family commute with a third person from the workplace).

These results indicate that employees prefer to ride with family members or other people they know. It is possible that employees will turn to an organized ridesharing program when they exhaust their personal contacts. While few employees report organized ridesharing programs as their primary reason for joining or forming carpools, these programs can still have a reinforcing impact and can help keep carpools together after one or more members leave. Given the transient nature of carpools, provision of ongoing publicity concerning ridesharing benefits is a worthwhile element in a ridesharing program. The small number of employees who cite the Georgia Ridesharing Program as their primary reason for ridesharing, however, makes it difficult to evaluate the direct impact of the program.

TABLE 4-16. CARPOOLERS' REASONS AND INCENTIVES FOR CARPOOLING

A. REASONS CHECKED FOR CARPOOLING

	In Order of Priority		
	<u>First</u>	<u>Second</u>	<u>Third</u>
Cheaper than drive alone or transit	33.3	18.1	12.4
Save wear on auto	15.9	26.4	16.7
Like commute with family members	13.2	14.0	5.9
Convenient to others	11.1	3.7	9.2
Prefer not driving	9.4	19.2	27.2
More convenient than MARTA	3.9	4.8	7.0
Like company on trip	3.0	7.4	14.6
Faster than MARTA	2.8	5.4	2.3
Special parking privileges	0.6	0.3	1.5
Georgia Ridesharing Program	< 0.1	0.1	1.7
Other	6.8	0.6	1.3
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
SAMPLE SIZE	634	615	590

B. HOW DID YOU JOIN OR FORM CARPOOL?\*

	<u>Percent</u>	<u>Sample Size</u>
Household members decided to commute together	44.1%	249
Local newspaper advertisement	0.8	3
Company letter or notice	1.1	13
Company matching program	1.6	15
Assistance from Georgia Ridesharing Program	0.9	13
Informal contact at work	48.1	371
Informal contact in neighborhood	12.1	84
Other	0.5	12

\*Percentage of those answering Yes to Question 16, "Are you currently a member of a carpool?" (expanded total = 126,486). Multiple responses were permitted.

Table continued on following page.



TABLE 4-16 (Continued). CARPOOLERS' REASONS AND INCENTIVES FOR CARPOOLING

C. CARPOOLERS BENEFITING FROM PREFERENTIAL TREATMENT\*

	<u>Percent</u>	<u>Sample Size</u>
Preferential carpool parking	8.7%	84
Reduced carpool parking rates	1.8	15
Employer vans	0.3	12
Park-and-ride lots	3.2	22
Other	5.4	15

\*Percentage of those answering Yes to Question 16, "Are you currently a member of a carpool?" (expanded total = 126,486). Multiple responses were permitted.

SOURCE: 1982 Employee Workplace Survey, Weighted Results.

Section C of Table 4-16 shows that few carpoolers receive preferential treatment. The largest grouping using preferential treatment received preferential parking. It is not clear how effective these incentives are in encouraging carpool formation, but it appears that few employers are providing them.

#### 4.3.3 Differences between Ridesharers and Non-Ridesharers

4.3.3.1 Attitudes Toward Travel Characteristics - Table 4-17 compares the attitudes toward travel characteristics of persons who reported ridesharing as their primary commuting mode and those who did not. This question, unlike the questions shown in Table 4-16, was asked of all respondents, not only carpoolers. Responses to the two questions even differ among carpoolers. Priority in commuting decision (Table 4-17) may be viewed as a more theoretical question than "Why do you carpool?" (Table 4-16). The results in Table 4-17 emphasize the importance of economic considerations in ridesharing. Ridesharers were nearly three times more likely than non-ridesharers to check "low cost" as their first-priority factor in commuting. Non-ridesharers, on the other hand, were more likely to select "convenience" (31.8 percent) or "travel time" (19.0 percent) as their first-priority commuting factor.

It should be noted, however, that "convenience" and "travel time" ranked high as second and third choices among ridesharers. This is reflected by the fact that nearly half the carpools involve family members and thus require minimal additional travel time. Very few of the ridesharers in the survey are in relatively complicated carpools that involve multiple pick-ups and drop-offs. While ridesharers do show a greater interest in cost than non-ridesharers, they are also concerned with time and convenience. The decision to carpool thus reflects some analysis of tradeoffs rather than a singular concern with saving money.

4.3.3.2 Commuting Characteristics Related to Ridesharing - Table 4-18 shows a clear difference in commuting time and distance between ridesharers and non-ridesharers. Over 40 percent of ridesharers travel more than 20 miles to work, compared to less than 20 percent for non-ridesharers. In terms of time, a similar split exists, with over 40 percent of ridesharers traveling more than 30 minutes to work, compared to just over 20 percent for non-ridesharers.

Given these differences, it is not surprising that ridesharers cite cost and auto wear as their main reasons for carpooling (see Table 4-16). While it is probably more difficult for someone commuting a long distance to find another rider, economic considerations apparently influence commuters to do so.

TABLE 4-17. PRIORITY FACTORS IN COMMUTE MODE CHOICE OF RIDESHARERS AND NON-RIDESHARERS\*

FACTORS	FACTORS CHECKED AS:					
	First Priority		Second Priority		Third Priority	
	Rideshare	Non-Rideshare	Rideshare	Non-Rideshare	Rideshare	Non-Rideshare
Low cost	37.9%*	12.9%	12.1%*	9.1%	9.3%	9.8%
Convenience	21.2*	31.8	27.8	25.6	23.3*	19.6
Schedule requirements	15.6*	11.9	9.4*	12.1	9.8	10.0
Travel time	9.9*	19.0	19.3*	25.8	19.8	20.0
Need car at work	5.2*	8.3	7.6	9.6	6.7*	8.8
Transit unavailable	3.7*	7.7	7.8*	5.0	6.7*	9.1
Need to stop to/from work	3.4*	5.1	4.8*	8.9	15.1	16.0
Vehicle unavailable	2.5	1.5	4.3*	2.2	1.8	1.4
Employer subsidy	0.3	0.3	2.6*	0.6	1.5	1.0
Environment, energy conservation	0.1	0.1	1.8*	0.3	3.3*	1.2
Parking scarce or expensive	0.1	0.1	1.6*	0.3	2.4*	0.6

\*Rideshare/Non-rideshare split is based on response to Question 16, "Are you currently a member of a carpool?"

Table continued on following page.

TABLE 4-17 (Continued). PRIORITY FACTORS IN COMMUTE MODE CHOICE OF RIDESHARERS AND NON-RIDESHARERS\*

FACTORS	FACTORS CHECKED AS:					
	First Priority		Second Priority		Third Priority	
	Rideshare	Non-Rideshare	Rideshare	Non-Rideshare	Rideshare	Non-Rideshare
Exercise/health	0.0	0.2	0.0	0.4	0.0*	1.9
Other	0.3*	1.0	0.1	0.1	0.3	0.4
	100.0	100.0	100.0	100.0	100.0	100.0
SAMPLE SIZE	624	2,645	613	2,601	600	2,552

\*Significant difference between rideshare and non-rideshare at the 95 percent confidence level.

SOURCE: 1982 Employee Workplace Survey, Weighted Responses.

TABLE 4-18. DISTANCE AND TRAVEL TIME TO WORK, BY RIDESHARERS AND NON-RIDESHARERS

MILES TO WORK	RIDESHARERS		NON-RIDESHARERS		MINUTES TO WORK	NON-RIDESHARERS	
	(%)	(%)	(%)	(%)			
0-5	8.9%	26.2%	3.0%	8.2%	0-5	3.0%	8.2%
5-10	14.0	23.8	4.8	14.2	5-10	4.8	14.2
10-15	19.6	19.6	9.4	18.6	10-15	9.4	18.6
15-20	15.3	12.8	14.9	16.0	15-20	14.9	16.0
20-25	17.4	7.7	9.7	10.6	20-25	9.7	10.6
25-30	8.7	4.3	17.0	12.2	25-30	17.0	12.2
30-40	11.8	3.8	19.2	10.5	30-40	19.2	10.5
40-50	2.8	1.0	15.8	6.6	40-50	15.8	6.6
Over 50	1.5	0.8	3.7	1.9	50-60	3.7	1.9
	100.0	100.0	2.1	1.0	60-90	2.1	1.0
			0.4	0.2	Over 90	0.4	0.2
			100.0	100.0		100.0	100.0
< 20	57.8	82.4	58.8	79.8	< 30	58.8	79.8
> 20	42.2	17.6	41.2	20.2	> 30	41.2	20.2
SAMPLE SIZE	693	2,931	705	2,979			

SOURCE: Employee Workplace Survey, Weighted Results.

This information indicates that ridesharing programs would find it worthwhile to target individual employees living relatively far from their workplace. Table 4-19 provides some information on how successfully the GRP has reached this market. In general, those employees who carpool and are familiar with the GRP make longer work trips. Carpoolers who work for employers providing ridesharing assistance generally have longer work trips than other carpoolers. This indicates that employers may be sensitive to the commuting distance of their employees. Particularly striking, however, is the fact that among carpoolers who are familiar with the GRP but whose employers are not in contact, 79.9 percent commute 30 minutes or more. This indicates that commuters with long work trips will learn about ridesharing programs on their own initiative. Therefore, while it is difficult to determine the precise role of the GRP in influencing mode choice, it appears that both employer and employee interest in the GRP increases with longer employee commuting times.

4.3.3.3 Demographic Characteristics Related to Ridesharing - Demographic characteristics of ridesharers and non-ridesharers are found in Table 4-20. Differences between the two groups are slight but ridesharers are more likely to be female, under 35, and members of a minority group. Surprisingly, the non-rideshare group has a slightly higher proportion of people at the lower household income levels (20 percent under \$15,000 per year, compared to 15.6 percent for ridesharers).

Given that ridesharers are more likely to be female, young, and members of a minority group, they might also be expected to have lower incomes. One explanation is that ridesharers are more likely to come from two- or three-worker households in which total household income is relatively high but there are too few vehicles available for commuting. Another possible explanation is that the lower-income categories under non-rideshare have a significant number of transit riders, and that commuters who drive alone actually have incomes equal to or higher than those of ridesharers. Evidence for this is that 53.4 percent of MARTA local bus riders and 60.9 percent of MARTA rail riders reported incomes of under \$15,000 per year. A similar effect occurs with ethnic groups; in the total non-rideshare category, 14.5 percent belong to minority groups, compared to 50.1 percent for MARTA local bus and 69.7 percent for MARTA rail. Therefore, differences in socioeconomic characteristics are more significant between transit riders and auto commuters than they are between ridesharers and "drive-alone" commuters.

4.3.3.4 Work-Related Characteristics Related to Ridesharing - Table 4-21 summarizes the work-related characteristics of transit riders. One of the more interesting findings involves the relationship between work schedule and

TABLE 4-19. EXPOSURE TO GEORGIA RIDESHARING PROGRAM AND DURATION OF WORK TRIP FOR CARPOOLERS ONLY

MINUTES TO WORK	EMPLOYER IN CONTACT WITH GRP				EMPLOYER NOT IN CONTACT WITH GRP				ALL CARPOOLERS* Percent
	EMPLOYER SPONSORS EMPLOYEE RIDESHARING ASSISTANCE?				EMPLOYEES FAMILIAR WITH GRP?				
	YES		NO		(5) YES		(6) NO		
	(1) YES Percent	(2) NO Percent	(3) YES Percent	(4) NO Percent	Percent	Percent	Percent	Percent	
0-5	0.0	0.0	0.0	2.4	0.0	0.0	4.9	3.0	
5-10	1.3	1.9	0.0	6.5	0.0	0.0	6.5	4.8	
10-15	3.5	6.9	0.0	10.6	2.3	11.9	17.3	9.4	
15-20	18.8	6.9	11.3	20.2	0.0	0.0	11.2	14.9	
20-25	2.1	7.5	29.3	7.2	6.1	11.7	19.6	9.7	
25-30	15.9	17.1	11.5	13.4	14.8	16.5	9.4	17.0	
30-40	25.9	18.7	16.6	14.3	50.2	2.1	0.4	19.2	
40-50	25.2	21.0	28.4	20.8	0.0	14.9	0.3	15.8	
50-60	4.5	13.9	2.9	2.4	14.9	0.4	0.0	3.7	
60-90	2.4	6.2	0.0	0.6	0.0	0.0	0.3	2.1	
> 90	0.3	0.0	0.0	1.8	0.0	0.0	0.3	0.4	
	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	

\*From Table 4-18.

Table continued on following page.

TABLE 4-19 (Continued). EXPOSURE TO GEORGIA RIDESHARING PROGRAM AND DURATION OF WORK TRIP FOR CARPOOLERS ONLY

MINUTES TO WORK	EMPLOYER IN CONTACT WITH GRP				EMPLOYER NOT IN CONTACT WITH GRP				ALL CARPOOLERS*	
	EMPLOYER SPONSORS EMPLOYEE RIDESHARING ASSISTANCE?				EMPLOYEES FAMILIAR WITH GRP?					
	YES		NO		(5) YES		(6) NO		Count	Percent
< 30	41.7	40.3	52.1	60.2	20.1	71.4	71.4	58.8	30	58.8
> 30	58.3	59.7	47.9	39.8	79.9	28.6	28.6	41.2	30	41.2
SAMPLE SIZE	77	122	35	102	22	291	291	705		

\*From Table 4-18.

SOURCE: 1982 Employee Workplace Survey.



TABLE 4-20. DEMOGRAPHIC CHARACTERISTICS OF RIDESHARERS AND NON-RIDESHARERS

<u>SEX</u>	<u>RIDESHARE (%)</u>	<u>NON-RIDESHARE (%)</u>	<u>MARTA BUS*</u>	<u>MARTA RAIL*</u>	<u>SAMPLE SIZE</u>
Male	41.5	45.7	33.4	49.2	1,492
Female	58.5	54.3	66.6	50.8	1,970
<u>AGE</u>					
Under 20	6.2	3.5	9.0	1.1	75
20-24	14.5	11.9	10.9	12.4	366
25-34	34.9	35.6	41.0	48.0	1,291
35-44	24.0	25.3	17.5	22.8	937
45-54	16.3	14.4	8.5	13.4	553
55-64	3.7	6.9	10.3	2.3	244
65+	0.4	2.4	2.8	0.0	19
<u>ETHNIC GROUP</u>					
White	82.4	85.5	49.9	30.3	2,982
Black	13.7	12.9	49.5	69.7	537
Spanish Surname	2.0	1.2	0.4	0.0	24
Other	1.9	0.4	0.2	0.0	26
<u>DRIVER'S LICENSE</u>					
Yes	92.9	96.0	72.7	82.4	3,566
No	7.1	4.0	27.3	17.6	91

Table continued on following page.

TABLE 4-20 (Continued). DEMOGRAPHIC CHARACTERISTICS OF RIDESHARERS AND NON-RIDESHARERS

HOUSEHOLD INCOME	RIDESHARE	NON-RIDESHARE	MARTA	MARTA	SAMPLE SIZE
	(%)	(%)	BUS*	RAIL*	
< \$5,000	1.0	1.7	9.5	4.2	44
\$ 5,000-\$ 9,999	4.5	6.3	26.8	22.0	136
\$10,000-\$14,999	10.1	12.0	17.1	34.7	384
\$15,000-\$19,999	8.2	12.4	11.2	8.0	394
\$20,000-\$24,999	11.5	12.0	16.9	5.2	400
\$25,000-\$34,999	33.7	24.5	8.6	10.8	777
\$35,000-\$44,999	14.0	15.4	1.7	9.2	540
\$45,000-\$54,999	9.2	9.4	3.4	1.9	333
\$55,000-\$74,999	4.8	4.4	4.6	2.9	178
Over \$75,000	3.1	1.9	0.1	1.0	61

\*Rideshare/Non-Rideshare percentages are based on response to Question 16, "Are you a member of a carpool?" MARTA percentages are based on response to Question 1, "How do you most often commute to and from work?" Therefore, MARTA riders are included in the Non-Rideshare category.

SOURCE: 1982 Employee Workplace Survey, Weighted Results.

TABLE 4-21. WORK-RELATED CHARACTERISTICS OF RIDESHARERS AND NON-RIDESHARERS

	<u>RIDESHARE</u> (%)	<u>NON-RIDESHARE</u> (%)	<u>SAMPLE SIZE</u>
<u>FULL OR PART-TIME</u>			
Full	96.7*	91.2	3,505
Part	3.3*	8.8	140
	<u>100.0</u>	<u>100.0</u>	
<u>WORK SCHEDULE</u>			
Fixed -- Employer sets hours	80.7*	73.3	2,774
Variable -- Same each day	11.3*	6.4	243
Variable -- Can vary time	4.1	5.5	219
Irregular	2.5*	12.8	339
Rotating Shift	1.4	1.8	90
Other	< .1	0.2	8
	<u>100.0</u>	<u>100.0</u>	
<u>OCCUPATION</u>			
Sales	7.1	6.2	203
Clerical	33.8*	28.5	1,238
Production	11.7*	5.3	186
Craftsman	5.0	5.4	160
Service	4.8*	12.0	207
Professional/Technical	22.7	23.3	872
Manager/Administrator	13.9*	17.9	678
Transportation	0.9	1.1	33
Other	0.1	0.3	15
	<u>100.0</u>	<u>100.0</u>	

\*Significant difference between rideshare and non-rideshare at 95 percent confidence level.

SOURCE: 1982 Employee Workplace Survey, Weighted Results.

ridesharing. Among ridesharers, 92.0 percent have the same schedule each day, fixed either by themselves or by their employers. The comparable percentage for non-ridesharers is 79.7 percent. Ridesharers are also more likely to work full-time, a further indication that regular start times are better-suited to ridesharing.

Many agencies have encouraged both ridesharing and variable hours programs as methods of reducing traffic congestion. However, the survey data indicate that the availability of variable hours does not make a difference in the tendency to rideshare.

Ridesharers are more likely than non-ridesharers to be found in the clerical and production categories, two occupations that generally involve regular working hours. Non-ridesharers are more likely to fall in the service and manager/administrator categories. These two categories tend to be more flexible with respect to working hours, while the high number of service workers probably reflects the predominance of transit riders in this category.

#### 4.4 INDIVIDUAL AND AGGREGATE COSTS AND BENEFITS OF THE RIDESHARING PROGRAM

##### 4.4.1 Employer Costs and Benefits

Decisions on the part of employers to promote ridesharing in the workplace can rarely be traced to one factor. The Georgia Ridesharing Program focused primarily on large employers and encouraged the development of ongoing, in-house ridesharing programs. The GRP also offered programs that involved direct contact with employees. These included presentations and the use of a phone line to bring together potential carpool partners. For the most part, however, employers were encouraged both to take primary responsibility for promotion of ridesharing to employees and to bear the costs of these efforts. Unfortunately, no specific accounting of these costs (administrative costs, loss of work-hour flexibility, etc.) was made by the GRP.

The surveys indicated that employers tend to see the benefits of ridesharing primarily in terms of energy conservation and reduced traffic congestion. While improvements in these areas help everyone, it appears that many employers do not see direct benefits from these programs. Those employers who do see direct benefits in ridesharing programs tend to be large

employers concerned with employee fringe benefits and/or shortages of parking. Because the surveys were conducted at a time when unemployment was high, it is possible that employers were less concerned about fringe benefits and their standing in the labor market -- an attitude that may change at times when unemployment is significantly reduced.

#### 4.4.2 Employee Costs and Benefits

Because of the GRP program structure, which encouraged employers to assume primary responsibility for ridesharing promotion, a quantitative evaluation of the GRP's direct effect on ridesharing is difficult to conduct. Most commuters who carpool to work do so for their own economic benefit or for reasons of convenience. Commuters who rideshare tend to have longer work trips than other commuters and are thus more concerned about costs and auto wear. Nearly half the carpools in the Atlanta region involve members of the same household. When asked their reasons for ridesharing, most employees cited reasons related to cost or convenience. While they may have been influenced by an organized ridesharing program, it is unlikely that they would have cited the program as the major reason for their choice of mode. Thus, the direct impact of the GRP on mode choice cannot be determined, and the specific objectives described in Section 1.2.3 cannot be measured.

In summary, employees view ridesharing benefits primarily in economic terms. Carpoolers cite cost and concern about auto wear as their primary reasons for ridesharing. It is clear that efforts to market ridesharing programs should emphasize the economic benefits involved.

#### 4.4.3 Costs and Benefits to the General Public

In terms of publicizing the benefits of ridesharing, it appears that the GRP was effective. According to the survey, 2,874 employers (Table 4-3) and approximately 40,000 employees (Table 4-9) had some direct contact with the GRP. Employers who had contact with the program and who sponsored ridesharing assistance totaled 149. Many more were familiar with the activities of the GRP; these totaled 7,249 employers and 144,726 employees. On the basis of these figures and the two-year budget of \$600,520, the following cost-effectiveness figures may be computed for the GRP:

Cost/Employer Contacted by GRP	- \$ 208.95
Cost/Employer Familiar with GRP	- \$ 82.84
Cost/Employee Contacted by GRP	- \$ 15.01
Cost/Employee Familiar with GRP	- \$ 4.15

The benefits of ridesharing to the general public include reduced traffic congestion (possibly resulting in reduced highway investment), improved air quality, and fuel savings. Mode choice figures from the employee survey showed a very slight increase in ridesharing and a very slight decrease in commuters driving to work alone during the 1980-82 period. Investments in ridesharing promotion tend to be relatively inexpensive but have generally had limited political support. By helping to create a positive image of ridesharing among both major employers and area employees, the GRP may have contributed to a more positive atmosphere for future investments in ridesharing promotion.

Programs that involve direct contact with individuals are better-suited to quantitative evaluation of the impact of ridesharing promotion. It does appear, however, that an investment of \$600,520 in ridesharing promotion is relatively small, given the mode's importance for commuting. The MARTA rail system, for example, has cost over \$1 billion and currently carries only 3 percent of regional commuters. Although the 18 percent mode share for ridesharing cannot be tied to any specific level of public expenditure (as for MARTA rail), the importance of ridesharing appears to warrant some level of promotional expenditure. Approximately half the employees in the survey reported that MARTA was not even available for their work trips. For these commuters, ridesharing is the only alternative to the single-driver auto.

## 5. CONCLUSIONS AND TRANSFERABLE IMPLICATIONS

This section presents conclusions drawn from the evaluation of the Georgia Ridesharing Program as well as the transferable implications of the demonstration.

### 5.1 CASE STUDY CONCLUSIONS

The GRP's goal of reaching the larger employers in the area was accomplished. Nearly two-thirds (64.1 percent) of area firms with 500 or more employees were familiar with GRP activities, and 73.0 percent of these firms had had contact with the program (Table 4-3). Employers reporting that they had contact with the GRP and started a ridesharing assistance program accounted for only 0.4 percent of all employers. Because they tended to be major employers, however, they accounted for nearly 106,000, or 13.3 percent, of all employees in the region. Employees working for these firms showed higher rates of ridesharing and transit usage than other employees in the region. It should also be noted that despite the employer orientation of the program, nearly 84,000 employees whose employers had no contact with the GRP were familiar with the program.

More specific conclusions follow. It should be noted that because information available from GRP records was limited, these conclusions were drawn primarily from the employee and employer surveys.

- The GRP successfully generated publicity that reached beyond employers who were directly contacted. Approximately 19 percent of all employers and 17 percent of all employees in the region were familiar with the program. Over half of these employees worked for employers who did not participate. Nearly one-quarter of employers who had direct contact with GRP initiated the contact themselves.
- The GRP effectively carried out its strategy of contacting major employers. Most employers with 500 or more employees were contacted, and these were far more likely than other employers to offer ridesharing assistance programs to their employees. The emphasis of the GRP on large employers appears to have been well-placed.
- Employers offering ridesharing assistance appeared to be influenced strongly by the fuel shortage, even though the survey was conducted more than two years after the last shortage occurred. A desire to provide additional employee fringe benefits and response to employee requests were the two major additional reasons given for supplying employee transportation assistance.

- Most employers view ridesharing programs as benefitting the general public rather than employers directly. The major advantages cited were energy conservation and reduction of traffic congestion. Employers tend to view the major disadvantages as factors that do directly affect them, including difficulty in initiating the program, potential liability risks, and the fact that carpoolers do not work late. Employers who see direct benefits are more likely to initiate ridesharing programs.
- The GRP strategy was effective in that large numbers of employees were reached through a few large firms. Employees working for large employers (500 employees or more) were more likely than others to be familiar with the GRP and to have received assistance from the program. Firms in contact with the GRP and sponsoring ridesharing assistance accounted for only 0.4 percent of all firms in the region but 13.3 percent of all employees.
- The survey indicated that ridesharing has increased its mode share slightly but not significantly over the past two years at the expense of both the drive-alone and transit modes. Employers in contact with the GRP and offering ridesharing assistance show higher rates of both ridesharing and transit usage among their employees. Although the GRP may have had an impact, it is not possible to prove a direct connection. Employers in this category are major, and therefore provide more opportunities for ridesharing simply because a larger pool of employees is available.
- Ridesharing assistance appears to encourage stability in carpooling. Ridesharing employees who work for employers that provide ridesharing assistance have been in their carpools longer than other employees.
- Most ridesharers cite economic considerations first in their selection of a commuting mode. Ridesharers tend to have much longer work trips than non-ridesharers and thus express greater concern about cost and auto wear.
- Any official ridesharing program can only affect a small percentage of total commuters. Most carpools are either composed of family members commuting together or are developed through informal contact at work.
- Employers do appear sensitive to employee commuting distance and are more likely to provide ridesharing assistance if their employees have long work trips.



- Demographic differences between ridesharers and non-ridesharers in Atlanta are minor. The major demographic differences are found between auto and transit commuters; the latter are much more likely to have low incomes and be members of minority groups.
- Ridesharing and flexible-hours programs are often promoted together but work somewhat at cross-purposes. Flexible hours reduce the potential number of non-family poolers at any one time and make it difficult for non-family carpools to function. Ridesharers are more likely than non-ridesharers to work the same hours every day.

## 5.2 TRANSFERABLE IMPLICATIONS

- Ridesharing promotion oriented toward large employers appears to be an effective use of program resources in terms of reaching the largest number of employees with limited personnel. The GRP has shown that publicity generated through employer-based efforts can spread well beyond those directly contacted.
- Employers who feel that they benefit directly from ridesharing assistance are more likely to have a program. The GRP experience has shown that marketing efforts directed toward employers should emphasize economic benefits, including better management of parking facilities and attraction of a better labor force through an inexpensive fringe benefit.
- Ridesharing programs should attempt to identify certain employee and employer characteristics and target-market their programs. Desirable characteristics include parking facilities owned by an employer, a limited and relatively stable work force, and a large number of employees who must commute long distance.
- Variable work-hour and ridesharing programs should be more carefully coordinated to prevent possible conflict.



APPENDIX A  
SAMPLING REQUIREMENTS MEMORANDUM  
PREPARED BY TRANSPORTATION SYSTEMS CENTER



## Appendix A

### SAMPLING REQUIREMENTS MEMORANDUM PREPARED BY TRANSPORTATION SYSTEMS CENTER

This appendix outlines the sampling requirements for the National Ridesharing Demonstration projects' extended data collection sites. Sampling requirements are determined for surveys of employers and of employees at surveyed firms. Explanation of the approach taken to determine sample sizes follows a brief overview of the evaluation strategy as it pertains to sampling requirements.

The programs, in general, are aimed at employers and attempt to enlist their support in organizing, supporting, and promoting ridesharing programs for their employees. The three main issues for evaluation are:

1. Determinants of the level of employers' participation in a program. An important aspect of the evaluation of employer response is to identify properly the contribution of the ridesharing projects in influencing rideshare promotion activities by area employers.
2. Determinants of employee ridesharing behavior, particularly those effects of a ridesharing program on employees' ridesharing propensities.
3. Measurement of specific aspects of individual and aggregate benefits (in terms of reduced fuel consumption, etc.) associated with the programs.

Evaluating employers' tendencies to participate requires measurement or categorization of their involvement levels. At each site, many firms were never contacted by representatives of the ridesharing agencies. Their only exposure to the ridesharing projects has been through billboards, public service announcements, and the like. Additional firms have been contacted, but for a wide variety of reasons have declined participation. Finally, there is the group of firms that have participated. However, within this group the activities that participation entails vary substantially. In some instances, firms have merely allowed the ridesharing agency to offer promotion and matching services. In others, the ridesharing agency has provided technical support for firms, with the stipulation that the firm commit its own resources to promotion of ridesharing. The level of activity accepted as participation varies over firms within a site, and across the full spectrum of participation levels that one can imagine, the locally relevant range differs among sites as well. Thus, for purposes of evaluation, treating participation on a binary yes/no basis is only a first step. The more complex analysis will not only associate participation tendencies with firm characteristics, but will attempt to explain differences both in the activities voluntarily undertaken by individual firms and in the firm responses as program constraints vary.

The design underlying this evaluation is a static group comparison and as such allows measurement of effects only after exposure to ridesharing activities. The design inherently suffers from potentially serious selectivity problems. In no sense was a random process employed to assign firms to participant and non-participant categories. Generally, the ridesharing agencies directed their efforts to the firms they expected would have the greatest likelihood of participating. These were often the largest firms and those located in areas with the greatest parking difficulties or poorest transit service. As a consequence, characteristics such as CBD location or large size will concentrate on the firms either contacted or contacted and participating. Smaller firms and perhaps firms geographically isolated will uncommonly be found among the participants. The problem manifests itself as collinearity among participation, size, and location, and hinders the ability to isolate the project's influence on ridesharing. Unless the overlap is complete, the problem can be reduced through increased sample sizes. However, larger samples will not eradicate it and some measure of its consequences must be accepted as the result of the design.

At the employee level, the evaluation seeks to identify behavioral tendencies toward ridesharing, using the ridesharing program participation of an employee's firm as one explanatory variable. With the firm as the unit of observation, the share of employees ridesharing can be related to characteristics of the firm, including its ridesharing activities. In this model, the ridesharing projects operate indirectly on employee behavior through their influence on a firm's ridesharing activities. It is assumed that employees respond to programs and incentives as offered, without regard to their origins. This means that it makes no difference to the employee whether the employer's program was self-initiated or the result of the ridesharing demonstration project. As a consequence, no avenue exists for direct association between a ridesharing project and employee ridesharing behavior. In a disaggregate analysis, the individual's ridesharing behavior can be related to characteristics describing his/her individual situation, such as income, distance to work, household composition, and so forth, as well as to characteristics of his/her employer.

Very briefly, the sampling process will occur in two stages. In the first stage, firms will be stratified into size categories from which probability samples will be drawn. In the second stage, samples of employees at the firms selected in the first stage will be drawn randomly. The sampling frame at the first stage is the population of firms within the local area. This includes (with equal probability) firms not contacted, firms contacted but not participating, and firms participating at any level of activity. At the second stage, the frame is the full population of employees at firms drawn in the first stage. It should be evident that through drawing randomly at each stage, the drawing of employees is fully random. The remainder of this appendix describes the sampling process in greater detail, provides explanation for the procedures, and points out some pitfalls that may remain.

The sample sizes determined here are believed to be relatively large. This choice is the consequence of a desire to err on the high side in the face of uncertainty about the values of various parameters one would use to determine sample sizes.

In Table A-1, the population and sample sizes are shown for each of the four sites. The population of firms has been partitioned into four categories: 500 and above, 100-499, 20-99, and 1-19. Stratification of firms is dictated by the very sharp skew in the size distribution of firms. In Figure A-1, the shares of firms in each of nine size categories are shown. While the data used for Figure A-1 are national aggregates, size distributions of firms at each of the four sites very closely follow that of the aggregate. In the extreme there are nearly 500 times as many firms in the 1-4 category as in the 1000+ category. As a consequence, a simple random sample of several hundred firms would be expected to yield very few firms in the largest size categories. Figure A-1 also depicts the shares of employees in each of the firm size categories. As is evident, the share of employees in the largest category closely approximates that in the smallest. Thus, for a simple random sample of firms, the statistically expected number of employees from large firms would approximate that of small firms. This would appear to justify use of a simple random sample. However, a sample across all firms would also leave substantially high probabilities of drawing no employees in one or more of the larger categories, and even higher probabilities of drawing all employees in those categories from a very few firms. To forestall this danger, and because the ridesharing projects have generally emphasized the larger firms, the sampling has been stratified to ensure inclusion of firms across all sizes. The sampling procedures that resulted in the totals in Table A-1 are discussed below.

The sampled number of firms in each strata results from a combination of two approaches. In one, the employer was treated as the unit of observation and an exogenously determined total sample size was allocated over the four strata through use of a standard formula (see, for example, Cochran, Sampling Techniques, Chapter 5). In the other approach, the employee was treated as the unit of observation, with the firm as a cluster of employees. Using a standard rule for the optimal number of units per cluster, the number of employees to be surveyed at each firm was determined. This yielded the number of employees to receive the long form referred to in columns 6 and 7 of Table A-1. There is also a short form, described more fully below. Finally, with the cluster sizes and total number of firms as parameters, the number of firms per strata were selected.

For the employee survey, firms were regarded as clusters. The number of individual employees drawn within each cluster was guided by the degree of homogeneity within firms, as well as the relative costs of surveying both additional firms and additional employees within a firm. The cost of

TABLE A-1. POPULATION AND SAMPLE SIZES FOR ATLANTA

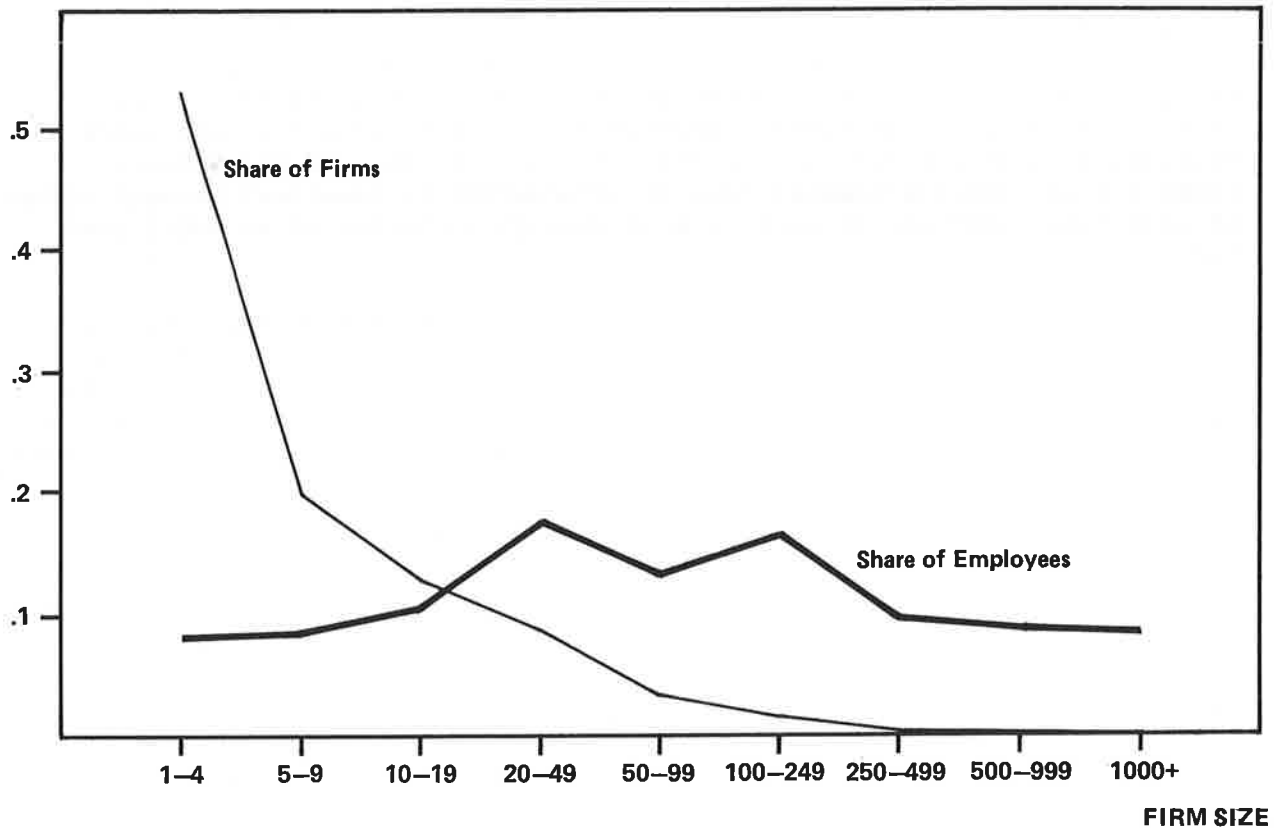
	TOTAL NUMBER OF FIRMS	NUMBER OF EMPLOYER SURVEYS RETURNED*	TOTAL NUMBER OF EMPLOYEES	NUMBER OF EMPLOYEES AT SAMPLED FIRMS	SAMPLED NUMBER OF EMPLOYEES AT SAMPLED FIRMS	SHARE OF SAMPLED EMPLOYEES WHO RECEIVE LONG FORM SURVEYS	TOTAL NUMBER OF LONG FORM SURVEYS	NUMBER OF EMPLOYEE SURVEYS RETURNED	TOTAL NUMBER OF SURVEYS
Atlanta									
500+	111	64	100,000	52,200	100	50%	2,900	1,361	5,800
100-499	960	73	215,000	19,250	80	50%	3,440	1,314	6,880
20-99	5,100	58	230,000	2,970	all	50%	1,485	813	2,970
1-19	34,800	59	190,000	265	all	all	265	258	265
TOTALS	40,971	254	735,000	74,685			8,890	3,746	15,915

NOTE Total firm counts are based on the 1979 edition of County Business Patterns.  
\*Number of firms asked to participate is not available, so firm response rate cannot be calculated.

SOURCE: County Business Patterns, 1979.



SHARE



SOURCE: Lawrence Doxsey, Transportation Systems Center.

Figure A-1

ATLANTA RIDESHARING: FIRM SIZE AND EMPLOYEE SHARE

reaching an additional respondent by including an additional firm far exceeds that of adding a respondent at a firm already surveyed. This by itself would argue for relatively larger sample sizes at each firm. With respect to homogeneity, if the employees of firms are identical in terms of the characteristics measured, then little additional information is obtained through surveying beyond the first respondent at each firm. On the other hand, if employees are distributed across firms in essentially a random fashion, it makes no difference whether a given size sample of employees is obtained at a single firm or a cross-section of firms. At the optimal cluster size, the incremental cost of information is identical through either an additional employee at each firm or through inclusion of an additional firm.

Because disaggregate analysis is fundamental to the evaluation, the surveying of employees is the most crucial aspect of the data collection process. It is also potentially the source of the greatest weakness. As described thus far, the only mechanism for discerning employee ridesharing incidence is the returned employee surveys. However, if the survey response rate differs between ridesharing and non-ridesharing employees, the mode share estimates will be inaccurate. Furthermore, we have no external basis for determining the extent of any systematic response rate difference and hence no means for choosing weights to make a correction. To alleviate this difficulty, a single question survey, asking general mode to work, was given to one-half of all surveyed employees at firms with 20 or more employees. These surveys are responsible for the difference between columns 7 and 8 of Table A-1 in the numbers of surveyed employees. The mode split indicated on the short form will be used to weight the long form responses so that the adjusted mode split on the long form will match that of the short.

APPENDIX B  
SURVEY QUESTIONNAIRES



This travel survey will be used by local transportation agencies to improve travel conditions in the Atlanta area. Please answer the following questions as accurately as possible. Your responses will be strictly confidential.

serial  
1-5  
1 card  
no.

1. How do you most often commute to and from work? (Check all that apply if you usually use a combination of means to make a one-way trip)

- 7-1  Drive alone
- 8-1  Drive or ride with one or more other people
- 9-1  MARTA express bus
- 10-1  MARTA local bus
- 11-1  MARTA rail
- 12-1  Private or employer-sponsored bus
- 13-1  Taxi
- 14-1  Motorcycle or bicycle
- 15-1  Walk
- 16-1  Other (specify) \_\_\_\_\_

2. Please number in order of importance the three most important factors which influence how you most often commute to and from work. (1=most important, 2=second most important, 3=third most important)

- 18  Low cost
- 19  Fast travel time
- 20  Convenience
- 21  Schedule requirements
- 22  Household vehicle unavailable
- 23  Transit unavailable
- 24  Parking unavailable or too expensive at workplace
- 25  Need car during working hours
- 26  Need to make stops on the way to or from work
- 27  Employer provides subsidy for commuting (e.g., free parking or discounted transit pass)
- 28  Exercise, health, like to walk
- 29  Environmental concern, energy conservation
- 30  Other (specify) \_\_\_\_\_

3. Thinking back over the last five days you worked (excluding today), please indicate how many times you used each of the following means to travel to and from work.

	<u>To Work</u>	<u>From Work</u>
Drove alone	33 _____ days	34 _____ days
Drove or rode with one or more other people	35 _____ days	36 _____ days
MARTA express bus	37 _____ days	38 _____ days
MARTA local bus	39 _____ days	40 _____ days
MARTA rail	41 _____ days	42 _____ days
Private or employer-sponsored buspool	43 _____ days	44 _____ days
Taxi	45 _____ days	46 _____ days
Motorcycle or bicycle	47 _____ days	48 _____ days
Walked	49 _____ days	50 _____ days
Used combination of above (specify) _____	51 _____ days	52 _____ days
Other (specify) _____	53 _____ days	54 _____ days

4. What is your home zip code?

5. How many miles is it from your home to your place of work? \_\_\_\_\_

6A. How long does it take to travel from your home to your place of work during commuting hours if you drive by the most direct route without any stops?  
\_\_\_\_\_ minutes

6B. How long does it take to travel from your home to your place of work during commuting hours if you use MARTA? (including the time you spend walking or driving to and from MARTA)  
\_\_\_\_\_ minutes

- 73-1  Don't know
- 2  MARTA is not available between my home and my place of work
- 3

17

31

55

57

64

67

70

7. Do you work full-time or part-time?

Full-time        days per week  Part-time        days per week

8. Which of the following best describes your work schedule? (Check one)

- 7-1  I have fixed work hours which are set by my employer
- 2  I can choose my own work schedule, but I must start work at the same time each day
- 3  I can vary my start time each day by up to        minutes or        hours
- 4  I have a very irregular work schedule
- 5  I work a rotating shift
- 6  Other (specify) \_\_\_\_\_

serial 1-5  
 2 card no.  
 6  
 8  
 11

9. At what time do you most often... (ANSWER BOTH PARTS BELOW)

Begin work?  am  pm (Check one)  
 Leave work?  am  pm (Check one)

10. Do you have a valid driver's license?  Yes  No

11. How many vehicles (cars, vans, pick-up trucks, or motorcycles) in operating condition are available for use by members of your household? (including company cars)

       vehicles  
 None (SKIP TO QUESTION 16)

12. Please indicate for each vehicle: its year/make/model, its average fuel economy (miles per gallon), and the month and year you acquired it.

	Year/Make/Model	Average miles per gallon	Month/year acquired
Vehicle #1	_____	_____	_____
Vehicle #2	_____	_____	_____
Vehicle #3	_____	_____	_____
Vehicle #4	_____	_____	_____

26  
 38  
 50  
 62

13. Which vehicle do you use most often for your commute trip? (Check one)

- 74-1  Vehicle #1
- 2  Vehicle #2
- 3  Vehicle #3
- 74-4  Vehicle #4
- 5  None -- I never drive to work

14. Within the past two years, has anyone in your household purchased a vehicle?

- 75-1  Yes
- 2  No (SKIP TO QUESTION 16)

15. Was this a replacement for another household vehicle?

- 7-1  Yes What was the year/make/model and average miles per gallon of the vehicle which was replaced?  
 \_\_\_\_\_ mpg
- 2  No

serial 1-5  
 3  
 6  
 8

16. In this survey, "carpool" means two or more people (including family members) who commute together on a regular basis in a car, van, or pick-up truck. This includes vanpools. Are you currently a member of a carpool?

- 16-1  Yes
- 2  No (SKIP TO PAGE 5)

PLEASE ANSWER THE QUESTIONS ON THIS PAGE ONLY IF YOU ARE CURRENTLY A MEMBER OF A CARPOOL -- THAT IS, IF YOU ANSWERED "YES" TO QUESTION 16. OTHERWISE, PLEASE SKIP TO PAGE 5.

17. How many people including yourself usually participate in your carpool even if they do not ride every day? 17 people

18. How many of the other people in your carpool... (ANSWER ALL FOUR PARTS BELOW)

- Live in the same household as you?... 19 person(s)
- Work for the same employer as you?... 21 person(s)
- Work in the same location as you but for a different employer?... 23 person(s)
- Are male?... 25 person(s)

19. How long have you been commuting with at least one other member of your carpool? \_\_\_\_\_ months or \_\_\_\_\_ years

27

20. Were any members of your carpool commuting together before you joined?

No  
 Yes → For how long before you joined? \_\_\_\_\_ months or \_\_\_\_\_ years

31

21. Please number in order of importance your three most important reasons for joining or forming a carpool. (1=most important, 2=second most important, 3=third most important)

- 34-  I like to commute with family members
- 35-  I prefer not having to drive all the time
- 36-  Carpooling saves wear and tear on my auto
- 37-  Carpooling is cheaper than driving alone or taking MARTA
- 38-  I like company on the trip to work
- 39-  My employer provides special parking privileges for carpools
- 40-  Information or assistance from the Georgia Ridesharing Program
- 41-  More convenient than MARTA
- 42-  Faster than MARTA
- 43-  Convenience to other carpool members
- 44-  Other (specify) \_\_\_\_\_

46

22. How did you join or form your carpool? (Check as many as apply)

- 48-1  Household members decided to commute together
- 49-1  Advertisement in local newspaper
- 50-1  Company newsletter or bulletin board
- 51-1  Company matching program
- 52-1  Information or assistance from the Georgia Ridesharing Program
- 53-1  Informal contact with someone at work
- 54-1  Informal contact with someone in my neighborhood
- 55-1  Other (specify) \_\_\_\_\_

56

23. Does your carpool make use of any of the following? (Answer yes or no for each item)

- |      |                          | <u>Yes</u> |                          |  | <u>No</u> |  |
|------|--------------------------|------------|--------------------------|--|-----------|--|
| 58-1 | <input type="checkbox"/> | -2         | <input type="checkbox"/> | Preferential parking spaces for carpools |           |  |
| 59-1 | <input type="checkbox"/> | -2         | <input type="checkbox"/> | Reduced parking rates for carpools       |           |  |
| 60-1 | <input type="checkbox"/> | -2         | <input type="checkbox"/> | Employer vans                            |           |  |
| 61-1 | <input type="checkbox"/> | -2         | <input type="checkbox"/> | Park and ride lots                       |           |  |
| 62-1 | <input type="checkbox"/> | -2         | <input type="checkbox"/> | Other (specify) _____                    |           |  |

64

24. Which of the following best describes your carpool arrangement? (Check one)

- 66-1  One person drives all the time
- 2  Driving is shared by all carpool members
- 3  Driving is shared by some carpool members

THIS PAGE FOR CARPOOL MEMBERS ONLY

25. How often are you the driver of your carpool? (Check one)

- 67-1  Always (ANSWER QUESTIONS IN COLUMN A ONLY)
- 2  Sometimes, \_\_\_\_\_ days per week (ANSWER QUESTIONS IN COLUMNS A AND B)
- 3  Sometimes, every \_\_\_\_\_ days (ANSWER QUESTIONS IN COLUMNS A AND B)
- 4  Sometimes, every \_\_\_\_\_ weeks (ANSWER QUESTIONS IN COLUMNS A AND B)
- 5  Never (ANSWER QUESTIONS IN COLUMN B ONLY)

68

serial  
1-5

4 card  
no.

COLUMN A

THE FOLLOWING QUESTIONS APPLY TO YOUR TRIP TO WORK WHEN YOU DRIVE THE OTHER MEMBERS OF YOUR CARPOOL. PLEASE SKIP TO COLUMN B IF YOU NEVER ARE THE DRIVER.

A1. What vehicle do you most often use when you drive others? (Indicate year/make/model)

---

A2. How many passengers are usually picked up at your home (including family members)?

8

A3. How many stops do you usually make to pick up passengers?

10-1  None

10-2  One

How far is it from your home to this pick-up point? \_\_\_\_\_ miles

11

10-3  Two or more (ANSWER BOTH QUESTIONS BELOW)  
How far is it from your home to the first pick-up point? \_\_\_\_\_ miles

14

How far is it from the first to last pick-up point? \_\_\_\_\_ miles

17

A4. Do you drive directly to your parking place at work or do you stop to drop off passengers?

20-1  Drive directly to parking place at work

How far is it from the place where the last passenger is picked up (which may be your home) to your parking place?

\_\_\_\_\_ miles

21

20-2  Stop to drop off passengers (ANSWER ALL FOUR QUESTIONS BELOW)

How many stops do you usually make (excluding your parking place)?

\_\_\_\_\_ stops

24

How many passengers are usually dropped off before you park your vehicle?

\_\_\_\_\_ passengers

26

How far is it from the place where the last passenger is picked up (which may be your home) to the first drop-off point?

\_\_\_\_\_ miles

28

How far is it from the first drop-off point to your parking place?

\_\_\_\_\_ miles

31

NOW ANSWER QUESTIONS IN COLUMN B ABOUT YOUR TRIP TO WORK AS A CARPOOL PASSENGER. SKIP TO PAGE 5 IF YOU NEVER ARE A PASSENGER.

COLUMN B

THE FOLLOWING QUESTIONS APPLY TO YOUR TRIP TO WORK WHEN YOU ARE A PASSENGER IN YOUR CARPOOL. PLEASE SKIP TO PAGE 5 IF YOU NEVER ARE A PASSENGER.

B1. Where are you usually picked up in the morning?

34-1  At home

-2  At some other meeting place (ANSWER BOTH QUESTIONS BELOW)

How far is it from your home to the meeting place? \_\_\_\_\_ miles

35

How do you travel to the meeting place?  
 Auto  Other means

38-1      38-2

B2. How many passengers are usually picked up at the same place as you (excluding yourself and the driver)?

39-1  None

-2  \_\_\_\_\_ passengers are picked up at the same place as I am

40

B3. How many passengers are usually picked up after you?

42-1  None

-2  \_\_\_\_\_ passengers are picked up after me at \_\_\_\_\_ different locations

43

B4. How many passengers are usually dropped off before you?

47-1  None

-2  \_\_\_\_\_ passengers are dropped off before me at \_\_\_\_\_ different locations

48

B5. Where are you usually dropped off in the morning?

52-1  At work

-2  Other (specify) \_\_\_\_\_

53

B6. How many passengers are usually dropped off at the same place as you (excluding yourself and the driver)?

\_\_\_\_\_ passengers

55

B7. How far is it from the place where you are picked up to the place where you are dropped off?

\_\_\_\_\_ miles

57

B8. Is the vehicle left at home when you are a carpool passenger driven by others in your household while you are at work? (Check one)

60-1  There is no extra vehicle left at home as a result of my carpooling

-2  No, the vehicle is not driven by others

-3  Yes, for fewer miles than I would have driven it

-4  Yes, for more miles than I would have driven it

-5  Yes, for about the same number of miles as I would have driven it



THE QUESTIONS ON THIS PAGE SHOULD BE ANSWERED BY EVERYONE

26. Were you living in the Atlanta metropolitan area two years ago?

- 61-1  Yes
- 2  No (SKIP TO QUESTION 29)

27. Were you working two years ago? (Check one)

- 62-1  Yes, full-time
- 2  Yes, part-time
- 3  No (SKIP TO PAGE 6)

28. At that time, were you... (ANSWER EACH QUESTION BELOW)

- |                                       | Yes                           | No                          |
|---------------------------------------|-------------------------------|-----------------------------|
| Working for the same employer as now? | 63-1 <input type="checkbox"/> | -2 <input type="checkbox"/> |
| Working at the same location as now?  | 64-1 <input type="checkbox"/> | -2 <input type="checkbox"/> |
| Residing in the same location as now? | 65-1 <input type="checkbox"/> | -2 <input type="checkbox"/> |

29. If you worked or lived in a different location, how many miles was it from your home to your place of work? \_\_\_\_\_ miles

66

30. How did you most often travel to and from work two years ago? (Check all that apply if you usually used a combination of means to make a one-way trip)

- |   |  |
|---|--|
| 69-1 <input type="checkbox"/> Drove alone                                 | 74-1 <input type="checkbox"/> Motorcycle or bicycle                |
| 70-1 <input type="checkbox"/> Drove or rode with one or more other people | 75-1 <input type="checkbox"/> Walked                               |
| 71-1 <input type="checkbox"/> MARTA express bus                           | 76-1 <input type="checkbox"/> Other (specify) _____                |
| 72-1 <input type="checkbox"/> MARTA local bus                             | 77-1 <input type="checkbox"/> _____                                |
| 73-1 <input type="checkbox"/> Private or employer-sponsored buspool       | Not applicable -- I was not working two years ago (SKIP TO PAGE 6) |

78

31. Approximately how many days per week did you... (ANSWER BOTH PARTS BELOW)

- Travel to work by the means checked above? 7 \_\_\_\_\_ days  
 Travel from work by the means checked above? 8 \_\_\_\_\_ days

serial 1-5 card no. 5

32. If you drove alone or drove with other people, what vehicle did you most often drive? (Specify year/make/model) \_\_\_\_\_

9

IF YOU WERE NOT IN A CARPOOL TWO YEARS AGO, PLEASE SKIP TO PAGE 6.

33. How many people were in your carpool two years ago (including yourself)? \_\_\_\_\_

15

34. How many of the other members of your carpool... (ANSWER ALL THREE PARTS BELOW)

- Lived in the same household as you? 17 \_\_\_\_\_ person(s)
- Worked for the same employer as you? 19 \_\_\_\_\_ person(s)
- Worked in the same location as you but for a different employer? 21 \_\_\_\_\_ person(s)

35. How often were you the driver of your carpool? (Check one)

- 23-1  All the time
- 2  Some of the time, \_\_\_\_\_ days per week
- 3  Some of the time, every \_\_\_\_\_ days
- 4  Some of the time, every \_\_\_\_\_ weeks
- 5  Never

24

36. What was the average fuel economy of all the vehicles used by your carpool?

\_\_\_\_\_ miles per gallon

37. Are you familiar with the activities of the Georgia Ridesharing Program?

- 28-1  Yes  
 -2  No (SKIP TO QUESTION 40)

38. Have you received any of the following from the Georgia Ridesharing Program? (Answer yes or no for each item)

Yes No

- 30-1  -2  Brochures on carpooling or vanpooling  
 31-1  -2  MARTA route and schedule information  
 32-1  -2  List of people with whom I could carpool or vanpool  
 33-1  -2  Assistance in forming or joining a carpool or vanpool  
 34-1  -2  Other (specify) \_\_\_\_\_

39. If you received any of the above, how did you use it? (Check as many as apply)

- 37-1  This information helped me start carpooling or vanpooling  
 38-1  This information helped me find replacement or additional members for my carpool or vanpool  
 39-1  I contacted people on the list but did not start carpooling or vanpooling with any of them  
 Why not? \_\_\_\_\_  
 40-1  I filed this information away for future use  
 41-1  I did not use this information  
 Why not? \_\_\_\_\_

40. What is your occupation? (Check one)

- 46-1  Salesperson  
 -2  Clerical/office worker  
 -3  Shop/production worker  
 -4  Craftsman or foreman  
 46-5  Service worker  
 -6  Professional/technical  
 -7  Manager/administrator  
 -8  Transportation/driver  
 -9  Other (specify) \_\_\_\_\_

41. During the past 12 months, how many days did you not go to your usual place of work for each of the following reasons (excluding holidays)?

Illness 49 \_\_\_\_\_ days  
 Vacation 51 \_\_\_\_\_ days  
 Personal leave 53 \_\_\_\_\_ days  
 Out-of-town business 55 \_\_\_\_\_ days

42. Are you... 57-1  Male 57-2  Female

43. What is your age? 58 \_\_\_\_\_ years

44. To which of the following ethnic groups do you belong? (Check one)

- 60-1  White  
 -2  Black  
 60-3  Spanish-surnamed  
 -4  Other (specify) \_\_\_\_\_

45. How many people live in your household including yourself? 62 \_\_\_\_\_

46. Including yourself, how many people in your household are... (ANSWER BOTH PARTS)

Employed full-time or part-time? 64 \_\_\_\_\_  
 Licensed to drive? 66 \_\_\_\_\_

47. In what range is your annual household income? (Check one)

- 68-1  Less than \$5,000  
 -2  \$5,000 - \$9,999  
 -3  \$10,000 - \$14,999  
 -4  \$15,000 - \$19,999  
 -5  \$20,000 - \$24,999  
 68-6  \$25,000 - \$34,999  
 -7  \$35,000 - \$44,999  
 -8  \$45,000 - \$54,999  
 -9  \$55,000 - \$74,999  
 -0  \$75,000 and over

48. Please indicate today's date \_\_\_\_\_, 1982

EMPLOYER PROFILE

[MAILING LABEL]

Please correct the label if necessary.

serial no. 1-4

1 card no. 5

Name, Title, and Department of Person Filling Out This Form

Name \_\_\_\_\_ Title \_\_\_\_\_

Department \_\_\_\_\_ Telephone \_\_\_\_\_ Ext. \_\_\_\_\_

SECTION A - INFORMATION ABOUT YOUR ORGANIZATION

1. Which of the following best describes your organization? (Check one)

- 6-01  Manufacturing
- 02  Retail trade
- 03  Wholesale or supplier
- 04  Financial services -- e.g., bank, insurance, real estate
- 05  Legal services
- 06  Business services -- e.g., advertising, consulting, data processing
- 07  Other commercial services -- e.g., hotel, laundry, repair
- 08  Health and social services
- 09  Transportation, communications, or utility
- 10  Educational institution
- 11  Government
- 12  Military
- 13  Other (specify) \_\_\_\_\_

8

2. How long has your organization been in existence? \_\_\_\_\_ years or \_\_\_\_\_ months

3. How long has your organization been at this location? \_\_\_\_\_ years or \_\_\_\_\_ months

4. Is this location your organization's headquarters? 17-1  Yes 17-2  No

5. What is the approximate gross floor area at this location? \_\_\_\_\_ sq. ft.

6. What is the total land area at this location? \_\_\_\_\_ sq. ft. or \_\_\_\_\_ acres

25 31

7. How many employees does your organization have at this location? \_\_\_\_\_

8. Approximately how many of these employees are new to your organization since one year ago?

37 41

9. Does your organization have any other work locations (divisions, plants, offices, etc.) in the Atlanta metropolitan area in addition to this location?

42-1  Yes

How many other work locations? \_\_\_\_\_  
How many employees does your organization have at these other work locations? \_\_\_\_\_

45 49

-2  No

10. Please indicate the number of employees at this location who are in each of the following categories.

<u>Number of Employees</u>		<u>Number of Employees</u>	
Salesperson		Service worker	
Clerical/office worker		Professional/technical	
Shop/production worker		Manager/administrator	
Craftsman or foreman		Transportation/driver	
Other (specify) _____			

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 5

11. What percentage of employees at this location are...

Temporary or seasonal? %      Part-time? %  
 Female? %

12. Are employees at this location permitted to vary their work start times?

55-1  Yes -- Please specify any restrictions on eligibility \_\_\_\_\_  
 \_\_\_\_\_  
 55-2  No

13. Are there multiple work shifts and/or staggered start times at this location?

58-1  No  
 -2  Yes, there are multiple shifts  
     ↳ How many shifts are there?   
     ↳ How many employees are assigned to the largest shift?   
 -3  Yes, there are staggered start times

SECTION B - INFORMATION ABOUT PARKING

14. How many parking spaces does your organization furnish for employees working at this location?

65-1  None -- we furnish no employee parking (SKIP TO QUESTION 19)  
 -2  We furnish spaces

15. Of these parking spaces, how many are leased by your organization?

spaces leased at an average cost of \$ per space per month

16. How much do you charge employees for parking? \$ per space per month

17. Are all employees eligible for these spaces?

18-1  Yes  
 -2  No -- Please specify restrictions and number of employees eligible  
 \_\_\_\_\_

18. What is the annual cost of maintaining your parking facilities? \$

19. Is there free parking within 1/4 mile of your location?  Yes  No

20. Is there paid parking within 1/4 mile of your location?

34-1  Yes  
 What type(s)? (Check all that apply) 35-1  On-street, metered  
 36-1  Off-street, indoor  
 37-1  Off-street, outdoor  
 What is the average rate for off-street parking? \$ per space per day or  
 34-2  No \$ per space per month

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28. If you provide vans for employee vanpool groups...

a. Approximately when did your organization begin providing vans?  
 \_\_\_\_\_ month/year

--

b. How many vans do you provide at present? \_\_\_\_\_  
35

c. Of these, how many are leased?  
 \_\_\_\_\_ are leased at an average cost of \$ \_\_\_\_\_ per van per month  
38 41

d. What is the total monthly amount collected from employees who use the vans  
 you provide (excluding charges for personal use of the van)? \$ \_\_\_\_\_  
44 46

e. Is van maintenance performed in-house? 49-1  Yes 49-2  No

SECTION D - VIEWS ABOUT EMPLOYER-SPONSORED RIDESHARING PROGRAMS

Please answer all the questions in this section, whether or not you are currently involved in ridesharing activities.

29. What do you think are the three most important benefits or advantages of employer-sponsored efforts to promote carpooling and vanpooling among employees? Please place a "1" beside the most important benefit, "2" beside the second most important benefit, and "3" beside the third most important benefit.

- 50 \_\_\_ Relief of traffic congestion
- 51 \_\_\_ Energy conservation
- 52 \_\_\_ Improved image within the community
- 53 \_\_\_ Reduced parking requirements
- 54 \_\_\_ More parking for customers and visitors
- 55 \_\_\_ Able to expand facilities without moving or acquiring more land
- 56 \_\_\_ Effective fringe benefit to recruit/retain employees
- 57 \_\_\_ Able to hire people without autos and people who live farther away
- 58 \_\_\_ Improved competitive standing in the labor market
- 59 \_\_\_ Improved employee punctuality
- 60 \_\_\_ Reduced employee absenteeism
- 61 \_\_\_ Reduced overtime requirements
- 62 \_\_\_ Improved employee morale
- 63 \_\_\_ Other (specify) \_\_\_\_\_

--

30. What do you think are the three most important barriers to or disadvantages of employer-sponsored efforts to promote ridesharing?  
 (1 = most important, 2 = second most important, 3 = third most important)

- 66 \_\_\_ Inappropriate employer role
- 67 \_\_\_ Difficult to initiate
- 68 \_\_\_ Few employees benefit
- 69 \_\_\_ Potential liability risks
- 70 \_\_\_ Insurance costly or unavailable
- 71 \_\_\_ Regulatory restrictions
- 72 \_\_\_ Potential complications involving labor negotiations
- 73 \_\_\_ High start-up costs
- 74 \_\_\_ High operating costs
- 75 \_\_\_ Large staff time requirements
- 76 \_\_\_ Employees who carpool work fewer hours
- 77 \_\_\_ Employees who carpool are unwilling to stay after hours
- 78 \_\_\_ Employees who carpool are less punctual
- 79 \_\_\_ Other (specify) \_\_\_\_\_

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31. Please read the following list of employee fringe benefits and indicate for each item (a) whether you believe it is effective in attracting or retaining employees and (b) whether the benefit realized by employees is at least as large as the cost of the activity to the employer.

	Effective in attracting or retaining employees?		Benefit to employees at least as large as cost to employer?	
	Yes	No	Yes	No
Group health insurance	6-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	20-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Free parking	7-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	21-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Maternity leave	8-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	22-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Life insurance	9-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	23-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Company car	10-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	24-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Paid vacation	11-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	25-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Group dental insurance	12-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	26-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Flexitime	13-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	27-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Pension plan	14-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	28-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Assistance in forming or expanding carpools	15-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	29-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Employer-provided vans	16-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	30-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Tuition assistance	17-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	31-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
On-site day care	18-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	32-1 <input type="checkbox"/>	-2 <input type="checkbox"/>
Paid sick leave	19-1 <input type="checkbox"/>	-2 <input type="checkbox"/>	33-1 <input type="checkbox"/>	-2 <input type="checkbox"/>

32. Are you familiar with the activities of the Georgia Ridesharing Program?

- 34-1  Yes  
-2  No

33. Has your organization ever contacted or been contacted by the Georgia Ridesharing Program?

- 35-1  Yes -- we contacted the Georgia Ridesharing Program  
-2  Yes -- we were contacted by the Georgia Ridesharing Program  
-3  No (SKIP QUESTIONS 34 AND 35)

34. Which of the following did you receive from the Georgia Ridesharing Program? (Check all that apply)

- 36-1  Information on carpooling/vanpooling  
37-1  Briefing on carpooling/vanpooling  
38-1  Assistance in performing in-house matching  
39-1  Employee match lists prepared by the Georgia Ridesharing Program  
40-1  Assistance in obtaining vans  
41-1  Assistance in forming and operating vanpools  
42-1  Other (specify) \_\_\_\_\_

35. Were you generally satisfied with the service your organization received from Georgia Ridesharing Program?

- 45-1  Yes  
-2  No - In what ways could the service be improved? \_\_\_\_\_  
\_\_\_\_\_

THANK YOU VERY MUCH FOR YOUR COOPERATION. PLEASE USE THE SPACE BELOW FOR ANY COMMENTS

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48





