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**GAINESVILLE REGIONAL
TRANSIT SYSTEM
TRANSIT DEVELOPMENT PLAN
FYs 1999 - 2003**

Draft Final Report

Prepared for:

Gainesville Regional Transit System

By:

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June 1998

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CHAPTER ONE:

Base Data Compilation

INTRODUCTION

September 1997 was a month that forever changed the course of transit in the Gainesville metropolitan area. As had been the case with countless other years in Gainesville history, it was the beginning of the Fall semester at the University of Florida. The difference was that Regional Transit System buses were swelling to and beyond capacity. Routes throughout the areas in the southwest quadrant were forced to pass awaiting customers because of the standing room only crowds on the buses. Articles appeared almost daily in the Independent Florida Alligator and the Gainesville Sun with accounts of students who desired to take the bus to campus but were unable to do so. RTS officials, accustomed to complaints of empty buses, heard the complaints from customers and set about on a new course...

What changed? Students have always lived in Gainesville. The University has been around since 1853. And Gainesville has had a transit system for many years. The fact is that University of Florida student enrollment has been steadily increasing throughout the 1990s while the overall number of parking spaces has not kept pace. Transit as a transportation product became an instant choice to its existing and potential student customers.

In Florida, transit systems must submit a five-year transit development plan to the Florida Department of Transportation as a condition to receiving block grant funding each year. The plan must be strategic in nature, which means that it must reflect the community's will and set out a series of strategies to reflect that will. In the past, residents and leaders have struggled with the role of transit in overall community values. There are many in Gainesville/Alachua County who value the region's natural beauty with its parks, prairies, and tree-lined streets. The people of Gainesville think a great deal about their community not only in concrete but in conceptual terms as well, using terms such as "livable" and "sustainable" and "human scale development" to envision the kind of community they wish to create and maintain. Others believe the region has great potential for business and economic development given the quality of life that is afforded to new people moving into the region. Finally, there are those who see

the University of Florida, with its powerful economic impact and future expansion plans, as the primary force driving all of the factors discussed above.

Within this framework, Gainesville has experienced not only a rethinking of the role of transit but also a sense of great opportunity that must be seized. In January 1998, the Gainesville City Commission made history by adopting the first ever vision statement for the Regional Transit System:

The vision of RTS is:

*To become a premiere
university community transportation system
which provides a variety of
flexible transportation services
that promote
accessibility, comfort, a sense of fun, and community pride.*

This vision statement has been and will continue to be a guide in the development of this five-year plan. To better plan for the continuing development, improvement, or expansion of a public transit system, it is necessary to gain an understanding of the environment within which the system is operating. To achieve this end, Chapter One analyzes the demographic and economic conditions of Gainesville/Alachua County and its population utilizing 1990 U.S. Census Bureau (USCB) data as well as information collected from an on-board passenger survey, a bus operator survey, and interviews with Gainesville community leaders. Also, additional information was provided by RTS staff, the City of Gainesville, and the North Central Florida Regional Planning Council.

GAINESVILLE/ALACHUA COUNTY

Alachua County is located in North Central Florida and is bounded by Marion and Levy Counties to the south, Gilchrist County to the west, Columbia, Union and Bradford Counties to the north, and Putnam County to the east. The county encompasses approximately 874 square land miles. Gainesville, the largest city in the county, is physically situated in the center and is the County seat. A majority of residents live within the Gainesville urbanized area, which encompasses all of the RTS service area.

The Gainesville urbanized area has "natural barriers" that guide growth and development within the region and also highlight its natural beauty. To the south there is Paynes Prairie State Preserve which is several thousand acres in size; to the east is Newnans Lake; and to the north is San Felasco Hammock. A majority of residential and commercial development has occurred in the western and northwestern urban area, including the Oaks Mall at Newberry Road and I-75 and continuing west to S.W. 125th Street. A vast majority of off-campus housing for University of Florida students is situated south and southwest of the University along Archer Road, S.W. 20th/24th Avenue, and more recently, the Williston Road corridors.

The University of Florida is the community's main economic engine as the largest employer and with a student enrollment of 42,000, an enrollment that has been steadily increasing over the past several years. The University also has medical clinics and a teaching hospital, which makes it a primary focal point for the many rural counties surrounding it.

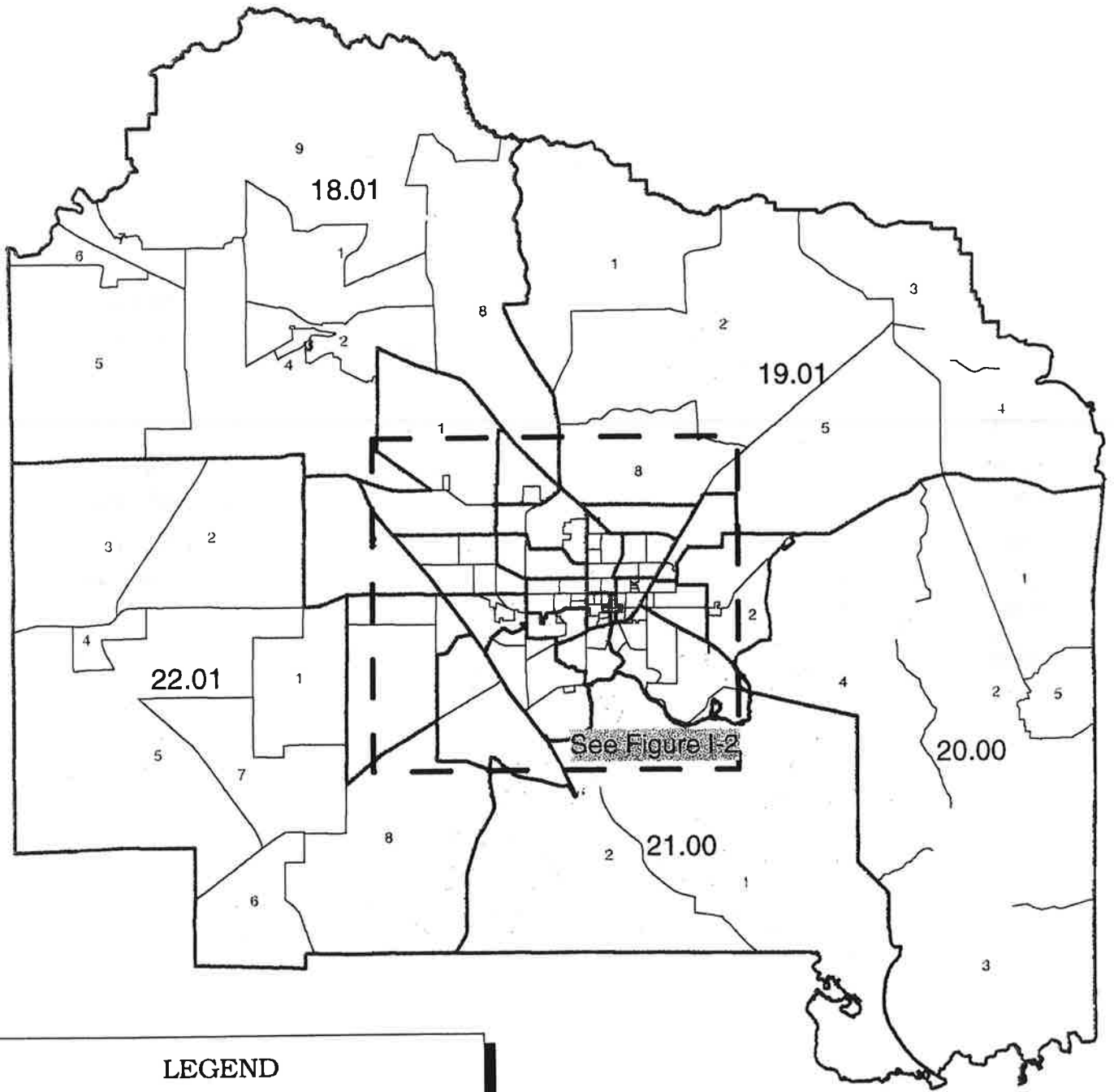
In the 1990 Census, the population was estimated at 181,561. The current (1995) population figure for Gainesville/Alachua County is 198,261, as projected by the Bureau of Economic and Business Research (BEBR) at the University of Florida. Gainesville is the largest city and the county seat with a population of 96,051. The county has eight (8) rural communities with population under 6,000, the largest of which is Alachua with a population of 5,612. Table I-1 below summarizes Alachua County's communities and unincorporated populations as of 1995.

**TABLE I-1
POPULATION – ALACHUA COUNTY COMMUNITIES**

Community	1990 Census	1995 Estimates	% Change
Gainesville	85,075	96,051	12.9%
Alachua	4,547	5,612	23.4%
High Springs	3,144	3,477	10.6%
Newberry	1,644	2,135	29.8%
Archer	1,372	1,427	4.0%
Hawthorne	1,305	1,381	5.8%
Waldo	1,017	1,047	2.9%
Micanopy	626	647	3.3%
Unincorporated	82,744	86,371	4.4%
TOTAL	181,561	198,261	9.2%

This section summarizes demographic and economic data for Gainesville/Alachua County. Specifically, characteristics related to transit use are presented. All data used in this chapter were obtained from the 1980 and 1990 USCB's Census of Population and Housing databases and, where applicable, from April 1, 1995 county population estimates provided by BEBR. All graphic depictions in this section present data at the block group level in order to provide more accuracy in looking at various demographic characteristics. Finally, Appendix A consists of tables which denote, in detail, the demographic and economic data examined for all census tracts and block groups as well as Traffic Analysis Zones (TAZs) in Gainesville/Alachua County, where applicable. Figures I-1 and I-2 below show Alachua County census tracts and block groups for the Gainesville Urban Area (GUA) and Alachua County as a whole.

**Figure I-1
Census Tracts and Block Group Boundaries
Alachua County**

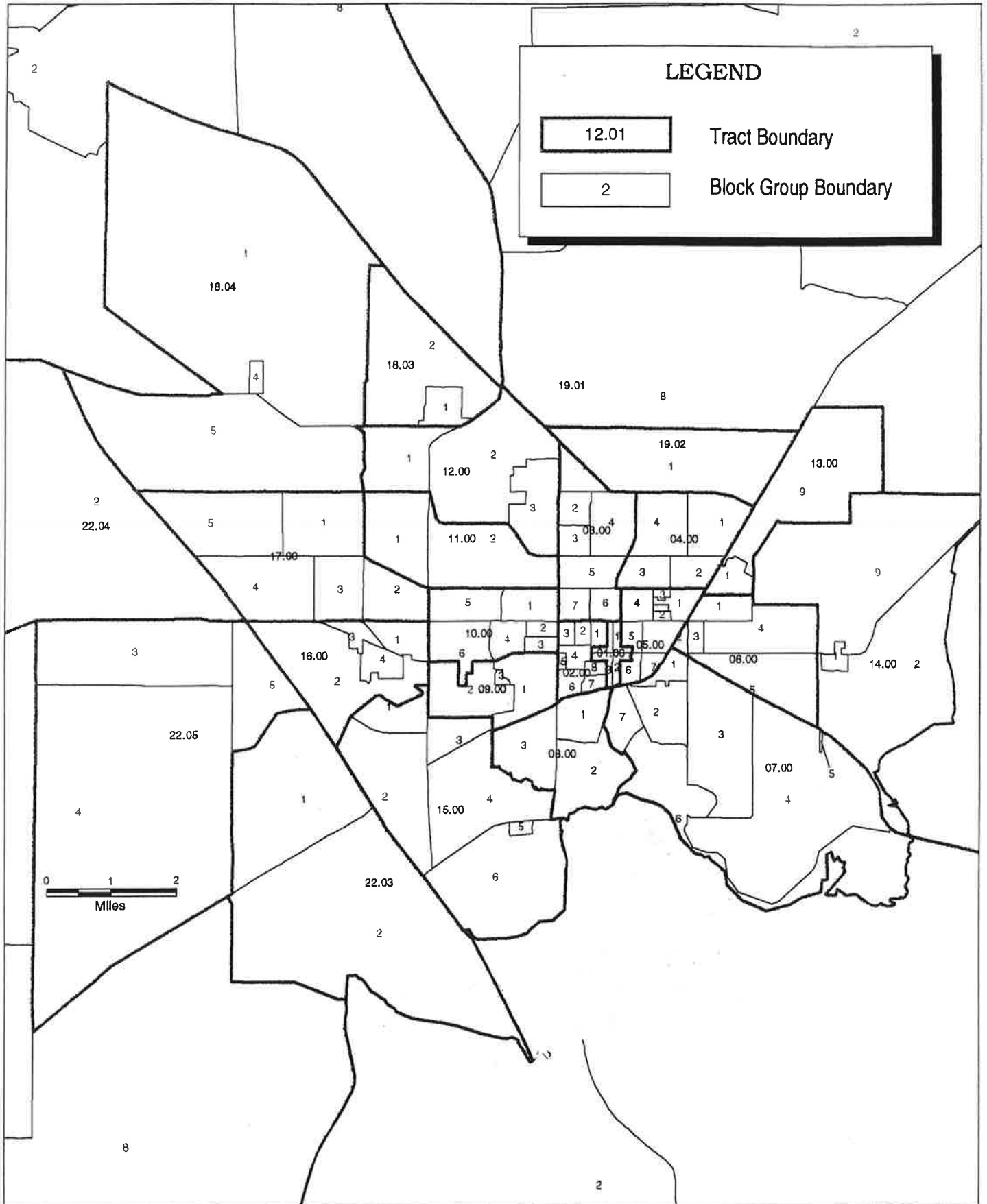


LEGEND

12.01	Tract Boundary
2	Block Group Boundary



**Figure I-2
Census Tract and Block Group Boundaries
Gainesville Urban Area**



Population, Population Growth Rates, and Population Densities

As shown in Table I-2, the 1990 population of Gainesville/Alachua County is 181,561. According to the USCB's population estimates, the county's population has increased more than 20 percent from 1980 to 1990, or an increase of 30,200 people. During this same time, Florida's population grew by approximately 33 percent. Based on estimates provided by BEBR, the county's population was projected to be 198,261 in 1995 (a growth rate of 9.2 percent from 1990), and is estimated to grow 7.4 percent to 213,000 by the year 2000.

Population densities were also examined, since higher densities are generally more conducive to transit use. Table 1-2 shows that Gainesville/Alachua County's 1990 population density of 208 persons per square mile is ranked 20th in the state and is 15 percent less than the State of Florida as a whole. In addition, according to 1990 U.S. Census data, the population density of Gainesville/Alachua County is significantly greater than that of its neighboring counties. The nearest most dense county is Marion with a 1990 population density of 123 persons per square mile (ranked 30th) with the remaining adjacent counties all ranking between 37th and 55th in the state.

**Table I-2
General Populations, Growth Rates, and Densities**

Area	1990 Population	Population Growth (1980-1990)	Density (persons per square mile)
Gainesville/Alachua	181,561	20.0%	208
Florida	12,937,926	32.8%	240

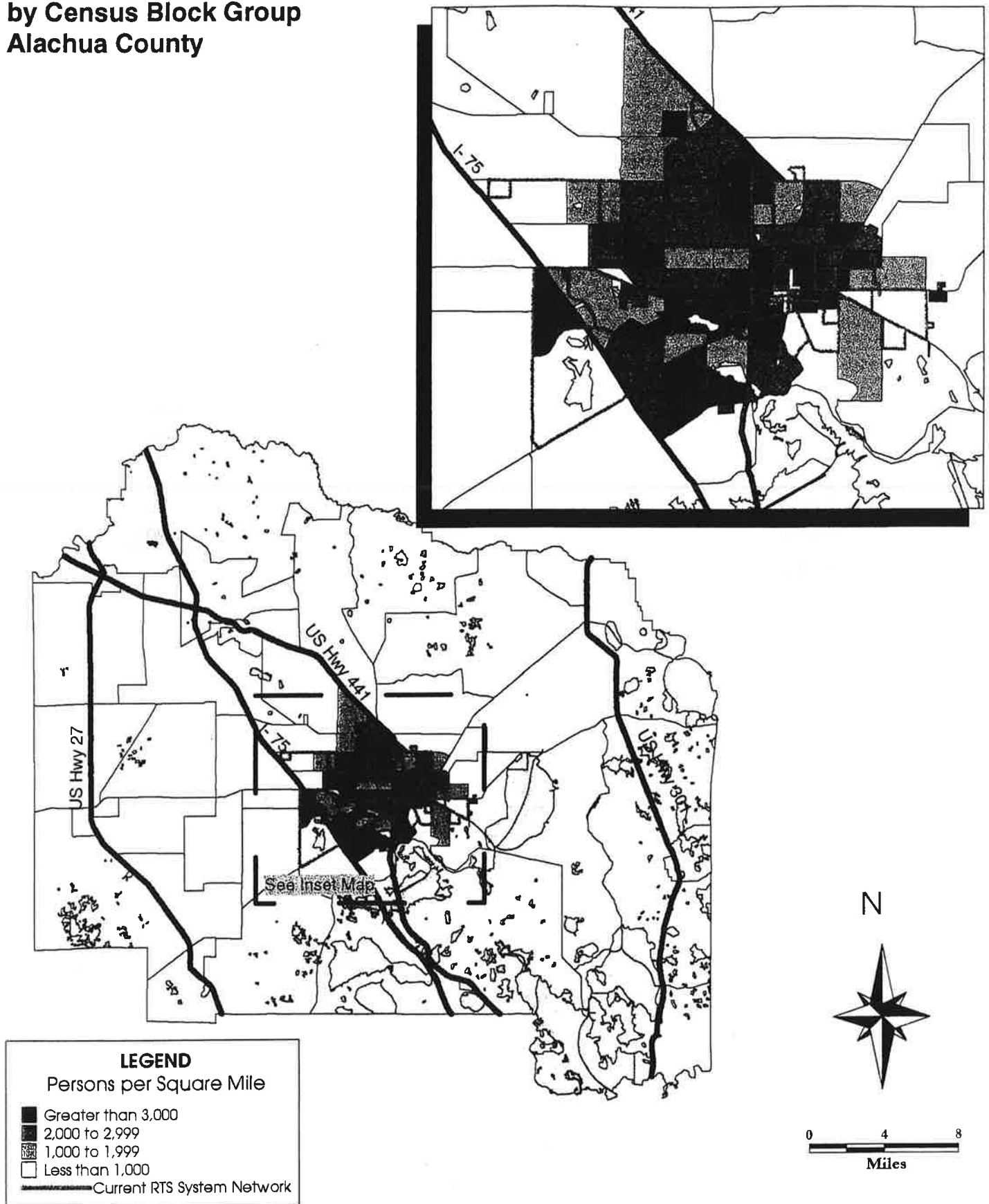
Table 1-3 outlines the five most populous census tracts in Gainesville/Alachua County. These five tracts each have populations greater than 10,000 persons. According to 1990 U.S. Census data, the most populous tract is number 15, which is located in southwest Gainesville and has 16,056 persons residing within its physical boundaries.

**Table I-3
Highest Populations by Census Tract (1990)
Gainesville/Alachua County**

Tract	Area	Population
15.00	Southwest Gainesville (urban)	16,056
18.01	Northwest Alachua County	13,863
22.01	Southwest Alachua County	12,980
22.05	West Gainesville (urban)	12,465
12.00	Northwest Gainesville (urban)	10,495

Although the above listed census tracts are the most populated, none of them have the greatest population densities expressed in persons per square mile. A majority of the block groups with the highest densities tend to be located west of Waldo Road, north of Paynes Prairie, east of I-75, and south of U.S. 441/N.W. 53rd Avenue as illustrated in Figure I-3. The population densities by block group can be seen in Figure I-3: those shaded dark blue have population densities greater than 3,000 persons per square mile.

**Figure I - 3
Population Density
by Census Block Group
Alachua County**



Traditional and Unique Transit Markets

To investigate the transportation needs of a given area, certain distinct segments of the population must be examined. One step in the development of a TDP requires the analysis of segments of the study area's population that consist of persons who use transit service as a primary source for mobility requirements. Florida has a statutory definition to define segments of the population who are "transportation-disadvantaged". These groups are commonly referred to using the acronym "TD." Traditional transit markets include:

- Youth (persons under the age of 18);
- Elderly (persons 60 years of age and older);
- Disabled (persons who have a public transportation disability)
- Low-income (households with annual incomes below \$10,000); and
- Zero-car (households in which no car is available).

In Gainesville, because of its demographics, unique markets exist for transit service including:

- University and College students (between the ages of 18-25);
- Environmentalists;
- Proponents of livable and sustainable communities; and
- University of Florida employees.

In this section, we will examine those market segments that are quantifiable based on U.S. census data. Those that are non-quantifiable (such as environmentalists) will be discussed in later technical memorandums to incorporate strategies to develop community coalitions for transit.

Data from the 1990 U.S. Census were used to obtain the number of persons in each of the TD categories. The following sections provide a description of the demographic characteristics of Gainesville/Alachua County in terms of the categories listed above.

Transportation Disadvantaged Population

Chapter 427 of the Florida Statutes defines transportation disadvantaged (TD) persons as:

"...those persons who because of physical or mental disability, income status, or age are unable to transport themselves or to purchase transportation and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or children who are handicapped or high-risk or at risk as defined in s. 411.202."

The Florida Coordinated Transportation System serves two population groups. The first group, now being referred to by the Florida Commission for the Transportation Disadvantaged (CTD) as the "Potential" TD population (also known as Category I TD population), includes persons who are disabled, elderly, low-income, and children who are "high-risk" or "at-risk." These Potential TD persons are eligible for trips that are sponsored by social services or other governmental agencies.

The second population group, referred to by the CTD as the Transportation Disadvantaged (TD) population (also known as Category II), is a subset of the Potential TD population. The TD population includes those persons who are transportation disadvantaged according to the definition in Chapter 427 F.S. (i.e., they are unable to transport themselves or to purchase transportation). These persons are eligible to receive the same subsidies as those persons in the Potential TD group, plus they are eligible to receive trips subsidized by the TD Trust Fund monies allocated to local community transportation coordinators (CTCs) by the CTD, as funding permits.

Table I-4 presents the 1997 estimates for persons who are included in the Potential TD population. This figure, 76,411, represents approximately 38.5 percent of the county's 1995 population. Table I-4 also includes the 1997 estimate of the TD population in Gainesville/Alachua County. Approximately 13,642 persons, or 6.9 percent of the county's population, are estimated to be included in the TD population and, therefore, would meet the criteria for being considered transportation disadvantaged and eligible to receive trips subsidized by the TD Trust Fund.

**Table I-4
1997 Gainesville/Alachua County
Transportation Disadvantaged Populations**

Population Segments	Population Estimates	Percent of County Pop.
Potential TD Population	76,411	38.5%
TD Population	13,642	6.9%

Source: Estimates obtained by CUTR using the methodology described in *Methodology Guidelines for Forecasting TD Transportation Demand at the County Level*. May 1993.

Table I-5 contains a detailed breakdown of the different categories within Gainesville/Alachua County's actual TD population. The largest subgroup is the transportation disabled, elderly, non-low income, which comprises approximately 41.4 percent of the 1997 TD population.

The *National Survey of Transportation Handicapped People* (NSTHP), sponsored by the former Urban Mass Transportation Administration (now the Federal Transit Administration), provided data on the number of persons with a "transportation handicap." This was defined as persons who (1) had experienced one or more general problems in the past 12 months that affected their mobility, (2) perceived that they had more difficulty in using public transportation than persons without their general problem, and (3) were not homebound. This definition was used to specify transportation disabled persons (a subset of the total disabled population) noted in Tables I-5 and I-6.

Table I-5
1997 Gainesville/Alachua County
Transportation Disadvantaged (TD) Population

Population Segments	Population Estimates	Percent of TD
Transportation Disabled, Non-Elderly, Low Income	781	5.7%
Transportation Disabled, Non-Elderly, Non-Low Income	2,336	17.1%
Transportation Disabled, Elderly, Low Income	974	7.1%
Transportation Disabled, Elderly, Non-Low Income	5,649	41.4%
Non-Transportation Disabled, Low Income, No Auto, No Fixed-Route Transit	3,872	28.7%
Total Transportation Disadvantaged	13,642	100.0%

Source: Estimates prepared by CUTR using the methodology described in *Methodology Guidelines for Forecasting TD Transportation Demand at the County Level*. May 1993.

Tables I-6 contains projections for the TD population of Gainesville/Alachua County out to the year 2002. Projections of populations are separated into the same subgroups as in Table 1-5. From 1997 to 2002 the TD population is estimated to grow from 13,642 in 1997 to 14,852 in 2002.

Table I-6
1997-2002 Gainesville/Alachua County
Transportation Disadvantaged (TD) Population Projections

Population Segments	1997	1998	1998	2000	2001	2002
Transportation Disabled, Non-Elderly, Low Income	781	790	799	809	816	824
Transportation Disabled, Non-Elderly, Non-Low Income	2,366	2,395	2,424	2,452	2,476	2,499
Transportation Disabled, Elderly, Low Income	974	994	1,014	1,036	1,064	1,093
Transportation Disabled, Elderly, Non-Low Income	5,649	5,767	5,887	6,008	6,173	6,341
Non-Transportation Disabled, Low Income, No Auto, No Fixed-Route Transit	3,872	3,919	3,967	4,015	4,055	4,095
Total Transportation Disadvantaged	13,642	13,865	14,091	14,320	14,584	14,852

Source: Estimates prepared by CUTR using the methodology described in *Methodology Guidelines for Forecasting TD Transportation Demand at the County Level*, May 1993.

Age

Table I-7 shows the percentage distributions for all age groups in Gainesville/Alachua County and Florida. As mentioned previously, the age groups of primary interest for this TDP are those segments of the population that are considered to be transportation disadvantaged. Specifically, these segments are the age groups that comprise the county's youth and elderly populations.

It is evident from the data in Table I-7 that the population of Gainesville/Alachua County is somewhat younger, overall, than that of Florida. The county's age distribution indicates that 43.4 percent of the population is under the age of 25 as compared with 31.3 percent for Florida. According to 1990 U.S. Census data estimates for 1995, the median age in Gainesville/Alachua County is 28.5 years. The county's median age is projected to increase approximately 3

percent to 29.1 by the year 2000. The younger populations within the county should be considered a major factor in the strategic planning and continuing development of public transit in the region.

**Table I-7
Population and Age Distribution**

Area	Age				
	0 – 17	18 – 24	25 – 44	45 – 59	60+
Gainesville/Alachua County	21.7%	21.7%	32.6%	11.3%	12.7%
Florida	19.4%	11.9%	29.1%	20.7%	18.9%

As discussed previously, the age groups of under 18 and over 60 are of interest in this study. Those under the age of 18 are either too young to drive or do not have access to an automobile. Similarly, the elderly are often drawn to public transportation as a more convenient form of mobility when physical or economic limitations are present. Therefore, persons in these two age groups typically rely more on public transportation for mobility.

Figures I-4 and I-5 below display the distributions of youth and elderly populations in Alachua County. The highest concentrations of persons below the age of 18 are found in the northern and western block groups of both the Gainesville urban area and Alachua County as a whole. The highest concentrations (more than 1,000) are found in the block group that includes Haile Plantation and other single family residential subdivisions and the block group north of N.W. 39th Avenue near U.S. 441. Elderly populations are more dispersed throughout the county, including block groups in eastern Alachua County along U.S. 301, southern Alachua County, High Springs, and west of I-75. The highest concentrations of elderly persons (more than 500) are found in the northern portions of the Gainesville urban area, including the Millhopper area and the area from U.S. 441 south to N.W. 39th Avenue.

Figure I - 4
Population Under Age 18
by Census Block Group
Alachua County

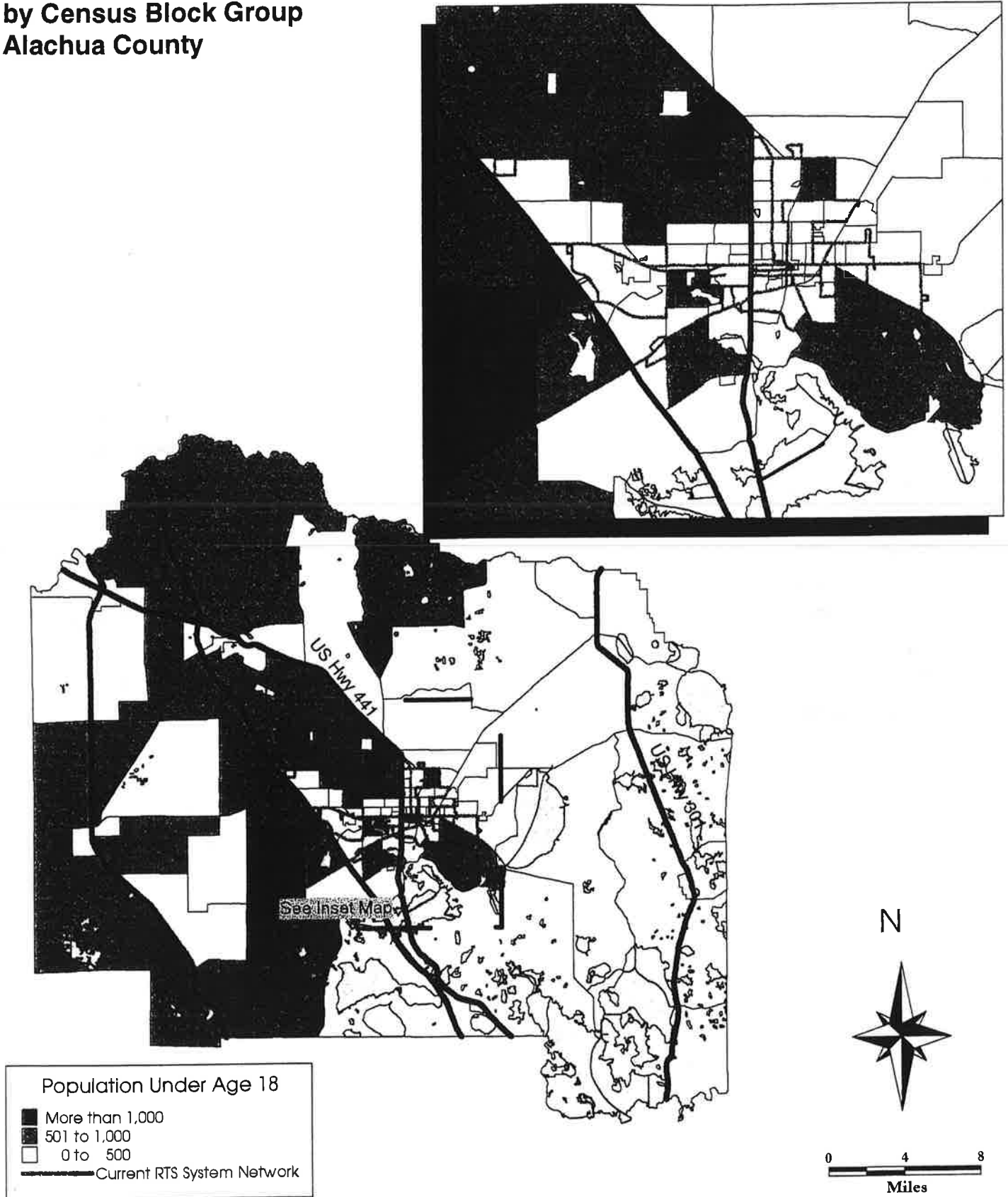
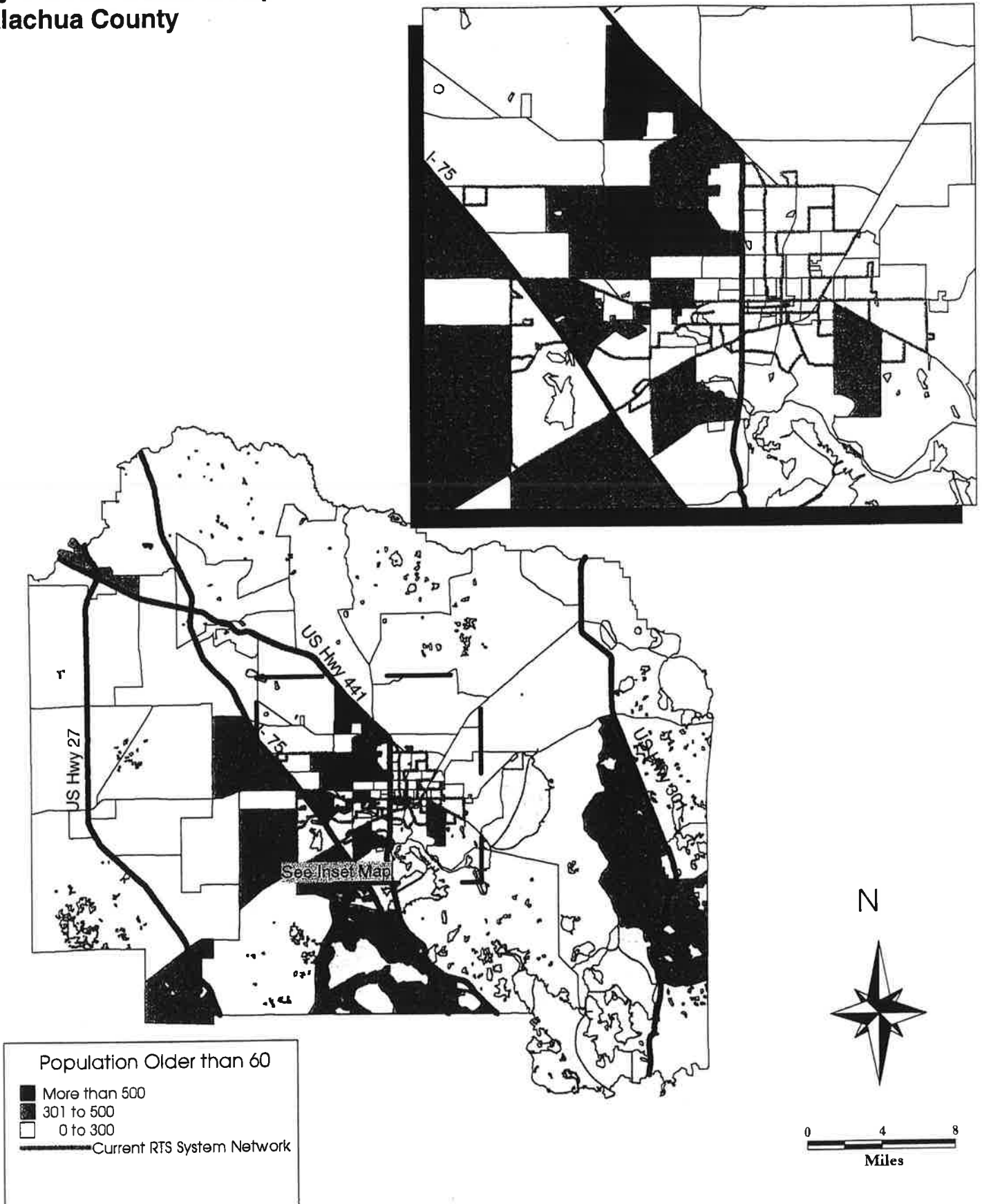


Figure I -5
Population Over Age 60
by Census Block Group
Alachua County



Income

Table I-8 presents the distribution of household income in Gainesville/Alachua County and Florida as a whole. Compared to the state, Gainesville/Alachua County has a high percentage of households with incomes under \$10,000 (24 percent for the county versus 15 percent for Florida). In addition, Gainesville/Alachua County has a slightly lower proportion of households with annual incomes of \$50,000 and over. In 1990, Gainesville/Alachua County's median income was \$22,279, which was 23 percent lower than Florida's 1990 mean income of \$27,483.

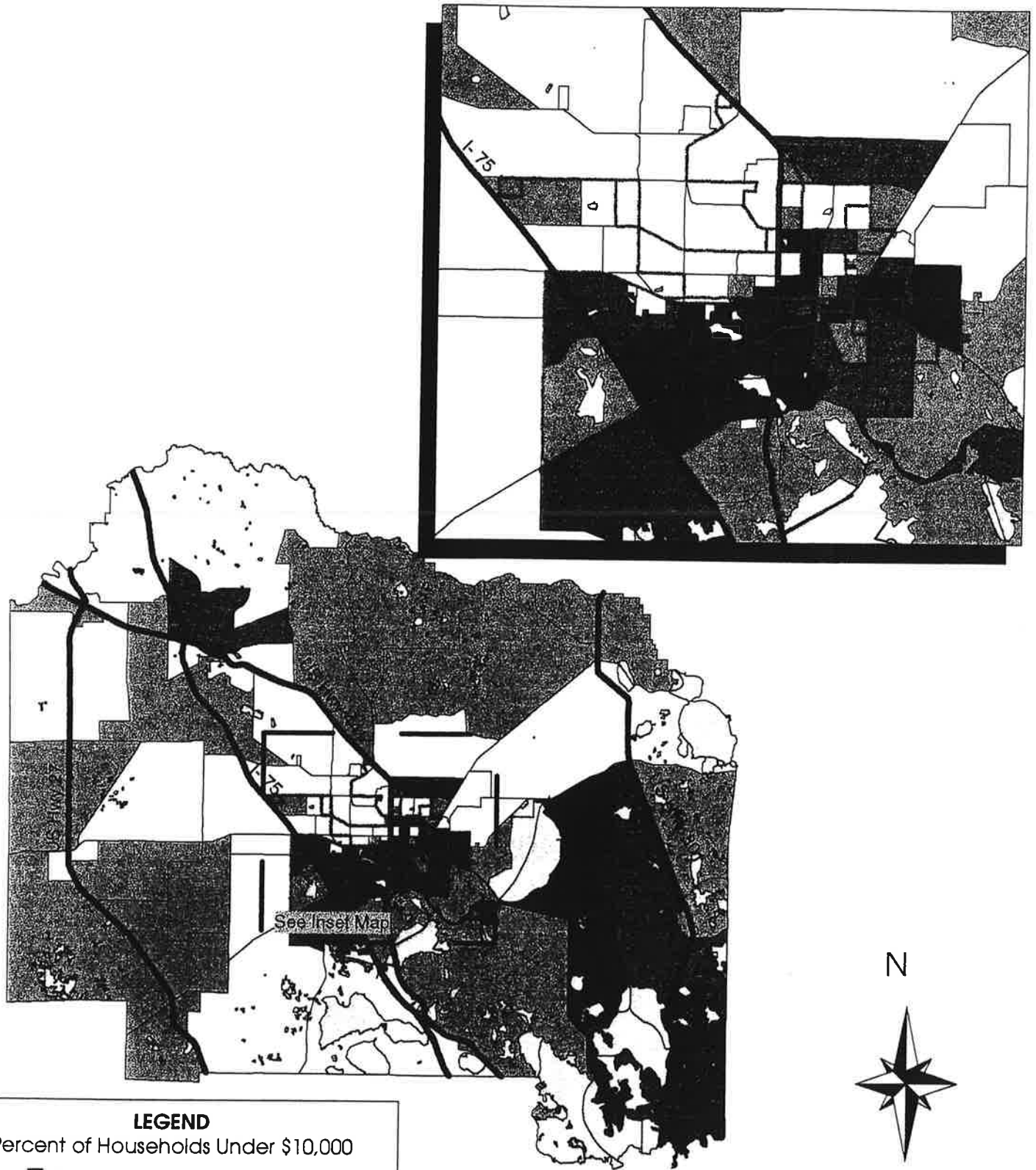
**Table I-8
Household Income Distribution (1990)**

Area	\$0-\$9,999	\$10,000-\$19,999	\$20,000-\$29,999	\$30,000-\$39,999	\$40,000-\$49,999	\$50,000 & Over
Gainesville/ Alachua County	24.3%	21.4%	16.3%	11.7%	8.8%	17.5%
Florida	15.1%	20.1%	18.8%	14.8%	10.4%	20.8%

Like age, income is an important factor in determining the usage of public transit. In general, with little or no access to an automobile (vehicle availability is discussed later in this section), low-income persons rely more on a public transit system for mobility and access to employment, shopping, and entertainment.

Census tracts wherein at least 15 percent of the households have annual incomes of less than \$10,000 are presented in Figure I-6 below. As the map in the figure shows, the tracts with the highest concentrations of low-income households (more than 35% of households, shaded dark blue) are located mainly in the southwest Gainesville urban area and in eastern Alachua County between Newnans Lake and Orange Lake to the south. Block groups with more than 15 percent but less than 34 percent of households with less than \$10,000 income are dispersed through western, northern and southeastern Alachua County.

Figure I - 6
Percent of Households with Income Under \$10,000
by Census Block Group
Alachua County



LEGEND
 Percent of Households Under \$10,000

- Over 35%
- 25 to 34%
- 15 to 24%
- Under 15%
- Current RTS System Network

N

0 4 8
 Miles

Household Vehicle Availability

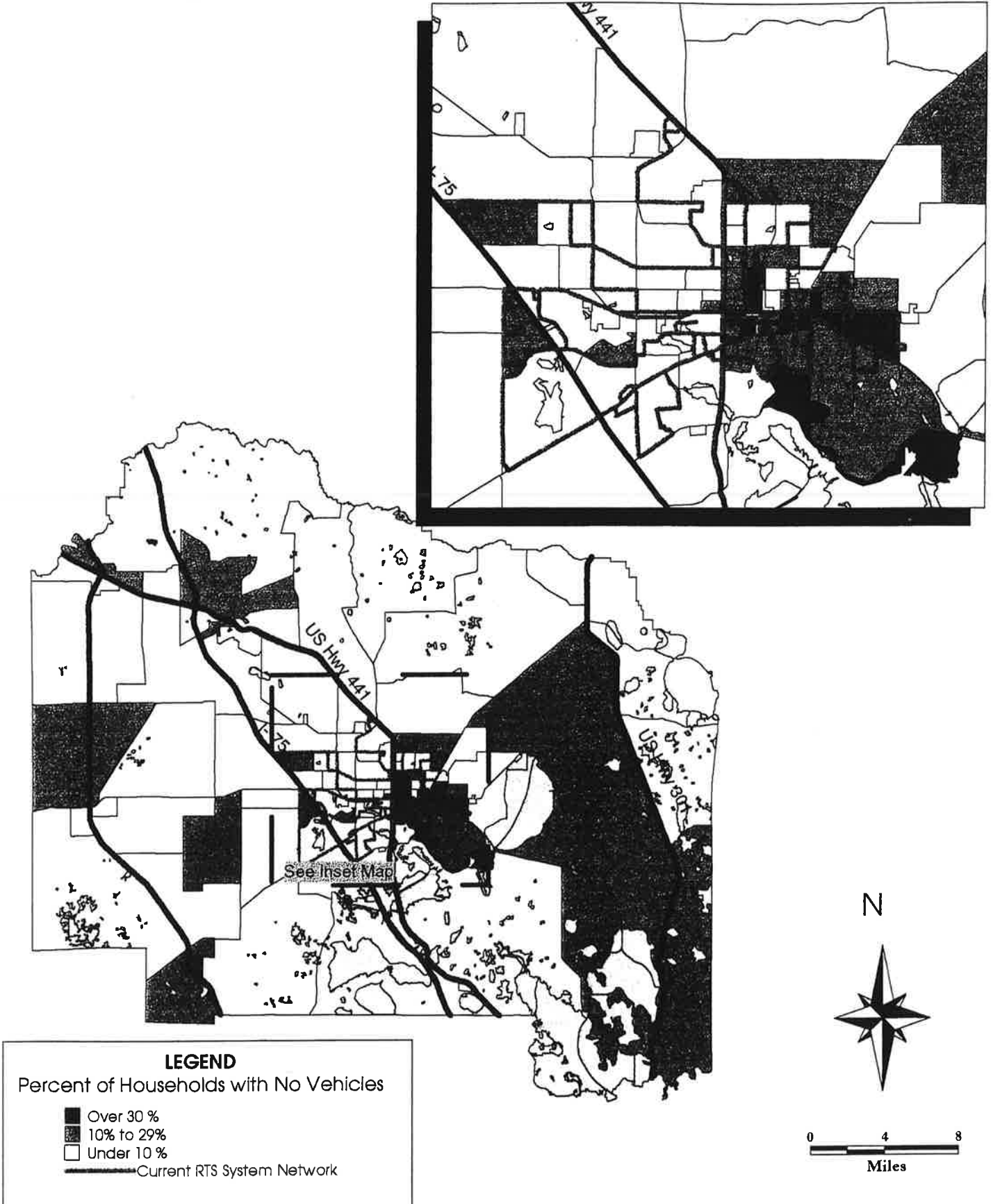
Although Figure I-6 above shows a heavy distribution of low income households throughout Alachua County, an examination of households with no automobiles available provides assistance in narrowing those low income persons more likely to use public transportation. Table I-9 outlines the distributions of vehicle availability among occupied housing units (used as a proxy for households) in Gainesville/Alachua County and Florida. In Gainesville/Alachua County, nearly 9 percent of households do not have access to a vehicle, comparable to the Florida statistic. Approximately 39 percent of households in the county have one vehicle available. Vehicle availability in Gainesville/Alachua County's households is comparable to the rest of the state.

Census tracts wherein at least 30 percent of the occupied housing units do not have a vehicle are included in Figure I-7, which graphically depicts the distribution of occupied housing units with no vehicles available. A majority of block groups with no vehicles available are found in the eastern Gainesville urban area, eastern Alachua County, Alachua, and High Springs. The tracts with over 30 percent of households with no vehicles are shown in dark blue and include those areas north and south of East University Avenue and areas to the south.

**Table I-9
Vehicle Availability Distribution (1990)**

Area	Number of Vehicles Available			
	Zero	One	Two	Three or More
Gainesville/Alachua County	8.8%	38.9%	36.9%	15.4%
Florida	9.0%	41.0%	37.0%	13.0%

Figure I-7
Percent of Households with No Vehicles Available
by Census Block Group
Alachua County



Unique Transit Markets

As mentioned earlier, Gainesville has some unique markets for transit in addition to traditional markets, including:

- University and College Students
- Environmentalists;
- Proponents of livable and sustainable communities; and
- University of Florida employees

Of these markets, only one can actually be examined using U.S. Census data, and that is University and College students. For the purposes of this study, university and college students will be considered those persons who fall within the age 18-25 category. It is true that there are persons in this age group who are not university and college students and it is also true that there are university students in other age groups. However, using this demographic is useful in determining the concentrations of the majority of students in the area.

Figure I-8 below shows the distribution of 18-25 year-olds in the region. This figure yields no surprises as the block groups with concentrations of this age group fall in the southwest quadrant of the urban area where many rental apartment complexes are located.

Employment Characteristics and Commuting Patterns

Table I-10 displays the percentage of the population 16 years and over in the labor force and the percentage of the labor force employed (non-military). The percentage of Gainesville/Alachua County workers in the labor force (50.4 percent) is lower than the state percentage (60.4 percent). However, employed labor force is higher than the state percentage and indicates that unemployment is at 2.9 percent in 1995.

**Figure I - 8
Population Between Age 18-25
by Census Block Group
Alachua County**

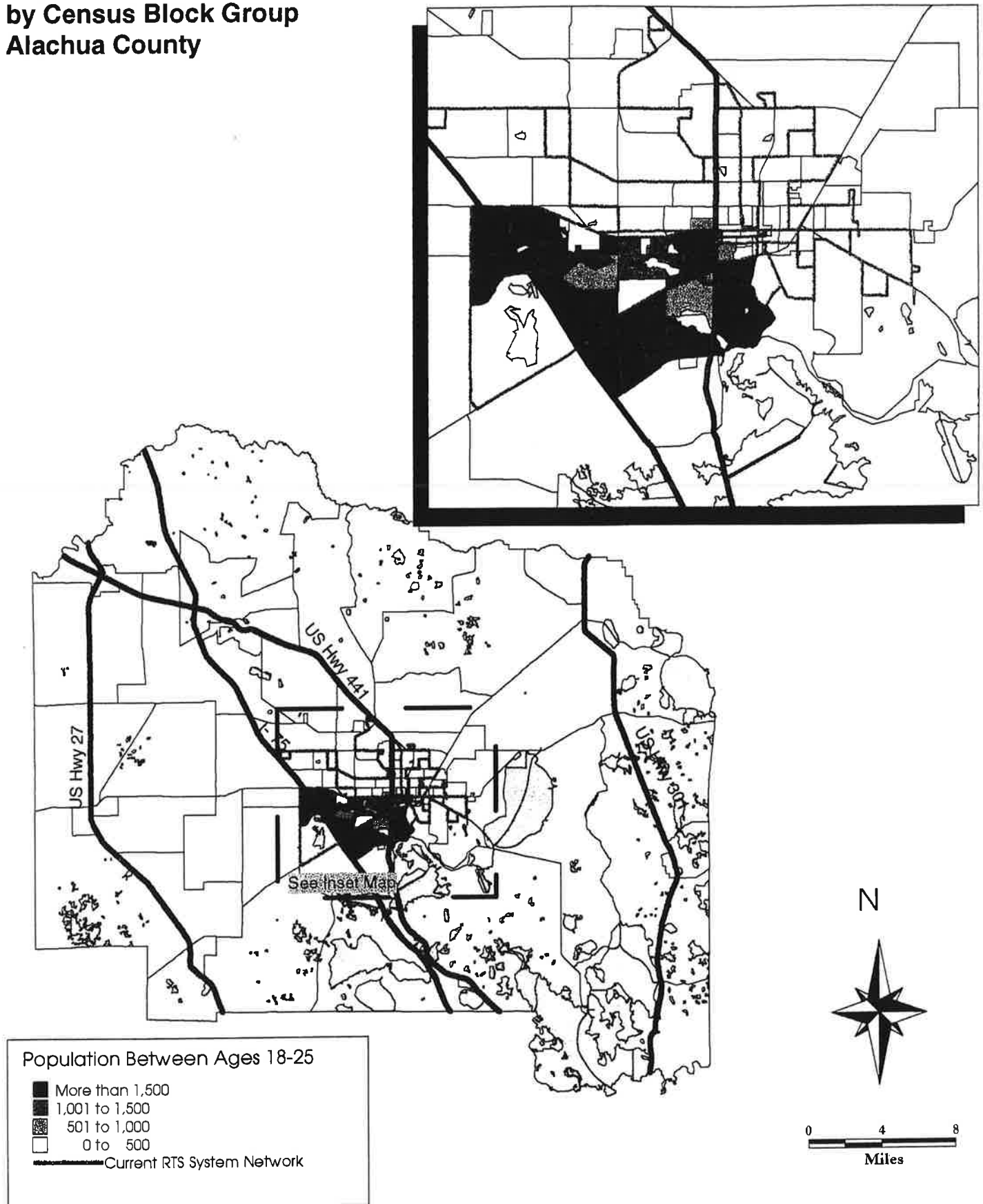
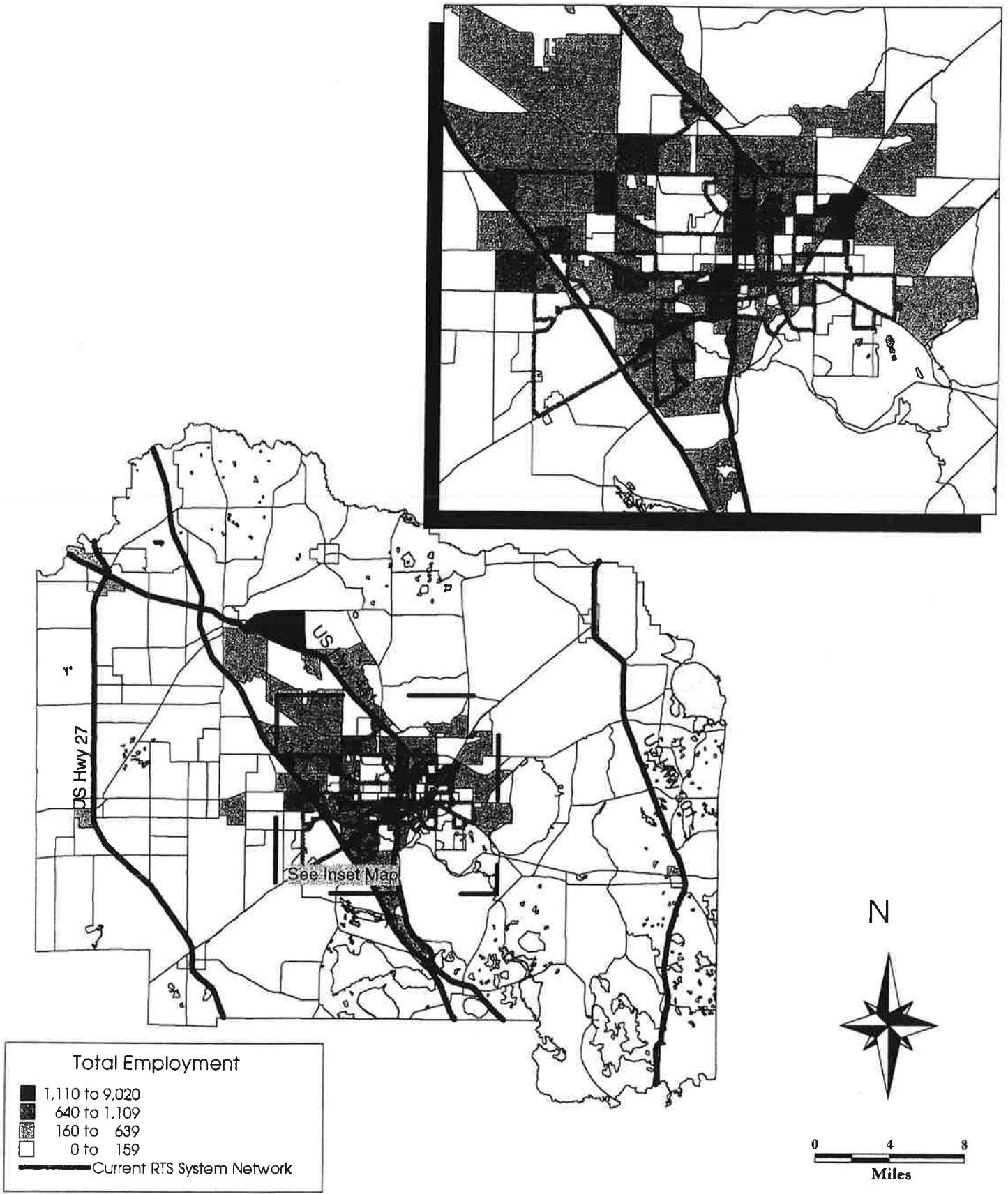


Table I-10
Labor Force Participation (1995)

Area	Percentage in Labor Force	Percentage of Labor Force Employed
Gainesville/Alachua County	50.4%	97.1%
Florida	60.4%	94.2%

Figure I-9 below shows employment by Traffic Analysis Zone (TAZ). As expected, the highest concentrations of employment (those shaded in dark blue) fall at the University of Florida, the Airport Industrial Park, central Gainesville, Millhopper, and the industrial park in Alachua. Lesser concentrations of employment are dispersed throughout the urban area.

Figure I - 9
Total Employment
by Traffic Analysis Zone
Alachua County



Travel to Work

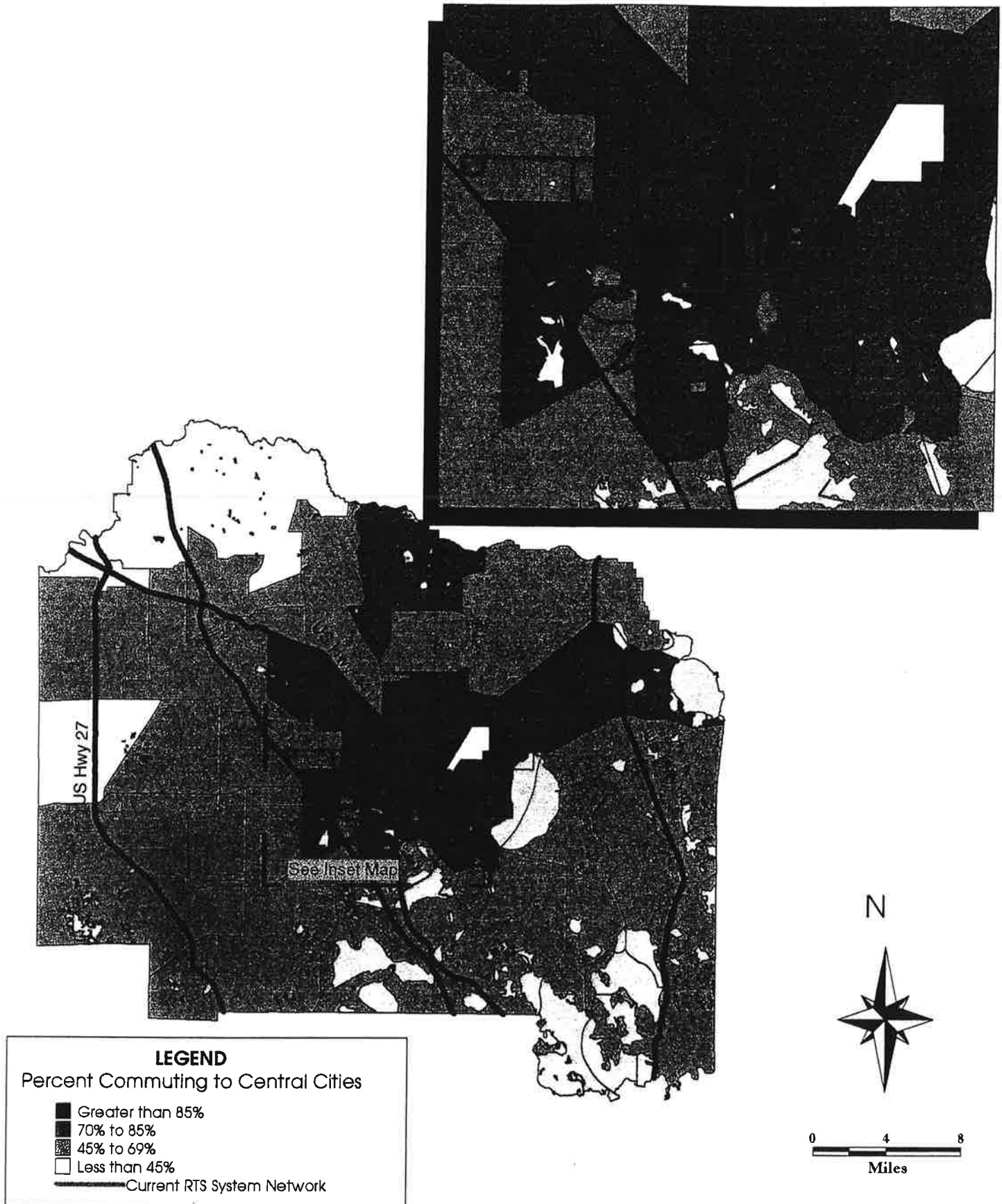
Table I-12 below shows work locations and the extent of intercounty commuting for Gainesville/Alachua County and Florida. The table indicates that a far greater percentage of workers commute to central cities in Gainesville/Alachua County than workers throughout the rest of the state. The USCB defines the central city in Alachua County as Gainesville.

Figure I-11 shows the percent of workers commuting to a central city. Virtually all block groups within the county have at least 45 percent of the households commuting to the central city. The highest concentrations, greater than 70 percent and greater than 85 percent, fall within the Gainesville urban area. The tracts with over 85 percent of workers commuting to a central city are shown in dark blue.

**Table I-12
Work Commuting Patterns (1990)**

Area	Work in Central City	Work in Suburbs	Work Outside the County
Gainesville/Alachua County	70.1%	21.2%	8.7%
Florida	41.0%	51.2%	7.8%

Figure I - 10
Percent of Workers Commuting to Central Cities
by Census Block Group
Alachua County



Travel Time to Work

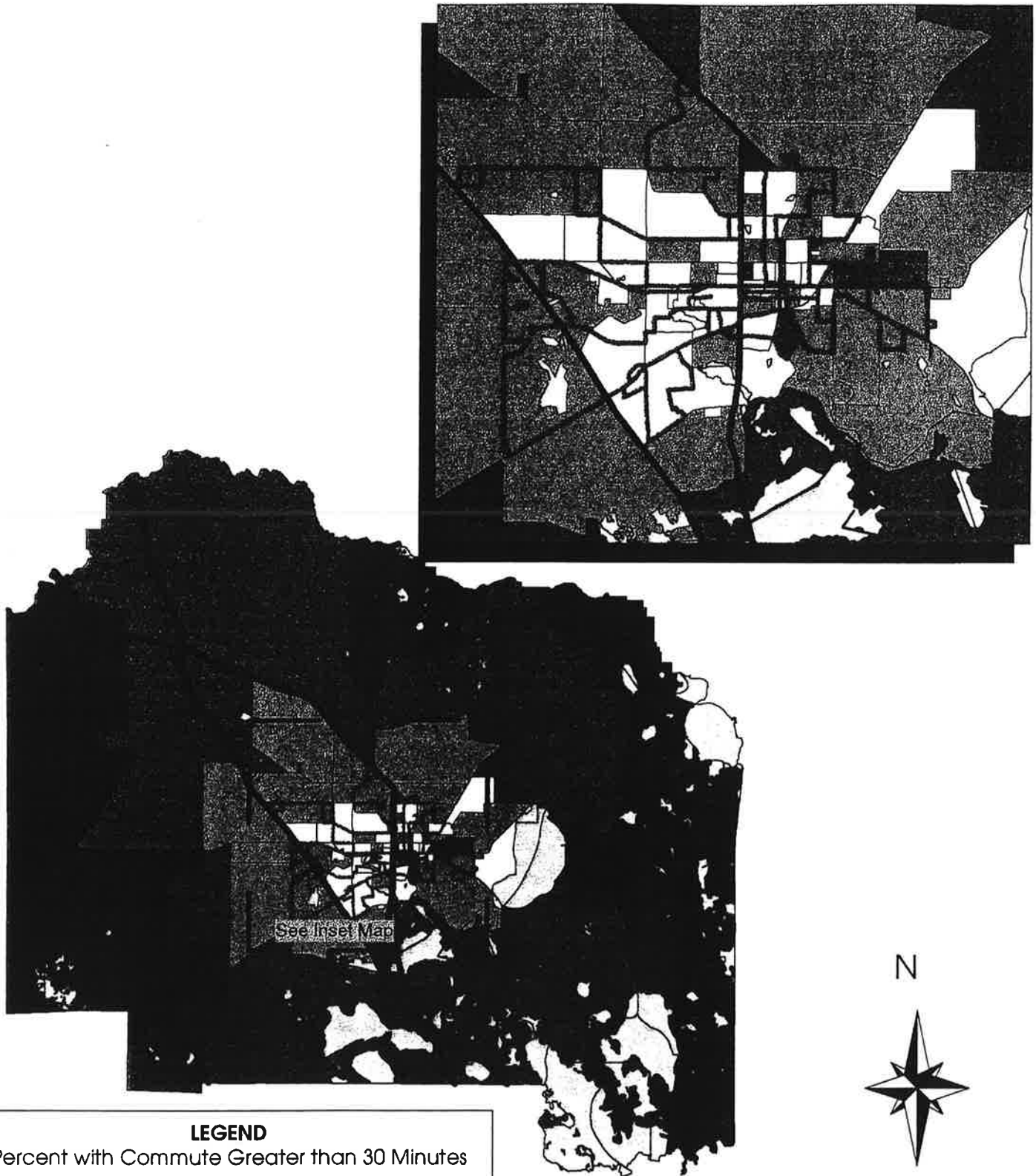
The largest proportion of workers in Gainesville/Alachua County travel between 10 and 19 minutes to work, according to 1990 U.S. Census data. This finding is also true for the state. Table I-13 below shows the distribution of travel times in Alachua County and the state.

Most of the block groups wherein the largest percentages of workers with commutes greater than 30 minutes are located in the extreme eastern and western edges of the county. Smaller percentages of commuters have greater than 30 minute commutes almost in concentric rings around the Gainesville urban area, as displayed in Figure I-12.

**Table I-13
Travel Time to Work (1990)**

Area	Travel Time in Minutes (percent of workers)				
	0-9	10-19	20-29	30-44	45+
Gainesville/Alachua County	15.8%	40.3%	20.7%	13.9%	9.3%
Florida	16%	33%	21%	17%	13%

Figure I - 11
Percent of Workers with Commute Greater than 30 Minutes
by Census Block Group
Alachua County



LEGEND
 Percent with Commute Greater than 30 Minutes

- Greater than 45%
- 25% to 44%
- 10% to 24%
- Less than 10%
- Current RTS System Network

Means of Travel to Work

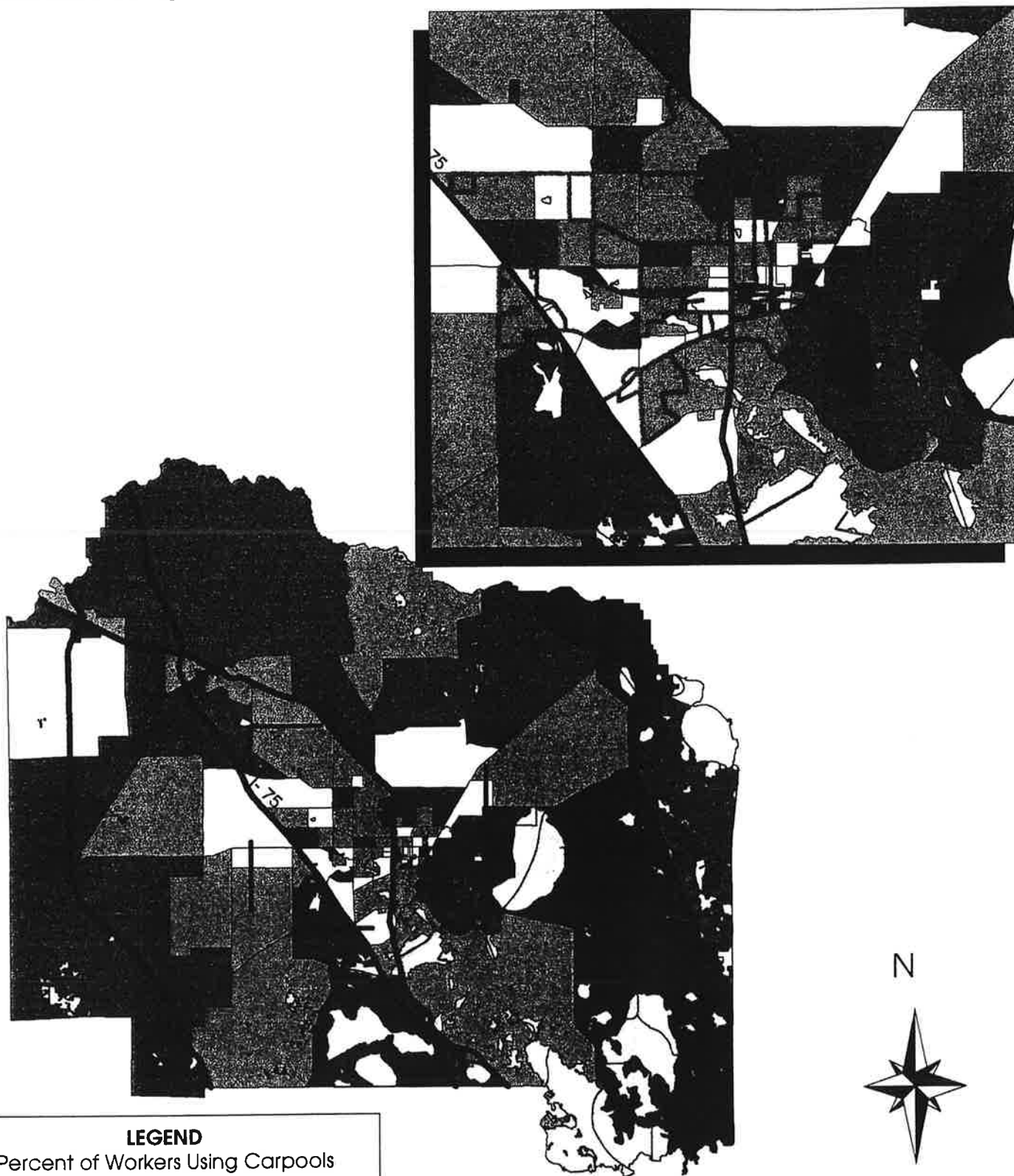
The data in Table I-14 show that, as expected, the majority of workers in Gainesville/Alachua County drive alone to work. More than 72 percent of workers in the county drive alone and the distributions of travel modes are consistent with those of the state. Also, the same table shows that public transit is the least-used commuting method for the work trip at 1.7 percent.

For purposes of this section, CUTR generated graphics to show the distributions of carpoolers (Figure I-13) and those who use public transportation (Figure I-14). Block groups with greater than 10% of workers carpooling fall with relatively equal distribution throughout the eastern and western sides of the county. The highest concentrations of carpoolers (those shaded in dark blue) are found in eastern Alachua County. For public transportation, those block groups with greater than 1% of commuters riding transit fall within the Gainesville urban area and specifically within the RTS service area.

**Table I-14
Journey-to-Work Mode Split (1990)**

Area	Travel Mode				
	Drive Alone	Carpool	Public Transit	Other	Walk or Work at Home
Gainesville/Alachua County	72.5%	14.1%	1.7%	4.7%	6.9%
Florida	77.1%	14.1%	2.0%	2.0%	4.8%

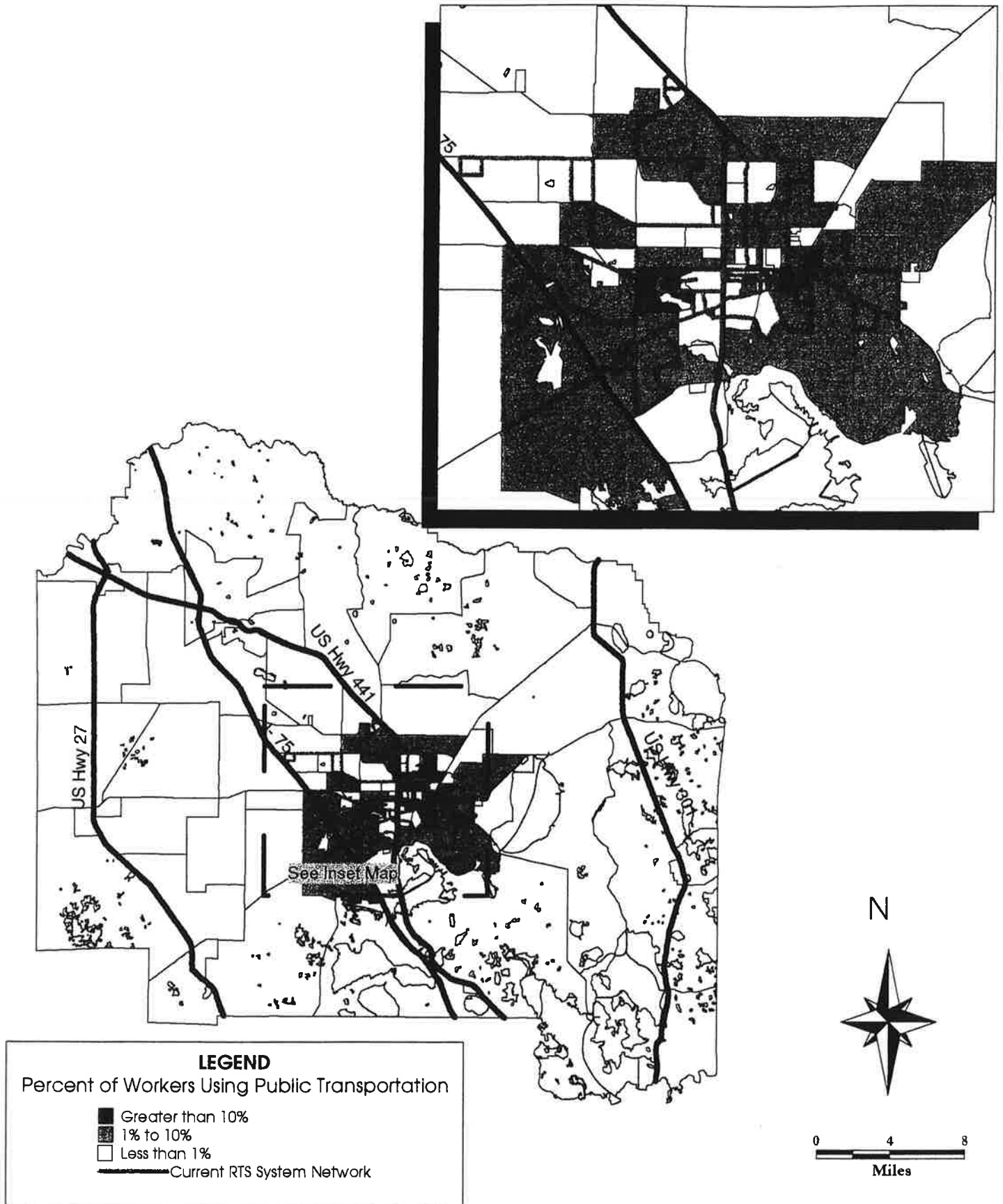
Figure I - 12
Percent of Workers Using Carpools
by Census Block Group
Alachua County



LEGEND
 Percent of Workers Using Carpools

- Greater than 25%
- 15 to 24%
- 10 to 14%
- Less than 10%
- Current RTS System Network

Figure I -13
Percent of Workers Using Public Transportation
by Census Block Group
Alachua County



OTHER GAINESVILLE/ALACHUA COUNTY CHARACTERISTICS

Visitors/Tourists

The University of Florida hosts six home football games each year during the months of September through November that attract 85,000+ per game. In addition, the Gatornationals, a car racing event, is held in Gainesville each March. There are also many cultural events occurring throughout the year. According to the Alachua County Visitors and Convention Bureau's statistics, hotel occupancy reached a peak in March at 77.12 percent. The low month was December at 56.5%. Table I-15 below shows hotel occupancy for the calendar 1996 year.

Table I-15
Hotel Occupancy in Gainesville/Alachua County, 1996

Month	Occupancy Rate in Percentages
January	64.6%
February	76.3%
March	77.1%
April	68.6%
May	65.2%
June	70.9%
July	66.2%
August	67.8%
September	56.6%
October	64.9%
November	64.3%
December	56.5%
Total 1996 Average Hotel Occupancy	66.6%

Source: Alachua County Visitors and Convention Bureau

Land Use and Transportation Mobility

Land use is an important consideration when examining the environment in which transit operates. In November, 1997, a "charette" was held in Gainesville to determine options for improving the S.W. 20th Avenue corridor. Land uses, local street networks, pedestrian and bicycle improvements, and transit alternatives were among the highlights of the charette and formed the foundation for recommendations on the future of the corridor.

The City of Gainesville "Future Land Use Element" contains a series of goals and objectives to guide the development and redevelopment of the city. Goal 2 states, "The land use element shall foster the unique character of the city by directing growth and redevelopment in a manner that uses activity centers to provide goods and services to city residents;... distributes growth and economic activity throughout the city in keeping with the direction of this element" (page A-6). Several land use categories are outlined in Objective 2.1.1 that include low, medium and high density residential development (up to 100 units per acre) as well as mixed use developments of varying intensities, with up to 150 units per acre designated in the "Mixed Use High Intensity" category. While many other land use categories are addressed, it is the land use categories discussed above that receive the most attention in the Transportation Mobility Element.

The Transportation Mobility Element states as an overall goal that the city, "Establish a transportation system that enhances compact development and redevelopment and that is sensitive to the cultural and environmental amenities of Gainesville... The [transportation] system should provide vehicular, mass transit and non-motorized access to activity centers, community facilities and neighborhood commercial areas" (page B-1). Accordingly, the objectives for transit call for the City to provide transit service to each Medium and High Intensity Mixed Use area unless there is a determination that there is inadequate ridership to support this service.

The policies also address transit service to medium and high density residential developments, stating that service shall be provided within ¼ mile of 80 percent of all Medium and High Density Residential areas. Finally, the Transportation Mobility Element contains policies that address extensions and expansions of transit service based on intensities or residential and mixed use developments.

Roadway Deficiencies

Table I-16 provides information on roadway segment deficiencies based on the existing plus committed network of the *Gainesville Metropolitan Area Year 2020 Transportation Plan*. As outlined in the Plan, a segment is considered to be "deficient" if its volume to capacity ratio, based on adopted Level of Service (LOS) standards, exceeds 1.2. This means that the facility is experiencing a volume of traffic that is greater than 120% of its capacity. A segment is considered to be "borderline" deficient if its volume to capacity ratio is 1.0 to 1.2. This means that the segment is experiencing traffic volumes between 100 and 120% of its capacity.

The existing plus committed network shows six segments that are currently deficient and thirteen segments that are borderline deficient. The source of this data is the *Gainesville Metropolitan Area Year 2020 Transportation Plan, Final Technical Report*.

**Table I-16
Gainesville/Alachua County - Roadway Deficiencies, Existing Plus Committed**

Roadway Segment	Volume/ Capacity Ratio	Current RTS Service
CURRENTLY DEFICIENT		
N.W. 39 th Avenue from N.W. 98 th Street to I-75	1.48	None
N W 83 rd St from N W 23 rd Avenue to SR 222	1.28	6
S W 12 th Street from S W 8 th Avenue to S W 4 th Avenue	1.24	None
S W 20 th Avenue from S W 62 nd Boulevard to SR 121	1.40	4
U.S. 441 (13 th St) from Archer Road to University Ave	1.23	Part of 1,6,3,8
N W 6 th Street from S W 4 th Avenue to N W 8 th Avenue	1.21	2
BORDERLINE DEFICIENCY		
N.W. 16 th Avenue from U.S. 441 to Main Street	1.12	None
N.W. 17 th Street from University Ave. to N.W. 16 th Avenue	1.01	None
N.W. 17 th Street from University Ave. to N.W. 8 th Avenue	1.16	None
N.W. 23 rd Avenue from N.W. 98 th Street to N.W. 83 rd Street	1.16	None
N.W. 5 th Avenue from N.W. 22 nd Street to U.S. 441	1.02	None
N.W. 91 st Street from N.W. 39 th Avenue to N.W. 32 nd Place	1.10	None
S.E. 15 th Street from S.R. 20 to S.R. 26	1.00	None
SR 24 (Archer Road) from S.W. 34 th Street to S.W. 16 th Ave.	1.00	1
SR 24 (Archer Road) from S.W. 16 th Avenue to S.R. 441	1.11	Part of 1,6
S.R. 26 (Newberry Road) from I-75 to N.W. 8 th Avenue	1.07	5
S.W. 16 th Street from S.W. 16 th Avenue to SR 24 (Archer Rd)	1.02	3
S.W. 46 th Boulevard from S.W. 91 st Street to Tower Road	1.09	None
U.S. 441 from N.W. 39 th Avenue to N.W. 6 th Street	1.01	3

RTS 1997 ON-BOARD SURVEY

As part of the TDP process, CUTR designed, administered, and analyzed results from an on-board survey that was conducted on a sample of RTS routes. The primary purpose of the survey effort was to obtain information on the demographic characteristics and travel behavior patterns of current RTS riders, as well as their level of satisfaction with specific aspects of the transit service being provided by the system. The following section presents the analysis of the on-board survey results.

PREVIOUS SURVEY EFFORTS

The last comprehensive on-board survey of RTS passengers was conducted by the system in July 1994. In addition, a subsequent survey was conducted on March 21, 1997, by a student intern employed at RTS. This latter survey was relatively detailed in terms of questionnaire content, but was only distributed on one of RTS's routes. Due to the narrow distribution focus of the March 1997 survey and the relative age of the July 1994 survey, no attempts have been made to compare the results of these previous surveys to those of this most recent effort. However, it should be noted that references have been made throughout the analyses to industry norms in Florida based on CUTR's recent and past experiences with on-board surveys. These industry norms will only be used to show RTS's unique demographic and/or travel behavior characteristics in comparison to the rest of the state, when applicable.

SURVEY METHODOLOGY AND PROCEDURES

A 28-question survey form was developed by CUTR that would best collect descriptive information regarding the demographic and travel behavior characteristics of current RTS riders. In addition, rider satisfaction with specific aspects of RTS transit service as well as with its overall quality was measured utilizing a series of questions that allowed riders to select from a range of scores (1 to 5) to indicate their varying levels of satisfaction with those aspects.

The survey was conducted on Wednesday, November 12, and Thursday, November 13, 1997. CUTR recruited students from the University of Florida's (UF) Department of Urban and Regional Planning and from the University of South Florida's College of Engineering to assist in the administration of the survey. The questionnaire was distributed and collected by the survey personnel on 26 of the 56 total daily runs on RTS's 15 routes over the two survey days. The surveyed runs, representing 46 percent of total system runs each day, were selected based on a random sampling methodology. Surveys were printed in the English language only, were coded with a control number, and were grouped together by route and run prior to distribution. For reference, a copy of the questionnaire is included in Appendix B.

The survey questionnaire was designed to be completed by riders while on board the buses. One survey representative was assigned to each bus that was sampled to provide assistance to riders who may have had questions concerning completion of the survey and to collect the surveys from the riders prior to their alighting. No mail-back provision was provided for returning the completed surveys; hence, all riders were encouraged to turn in their surveys before they alit from the buses whether the surveys were completed or not. As a result, a completed survey form was not a requirement for inclusion in the survey results. All answered questions were included in the

analyses regardless of whether the entire survey form was completed. It should also be noted that, upon boarding the buses, riders were asked by the survey representatives to complete a survey form even if they had already done so earlier during the course of one of the two survey days.

A total of 6,600 surveys were available for distribution over the two days; 2,107 usable surveys were collected and analyzed. CUTR performed all of the survey data entry, tabulations, and review of the tabulated data. This results in a response rate of approximately 32 percent—a very good rate for this type of survey. Given the sample size of completed surveys, the chance for sample bias is negligible: between two to three percent at the 95 percent confidence level (O'Sullivan, Elizabethan, and Gary R. Rassel, Research Methods for Public Administration, 1989, Longman, New York, p. 131). However, all statistical studies are subject to some degree of error and the origins of the error cannot always be accounted for and, subsequently, corrected.

Prior to analysis, the survey data were weighted using RTS average weekday ridership for November 1997 in order to better project respondent characteristics to RTS ridership as a whole. The weighting factors were derived on a route-by-route basis to ensure proper representation of each route's respective riders. Specifically, a weight for a particular route was calculated by dividing the average November 1997 weekday ridership for that route by the number of valid surveys returned on the route. As an example, if Route X had an average weekday ridership of 1,000 passengers during November 1997 and this same route had 100 completed questionnaires returned during the survey process, then each returned survey would be weighted by a factor of 10.00 ($1000 \div 100$) in the reporting of the survey results.

ORGANIZATION OF SURVEY ANALYSIS

The analysis of the 1997 RTS on-board survey is presented in the following seven sections included herein: Survey Completion, Trip Characteristics, Transfer Analysis, Rider Demographics, Fare and Travel Behavior, Work and Class Time Analysis, and Customer Satisfaction. Each section provides information about the survey results that will be useful in improving the performance of and services offered by RTS.

The **Survey Completion** section provides information on rider responses to the first question on the survey, "Have you completed this survey previously this week?". Riders who had completed the survey previously only needed to check off a "yes" response and return the survey without completing any other questions. This methodology assures that everyone boarding a bus receives an opportunity to complete a survey, so that the number of returned surveys is somewhat representative of actual ridership on board the sampled buses during the survey days. Its results can also give some indication of repeat usage of the buses by the riders. In addition to discussing the first question results, this section also presents the question-by-question response rates for the entire survey.

The **Trip Characteristic** section details specific attributes of the riders' individual trips. Trip characteristics gathered from the riders include route information, modes of access and egress to/from the bus stops, and the riders' initial origins and final destinations. The third section, **Transfer Analysis**, similarly attempts to highlight an additional characteristic of some of the riders' trips, i.e., the need to utilize more than one route to complete a particular trip.

The **Rider Demographics** section changes the focus from the trips that are being made to the persons who are making them. Information on the riders that is presented includes age, gender, ethnic heritage, 1996 total household income, household vehicle availability, driver's licensure, and residency status (i.e., number of months out of year rider resides in Gainesville/Alachua County).

Also, utilizing both demographics and travel behavior information, a ridership profile for a typical RTS rider is constructed and discussed. The rider characteristics and resulting profile are an extremely important part of any on-board survey analysis. Specifically, these data will enable RTS to better identify and understand the current market characteristics of its ridership and pinpoint specific rider characteristics/segments that can help direct more focused marketing strategies. Also, this information can assist in determining the need for rider facilities such as additional bus stops, bus stop shelters, and other related system aspects.

The **Fare and Travel Behavior** section looks at the riders' overall transit usage characteristics. What kind of fare they pay, how frequently they ride each week, and how long they have been using RTS service are all discussed in this section. Additionally, the riders' reasons for using transit and their potential alternative modes are examined as well. In conjunction with the individual trip information, these data can contribute to effective scheduling, planning, service levels, and general policy decisions regarding overall RTS service.

The **Work and Class Time Analysis** section presents data on when RTS's riders are going to work and school and when they are returning home from these particular destinations. Since these are traditionally important attractors for transit users, knowing the times of day that trips for these purposes are occurring will also be important to RTS's scheduling and planning functions. Also included in this section is an analysis of residence and work location zip codes.

The final analysis section reviews **Customer Satisfaction** with specific aspects of RTS service as determined by the riders' responses to several questions on the questionnaire. The responses to Questions 16 and 17 concerning what the riders like most and like least about riding the bus are discussed. Also analyzed are the responses to Question 27 which asked riders to rate their perception of 21 different service characteristics as well as the overall quality of RTS service using a five-point scale (1 to 5). On this scale, a score of "5" indicated a "very satisfied" level of satisfaction, while a score of "1" indicated a "very unsatisfied" level of satisfaction. The satisfaction section also includes discussion on the service characteristics most needing improvements according to the riders (Question 28) and several cross-tabulations relating satisfaction to selected demographic characteristics. The identified weaknesses, as perceived by the riders, potentially can be addressed by RTS through changes to its system. By distinguishing rider sensitivities regarding specific characteristics of the system, RTS will be better able to prioritize improvements to the system.

In general, the analyses that follow include a great deal of graphic-based and tabular information. Descriptive text is also provided, primarily for the purpose of introducing subjects, noting, and/or interpreting important findings from the on-board survey results. Finally, the on-board survey analysis portion of this document concludes with a brief summary section that discusses the major findings from the survey.

Survey Completion

The questionnaire that was utilized for the 1997 RTS on-board survey had a total of 28 questions,

some with multiple parts. The majority of the questions were close-ended in nature, simply requiring riders to select a response from a preset list. Since a survey did not need to be completely filled out to be included in the analyses, many of the survey records in the final survey database had missing values for various questions. To help the reader better understand the respondent sample sizes for each of the questions analyzed herein, Table 1 has been provided below. (Please note that the response rate for Question 1 has been calculated based on a total of 2,107 returned surveys. The response rates for all other questions have been calculated on a total of 1,636 surveys, which is the number of surveys with negative responses to Question 1.)

**Table 1
Response Rates by Survey Question**

Question	Valid Responses	Response Rate	Question	Valid Responses	Response Rate	Question	Valid Responses	Response Rate
Q1	2083	98.9%	Q18	1475	89.8%	Q27h	1237	75.2%
Q2a	1439	88.0%	Q19	1440	87.6%	Q27i	1231	74.9%
Q2b	1217	74.4%	Q20	1440	87.6%	Q27j	1219	74.1%
Q3	1605	97.7%	Q21	1225	74.5%	Q27k	1208	73.5%
Q4	1608	97.9%	Q22	1427	86.9%	Q27l	1203	73.2%
Q5	1619	98.5%	Q23	1409	85.8%	Q27m	1132	68.8%
Q6	1611	98.0%	Q24	1384	84.3%	Q27n	1132	68.8%
Q7a	341	20.7%	Q25	547	33.3%	Q27o	1210	73.7%
Q7b	327	19.9%	Q26a	438	26.7%	Q27p	1207	73.4%
Q8	1610	98.0%	Q26b	430	26.3%	Q27q	1207	73.4%
Q9	1599	97.4%	Q26c	759	46.2%	Q27r	1204	73.2%
Q10	1469	89.4%	Q26d	750	45.7%	Q27s	1205	73.3%
Q11	1462	88.9%	Q27a	1285	78.2%	Q27t	1202	73.1%
Q12	1485	90.4%	Q27b	1276	77.6%	Q27u	1198	72.9%
Q13	1475	89.8%	Q27c	1277	77.7%	Q27v	1205	73.3%
Q14	1469	89.4%	Q27d	1211	73.7%	Q28a	806	49.1%
Q15	1472	89.6%	Q27e	1136	69.0%	Q28b	767	46.8%
Q16	1126	68.8%	Q27f	1260	76.6%	Q28c	691	42.1%
Q17	1176	71.9%	Q27g	1252	76.2%			

Based on the individual question response rates shown in the previous table and on a review of a random sample of completed surveys, it appears that the majority of the riders understood and responded properly to each of the survey questions. The questions that required riders to provide open-ended responses or comments, such as Questions 7, 16, 17, 25, 26, and 28, had some of the lowest response rates. Among the close-ended questions, the one inquiring about the rider's total household income for 1996 (Question 21) had one of the lowest response rates. However, this was expected since survey questions concerning sensitive items such as income generally do not elicit high response rates.

Figure 1
Q1: Have you completed this survey previously this week?

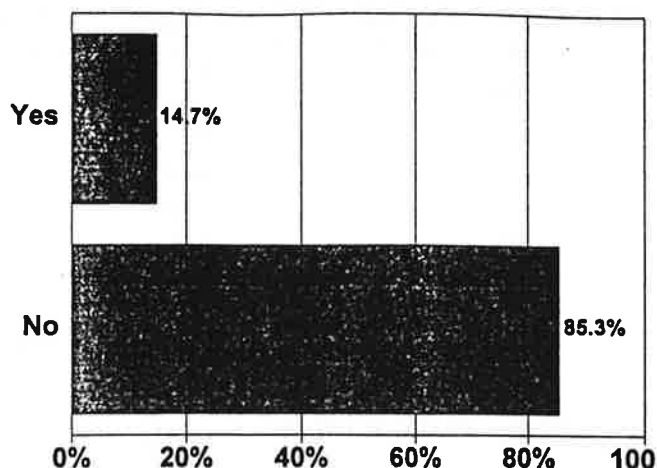


Figure 1, above, displays the distribution of responses to the survey's first question. Clearly, the vast majority of the returned surveys were from riders who had not previously completed the survey during the two survey days. Even though riders were asked by the survey representatives to complete a survey form whether they had already done so previously or not, it was anticipated that participation levels would drop off significantly once the riders had been approached more than two or three times during the course of the effort.

Trip Characteristics

Question 2 asked riders to provide the nearest street intersection or location where they got on and off the bus. In many instances, riders reported specific locations rather than intersections. CUTR attempted to group origins and destinations using the UF campus (which had up to 76 specific locations listed), Downtown, Santa Fe Community College, and various corridors throughout the city. The results for these origin and destination groupings are illustrated in Tables 2 and 3 on the following page. Clearly, the UF campus was the number one origin and destination of RTS riders.

In Question 3, riders were given the opportunity to select from a listing of RTS's 15 routes to indicate which one they were riding on at the time they completed the survey. After weighting based on route ridership, the four routes with the highest frequencies of response were the UF Campus Park-n-Ride route, the UF campus Fraternity Row route, Route 9, which serves Reitz Union and Butler Plaza, and Route 4, which serves Oak Mall And Shands. The response distribution for Question 3 is presented in Figure 2 on the following page.

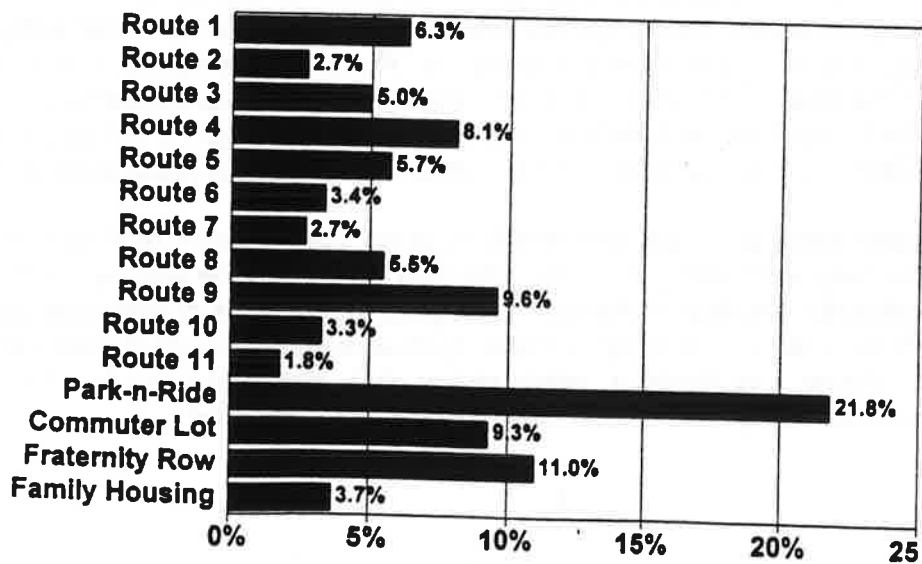
Table 2
Q2a: You got on this bus at?

Origin	# of Specific Locations	# of Riders	% of Valid Responses
UF Campus	61	4,332	48.0%
34 th St. Corridor	19	492	5.5%
13 th St. Corridor	20	429	4.8%
20 th Ave. Corridor	13	289	3.2%
Downtown	4	262	2.9%
23 rd Ave. Corridor	11	141	1.6%
8 th Ave. Corridor	14	115	1.3%
Santa Fe CC	1	113	1.3%

Table 3
Q2b: You got off this bus at?

Destination	# of Specific Locations	# of Riders	% of Valid Responses
UF Campus	76	5,064	65.9%
Downtown	5	443	5.8%
13 th St. Corridor	16	403	5.2%
Santa Fe CC	1	117	1.5%
20 th Ave. Corridor	5	112	1.5%
34 th St. Corridor	12	110	1.4%

Figure 2
Q3: What RTS route are you currently riding on?



The purpose of Questions 4, 5, 8, and 10 was to allow the riders to describe the nature of their trips in terms of mode of access, place of origin, final destination, and mode of egress. From Figures 3 through 6, which highlight the frequency distributions for the four questions, it is clear that a majority of RTS riders:

- walked one block to their bus stop;
- began their trip from home;
- traveled to the UF campus; and
- walked one block to their final destination.

Figure 3
Q4: How did you get to the bus stop for this trip?

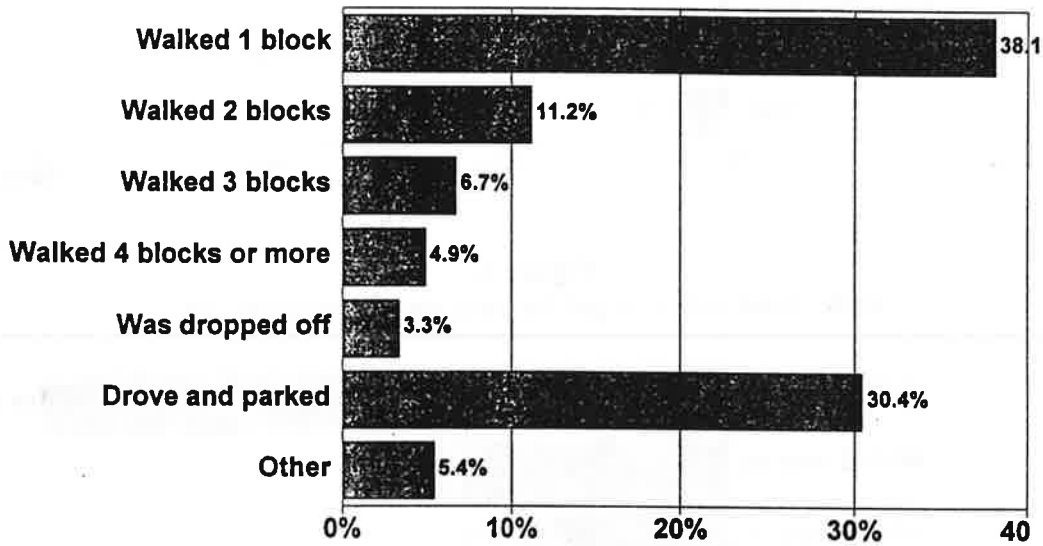


Figure 4
Q5: Where did you come from before you got on the bus for this trip?

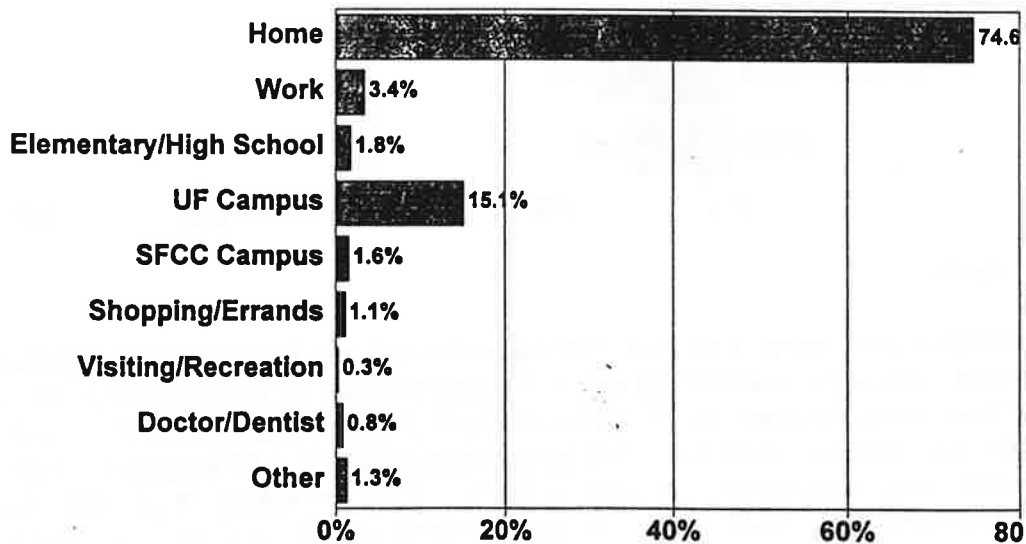


Figure 5
Q8: Where are you going on your trip?

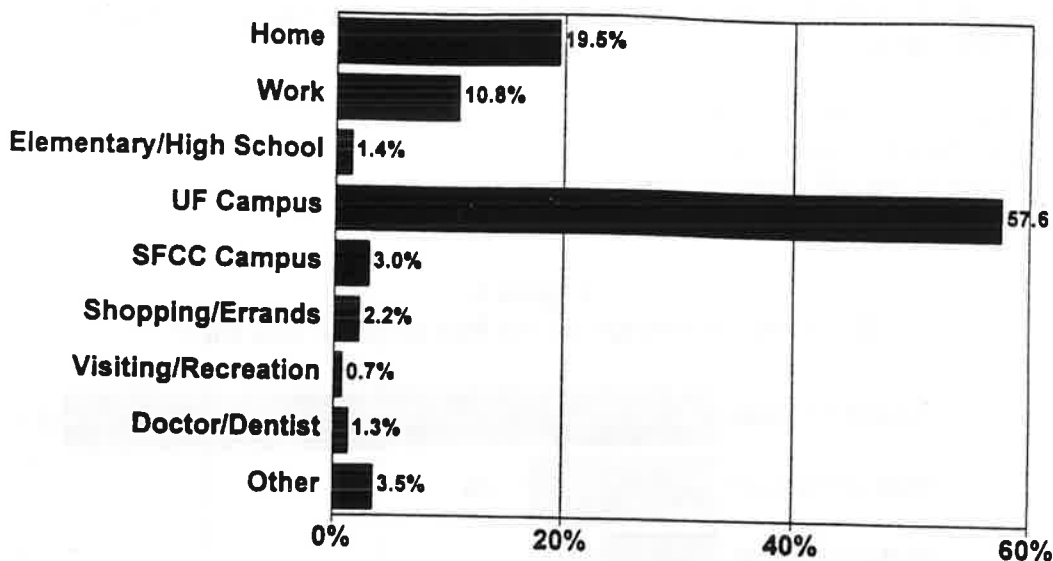
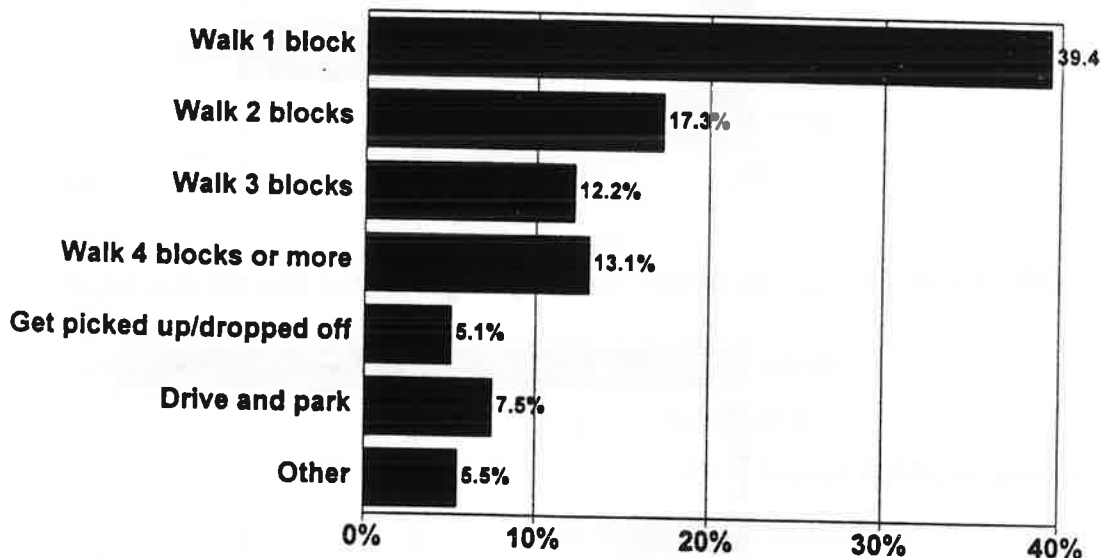


Figure 6
Q10: How will you get to your final destination?



Transfer Analysis

Question 6 asked riders whether they had to utilize more than one bus route to complete their trip. If a rider answered yes to this question, Question 7 asked the rider to provide the routes from which and to which they were transferring. A full 82 percent of riders indicated that no transfer was required for them to complete their trip. This finding indicates that RTS's system network is well designed for direct origin/destination travel within the city. RTS's resulting 18 percent rider transfer rate is in contrast to Florida industry norms, wherein systems usually experience a 30 to 40 percent

transfer rate. Of the 18 percent that did require a transfer, Table 4 provides a transfer matrix whereupon the "from routes" are listed along the left side of the table and the "to routes" are listed across the top. From this table, it is evident that Route 5 received the most transfers (243) from other routes, and Route 7 generated the most transfers (229) to other routes. Additionally, the campus routes experience virtually no transfer activity.

Figure 7

Q6: Do you have to take more than one bus route to complete your trip?

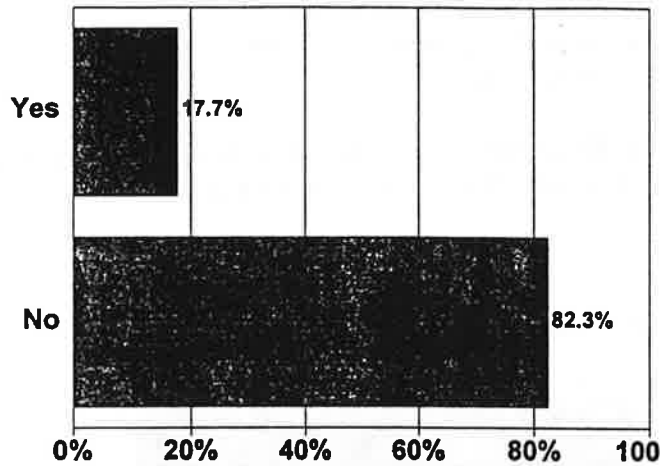


Table 4
Transfer Matrix Based on Responses to Question 7

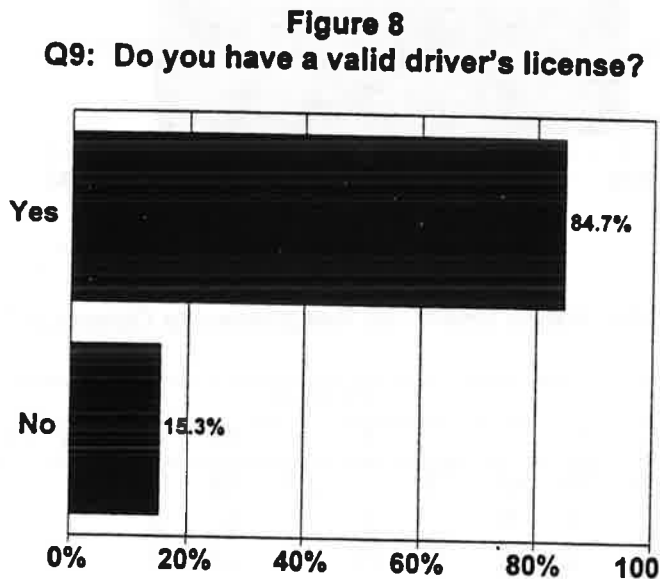
From Route	To Route															
	1	2	3	4	5	6	7	8	9	10	11	PNR	CL	FR	FH	Total
1	5	22	12	13	26	41	31		21	16	9			4		200
2	27		18		51	5		9		5	9					124
3	17	13		5	12	21	9	22		12	8					119
4	39		41	5	26	31	9	9	9		5		13	4		191
5	9	28	17	17		28	43	8	8	21	13					192
6	4			15	22		9	5		13						68
7	23	9	29		65	28		24		44	7					229
8	13	9	10	19	13	16	3		12	27	6		5		5	138
9			19	14		43		15				7				98
10	19		19		8		17	9			3					75
11	17	22	10	3	20	10										82
PNR													36	2		38
CL		5														5
FR													4			4
FH													2			2
Total	173	108	175	91	243	223	121	101	50	138	60	7	60	10	5	1,565

Rider Demographics

A number of questions were asked to establish a demographic profile of RTS ridership. Demographic-related questions included:

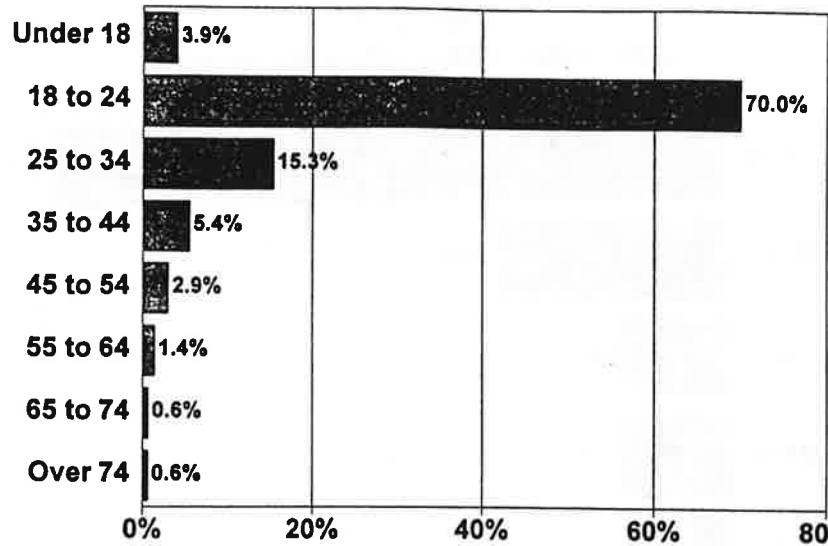
- driver's licensure (Question 9);
- age (Question 18);
- gender (Question 19);
- ethnic heritage (Question 20);
- total household income for 1996 (Question 21);
- household vehicle availability (Question 22); and
- residency status (Question 23).

Driver's Licensure - Nearly 85 percent of RTS riders possess a valid driver's license. The frequency distribution for this question is shown in Figure 8.



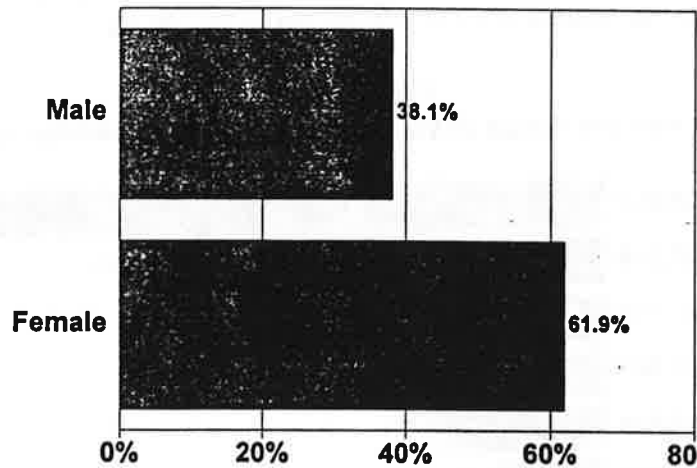
Age - Whereas transit systems in Florida usually experience a relatively equal distribution of age groups between 18 and 44 years, RTS has a disproportionate share of 18 to 24 year old riders (70 percent) utilizing its system. In fact, 89 percent of its ridership is under the age of 34 years. The frequency distribution for the age question is shown on the following page in Figure 9.

Figure 9
Q18: Your age is...



Gender - More women utilize RTS service than men; however, this is consistent with other transit systems throughout the state. The frequency distribution for this question is shown below in Figure 10.

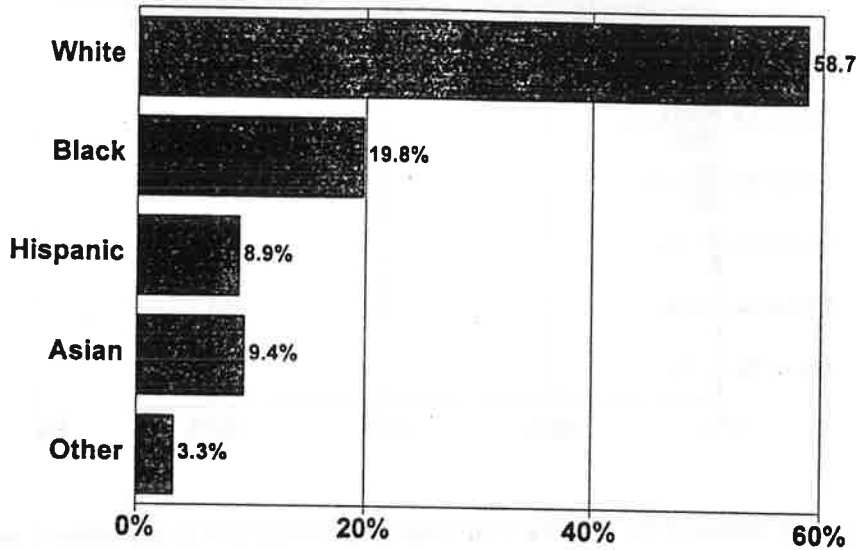
Figure 10
Q19: What is your gender?



Ethnic Heritage - Fifty-nine percent of RTS riders are white and nine percent are Hispanic. These proportions are comparable to those found at other transit systems in Florida. However, blacks are represented at 20 percent, which is lower than other systems. This may be due to the fact that Asians are over-represented in this survey (nine percent) in comparison to their overall presence in the population. In addition, it is also possible that the proportion of Hispanic riders has been

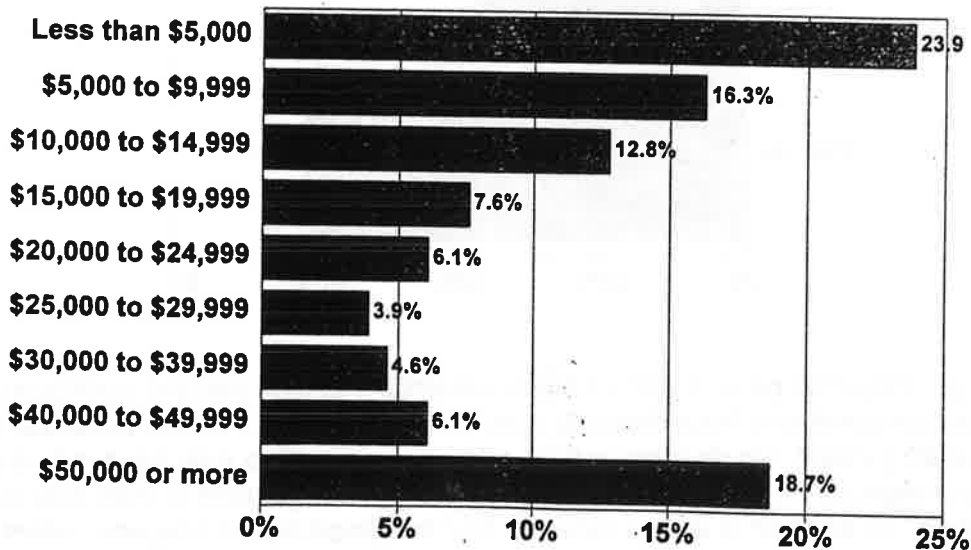
under-represented since the survey questionnaire was not translated into Spanish. The frequency distribution for this question is illustrated in Figure 11.

Figure 11
Q20: What is your ethnic heritage?



Total Household Income for 1996 - A total of 40 percent of riders had a total 1996 household income of less than \$10,000. Sixty-one percent had 1996 incomes of less than \$20,000. As noted previously in the Demographics Section, the median income for Gainesville/Alachua County is \$22,279. Also, 19 percent of the riders reported their 1996 incomes at \$50,000 or more, which is a higher proportion than normally seen at other Florida systems for this income level. The frequency distribution for the income question is shown in Figure 12.

Figure 12
Q21: What was the range of your total household income for 1996?



Household Vehicle Availability - Only 19 percent of RTS riders indicated having no vehicles available in their households. In Florida, transit systems have typically experienced zero-vehicle availability levels of greater than 40 percent among their ridership. Forty-five percent of RTS riders have two or more vehicles available in their households. The frequency distribution for this question is shown in Figure 13.

In addition, CUTR ran a cross-tabulation on household vehicle availability and rider age where the 18-to-24-year-old age group was compared to all other age groups combined. This cross-tabulation indicates that 89 percent of 18 to 24 year olds have one or more vehicles available, while only 61 percent of all other age groups have one or more vehicles available. The data for this cross-tabulation are presented in Table 5.

Figure 13

Q22: How many working cars, vans, and/or light trucks are available in your household?

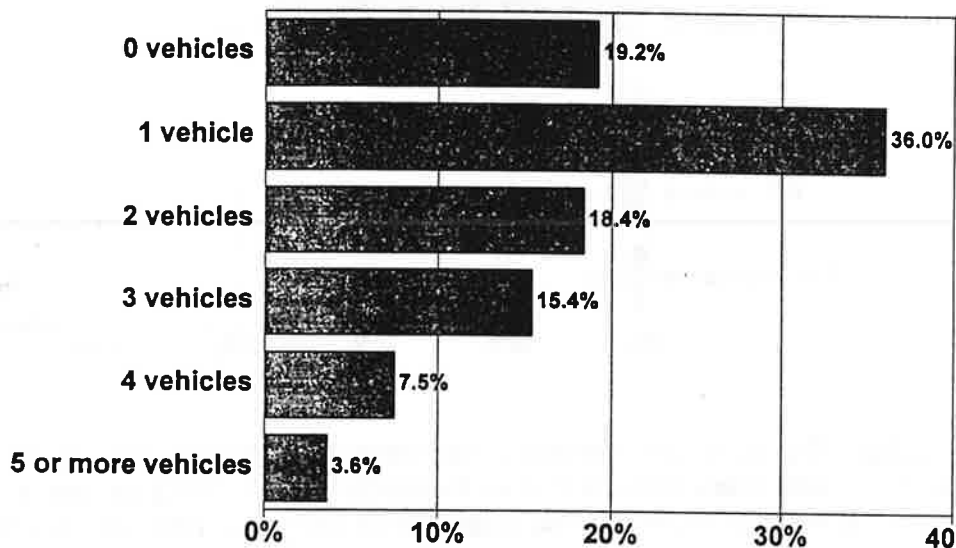


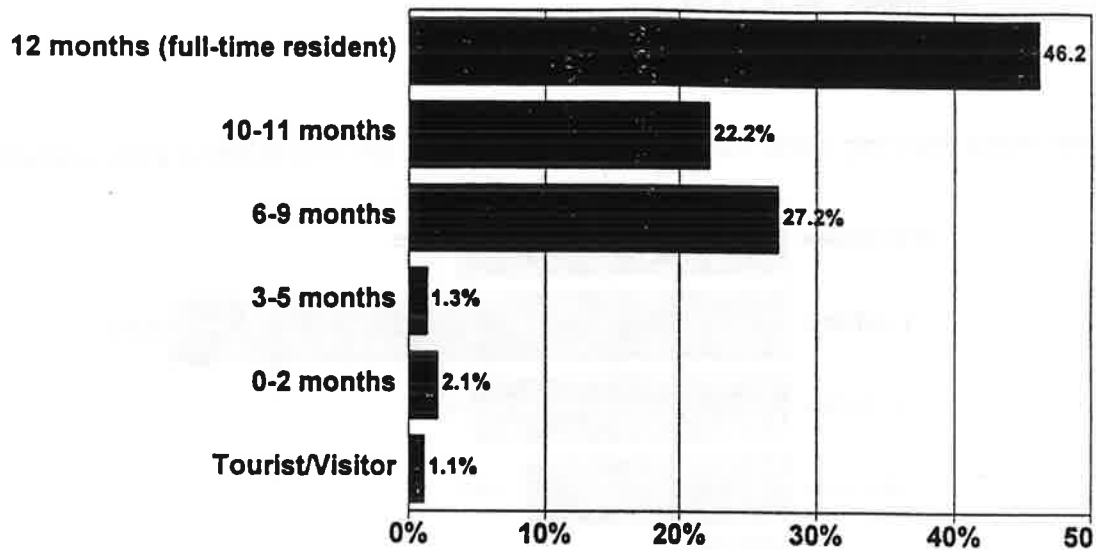
Table 5
Household Vehicle Availability by Rider Age

Household Vehicles Available	Age Groups		
	18-24	All Others	All Ages
0 vehicles	10.7%	39.9%	19.1%
1 vehicle	33.0%	43.1%	36.0%
2 vehicles	21.1%	12.0%	18.4%
3 vehicles	21.1%	1.9%	15.4%
4 vehicles	9.9%	1.8%	7.5%
5 or more vehicles	4.1%	2.4%	3.6%
Total	100.0%	100.0%	100.0%

Residency Status - Less than half (46 percent) of RTS riders are full-time residents of Gainesville/Alachua County. The relatively high incidence of less than full-time residency may correspond to the length of duration of UF's school year and the fact that students may not attend all semester sessions each year. The frequency distribution for this question is shown in Figure 14 below.

Figure 14

Q23: How many months out of the year do you reside in Gainesville/Alachua County?



Typical Rider Profile - Based on the previously-discussed demographic characteristics and on some of the travel behavior characteristics that will be presented in the next section, a typical RTS rider profile can be derived. The primary characteristics of the typical rider are as follows:

- white female;
- between the ages of 18 to 24 years;
- with a total 1996 household income of less than \$10,000;
- has one vehicle available for use;
- rides five days a week;
- rides because parking at UF is too difficult; and
- lives in Gainesville/Alachua County 12 months out of the year.

Fare and Travel Behavior

A series of questions were included on the survey questionnaire to establish the RTS riders' fare usage and travel behavior characteristics. These questions included:

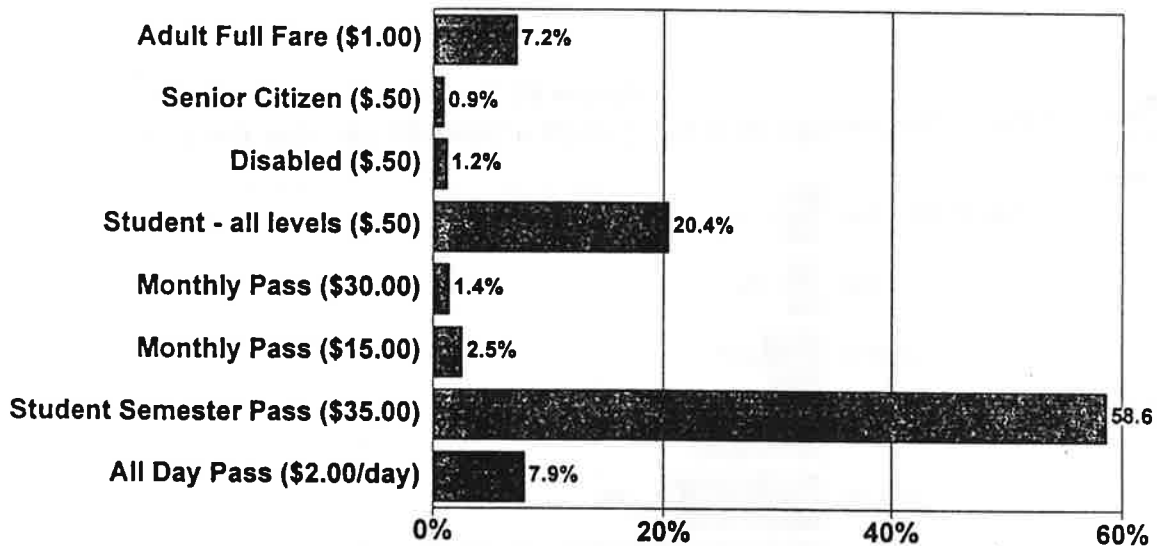
- fare payment type (Question 11);
- frequency of use (Question 12);
- reason for riding RTS (Question 13);

- alternative transportation (Question 14); and
- length of use (Question 15).

Fare Payment Type - Of all the questions asked in the 1997 RTS on-board survey, the results of Question 11 (What type of fare did you pay when you boarded this bus?) display the greatest differences with other transit systems in Florida. Slightly more than seven percent of RTS riders pay the full adult fare when riding the bus. The most utilized fare instrument is the Student Semester Pass, which 59 percent of all RTS riders use since it is an unlimited ride pass that lasts approximately four months. When combined with student cash fares, 79 percent of RTS ridership pays a student fare to ride. Seniors and persons with disabilities are under-represented compared with other systems in Florida. However, it must be noted that the pricing of the Student Semester Pass provides a significant savings on a cost per trip basis than all other fare categories. The frequency distribution for this question is shown in Figure 15 below.

Table 7, at the top of the following page, displays the results of a cross-tabulation of fare payment type by rider age, where the 18-to-24-year-old age group was compared to all other age groups combined. This cross-tabulation indicates that 92 percent of 18 to 24 year olds pay a student fare to ride RTS. Fifty percent of all other age groups also pay a student fare, but a significantly greater proportion of these groups pay the full adult fare (17 percent) than do the 18 to 24 year olds (3 percent).

Figure 15
Q11: What type of fare did you pay when you boarded this bus?



**Table 7
Fare Type by Rider Age**

Fare Type Utilized	Age Groups		
	18-24	All Others	All Ages
Adult Full Fare (\$1.00)	2.8%	17.0%	7.1%
Senior Citizen (\$0.50)	0.1%	2.6%	0.9%
Disabled (\$0.50)	0.2%	3.4%	1.2%
Student - all levels (\$0.50)	21.7%	17.4%	20.4%
Monthly Pass (\$30.00)	0.5%	3.2%	1.3%
Monthly Pass (\$15.00)	1.1%	5.6%	2.5%
Student Semester Pass (\$35.00)	70.1%	33.1%	58.9%
All Day Pass (\$2.00/day)	3.5%	17.6%	7.8%
Total	100.0%	100.0%	100.0%

Frequency of Use - Question 12 asked riders how many days per week they utilized RTS transit service. As shown in Figure 16, the majority of riders use RTS services five days per week (56 percent).

Table 8, at the top of the following page, displays the results of a cross-tabulation of frequency of use by rider age, where the 18-to-24-year-old age group was compared to all other age groups combined. This cross-tabulation indicates that a majority of both groups ride the bus five days a week.

**Figure 16
Q12: On average, how many days a week do you ride the bus?**

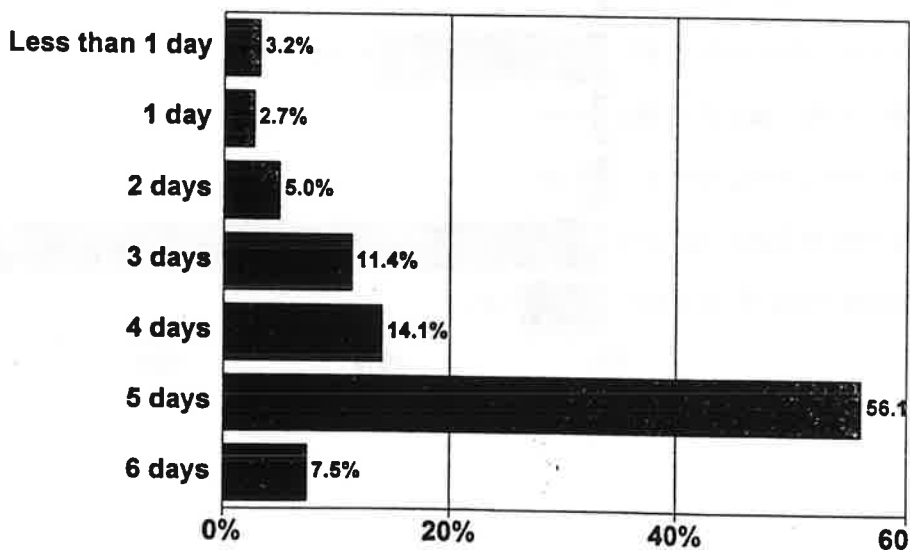


Table 8

Frequency of Use by Rider Age

Average Number of Days per Week Bus is Ridden	Age Groups		
	18-24	All Others	All Ages
Less than 1 day	2.9%	3.9%	3.2%
1 day	2.5%	3.3%	2.8%
2 days	4.9%	5.6%	5.1%
3 days	11.1%	11.9%	11.4%
4 days	14.4%	13.3%	14.1%
5 days	60.3%	47.0%	56.3%
6 days	3.9%	15.1%	7.2%
Total	100.0%	100.0%	100.0%

Reason for Riding RTS - Question 13 asked riders what their most important reason is for utilizing RTS transit service. Figure 17 indicates that the most frequent response given by riders is that parking at UF is too difficult (41 percent). The second most frequent response is that a car is not available for use. At 21 percent, this correlates to the results of Question 22, where 19 percent of riders reported that they had zero vehicles available in their households.

Table 9, on the following page, displays the results of a cross-tabulation of reason for riding RTS by rider age, where the 18-to-24-year-old age group was compared to all other age groups combined. This cross-tabulation indicates that the 18-to-24-year-old group has a much greater frequency of riding the bus because parking at UF is too difficult than the other age groups. However, a much higher percentage of other age groups indicated that they do not drive (23 percent) versus the 18 to 24 year olds (5 percent).

Figure 17
Q13: What is the most important reason you ride the bus?

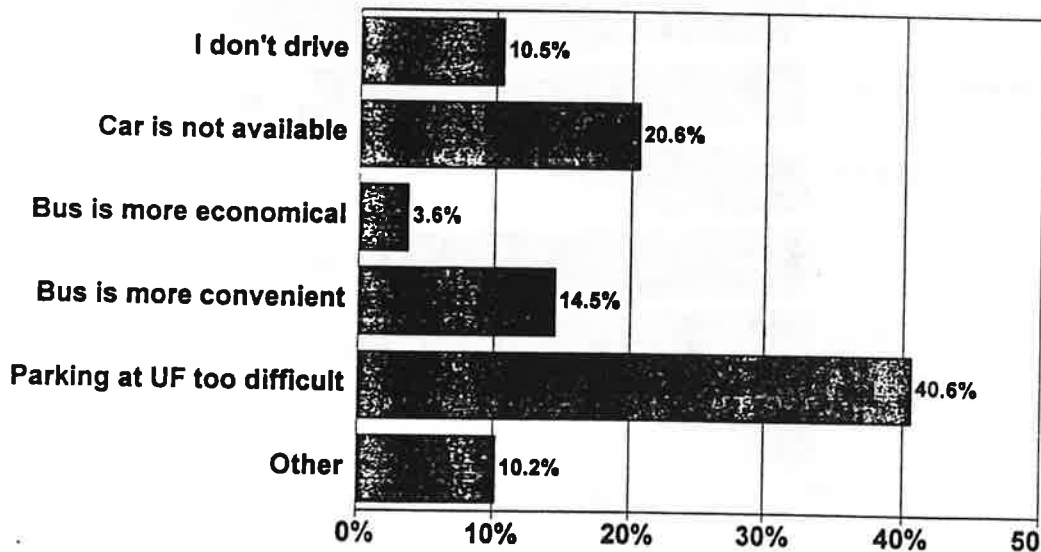
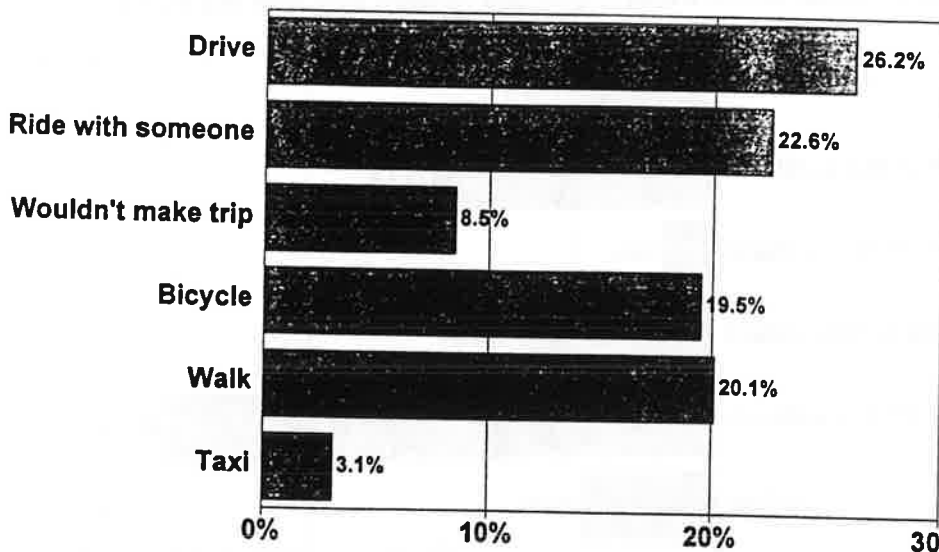


Table 9
Reason for Riding by Rider Age

Most Important Reason for Riding the Bus	Age Groups		
	18-24	All Others	All Ages
I don't drive	5.0%	23.1%	10.4%
Car is not available	16.9%	29.2%	20.6%
Bus is more economical	2.6%	5.7%	3.6%
Bus is more convenient	15.9%	10.7%	14.4%
Parking at UF too difficult	47.8%	24.3%	40.8%
Other	11.7%	7.0%	10.3%
Total	100.0%	100.0%	100.0%

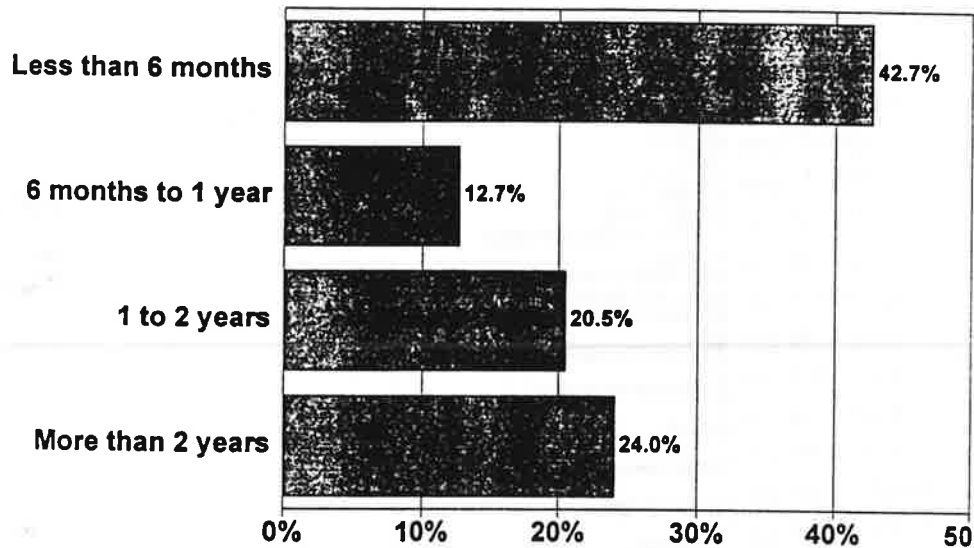
Alternative Transportation - Question 14 asked riders how they would complete their trip if they did not utilize RTS transit service. In 1993, the Board of Regents conducted a transportation study for all nine state universities. This study showed that UF was the most balanced in terms of daily travel modes to campus. While transit accounted for 2.1 percent of all daily trips to campus, walking and bicycling accounted for 37 percent of the trips (22.5 percent and 14.5 percent, respectively) (*State University Transportation Study*, Transportation Consulting Group, August 1993, p. 26). Accordingly, Figure 18 shows that 40 percent of riders would walk or bicycle if they did not make their trip by bus. An additional 26 percent stated that they would drive. Only eight percent of RTS riders would not make the trip.

Figure 18
Q14: How would you make this trip if not by bus?



Length of Use - Question 15 asked riders how long they have been using RTS transit service. The most striking aspect of the results for this question is that 55 percent have ridden for less than one year, and 45 percent have ridden for more than one year. From an industry perspective, "new" riders are usually classified as those who have ridden a transit system for less than one year. In Gainesville, there is built-in new ridership each year because of incoming freshman to UF. However, this high percentage of new riders appears to be a combination of incoming freshman and established students who have tried transit for the first time this year. The frequency distribution for this particular question is shown below in Figure 19.

Figure 19
Q15: How long have you been using RTS bus service?

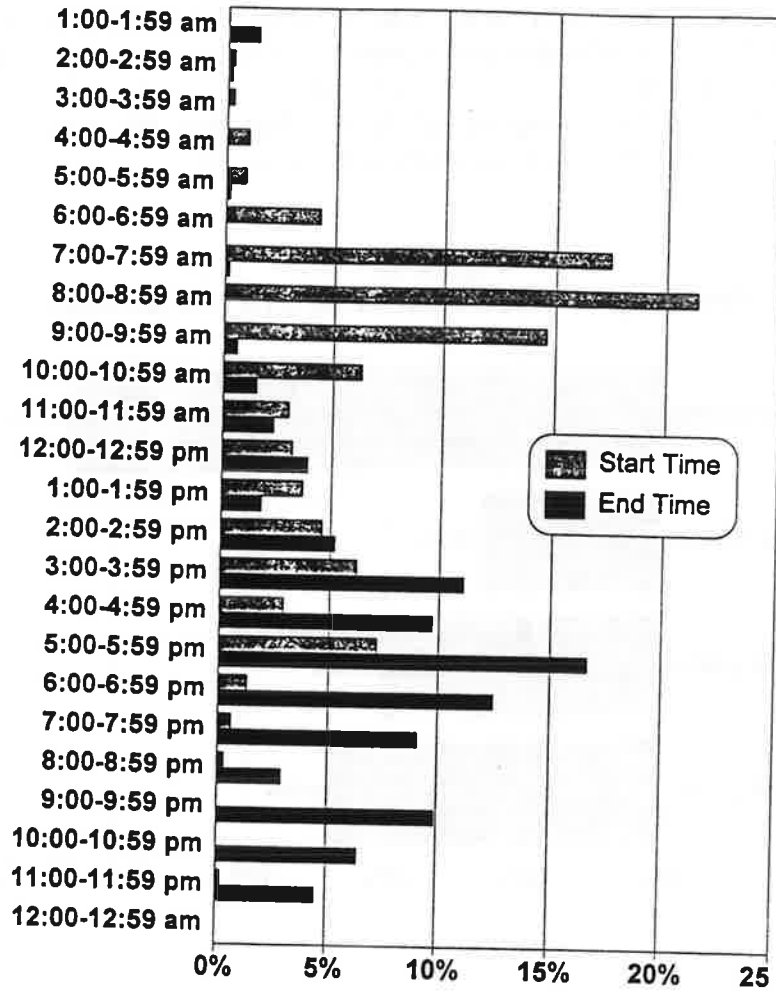


Work and Class Time Analysis

RTS riders were asked several questions to help determine where they live and work (in terms of zip code areas) and what times their work and/or classes begin and end.

Work Start and End Times - The first part of Question 26 asked riders to provide the start and end times for their work. As can be seen in Figure 20 on the following page, work start and end times for RTS ridership follow the traditional a.m. and p.m. peak periods, which are 6:00 to 10:00 a.m. and 3:00 to 7:00 p.m.

Figure 20
Q26a: Work Start and End Times



Class Start and End Times - The second part of Question 26 asked riders to provide the start and end times for classes, if and where applicable. Figure 21 on the next page shows that while class start times follow the traditional a.m. peak (7:00 to 10:00 a.m.), class end times for RTS ridership have no definable p.m. peak. Instead, class end times are distributed over a time period spanning from 12:00 noon to 8:00 p.m.