VOTRAN
TRANSIT DEVELOPMENT PLAN
MAJOR UPDATE: 2007 – 2016

Prepared for VOTRAN

by the
Center for Urban Transportation Research at the
University of South Florida

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CHAPTER ONE

VOTRAN AND THE COMMUNITY

INTRODUCTION

A thorough understanding of the environment within which a transit system operates is critical to the success of planning efforts for current and future development and enhancement of a transit system. Accordingly, this chapter opens with a descriptive overview of VOTRAN's operating environment, namely Volusia County and its major municipalities. After providing this background context, the chapter draws upon 2000 Census data and other sources to present an analysis of the demographic and economic conditions of the County and its residents. The Volusia County MPO Transit Quality of Service Evaluation and other transit-related goals, plans, and policies from local and state agencies have also been incorporated into this TDP.

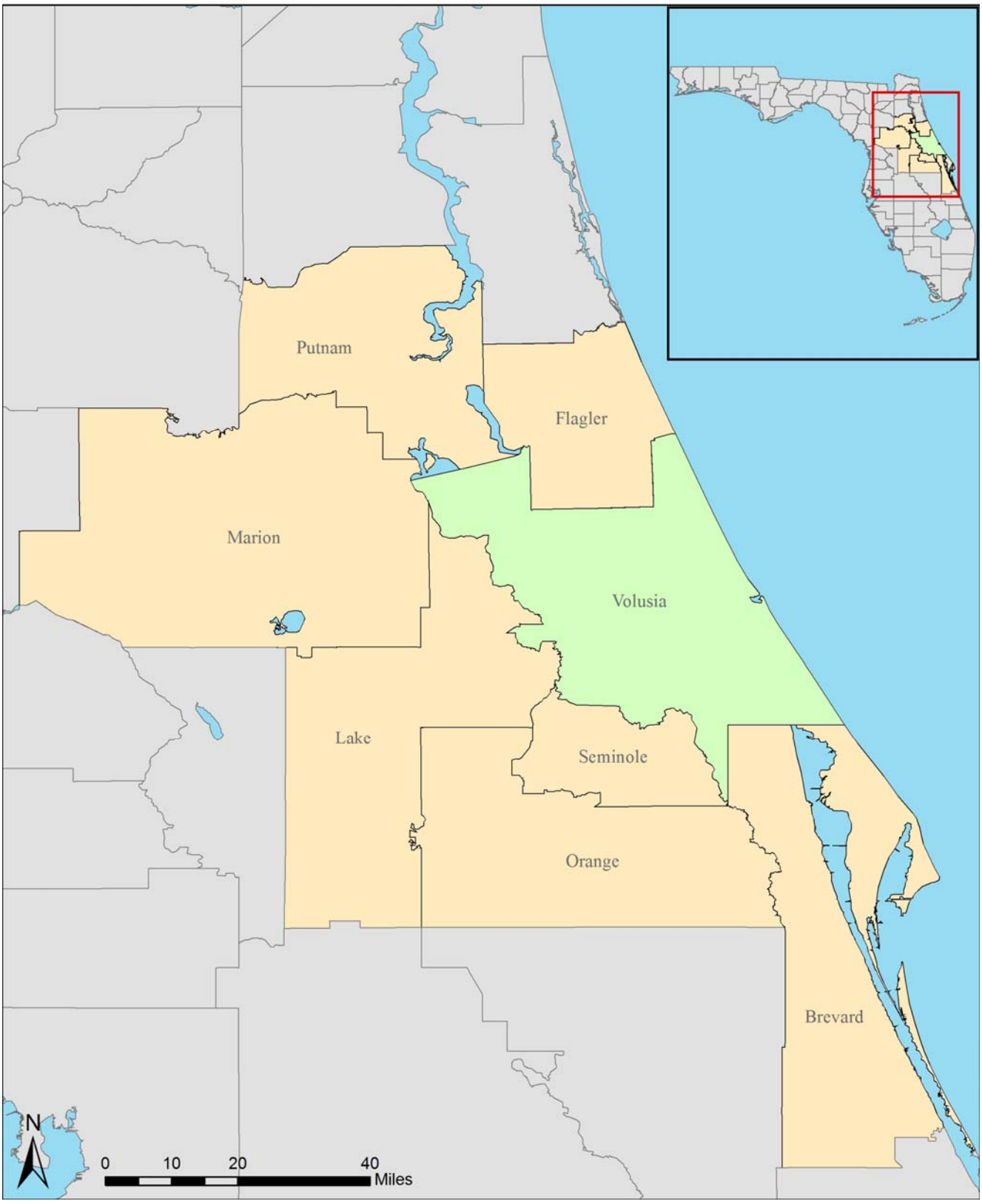
OVERVIEW OF VOLUSIA COUNTY

Volusia County is situated on central Florida's Atlantic coast and occupies a land area of 1,103 square miles, making it the tenth largest county in Florida. Located north of the Melbourne-Titusville-Cocoa area, Volusia County is bordered by Brevard, Seminole, Lake, Putnam, Marion, and Flagler counties (Figure 1-1). Its celebrated annual events, beautiful white sand beaches, temperate climate, and close proximity to theme parks and other attractions have established Volusia County as a prime destination for visitors to Florida. Millions of visitors flock to the County every year to enjoy popular events such as the Daytona 500, Bike Week, and Spring Break at the "World's Most Famous Beach," Daytona Beach. People are also drawn to the unique ambience offered by the County's other beachfront cities, such as New Smyrna Beach's small-town charm or the natural beauty of Ormond Beach, which is known as the "Birthplace of Speed" for the auto races staged on its hard-packed sand at the turn of the century.

Over time, the progression and form of development in the county has been influenced chiefly by its natural environment. The east coast of the county has experienced fairly rapid development, mainly due to the attractive location along the beaches of the Atlantic Ocean, which continues to be the scene of thriving growth along the U.S. 1 and I-95 corridors. Growth in the western section of the county, however, has advanced more slowly, centering around the picturesque county seat of DeLand, various other communities along I-4, and the many lakes and green areas along the St. John's River at the county's western border. The central area consists largely of wetlands and wildlife refuges, dividing the county into its eastern and western "sides." Thus, the population and activity centers have been separated into two halves, the eastern and western, which are linked by the major corridors of I-4, U.S. 92, and State Road 44.

Figure 1-1

Volusia and Adjoining Counties



Major industries in Volusia County include education, medical supplies and services, citrus juices, skin care products, plastics, automotive/aviation supplies and services, trucking and distribution, mechanical and electronic components/assembly, and various other manufacturing and commercial enterprises. Volusia County is home to such companies as Hawaiian Tropic (sun care products), Boston Whaler (fiberglass boats), and Quaker Oats Company's Ardmore Farms (fruit juices). According to the U.S. Bureau of Labor Statistics, it is estimated that the county's labor force in 2004 numbered 231,766 with only a 4.6 percent unemployment rate, slightly less than the State of Florida's estimated 2004 unemployment rate of 4.8 percent. Table 1-1 lists the ten largest industries in Volusia, by average monthly employment in 2004.

Table 1-1
Largest Employment Sectors in Volusia County

Industry	Average Monthly Employment in 2004
Retail Trade	24,548
Health Care and Social Assistance	22,513
Accommodation and Food Services	17,459
Construction	11,491
Public Administration	9,807
Manufacturing	9,653
Administrative Support, Waste Management, Remediation Services	8,294
Professional, Scientific, and Technical Services	6,555
Other Services	5,869
Wholesale Trade	4,342

Source: State of Florida, Agency for Workforce Innovation, Office of Workforce Information Services

Volusia County is also home to several institutions of higher learning, some of which have a national reputation for excellence. In Daytona Beach there are five universities/colleges: the historic Bethune-Cookman College, the University of Central Florida's Daytona Beach Campus, Daytona Beach Community College, Keiser College (a two-year junior college), and the only accredited, aviation-oriented university in the world, Embry-Riddle Aeronautical University. Embry-Riddle's aerospace engineering program was ranked number one in the nation among schools without doctorate programs. Stetson University in DeLand, founded in 1883, is Florida's oldest private university and is listed on the National Register of Historic Places. In the 2006 *U.S. News and World Report* national college ranking survey, Stetson University ranked number four on the list of the top comprehensive regional universities (Master's) in the South.

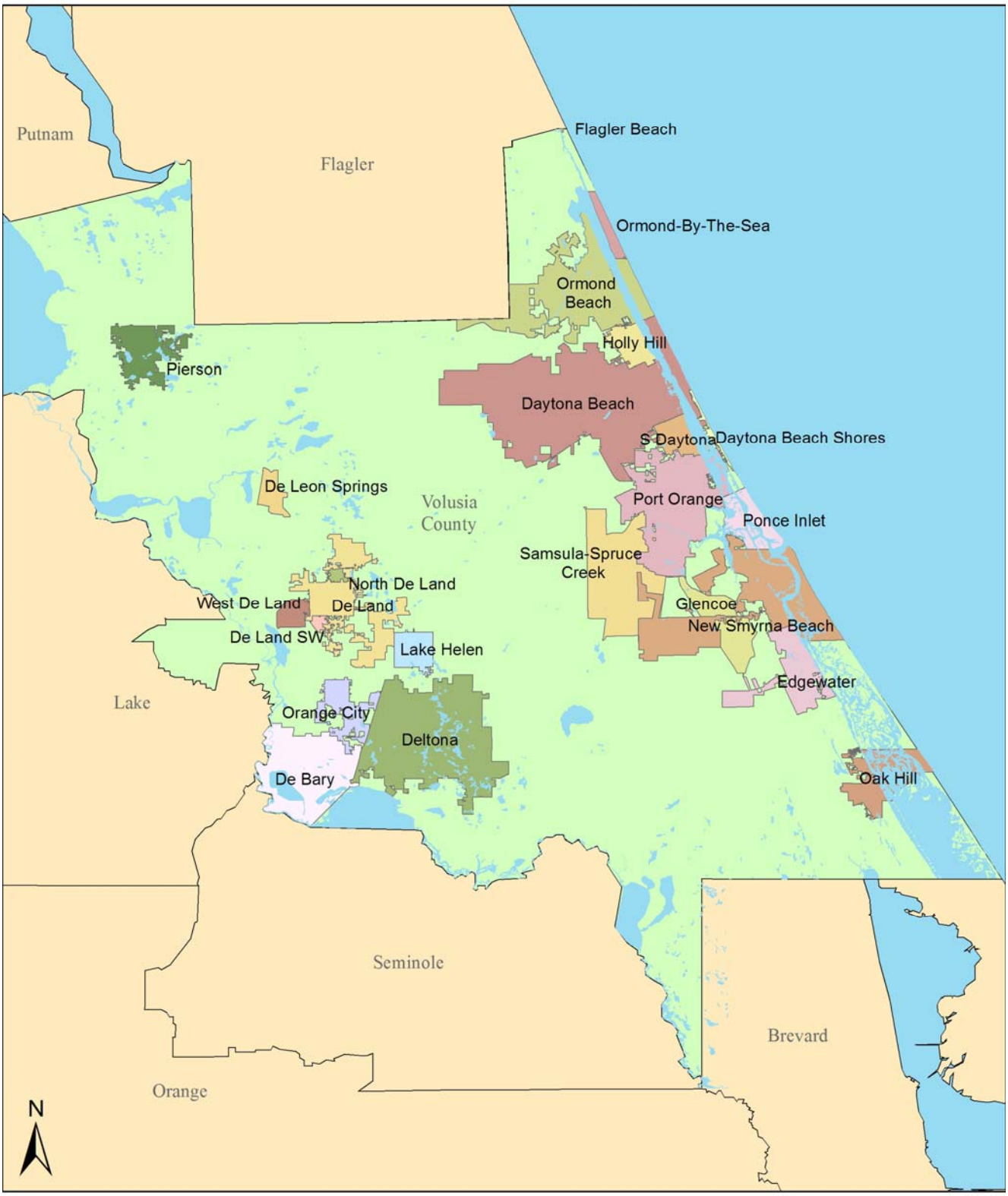
Aside from Volusia County's 47 miles of beautiful Atlantic beaches, there are over 3,000 acres of parks and other outdoor facilities that add to the County's appeal as a tourist destination. These include local and district parks such as Gemini Springs Park, boat ramps, campgrounds, fishing docks, trails for hiking and horseback riding, and sites that offer scenic beauty, sports and recreational programs. History buffs can explore a number of local, state, and national

historic and archaeological sites, while nature enthusiasts can enjoy the many federal and state recreation areas, such as Blue Spring State Park, Hontoon Island State Park, DeLeon Springs State Recreation Area, and Canaveral National Seashore, a 24-mile stretch of pristine barrier island beach. In addition, several wetlands and wildlife preserves are located in the central area of the County, including the Tomoka and Farmton Wildlife Management Areas and the Lake Woodruff National Wildlife Refuge. The area also has art galleries, museums, performing arts centers, and numerous other cultural offerings.

Seventy-five percent of the county's population is located within its 16 incorporated areas, shown in Figure 1-2. Table 1-2 lists the 2000 population of these areas, followed by brief descriptions of the most populous cities in Volusia County.

Figure 1-2

Incorporated Areas in Volusia County, 2000



Source: U.S. Census Bureau

Table 1-2

Population of Volusia County's Communities

Area	Census 2000	Percent of Total
Volusia County	**443,343**	100.00%
Daytona Beach	64,112	14.46%
Daytona Beach Shores	4,299	0.97%
DeBary	15,559	3.51%
DeLand	20,904	4.72%
Deltona	69,543	15.69%
Edgewater	18,668	4.21%
Flagler Beach (part)	76	0.02%
Holly Hill	12,119	2.73%
Lake Helen	2,743	0.62%
New Smyrna Beach	20,048	4.52%
Oak Hill	1,378	0.31%
Orange City	6,604	1.49%
Ormond Beach	36,301	8.19%
Pierson	2,596	0.59%
Ponce Inlet	2,513	0.57%
Port Orange	45,823	10.34%
South Daytona	13,177	2.97%
Unincorporated	106,880	24.11%

Source: 2000 U.S. Census Bureau and Florida Statistical Abstract 2005, University of Florida.

Deltona

First developed as a planned community in 1962 by the Mackle Brothers, Deltona is one of the newest cities in southwest Volusia County, having been incorporated in 1995, and is now the largest, with an estimated 2004 population of 80,052. Located along the I-4 high-tech corridor between the growing metropolitan areas of Daytona Beach and Orlando, Deltona is a residential community with a thriving housing market in single-family homes, gated communities, condominiums, and rental apartments. Residents are mainly younger families and professionals who commute to work in the various high-tech industries in Orange and Seminole counties. Deltona's reputation for safe and affordable neighborhoods, recreational opportunities, and laid-back lifestyle make it an ideal home for retirees as well. However, growth in the area is diversifying, and has moved beyond strictly residential development. With easy access to interstate highways, new roads, rail and water transportation, and vacant land, Deltona is poised to become a hub of vigorous commercial and industrial development in West Volusia County. A new commercial corridor and a 1,700-acre activity center at the I-4/S.R. 472 interchange have also contributed to Deltona's prime location for corporate headquarters, regional offices, high-tech industry, distribution centers and warehouses, and retail/commercial enterprise.

Daytona Beach

Located in the northeastern portion of the county along the Atlantic coast, Daytona Beach, the "World's Most Famous Beach," has become an important center for commerce, culture, education, and entertainment not just for Volusia County, but for north-central Florida as well. More than eight million tourists a year visit the area's beautiful ocean beaches. As the home of NASCAR and the Daytona International Speedway, crowds gather in the Daytona Beach area every February for Speed Weeks and the Daytona 500. Other events in the spring that attract visitors include Bike Week, Spring Break, and the Black College Reunion. These events, however, are not the city's only draw for tourists. The downtown area along the Halifax River is a unique destination for dining and shopping. The new 500-slip Halifax Harbor Marina, one of 16 public marinas in the city, is the largest facility of its kind between Miami and Charleston, SC. With abundant land available for development along the high-tech interstate corridors, and continued housing, retail, and industrial growth, Daytona Beach is a regional marketplace with a relatively low cost of living. Highly ranked colleges and universities and the acclaimed Advanced Technology Center support the business needs of the area's largest employers (education, healthcare, and government) with career advancement, research, and continuing education. Additional opportunities for business growth include industrial sites within an enterprise zone, a foreign trade zone, and a medical office park.

Port Orange

Port Orange is located in the southern Halifax area, south of Daytona Beach and primarily situated between the Intracoastal Waterway and I-95. With a history that goes back to 1804, Port Orange was eventually incorporated as a town in 1913, then as a city in 1926. It is currently one of the county's fastest growing cities due to its strong residential development, commercial activity, and new service industries. With an award-winning municipal complex, excellent schools, scenic tree-lined streets, and superior public services, Port Orange is a forerunner in growth management, community design, and environmental preservation. An active waterfront scene, numerous shopping opportunities, and fine restaurants contribute to the area's high quality, family-friendly lifestyle. The area is characterized by an established and successful business environment, increasingly bolstered by small manufacturing enterprises. In addition, a new conglomerate of medical suppliers/manufacturers complements Port Orange's two new healthcare facilities, the Halifax Hospital and the Palmer College of Chiropractic.

Ormond Beach

Ormond Beach is in the northeast corner of the county, to the north of Daytona Beach and Holly Hill. Due to its continued growth, the city now spans from the Atlantic Ocean and Halifax River westward to I-95 and beyond. The city has a long history and is predated by a number of settlements in the area. Before its incorporation as Ormond in 1880, the area was a village called New Britain that had been settled in the 1870s. During the early 1900s, the area became the popular winter home for America's most prominent and wealthy: the Rockefellers, Astors, Vanderbilts, and Flaglers. Today, the residents of Ormond Beach take pride in its natural beauty, magnificent beaches, pristine rivers, and local golf courses. The area has an expansive parks system, nationally acclaimed recreation program, exceptional schools, and numerous shopping and fine dining opportunities. Presently, the area is growing both commercially and residentially, with competitive housing costs, several new retail areas, and a 170-acre Airport Business Park that is attracting light industry and manufacturing.

DeLand

In 1876, Henry Addison DeLand founded this city with the hope that it would one day become the "Athens of the South." Located around the juncture of U.S. 17 and U.S. 92 along the east bank of the St. John's River, DeLand is the oldest city in western Volusia County and has been the county seat since 1888. DeLand's unique character has struck a balance between preserving its past while building for the future. A growing commercial and industrial base centered primarily on technical industries, agribusiness, and marine products combines with the small-town charm of DeLand's revitalized main street business district. In addition, the DeLand airport/business park, designated a foreign trade zone, is cultivating a diverse selection of manufacturers. Popular events that attract visitors to DeLand include the DeLand Outdoor Art Festival, the Central Florida Hot Air Balloon Rally, the "Anything That Floats" Raft Race, and the Fall Festival of the Arts, among others. The city also has a number of parks, the $3 million DeLand Cultural Arts Center, a municipal airport, and an AMTRAK terminal to serve its residents and visitors. DeLand is known for its residential neighborhoods shaded by 200-year-old oak trees, the quaint appeal of its downtown business and shopping district, and the prestigious Stetson University, all of which have been designated as National Historic Districts. In 1997, DeLand was one of just five U.S. communities to win the Great American Main Street Award.

New Smyrna Beach

About ten miles south of Daytona Beach, straddling the Indian River and U.S. 1 corridor, lies the city of New Smyrna Beach. Known as "The World's Safest Bathing Beach," New Smyrna is a popular tourist destination, but not just because of its eight-mile stretch of beautiful Atlantic beach and proximity to the Canaveral National Seashore. Visitors also come to enjoy the area's colonial history, such as the old Indian shell mounds and sugar mill ruins; stock car racing at the New Smyrna Speedway; fishing, golf, and other recreational activities; and the musical and theatrical performances at the nationally recognized Atlantic Center for the Arts. A vibrant beachside boutique shopping district, historic downtown and antique district, excellent restaurants, and beautiful parks contribute to New Smyrna Beach's small-town allure. Local commerce prospers from the many unique businesses spurred by the area's cultural diversity and international tourism industry. Several successful businesses housed in the New Smyrna Beach Airport/Industrial Park, which is within a foreign trade zone, play a role in the global economy.

DEMOGRAPHIC AND TRAVEL CHARACTERISTICS FOR VOLUSIA COUNTY

This section provides a summary of demographic and economic data at the person- and household-level for Volusia County, and includes an overview of specific demographic characteristics associated with potential transit use. For each of the demographic characteristics presented, the most current information possible was employed. In most cases, data were obtained through the 2000 Census, while the *2005 Florida Statistical Abstract* was used as an additional data source during this project.

The data are illustrated in maps and tables where suitable, and are presented at the level of the county as well as the block group. A census block group is a cluster of census blocks within a census tract. Block groups are the smallest geographic unit for which the Census Bureau tabulates sample data, allowing for more detailed examination of the socioeconomic characteristics within census tracts. As mentioned previously, the most populous regions in Volusia County are the east coast and western portion of the county, while the central portion of the county consists largely of wetlands and wildlife preserves. Therefore, to illustrate the data in sufficient detail, the maps in this chapter are presented in pairs, one each for the eastern and western portions of the county.

Population and Population Density

According to the 2005 Florida Statistical Abstract, the most populous city in Volusia County is Deltona, with a 2004 estimated population of 80,052. The city of Daytona Beach is the second largest, with a 2004 estimated population of 65,077. According to 2000 U.S. Census data, the population within incorporated cities accounts for more than 75 percent of the total population in Volusia County. During the time period of 1990 to 2004, Volusia County saw its population increase from 370,737 to 484,261, an increase of more than 30 percent. Over the same time period, Florida's growth rate was slightly higher, at just over 35 percent.

Table 1-3 displays population, population growth, and population density for Volusia County and Florida. Between 2000 and 2015, Volusia County's population is projected to increase by approximately 30 percent, a slightly slower rate than Florida's 33 percent projected growth over the same fifteen-year period. Table 1-3 also shows that by 2030 Volusia County's population is projected to be approximately 693,400, which represents a 56 percent increase from 2000. During this time period, the population is projected to increase at a slightly slower pace than employment, which, according to the Volusia County MPO, is expected to grow by 52% over the years between 2000 and 2030.

The 2004 population density in Volusia County is higher than the Florida population density, with 438 persons per square mile versus 325 persons per square mile, respectively. Figures 1-3 and 1-4 illustrate population density in the County, while Figures 1-5 and 1-6 show housing density. Table 1-4 depicts the most populous census block groups in the County, while Table 1-5 portrays the block groups containing the most households. As a general rule, higher population densities generate higher transit ridership.

Table 1-3
Population and Population Density

Area	Population Estimate	Population Projections*			Population Growth		2004 Population Density (persons per sq. mile)
	2000	2015	2025	2030	2000-2015	2015-2030	
Volusia	443,343	578,300	657,400	693,400	30.4%	19.9%	438
Florida	15,982,824	21,280,300	24,449,200	25,898,500	33.1%	21.7%	325

Source: 2000 U.S. Census Bureau and Florida Statistical Abstract 2005, University of Florida.

* For this report, medium population projections were used.

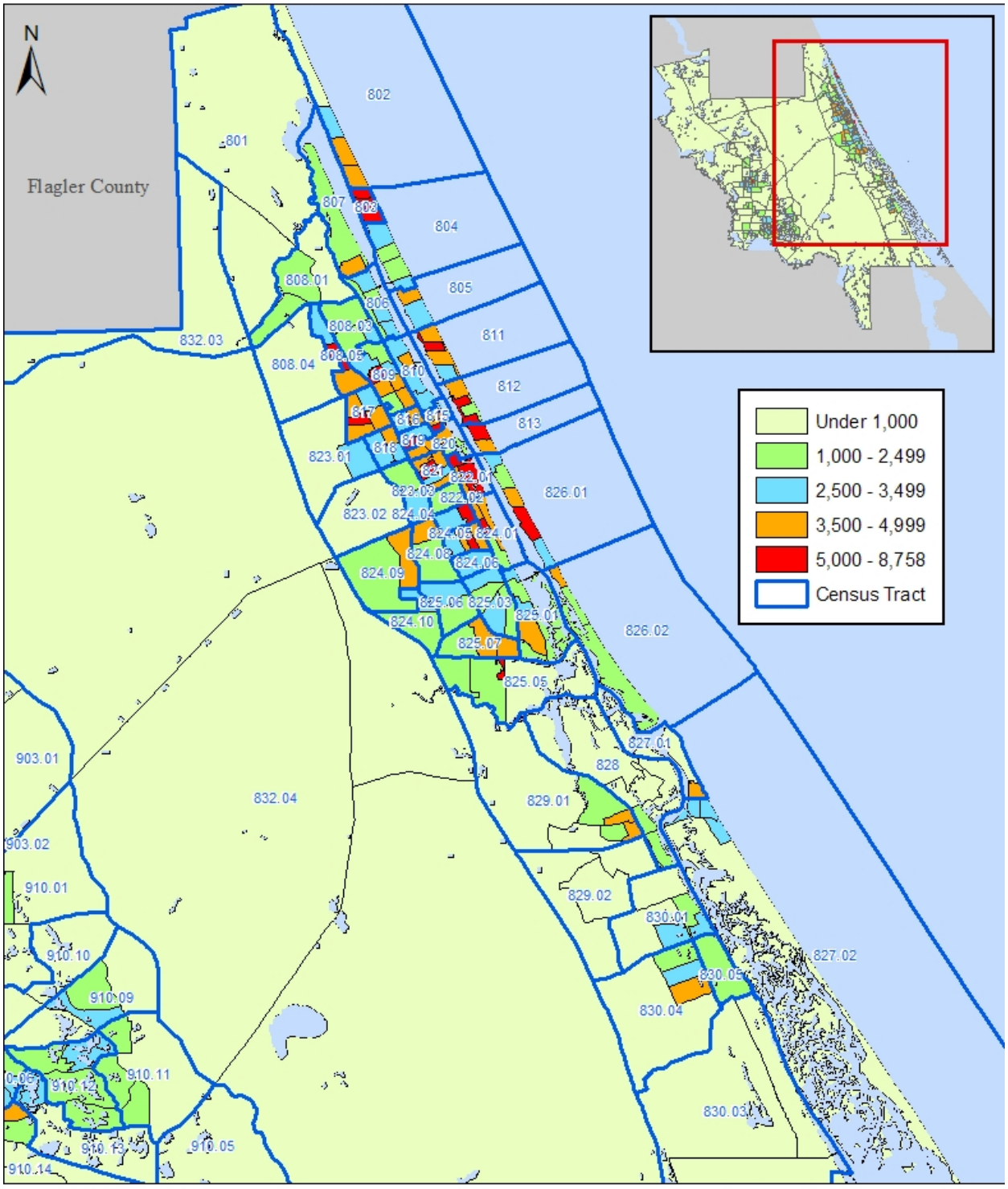
Table 1-4
Most Populous Block Groups in Volusia County, 2000

Tract	Block Group	Area	Population
832.04	3	Port Orange/Samsula-Spruce Creek/Volusia County	8,046
832.04	1	Daytona Beach/Volusia County	5,020
832.03	1	Ormond Beach/Volusia County	4,866
808.04	1	Daytona Beach/Ormond Beach	4,848
827.02	4	New Smyrna Beach/Oak Hill/Volusia County	4,762
824.09	1	Daytona Beach/Port Orange	4,375
910.13	2	Deltona/Volusia County	4,098
825.05	2	Port Orange	3,800
824.09	2	Daytona Beach/Port Orange	3,782
808.01	2	Ormond Beach	3,712

Source: 2000 U.S. Census Bureau

Figure 1-3

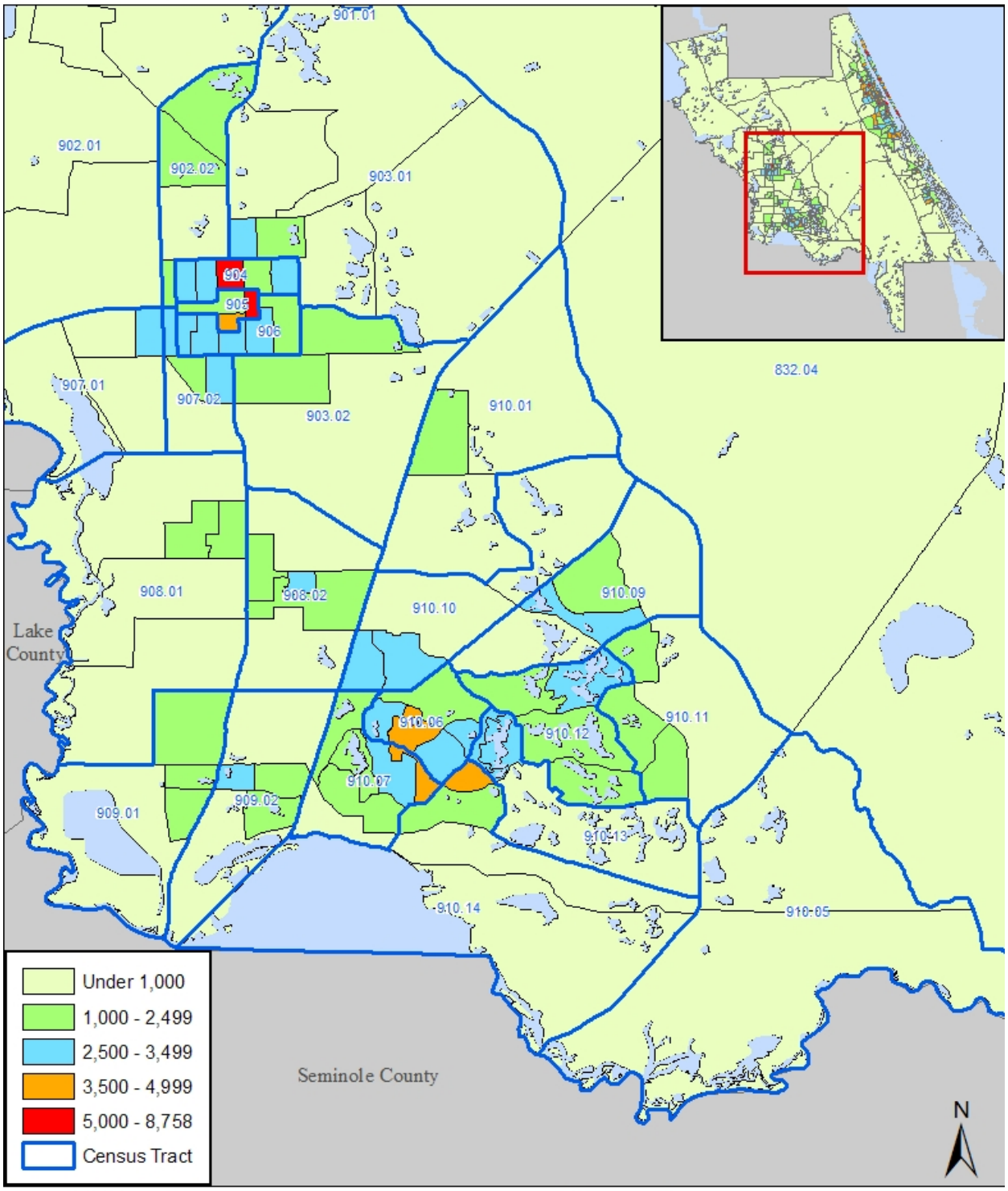
Population Density per Square Mile in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-4

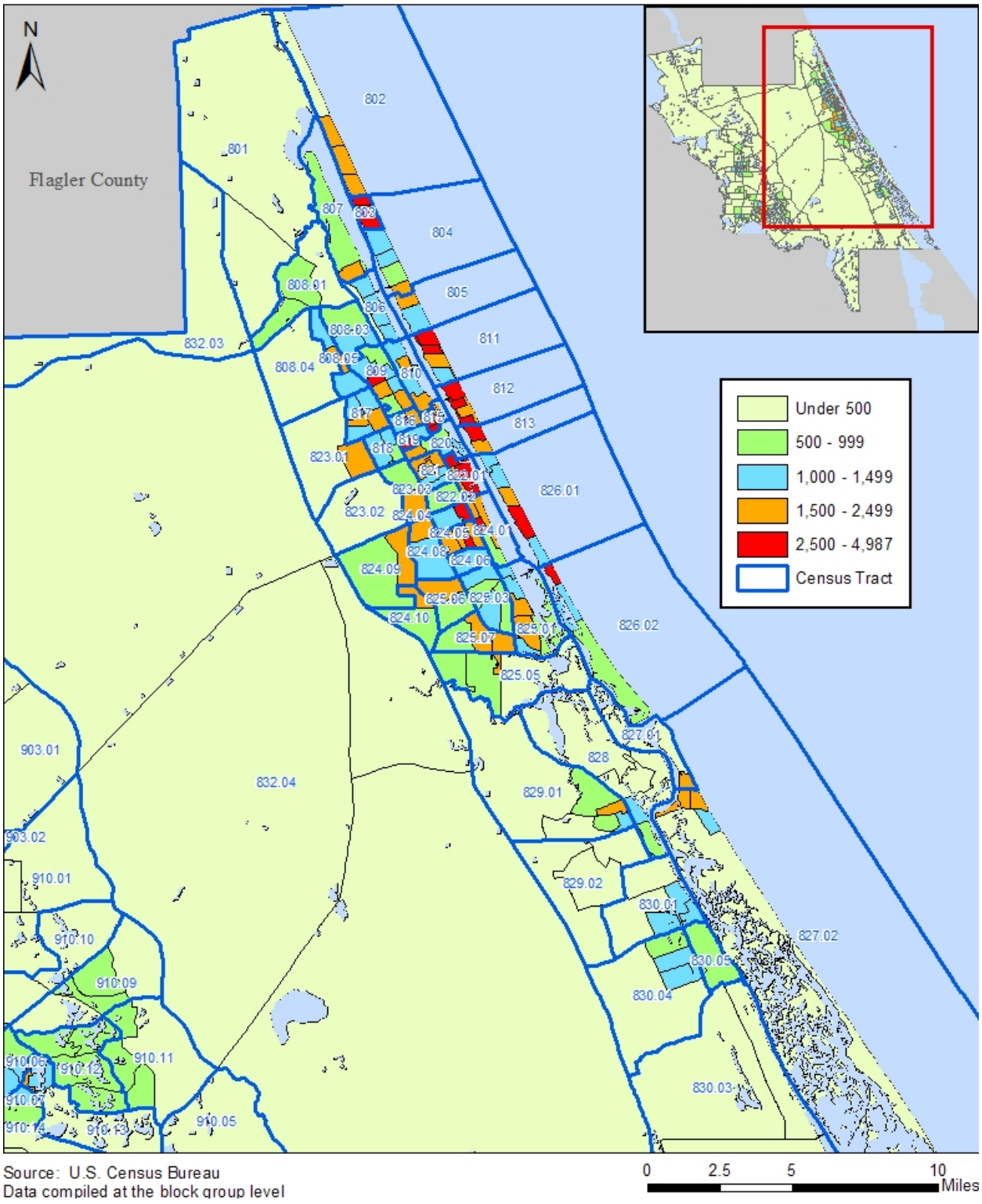
Population Density per Square Mile in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-5

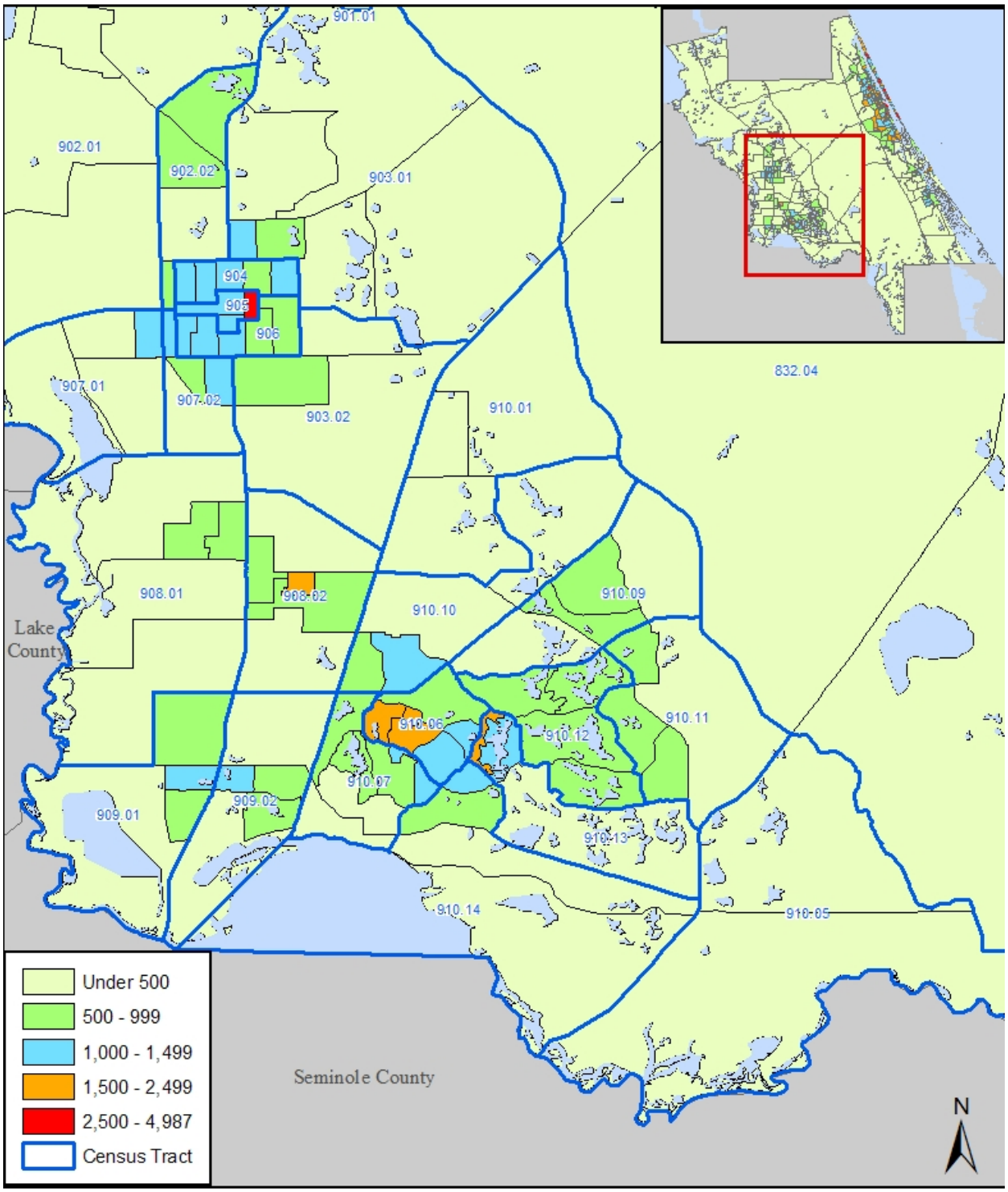
Households per Square Mile in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-6

Households per Square Mile in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Table 1-5
Most Households by Census Block Group in Volusia County, 2000

Tract	Block Group	Area	Total Households
832.04	3	Port Orange/Samsula-Spruce Creek/Volusia County	3,343
808.04	1	Daytona Beach/Ormond Beach/Volusia County	2,228
827.02	4	New Smyrna Beach/Oak Hill/Volusia County	2,194
824.09	1	Daytona Beach/Port Orange	2,000
824.09	2	Daytona Beach/Port Orange	1,853
824.08	2	Port Orange/Volusia County	1,722
830.03	1	Oak Hill/Volusia County	1,703
832.03	1	Ormond Beach/Volusia County	1,702
823.01	2	Daytona Beach	1,672
909.01	1	DeBary	1,585
808.01	2	Ormond Beach	1,547
830.05	1	Edgewater	1,514
826.01	4	Daytona Beach Shores	1,505
910.13	2	Deltona/Volusia County	1,429
825.06	1	Port Orange	1,418
910.10	3	Deltona	1,415
824.10	1	Port Orange	1,407

Source: 2000 U.S. Census Bureau

Population Age Characteristics

Table 1-6 charts the age group percentages for both Florida and Volusia County. According to the *2005 Florida Statistical Abstract,* nearly 22 percent of Volusia County's population is 65 years of age or older. This is approximately four percentage points higher than the State of Florida as whole. The 55-64 age category composes the smallest portion of the population in Volusia County, with approximately 12 percent of the population, while those ages 35-54 are the largest category, accounting for more than 27 percent of the County's population.

Table 1-6
Population Age Distribution, 2004

Area	0-17	18-34	35-54	55-64	65+
Volusia	19.66%	19.08%	27.43%	12.10%	21.73%
Florida	22.49%	21.07%	28.23%	10.80%	17.42%

Source: 2000 U.S. Census Bureau and Florida Statistical Abstract 2005, University of Florida.

According to projections from the *2005 Florida Statistical Abstract*, by 2010 the percentage of population in Volusia County that will be under 18 is approximately 19 percent. By 2030, this is projected to increase to approximately 23 percent, indicating that the percentage of youths in Volusia County is expected to experience modest growth over the next 25 years. However, the population age segment 65 and older is expected to represent 22 percent of the total County population by 2010, and is projected to nearly double to almost 41 percent of the total County population by 2030. Figures 1-7 and 1-8 illustrate the distributions of those under 18, while Figures 1-9 and 1-10 represent the distribution of those over 60, all for the year 2000. Table 1-7

presents the areas in Volusia County with the highest concentration of residents under 18 years and over 65 years of age. These two age groups are emphasized because they have less access to an automobile than the other age categories, resulting in a higher tendency to use public transportation. Furthermore, transit agencies located in an area with a significant elderly population will often market their services to the sites most frequently visited by seniors, such as medical facilities, shopping centers, and recreational facilities.

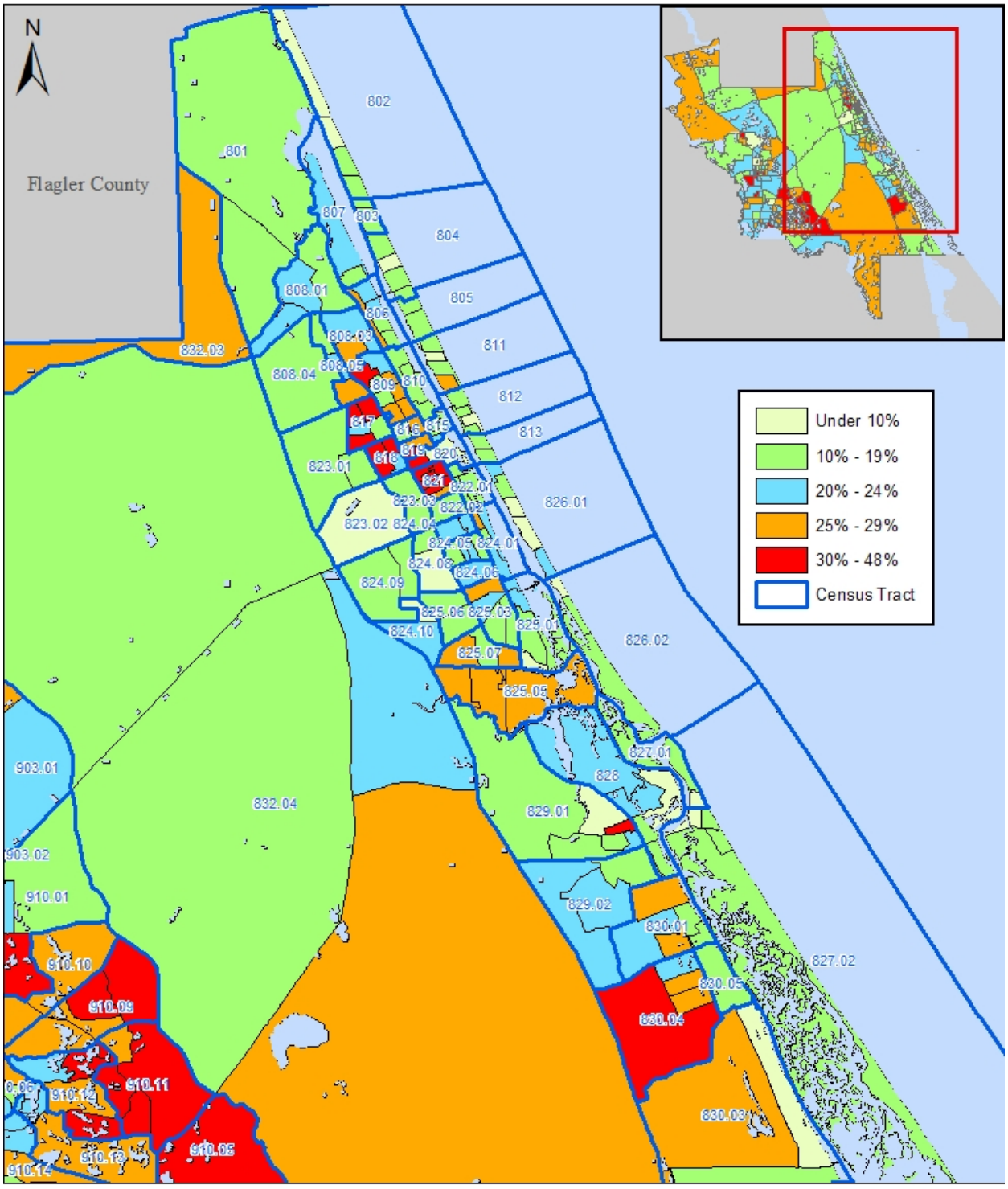
Table 1-7
Population Age Characteristics for Volusia County, 2000

Under 18				Over 65			
Tract	**Block Group**	**Area**	**Percent Under 18**	**Tract**	**Block Group**	**Area**	**Percent Over 65**
821.00	2	Daytona Beach	48.06%	908.02	2	Volusia County	82.31%
906.00	2	De Land	43.88%	809.00	3	Holly Hill	63.58%
818.00	1	Daytona Beach	38.33%	824.10	2	Port Orange/Volusia County	60.65%
910.09	1	Deltona/Volusia County	37.44%	905.00	1	De Land	58.82%
902.01	2	De Leon Springs	36.79%	908.02	6	Orange City/Volusia County	57.99%
910.11	3	Deltona	35.65%	829.01	2	New Smyrna Beach	55.48%
910.07	6	Deltona/Volusia County	35.53%	820.00	3	Daytona Beach	54.46%
907.02	4	De Land/De Land Southwest	35.38%	825.03	3	Port Orange	51.03%
910.01	3	Deltona/Lake Helen/Volusia County	34.60%	826.01	4	Daytona Beach/Daytona Beach Shores/Volusia County	49.05%
819.00	2	Daytona Beach	34.27%	827.02	2	New Smyrna Beach	49.01%
817.00	5	Daytona Beach	33.46%	824.08	2	Port Orange/Volusia County	48.62%
905.00	2	De Land	33.22%	902.01	1	Volusia County	47.40%
910.11	2	Deltona	33.21%	902.02	3	Volusia County	46.85%
829.01	3	New Smyrna Beach	32.75%	826.01	3	Daytona Beach/Daytona Beach Shores	46.73%
821.00	1	Daytona Beach	32.66%	811.00	2	Daytona Beach	46.51%

Source: 2000 U.S. Census Bureau

Figure 1-7

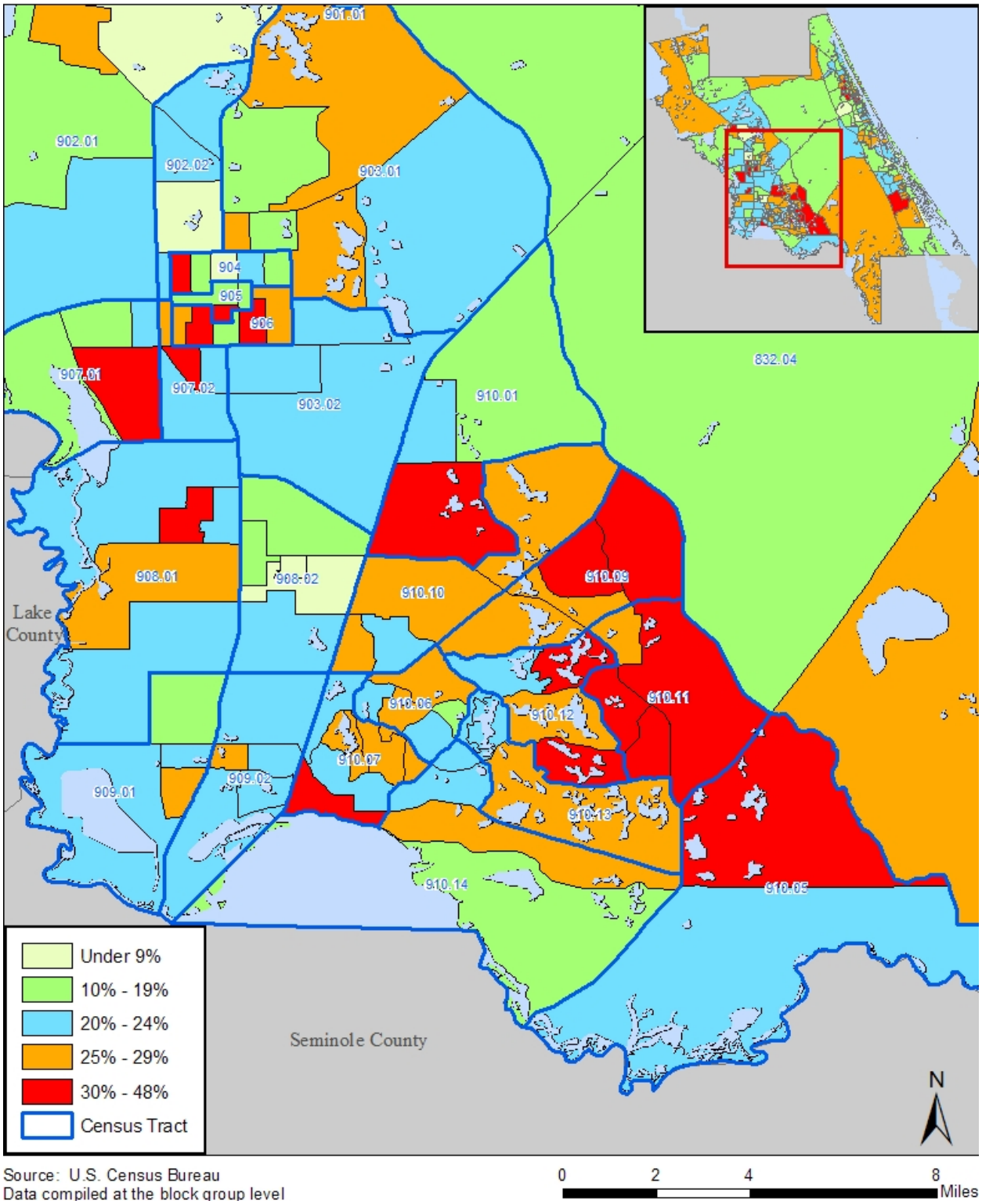
Percent of Population Under 18 in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-8

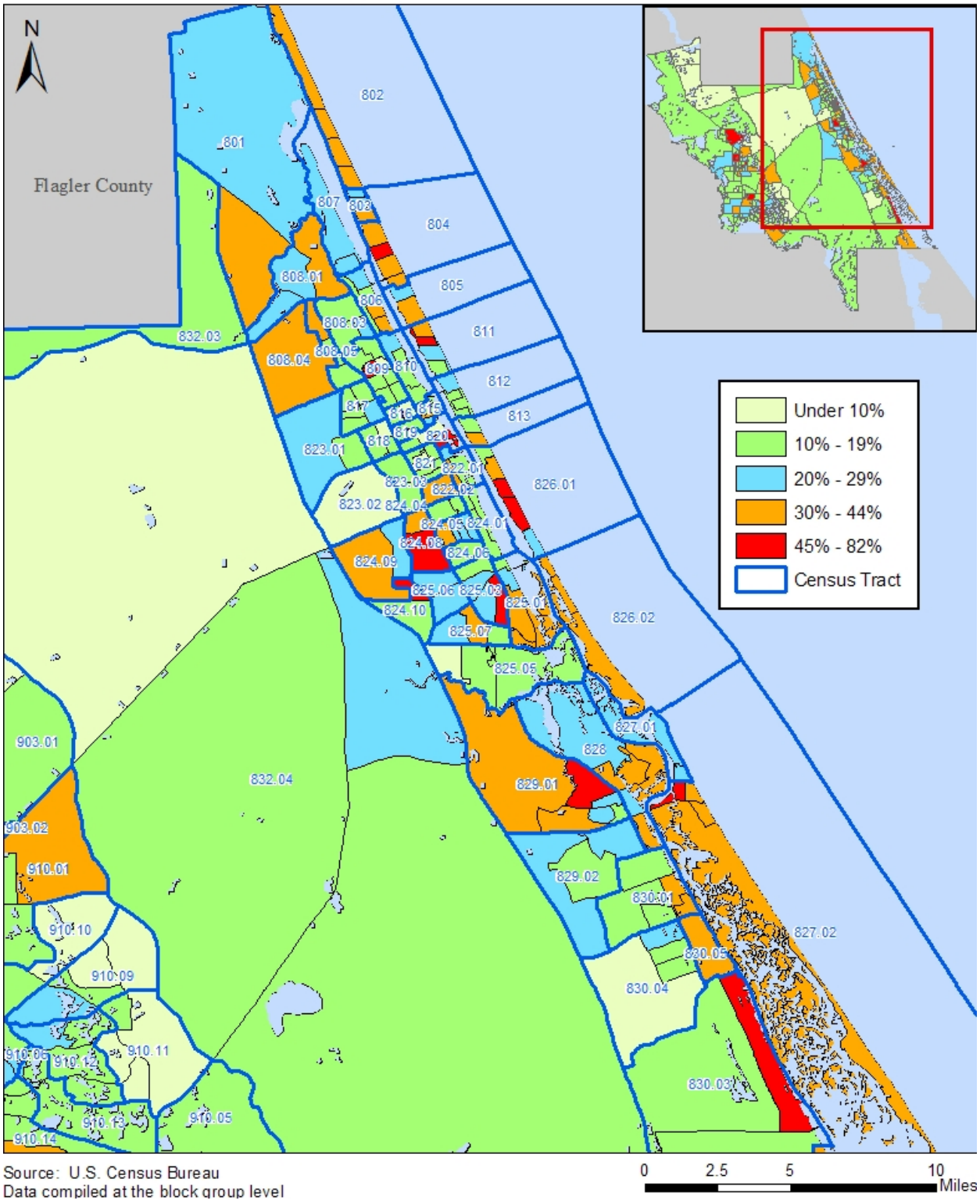
Percent of Population Under 18 in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-9

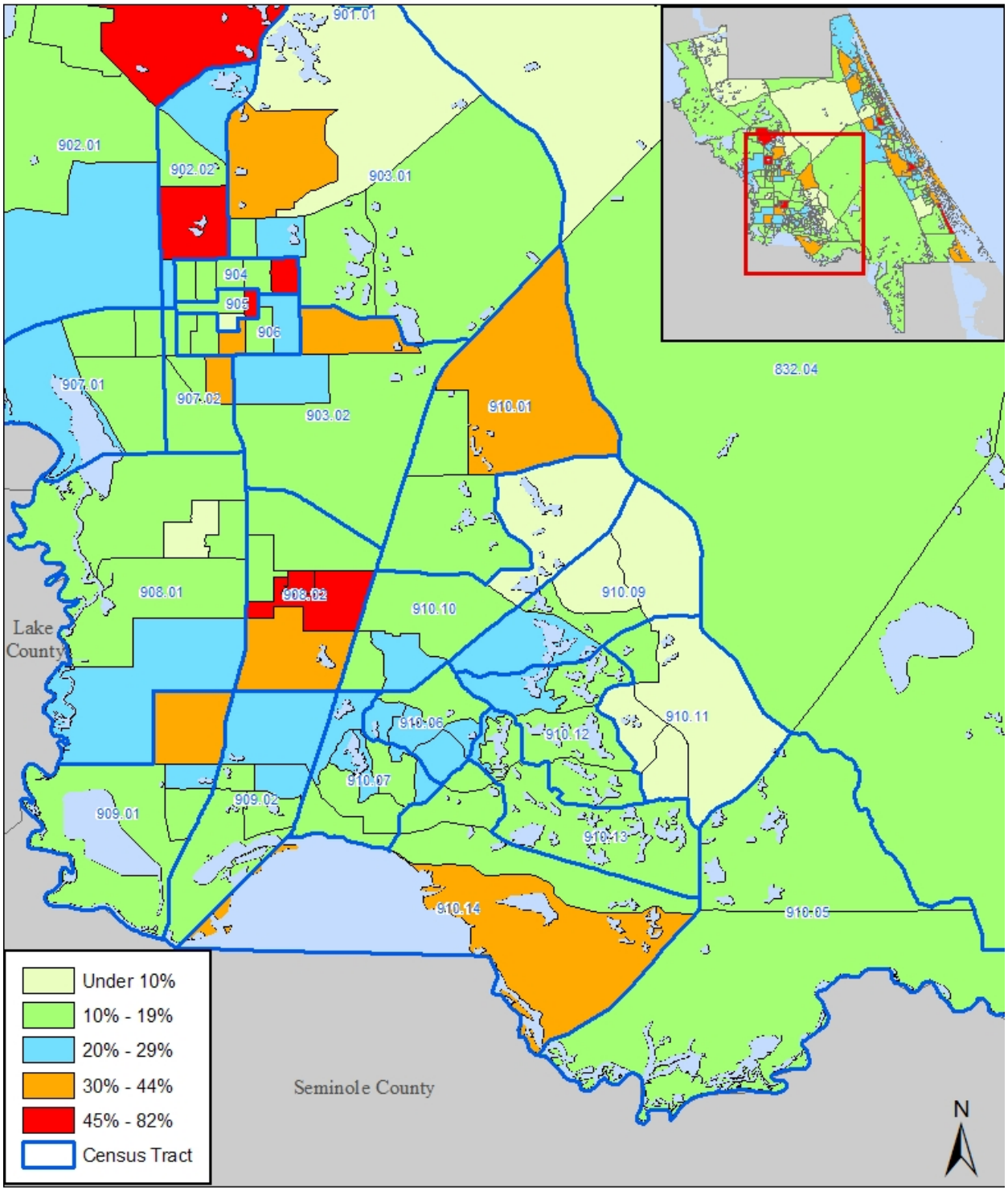
Percent of Population 65 and Older in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-10

Percent of Population 65 and Older in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Income Characteristics

Table 1-8 compares the distribution of household income in Florida and Volusia County. The percent of households with incomes in the categories under $50,000 is slightly higher than the percent for the State of Florida. Conversely, Volusia County is slightly below the State of Florida for upper income classifications. According to the 2000 U. S. Census, the median household income for the state of Florida is $38,819, more than 10 percent higher than Volusia County's median household income of $35,219.

Table 1-8
Annual Household Income Distribution, 2000

Area	$0 - $14,999	$15,000 - $24,999	$25,000 - $34,999	$35,000 - $49,999	$50,000 - $74,999	Over $75,000
Volusia	17.0%	16.8%	15.9%	18.3%	17.8%	14.2%
Florida	16.3%	14.5%	14.2%	17.4%	18.5%	19.1%

Source: 2000 U.S. Census Bureau

Table 1-9 shows the block groups in Volusia County with the highest concentration of households with an annual income of $15,000 or less. Over 67 percent of households report income under $15,000 in census tract/block group 815.00-5 (Daytona Beach area). Generally, low income is a factor contributing to a greater likelihood that public transportation will be used, and thus, in determining which areas have the greatest need for service. Low income areas such as those listed in Table 1-9 rely on public transit for access to employment, medical care, shopping, and recreation. The maps in Figures 1-11 and 1-12 present this income information graphically.

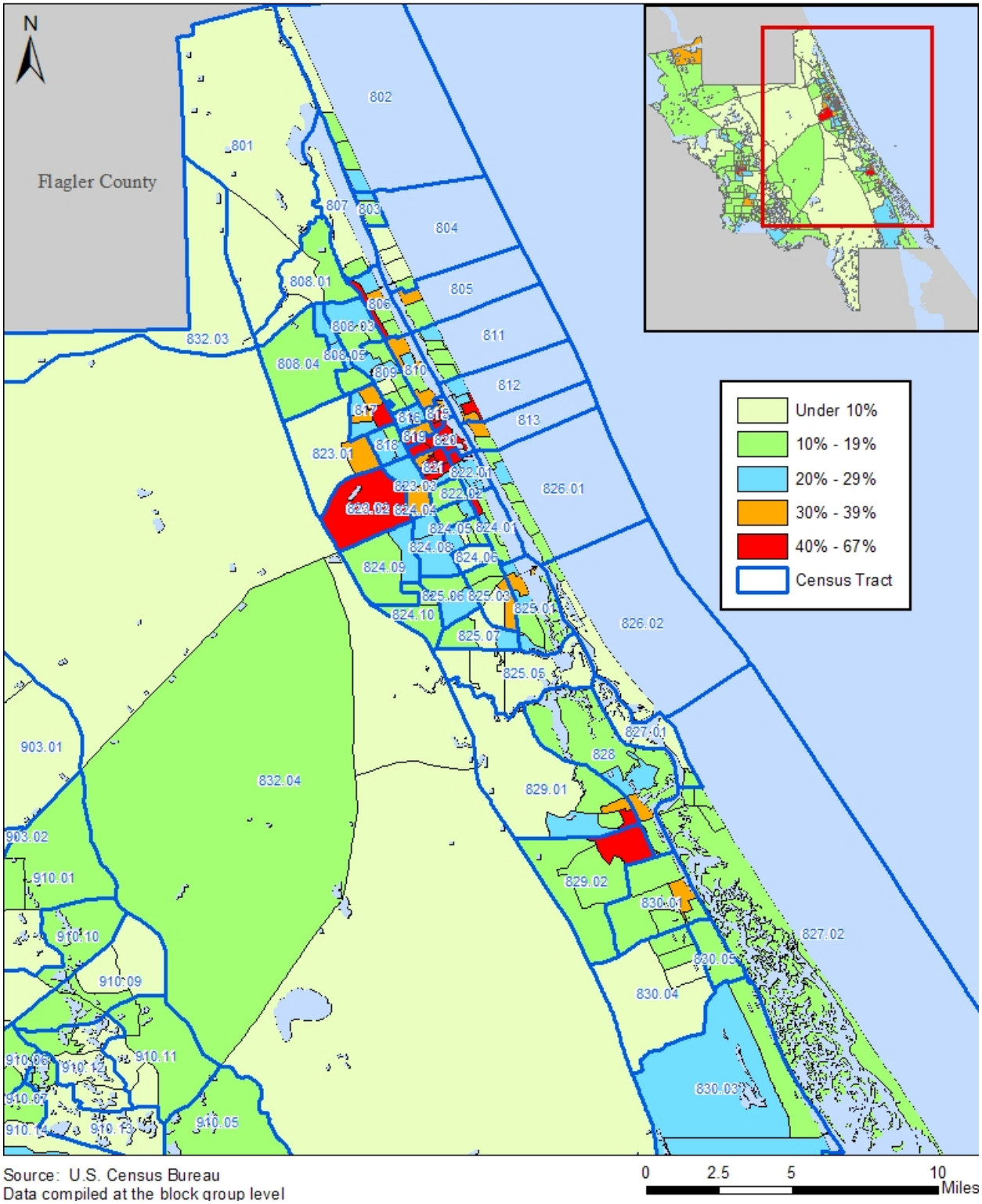
Table 1-9
Income Characteristics for Volusia County, 2000

Tract	Block Group	Area	Percent Households with Income Under $15,000
815.00	5	Daytona Beach	67.29%
819.00	2	Daytona Beach	65.13%
822.01	1	Daytona Beach	62.30%
815.00	4	Daytona Beach	56.39%
820.00	1	Daytona Beach	51.59%
821.00	3	Daytona Beach	51.15%
829.01	4	New Smyrna Beach	50.73%
821.00	1	Daytona Beach	49.73%
820.00	2	Daytona Beach	49.16%
906.00	3	De Land	49.05%

Source: 2000 U.S. Census Bureau

Figure 1-11

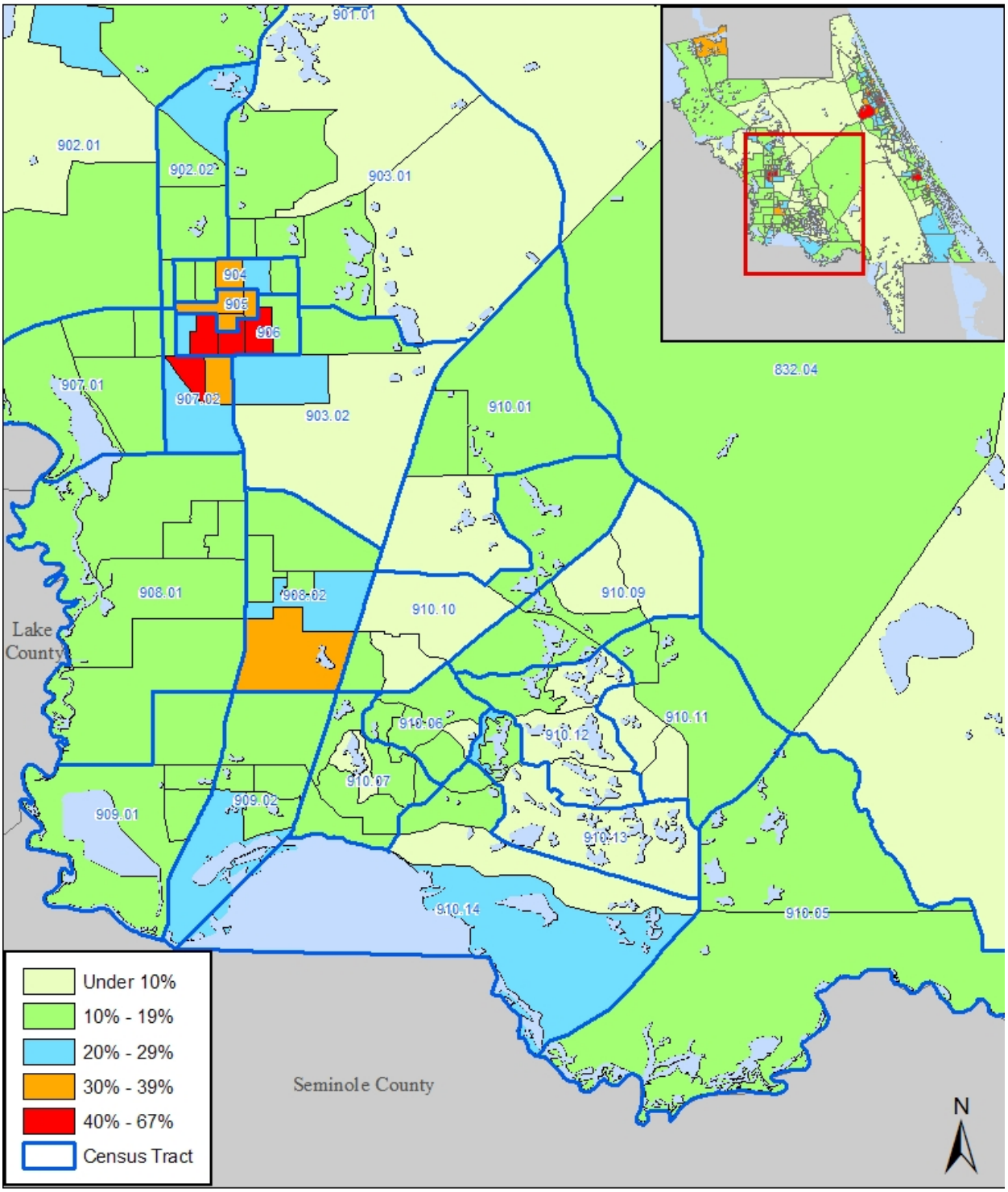
Percent of Households with Annual Income Under $15,000 in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-12

Percent of Households with Annual Income Under $15,000 in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Vehicle Availability

Table 1-10 shows the proportion of households that have access to a vehicle. As reported by the 2000 Census, Volusia County has just over seven percent of households without access to a vehicle, compared with eight percent for the state of Florida. Thus, Volusia County has a slightly higher percentage of household vehicle availability when compared with the State of Florida.

Table 1-10
Vehicle Availability Distribution, 2000

Area	Household Vehicle Availability	
	None	One or More
Volusia	7.1%	92.9%
Florida	8.1%	91.9%

Source: U.S. Census Bureau

Table 1-11 displays the areas within Volusia County that have the highest concentration of households without access to a vehicle. Census tract/block group 820.00-3 (Daytona Beach area) has the highest percentage of persons without vehicle availability. As in low income areas, residents in areas with low vehicle accessibility are more likely to use public transportation to travel to their destinations. Figures 1-13 and 1-14 present this information in map form.

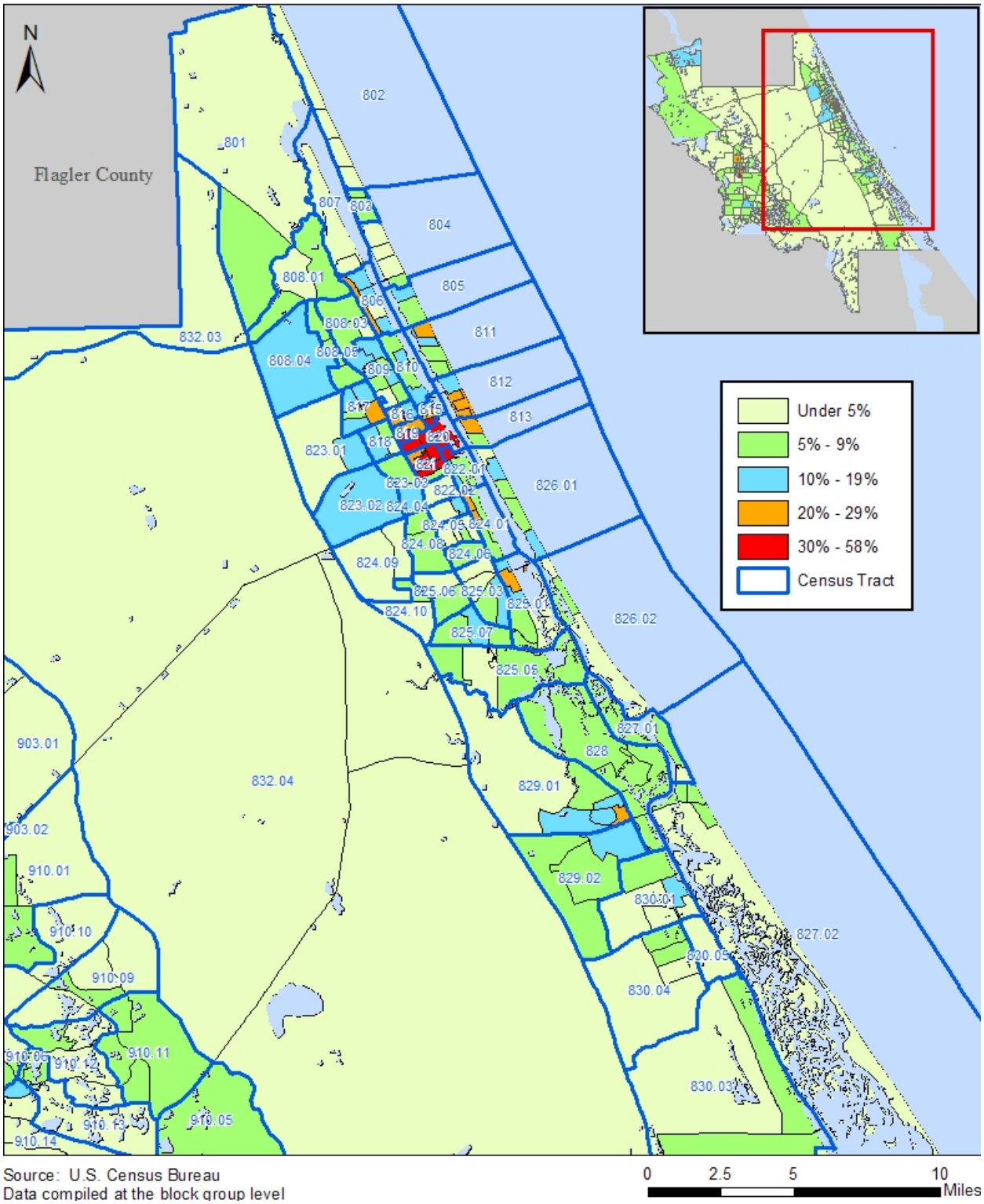
Table 1-11
Vehicle Availability Characteristics for Volusia County, 2000

Tract	Block Group	Area	Percent Households with No Vehicle Available
820.00	3	Daytona Beach	57.93%
819.00	2	Daytona Beach	48.76%
820.00	2	Daytona Beach	48.19%
821.00	3	Daytona Beach	43.73%
821.00	2	Daytona Beach	39.63%
905.00	1	De Land	39.12%
821.00	1	Daytona Beach	38.72%
815.00	4	Daytona Beach	38.49%
822.01	1	Daytona Beach	36.95%
907.02	2	De Land/De Land Southwest	36.64%
820.00	1	Daytona Beach	33.82%
829.01	4	New Smyrna Beach	28.83%
821.00	5	Daytona Beach	28.24%

Source: 2000 U.S. Census Bureau

Figure 1-13

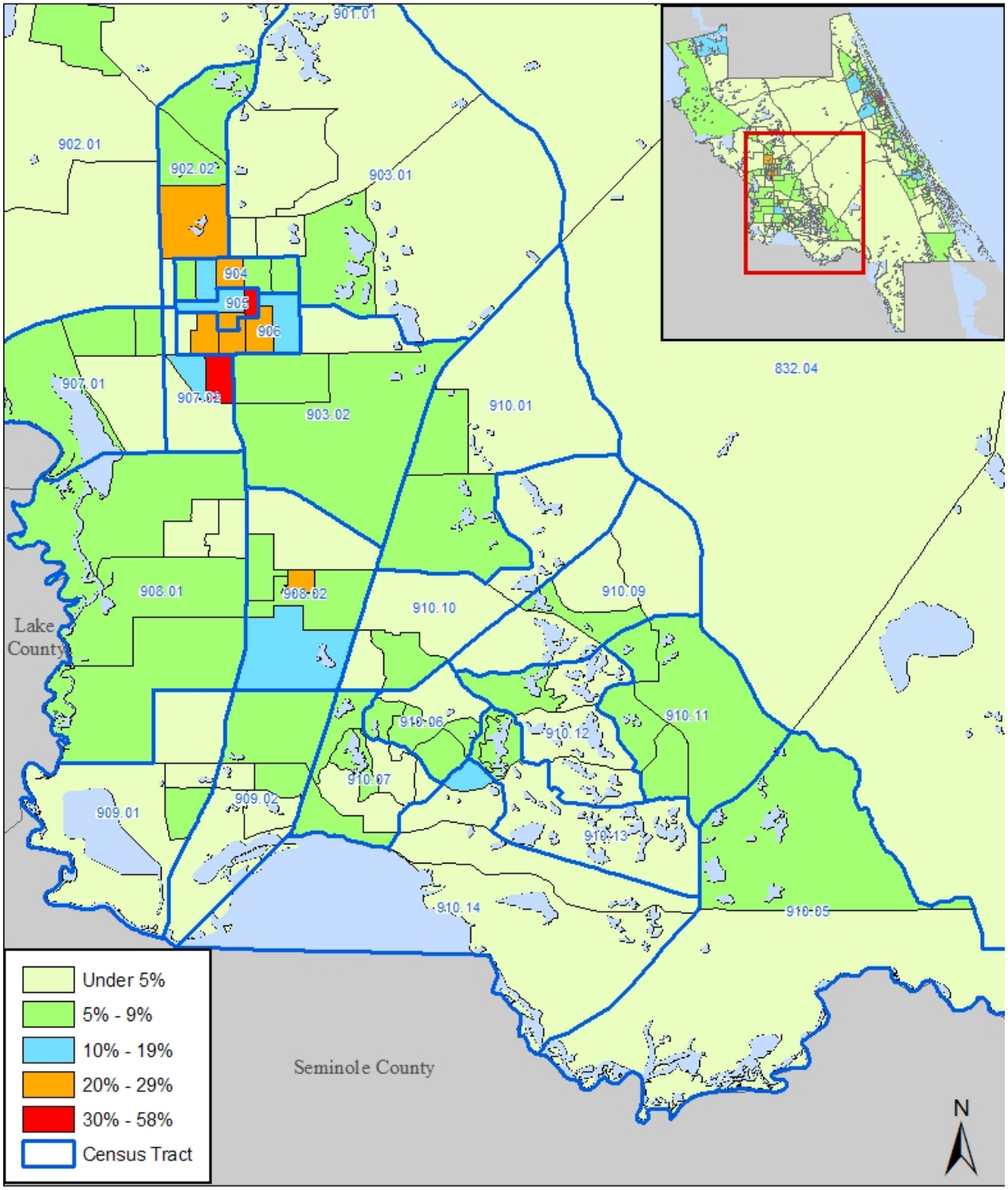
Percent of Households with Zero Vehicles in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-14

Percent of Households with Zero Vehicles in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Employment Characteristics

Table 1-12 draws a comparison between Volusia County and the State of Florida for the size of the labor force, as well as the percentage of the labor force that is actually employed. In Volusia County, over 93 percent of the labor force is employed. This is just below the 94% labor force employment rate for the State of Florida.

Table 1-12
Employment Characteristics, 2000

Area	Population 16 years and over	Civilian Labor Force	Percent of Labor Force Employed
Volusia County	364,534	201,658	93.7%
Florida	12,744,825	7,407,458	94.4%

Source: 2000 U.S. Census Bureau

Travel Time to Work

Table 1-13 compares the travel time to work distribution for Volusia County and Florida. The majority of Volusia County residents have less than a 30-minute commute (67 percent), while about 62 percent of Florida residents complete their commute in less than 30 minutes. From this table it is apparent that Volusia County residents typically spend less time traveling to work than the average Florida resident.

Table 1-13
Commute to Work Distribution, 2000

Area	< 10 min	10-19 min	20-29 min	30-44 min	45-59 min	60+ min
Volusia	14.0%	33.5%	19.8%	17.8%	6.7%	8.2%
Florida	11.2%	30.0%	21.6%	22.3%	8.0%	7.0%

Source: 2000 U.S. Census Bureau

The census tracts/block groups displayed in Table 1-14 have commute times over 30 minutes and over 45 minutes. The highest percentage of residents with a commute of 30 minutes or more live in census tract/block group 910.05-1 (unincorporated Volusia County), where 77 percent commute 30 minutes or more. For residents with a commute of 45 minutes or more, census tract/block group 910.13-3 (Deltona area) has over 44 percent, the highest percentage in the County. Volusia County has an average commute time of 25.4 minutes, slightly less than Florida's average commute time of 26.2 minutes (Table 1-15). This information is shown in the maps in Figures 1-15 through 1-18.

Table 1-14
Travel Time Characteristics for Volusia County, 2000

Over 30 Minutes				Over 45 Minutes			
Tract	**Block Group**	**Area**	**Percent with 30 Min. or More**	**Tract**	**Block Group**	**Area**	**Percent with 45 Min. or More**
910.05	1	Volusia County	77.25%	910.13	3	Deltona	44.06%
910.11	2	Deltona	75.98%	910.11	1	Deltona/Volusia County	37.78%
910.14	4	Volusia County	66.98%	910.06	4	Deltona	36.21%
910.09	2	Deltona	66.13%	910.14	3	Deltona/Volusia County	35.65%
910.11	1	Deltona/Volusia County	64.81%	910.05	1	Volusia County	35.33%
910.06	4	Deltona	62.76%	910.11	2	Deltona	35.09%
910.05	2	Volusia County	62.60%	910.14	2	Deltona/Volusia County	33.90%
910.14	3	Deltona/Volusia County	61.62%	910.09	2	Deltona	33.74%
910.12	2	Deltona	61.59%	910.12	2	Deltona	33.39%
910.07	5	Deltona	61.21%	910.07	4	Deltona/Volusia County	31.80%
910.14	1	Deltona	60.96%	910.11	3	Deltona	31.72%

Source: 2000 U.S. Census Bureau

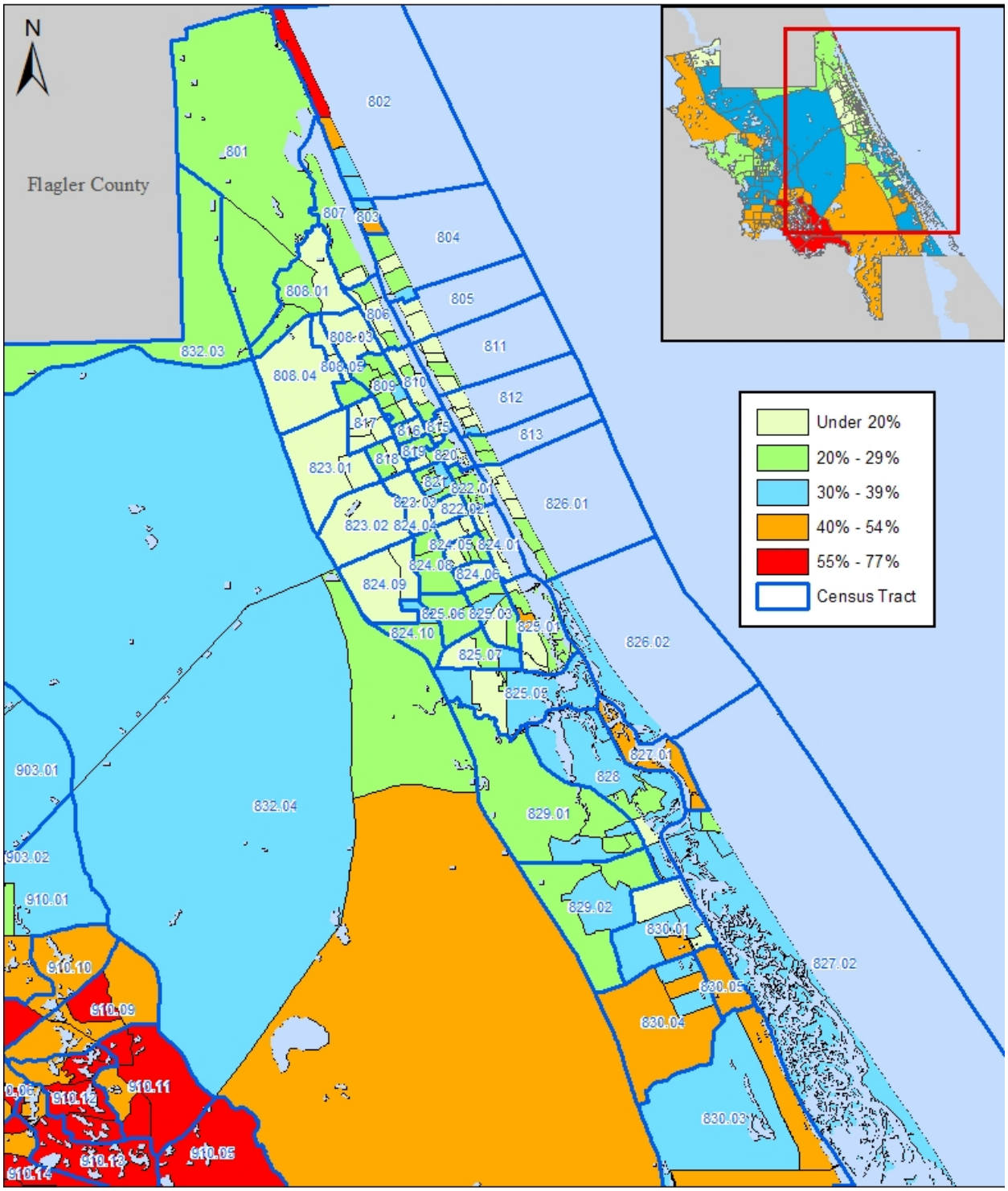
Table 1-15
Travel Time to Work, 2000

Area	Average Commute to Work (min)
Volusia	25.4
Florida	26.2

Source: 2000 U.S. Census Bureau and Bureau of Transportation Statistics

Figure 1-15

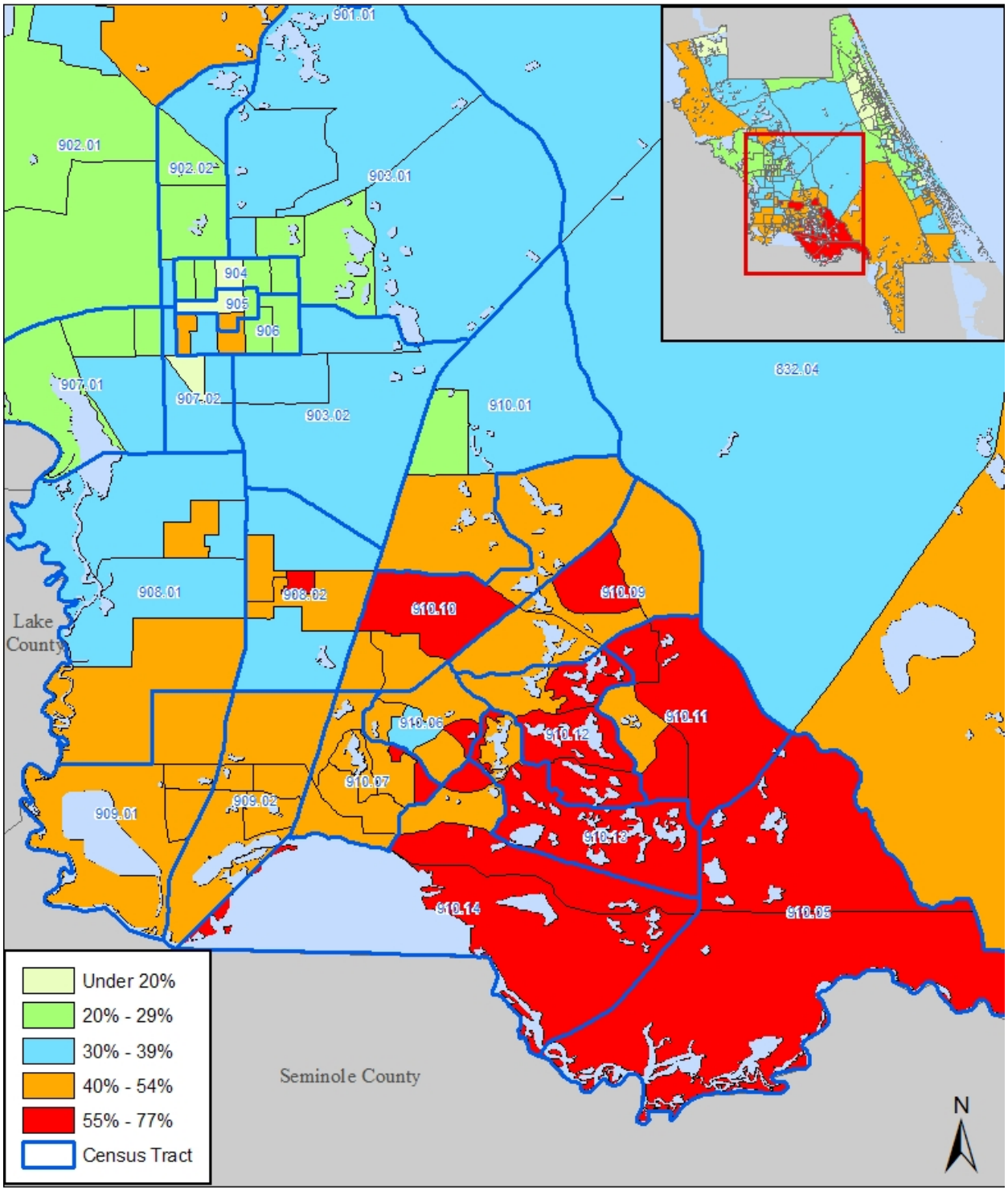
Percent of Workers with Commute Greater Than 30 Minutes in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-16

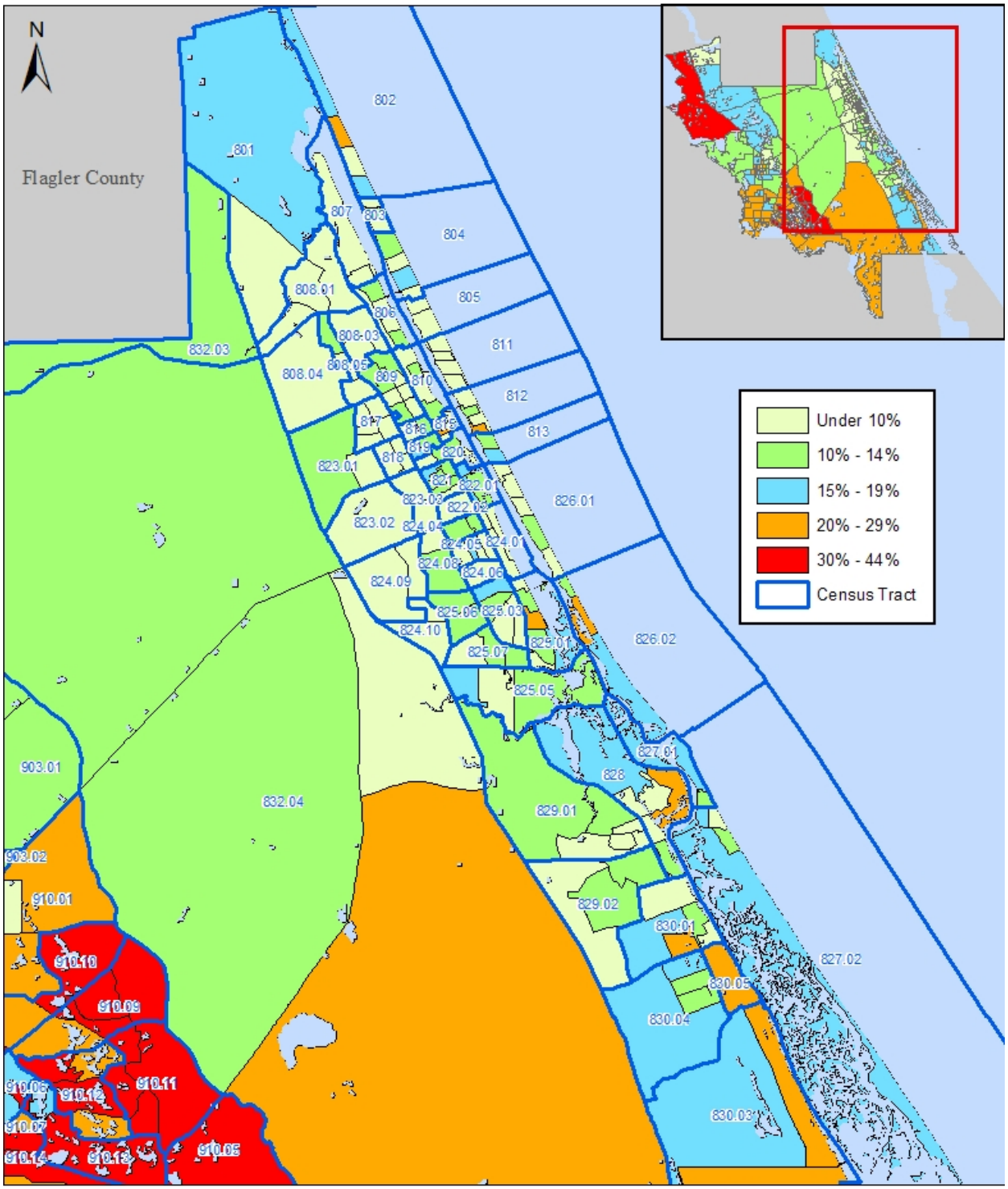
Percent of Workers with Commute Greater Than 30 Minutes in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-17

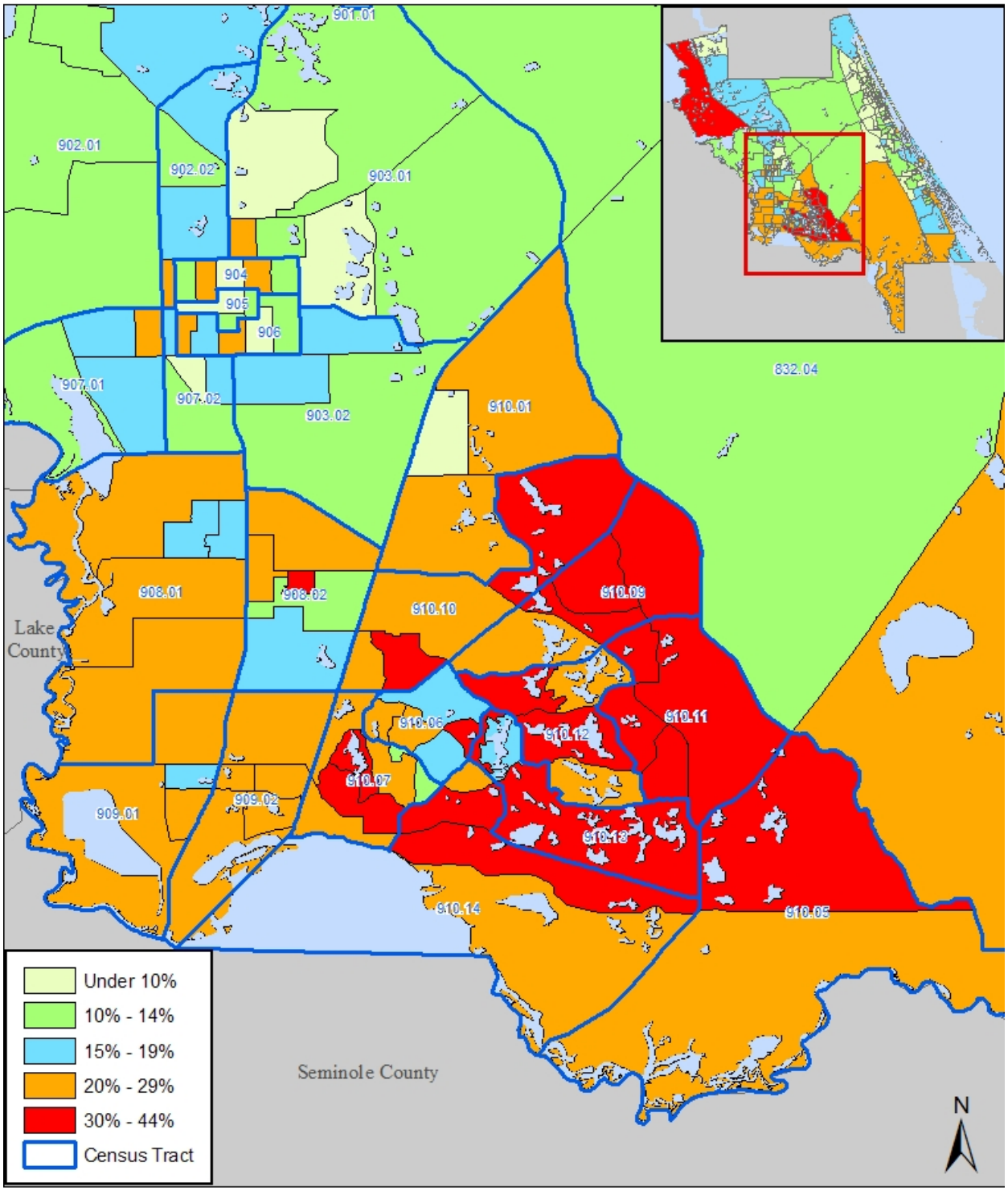
Percent of Workers with Commute Greater Than 45 Minutes in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 1-18

Percent of Workers with Commute Greater Than 45 Minutes in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Means of Travel to Work

Table 1-16 shows the mode of transportation distribution for employed residents of both Volusia County and Florida. Drive-alone travel is almost identical with that of the State of Florida, with nearly 79 percent of workers using this mode to travel to work. Volusia County has a slightly lower rate of public transportation use, and a slightly higher rate of carpool/vanpool travel when compared to statewide results. The areas within Volusia County with the highest concentration of persons using public transportation services are displayed in Table 1-17. The highest percentage (25.7 percent) of Volusia County residents using public transportation to commute to and from work live in census tract/block group 815.00-2 (Daytona Beach area). This information is depicted in the maps in Figures 1-19 and 1-20.

Table 1-16
Means of Travel to Work Distribution, 2000

Area	Drive Alone	Carpool/Vanpool	Public Transportation	Bike or Walk	Work at Home
Volusia	78.7%	13.5%	1.0%	2.5%	2.9%
Florida	78.8%	12.9%	1.9%	2.3%	3.0%

Source: 2000 U.S. Census Bureau

Table 1-17
Means of Travel to Work Characteristics for Volusia County, 2000

Tract	Block Group	Area	Percent Workers Using Public Transportation
815.00	2	Daytona Beach	25.66%
821.00	3	Daytona Beach	24.44%
819.00	2	Daytona Beach	18.13%
812.00	4	Daytona Beach	16.30%
815.00	3	Daytona Beach	14.21%
821.00	2	Daytona Beach	12.04%
820.00	1	Daytona Beach	11.50%
821.00	5	Daytona Beach	11.15%

Source: 2000 U.S. Census Bureau

Figure 1-19

Percent of Workers Using Public Transportation in Eastern Volusia County, Florida, 2000

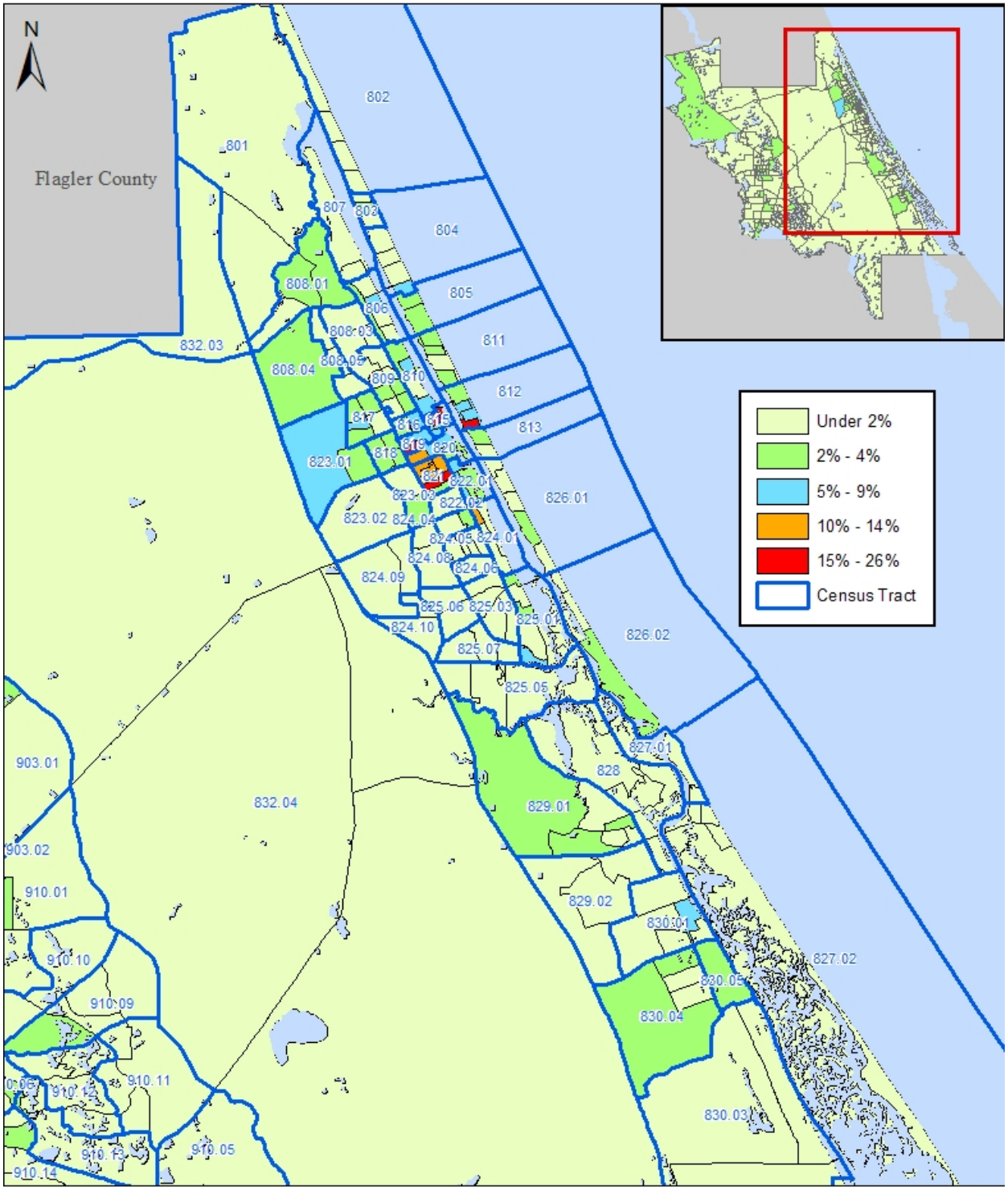
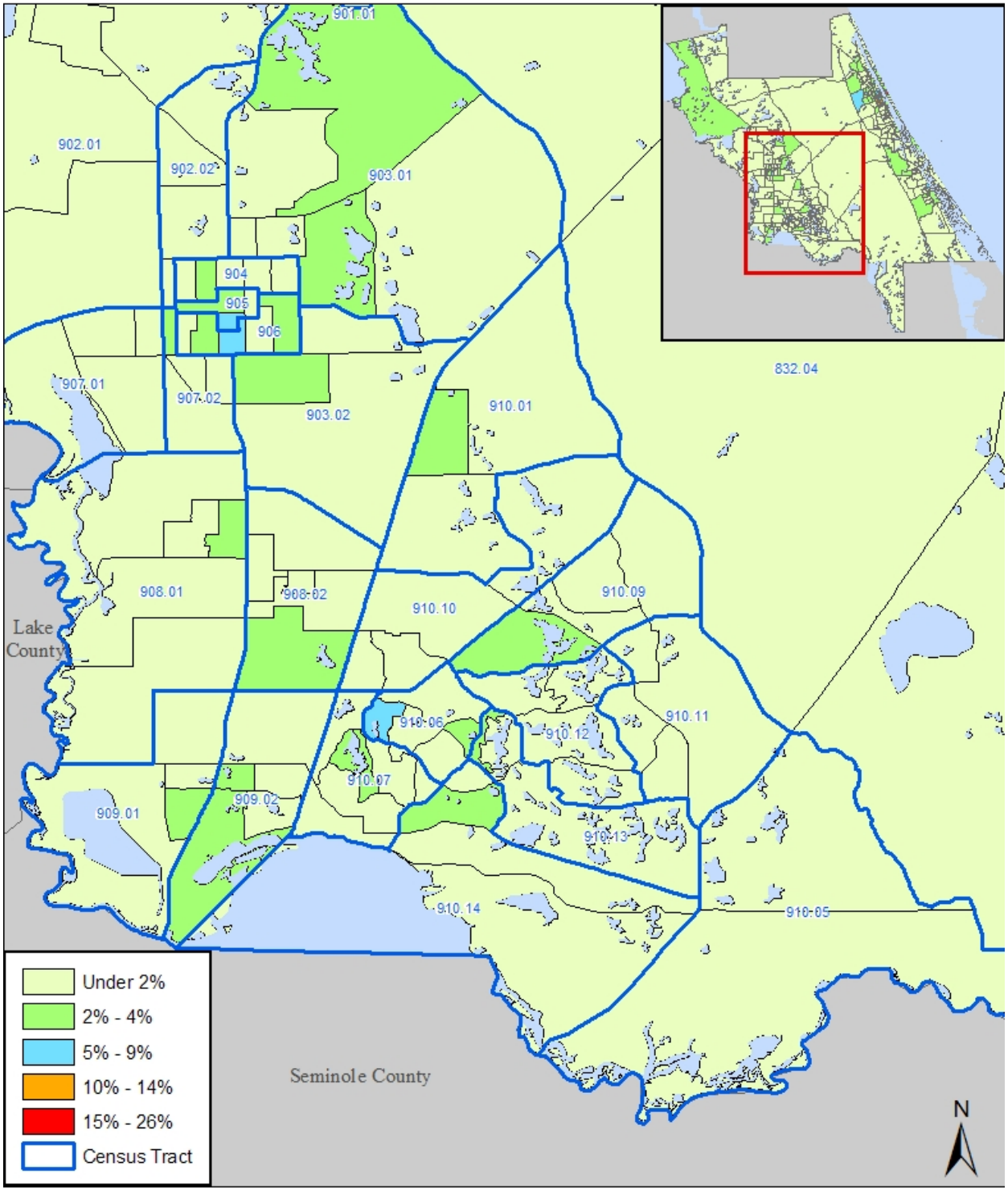


Figure 1-20

Percent of Workers Using Public Transportation in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Journey to Work

Table 1-18 shows the journey to work distribution for Volusia County residents. As of the 2000 U. S. Census, most working residents of Volusia County (80.59 percent) both live and work within Volusia County boundaries. Lying southwest of Volusia County is the second largest work destination for Volusia's employed residents, Seminole County, where almost nine percent of Volusia workers have jobs.

Table 1-18
Volusia County Workers Place of Employment, 2000

Place of Work	Percent of Workers
Seminole County	8.96%
Orange County	5.92%
Flagler County	0.99%
Brevard County	0.75%
Other	2.79%

Source: 2000 U.S. Census Transportation Planning Package, Part 3

Based on 2000 U. S. Census data, Figure 1-21 illustrates commute flows from Volusia County to other counties, while Figure 1-22 shows the commute flows from other counties into Volusia County. The largest number of commuters traveling out of Volusia County (16,655) travel southwest into Seminole County, while the largest number commuting into Volusia County (4,445) are traveling south from Flagler County.

Figures 1-23 through 1-28 illustrate commute flows for several places within Volusia County. Figure 1-23 illustrates commute flows from Daytona Beach to other places, while Figure 1-24 shows the commute flows from other places into Daytona Beach. The largest number of commuters traveling out of Daytona Beach (2,505) travel to Ormond Beach, while the largest number commuting into Daytona Beach (7,615) are traveling from Port Orange.

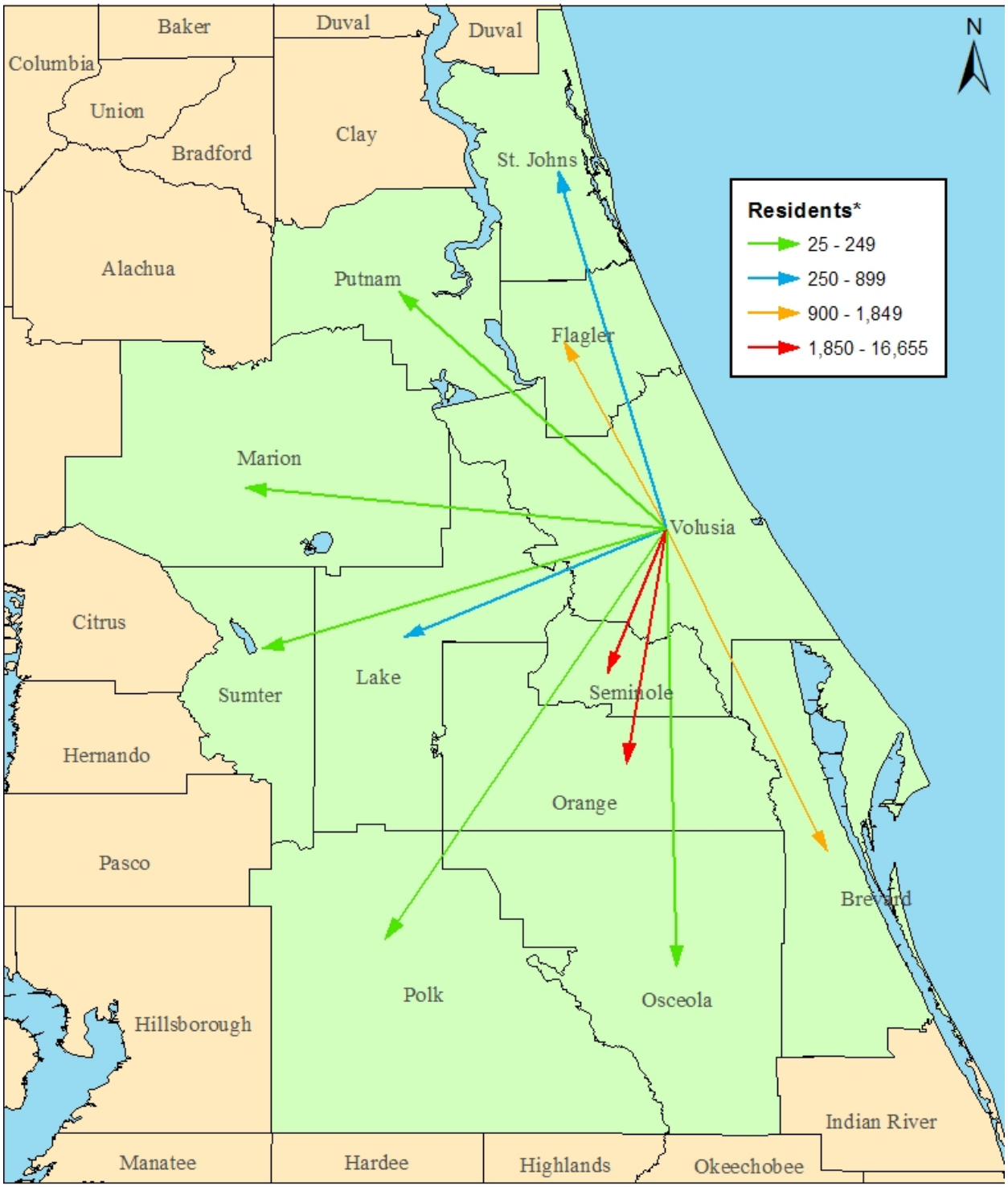
Figure 1-25 illustrates commute flows from DeLand to other places, while Figure 1-26 shows the commute flows from other places into DeLand. The largest number of commuters traveling out of DeLand (580) travel to Daytona Beach, while the largest number commuting into DeLand (1,895) are traveling from Deltona.

Figure 1-27 illustrates commute flows from Deltona to other places, while Figure 1-28 shows the commute flows from other places into Deltona. The largest number of commuters traveling out of Deltona (2,620) travel to Sanford, while the largest number commuting into Deltona (310) are traveling from DeBary.

In addition, the road level of service for Eastern Volusia County and Western Volusia County are shown in Figures 1-29 and Figure 1-30 for the year 2000.

Figure 1-21

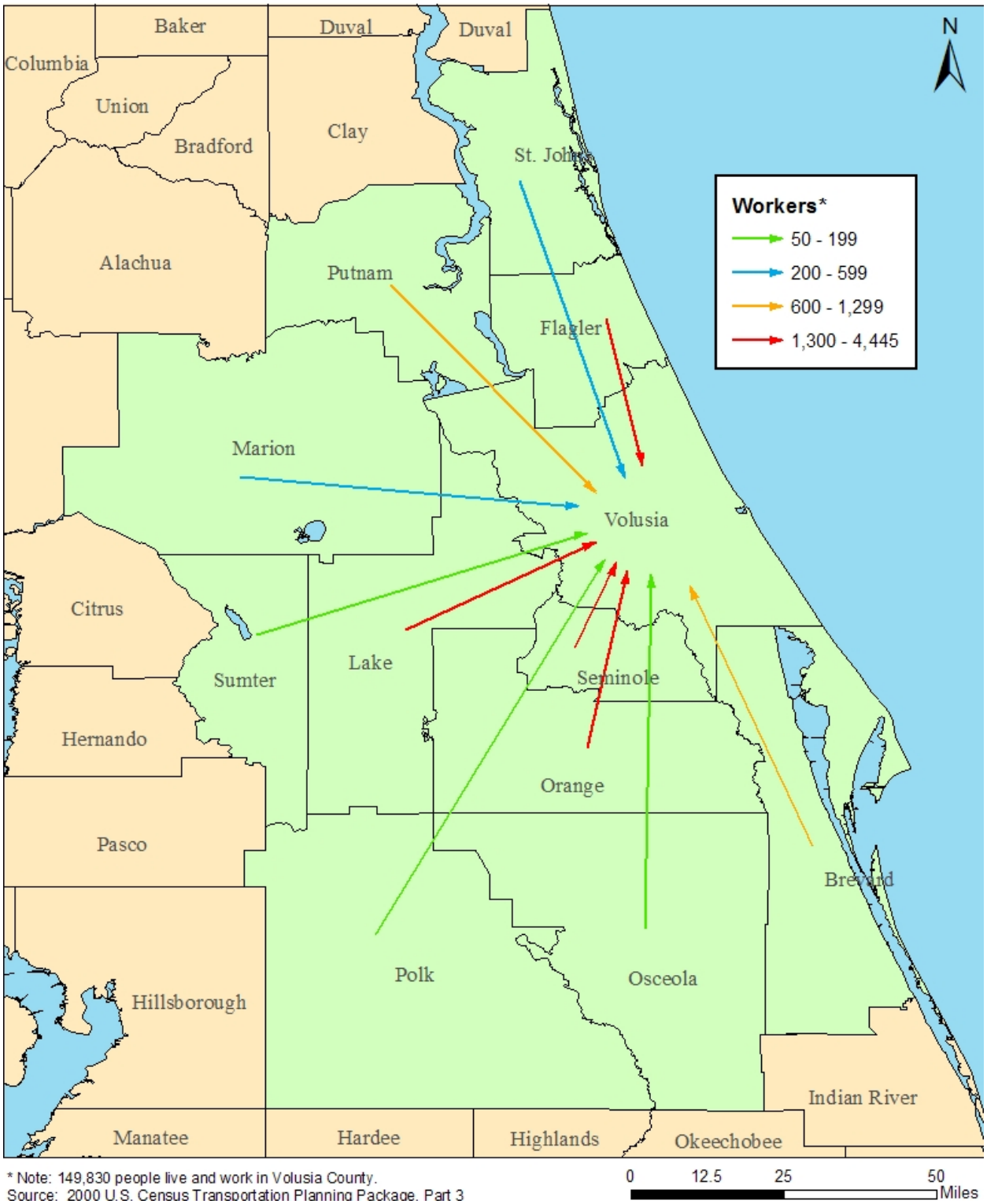
Commute to County of Employment for Residents of Volusia County, Florida in 2000



* Note: 149,830 people live and work in Volusia County.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-22

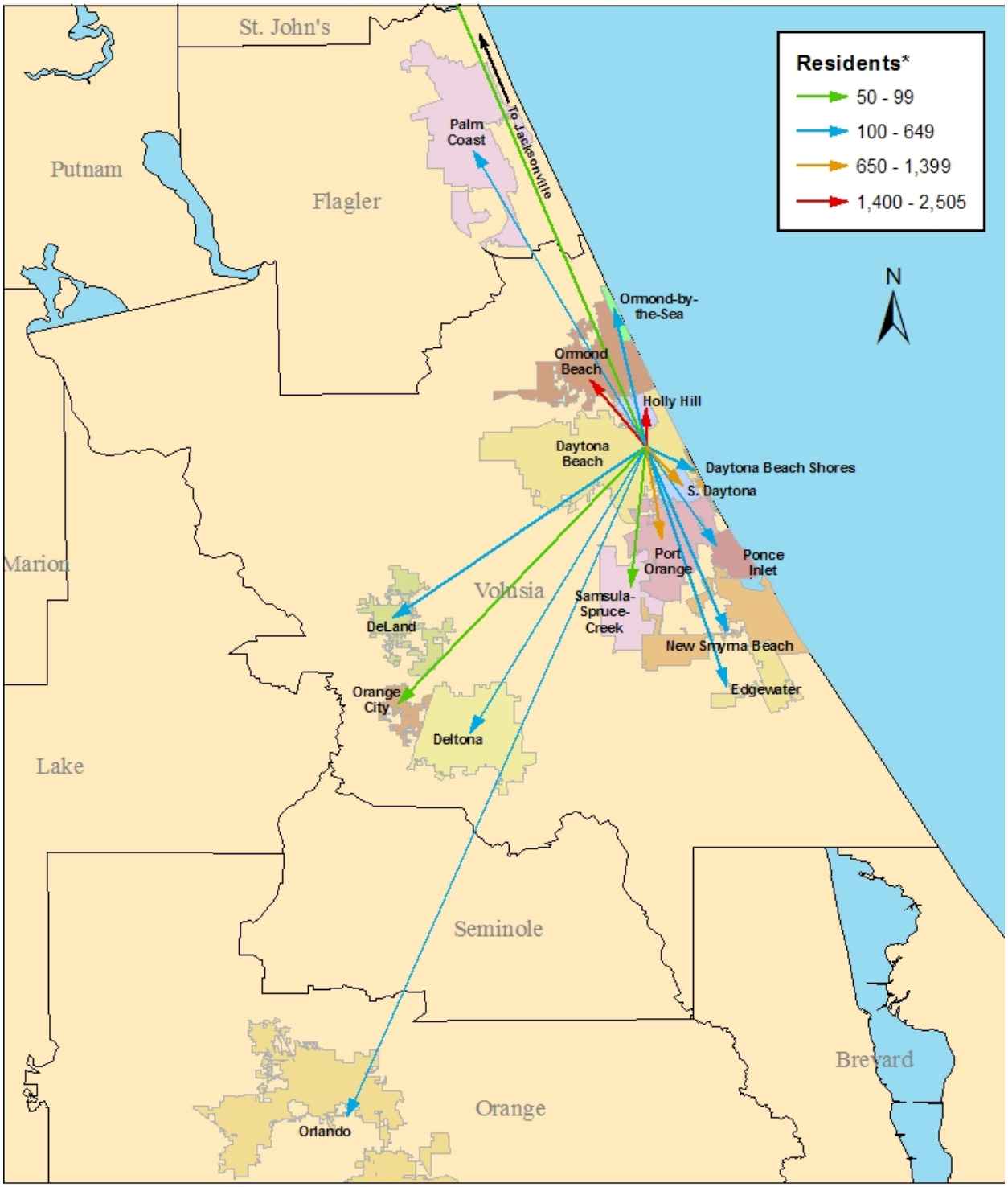
Commute from County of Residence for Workers Employed in Volusia County, Florida in 2000



* Note: 149,830 people live and work in Volusia County.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-23

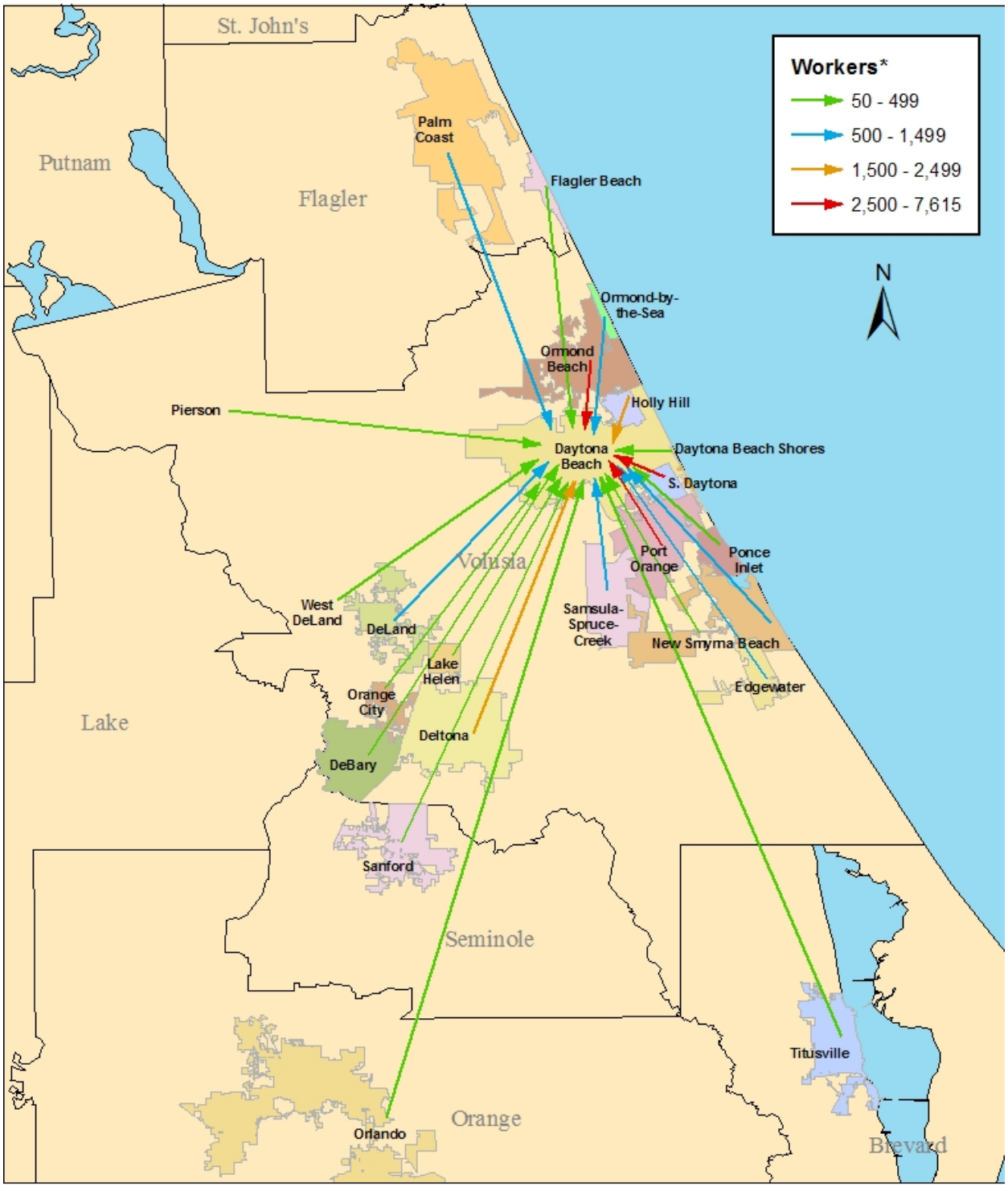
Commute to Place of Employment for Residents of Daytona Beach, Florida in 2000



* Note: 15,375 people live and work in Daytona Beach.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-24

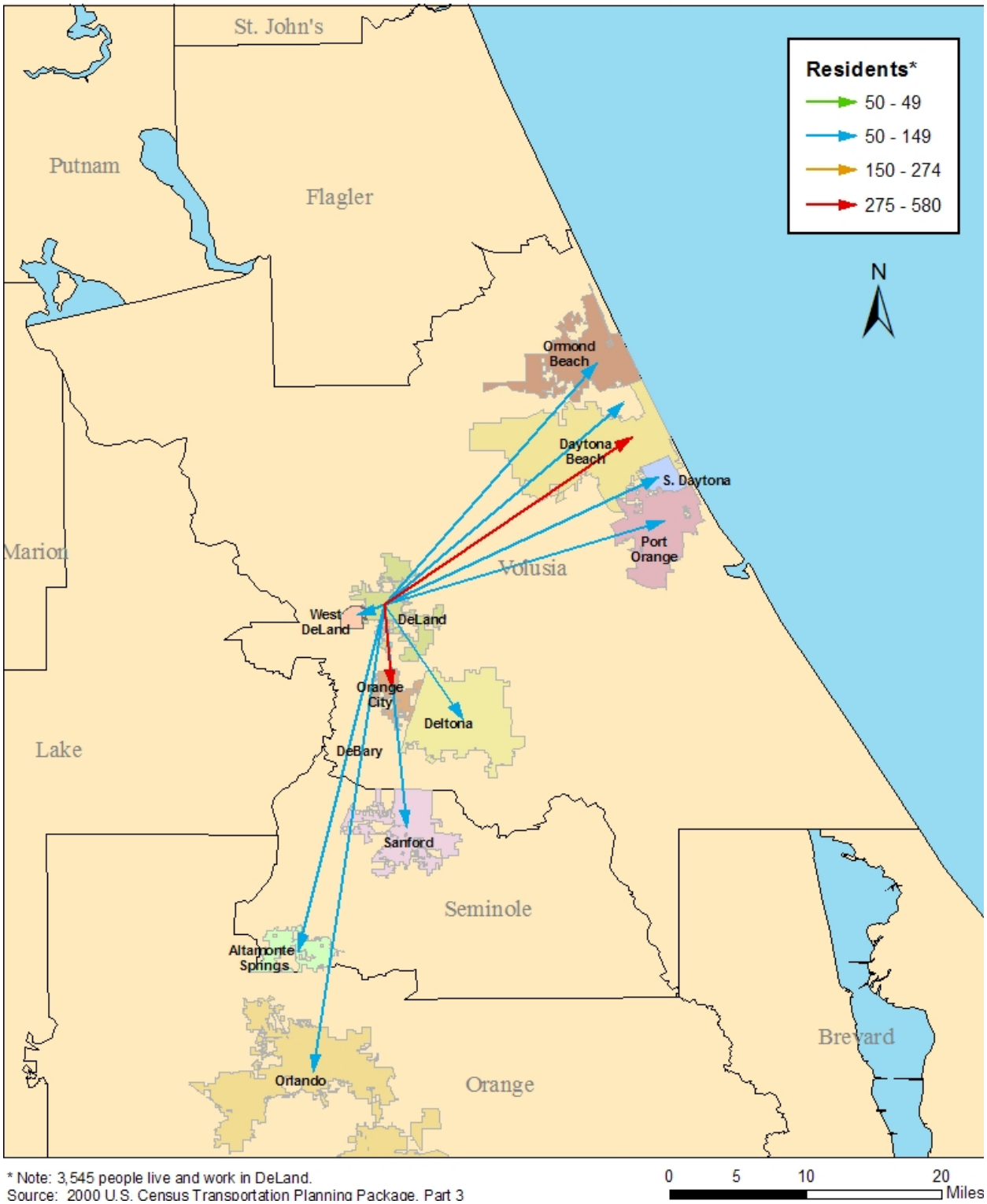
Commute from Place of Residence for Workers Employed in Daytona Beach, Florida in 2000



* Note: 15,375 people live and work in Daytona Beach.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-25

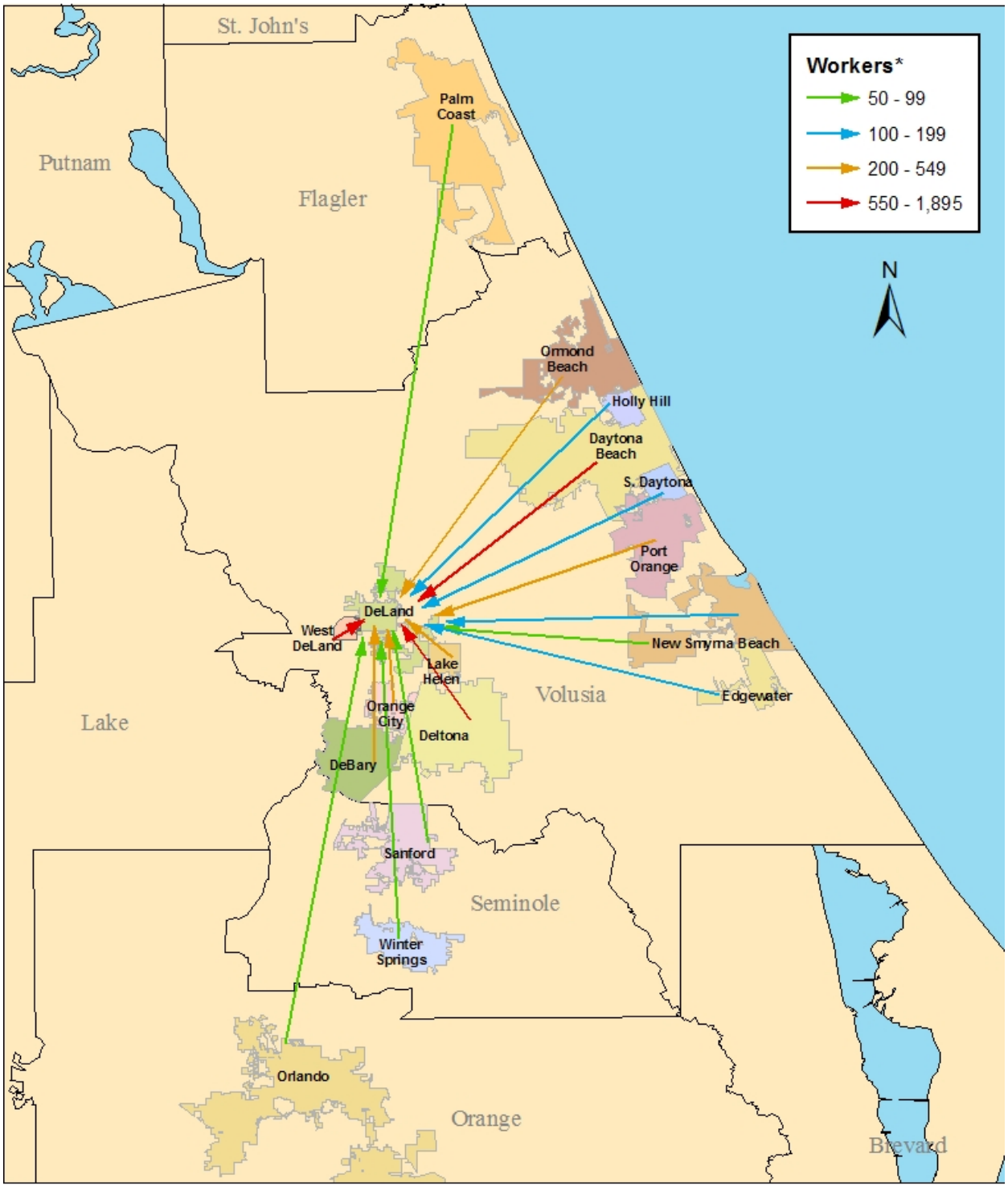
Commute to Place of Employment for Residents of DeLand, Florida in 2000



* Note: 3,545 people live and work in DeLand.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-26

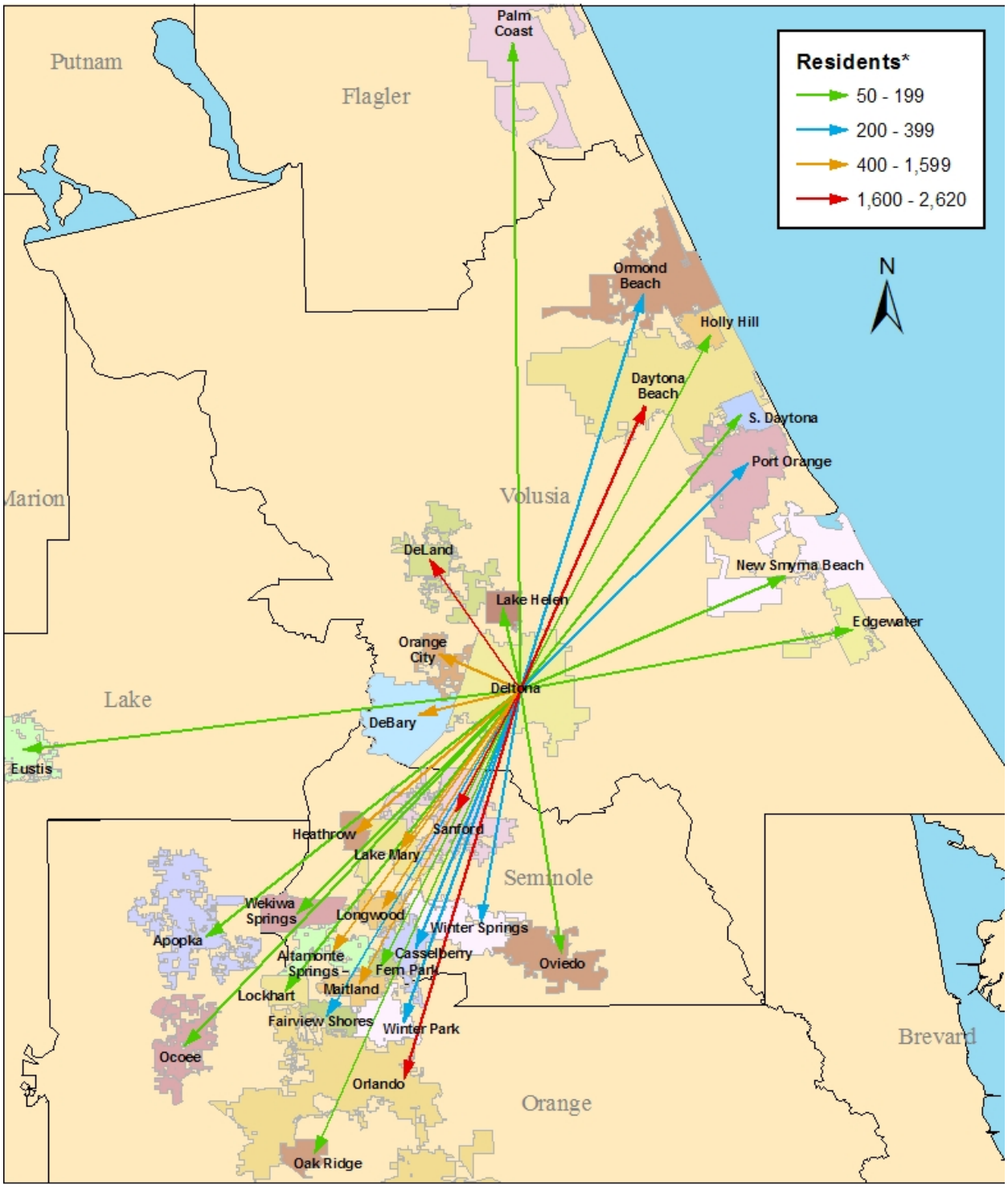
Commute from Place of Residence for Workers Employed in DeLand, Florida in 2000



* Note: 3,545 people live and work in DeLand.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-27

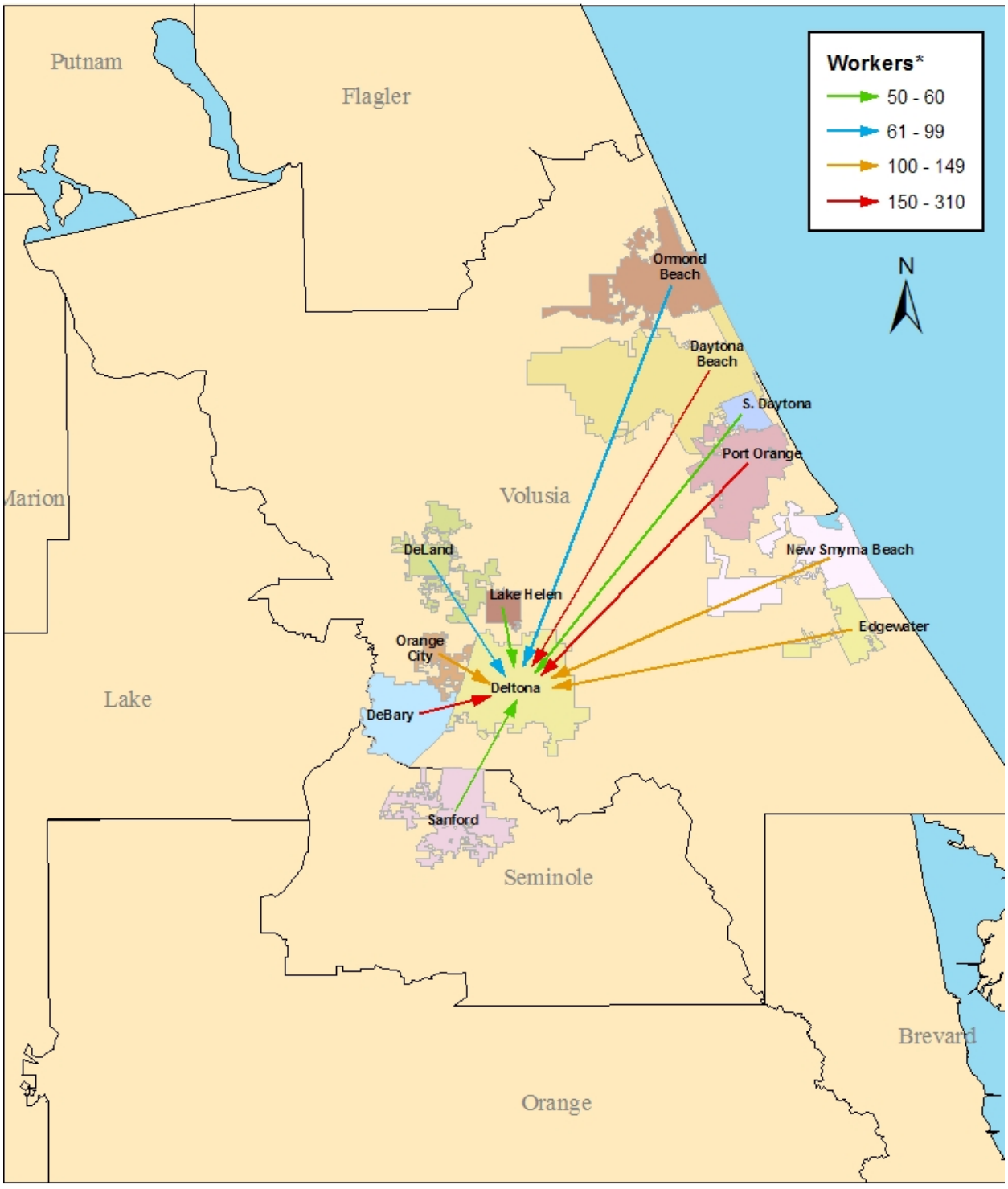
Commute to Place of Employment for Residents of Deltona, Florida in 2000



* Note: 4,785 people live and work in Deltona.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-28

Commute from Place of Residence for Workers Employed in Deltona, Florida in 2000



* Note: 4,785 people live and work in Deltona.
Source: 2000 U.S. Census Transportation Planning Package, Part 3

Figure 1-29

Road Level of Service in Eastern Volusia County, Florida, 2000

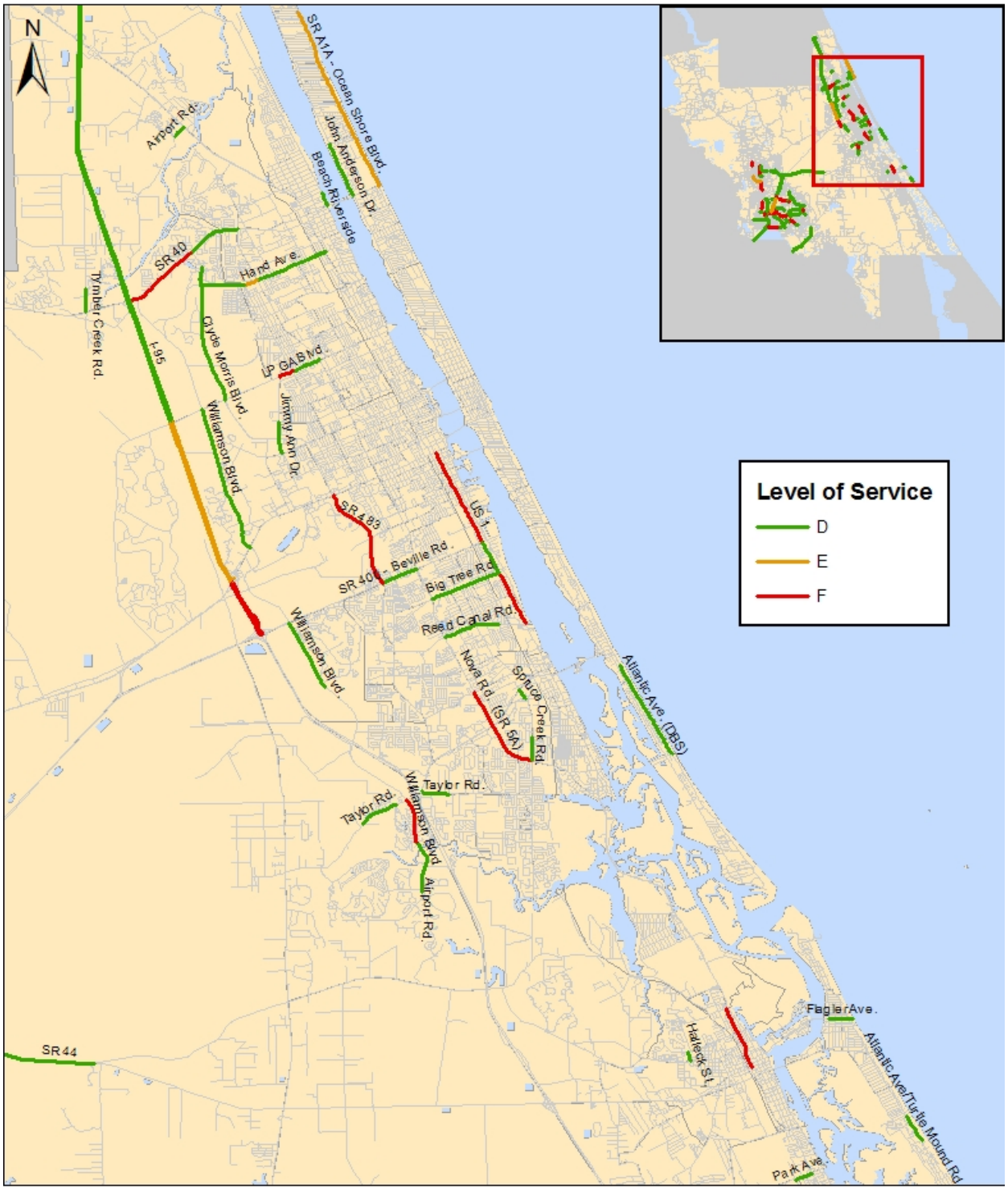
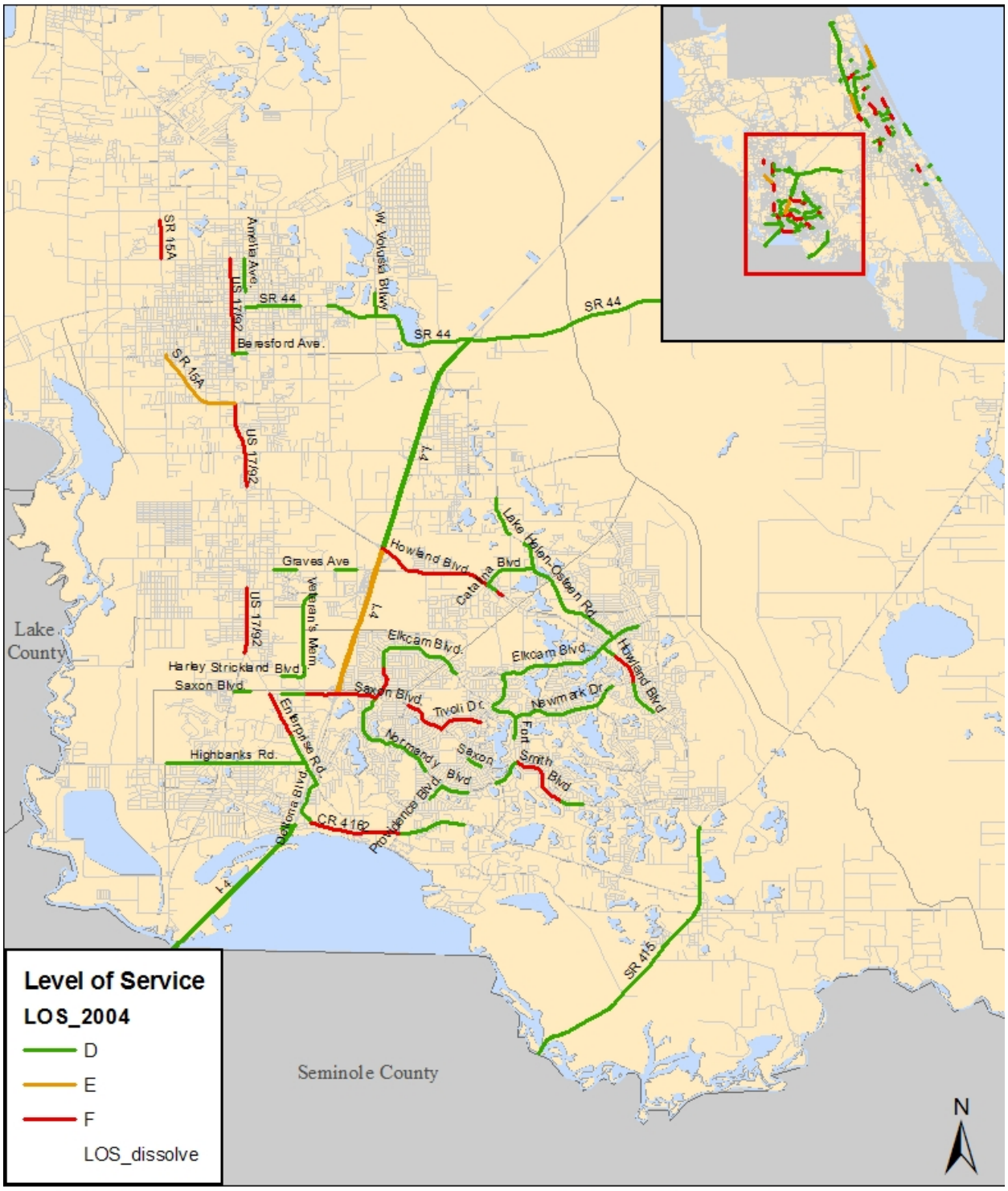


Figure 1-30

Road Level of Service in Western Volusia County, Florida, 2000



Source: Volusia County MPO
Note: Data based on Volusia County Comprehensive Plan standards

0 2 4 8 Miles

CHAPTER TWO

EXISTING SERVICES

INTRODUCTION

This chapter presents a brief description of the existing fixed-route and paratransit services operated throughout Volusia County by VOTRAN, a public transportation organization. A more detailed performance assessment of these services is provided in Chapter Three "Performance Evaluation". In addition, herein, is an overview of the other public transportation services available within Volusia County is presented.

IDENTIFICATION OF EXISTING PUBLIC TRANSPORTATION SERVICES

Public transportation can be defined as any form of transportation in which a person pays another party, at the point of service or pre-paid, for transportation in a vehicle. With this definition in mind, there are several forms of public transportation available in Volusia County and the surrounding area.

County of Volusia, dba VOTRAN

The County of Volusia, dba VOTRAN, provides public transit services within the County (which includes several municipalities). In addition to providing fixed route bus service, VOTRAN provides complementary paratransit services (usually door to door van service) as required under the Americans with Disabilities Act (ADA). VOTRAN also functions as the Community Transportation Coordinator (CTC), providing services under the Transportation Disadvantaged program, Medicaid, rural trips and various agency sponsored trips.

Fixed Route Service

VOTRAN's fixed route bus system utilizes approximately 44 vehicles during peak hour operation, providing service on 26 routes. Standard daily service runs from 6:00 a.m. to 7:00 p.m. Monday through Saturday, with limited fixed route service on Sunday and at night. VOTRAN also operates seasonal trolley service from January until September each year. The transit routes extend approximately 640 directional route miles providing service in a County that is just over 1,200 square miles in size.

Growth patterns within Volusia County have resulted in several geographical areas of concentrated development and these have influenced the structure of transit routes. The two centers of concentration include Daytona Beach in the east along the Atlantic Ocean coast and the cities of DeLand and Deltona in the southwest portion of the County. A cross county service has been established to provide connections between the two primary service areas, and public transit is made available to rural communities located in southeast Volusia and northwest Volusia.

Total boardings recorded during fiscal year 2005 for the fixed route system were 3,262,819 passengers.

Table 2-1 and Table 2-2 provide the current route frequencies and Calendar 2005 ridership statistics for the VOTRAN fixed route service.

Table 2-1

VOTRAN ROUTE FREQUENCY

ROUTE NUMBER & NAME	Frequency		
	Weekday / Saturday	Night	Sunday
1A - A1A North	:60	:60	:60
1B - Granada	:60	:60	:60
3 - N. RIDGEWOOD	:60	:60	:60
4 - S. RIDGEWOOD	:60	:60	:60
5 - CENTER STREET	:60	---	---
6 - N. NOVA	:60	---	---
7 - S. NOVA	:60	---	---
8 - HALIFAX	:60	---	---
9 - INTN'L SPEEDWAY	:60	---	---
10 - MEDICAL CENTER	:30	:60	:60
11 - MASON AVE.	:60	---	---
12 - CLYDE MORRIS	:60	---	---
15 - ORANGE AVE.	:30	:60	:60
17A - SOUTH ATLANTIC	:60	:60	:60
17B - DUNLAWTON	:60	:60	:60
40 - PORT ORANGE	:60	---	---
41 - EDGEWATER	:60	---	---
42 - NEW SMYRNA BEACH SHUTTLE	:60	---	---
43 - NEW SMYRNA BEACH MAINLAND	1:20	---	---
44 - NEW SMYRNA BEACH MAINLAND	1:20	---	---
60 - EAST/WEST CONNECTOR	:60	---	---
20 - DELTONA/DELAND	:60	---	---
21 - ORANGE CITY	1:20	---	---
22 - DELTONA	1:20	---	---
24 - PIERSON/SEVILLE	1:20	---	---
200 - ORLANDO I-4 EXPRESS	3 - a.m @ :30. 3 - p.m. @ :45	---	---
700 - BEACH TROLLEY	:45 12 Noon to 7:00 pm Jan to Labor Day	---	---

Table 2-2
VOTRAN 2005 ANNUALIZED RIDERSHIP STATISTICS

ROUTES NUMBERS/NAMES	TOTAL PASSENGERS	TOTAL REVENUE	TOTAL MILES	TOTAL HOURS	PASSENGERS/ TOTAL MILES	PASSENGERS/ TOTAL HOURS	RANKING BASED ON PASS./HR.
EASTSIDE ROUTES							
1A - AIA NORTH/1B - GRANADA	396,206	$252,945	245,119	16,939	1.62	23.39	4
3 - N. RIDGEWOOD	197,839	$122,614	96,990	7,217	2.04	27.41	3
4 - S. RIDGEWOOD	186,075	$109,525	100,458	6,660	1.85	27.94	2
5 - CENTER STREET	63,541	$34,636	55,537	4,684	1.14	13.57	16
6 - N. NOVA	122,070	$69,110	125,042	8,536	0.98	14.30	13
7 - S. NOVA	183,570	$101,579	122,290	8,781	1.50	20.91	6
8 - HALIFAX	68,469	$41,389	57,317	3,935	1.19	17.40	11
9 - INTN'L SPEEDWAY	72,139	$36,924	55,639	4,011	1.30	17.99	10
10 - MEDICAL CENTER	238,789	$131,622	158,199	11,986	1.51	19.92	8
11 - MASON AVE.	116,741	$64,615	100,398	7,970	1.16	14.65	12
12 - CLYDE MORRIS	119,772	$64,713	90,123	6,363	1.33	18.82	9
15 - ORANGE AVE.	145,073	$74,980	52,207	4,855	2.78	29.88	1
17A - S. ATLANTIC/17B - DUNLAWTON	260,997	$168,759	200,874	12,646	1.30	20.64	7
40 - PORT ORANGE	54,119	$29,054	87,548	3,962	0.62	13.66	15
41 - EDGEWATER	31,725	$20,503	70,259	3,698	0.45	8.58	17
42 - NEW SMYRNA BEACH SHUTTLE	22,166	$13,307	52,964	3,900	0.42	5.68	18
43 - NEW SMYRNA BEACH MAINLAND	9,868	$5,471	24,478	1,968	0.40	5.01	19
44 - NEW SMYRNA BEACH MAINLAND	7,358	$4,174	26,146	1,973	0.28	3.73	20
60 - EAST/WEST CONNECTOR	90,492	45,873	85,845	3,883	1.05	23.30	5
700 - BEACH TROLLEY	43,110	$32,235	48,861	3,072	0.88	14.03	14
WESTSIDE ROUTES							
20 - DELTONA/DELAND	180,382	$111,911	213,568	11,915	0.84	15.14	1
21 - ORANGE CITY	41,391	$25,599	78,264	4,234	0.53	9.78	3
22 - DELTONA	36,638	$23,151	72,916	4,099	0.50	8.94	4
24 - PIERSON/SEVILLE	32,355	$19,177	117,144	4,650	0.28	6.96	5
61 - WEST/EAST CONNECTOR	63,086	$41,580	93,969	4,368	0.67	14.44	2
VOLUSIA/ORLANDO EXPRESS							
200 - VOLUSIA/ORLANDO EXPRESS	13,871	$30,156	43,884	1,878	0.32	7.38	
TOTAL EASTSIDE	2,423,477	$1,420,661	1,850,137	126,783	1.31	19.12	
TOTAL WESTSIDE	353,849	$221,418	575,863	29,267	0.61	12.09	
TOTAL NIGHT SERVICE	119,073	$78,188	158,575	10,373	0.75	11.48	
TOTAL EAST,WEST,NIGHT	2,896,396	$1,720,266	2,584,571	166,420	1.12	17.40	
TOTAL ALL FIXED ROUTES	**2,911,474**	**$1,750,422**	**2,628,456**	**168,298**	**1.11**	**17.30**	

Paratransit Service

As the Community Transportation Coordinator (CTC) within Volusia County, VOTRAN ensures the provision of demand response paratransit services for the disabled and disadvantaged populations. These trips include complimentary paratransit service as required by the Americans with Disabilities Act of 1990 (ADA), those funded by the State of Florida Transportation Disadvantaged (TD) trust fund, trips eligible for Medicaid services, and various agency sponsored trips. The trips are accomplished through a partial broker system whereby VOTRAN provides a portion of the trips and the remainder is performed by private vendors under contract to VOTRAN (see Table 2-3).

Table 2-3
Private Providers

Name	Services Provided
Trans Med	A, W, S
Transportation Services of Volusia County	A, W. S
Little Wagon	A, W
Florida Glider	A, W
MedOne Shuttle	A, W. S
Medi Quick	A, W, S
All Volusia	A, W
AJ Special Transportation	A, W
Flagler County	A
Southern Komfort Taxi	A
Yellow Cab	A

NOTES: A = ambulatory, W = wheelchair, S = stretcher

VOTRAN staffs a reservation and scheduling department to record trip requests and develop manifests for service delivery. Reservations can be made for customers via telephone or facsimile as early as 7 days in advance of a trip and up to 4:00 p.m. on the day before the trip will occur. VOTRAN utilizes a computerized software system (i.e., “Trapeze Pass”) to book and schedule trips and to manage the manifests during daily operations.

Other VOTRAN Mobility Services

As the Volusia County “mobility manager”, VOTRAN is also active in coordinating other public transportation services. Examples would include:

- the “bike on buses” program, where all fixed route VOTRAN buses are equipped with bicycle racks
- Park-and-Ride programs to encourage car pooling and use of the VOTRAN bus system

- VOTRAN's vanpool program that provides subsidized vans for groups traveling to common destinations, primarily work oriented travel
- RideShare matching which is designed to match commuters with similar commuting schedules and destinations. The prospective commuter provides VOTRAN with their commuting specifics and VOTRAN matches them with prospective rides.
- Guaranteed Ride Home is a program that provides individuals with an emergency ride home from the workplace in emergency situations

Greyhound

Greyhound is the largest provider of inter-city bus service offering 16,000 daily departures to 3,100 destinations nationwide. There are two Greyhound terminals in Volusia County:

- 138 S. Ridgewood Avenue, Daytona Beach
- 224 W. Ohio Avenue, Deland

Amtrak

Amtrak provides intercity passenger rail services to more than 500 destinations in 46 states on a 22,000-mile route system. Volusia County residents and visitors have two points of access to the Amtrak system:

- The Deland Amtrak station located at 2491 Old New York Avenue in Deland
- The Amtrak bus service to the Deland station leaves from the Fairfield Inn on 100 North Atlantic Avenue in Daytona Beach

New Smyrna Beach Water Taxi

The City of New Smyrna Beach Water Taxi service was initiated in September 2006 to provide two hour service between the City of New Smyrna Beach and Ponce Inlet. The initial three stops are expected to be expanded to six stops in the near future. VOTRAN provides connections to the Water Taxi at both New Smyrna Beach with its Route #42 "New Smyrna Beach" and at Ponce Inlet with VOTRAN Route #17A "South Atlantic".

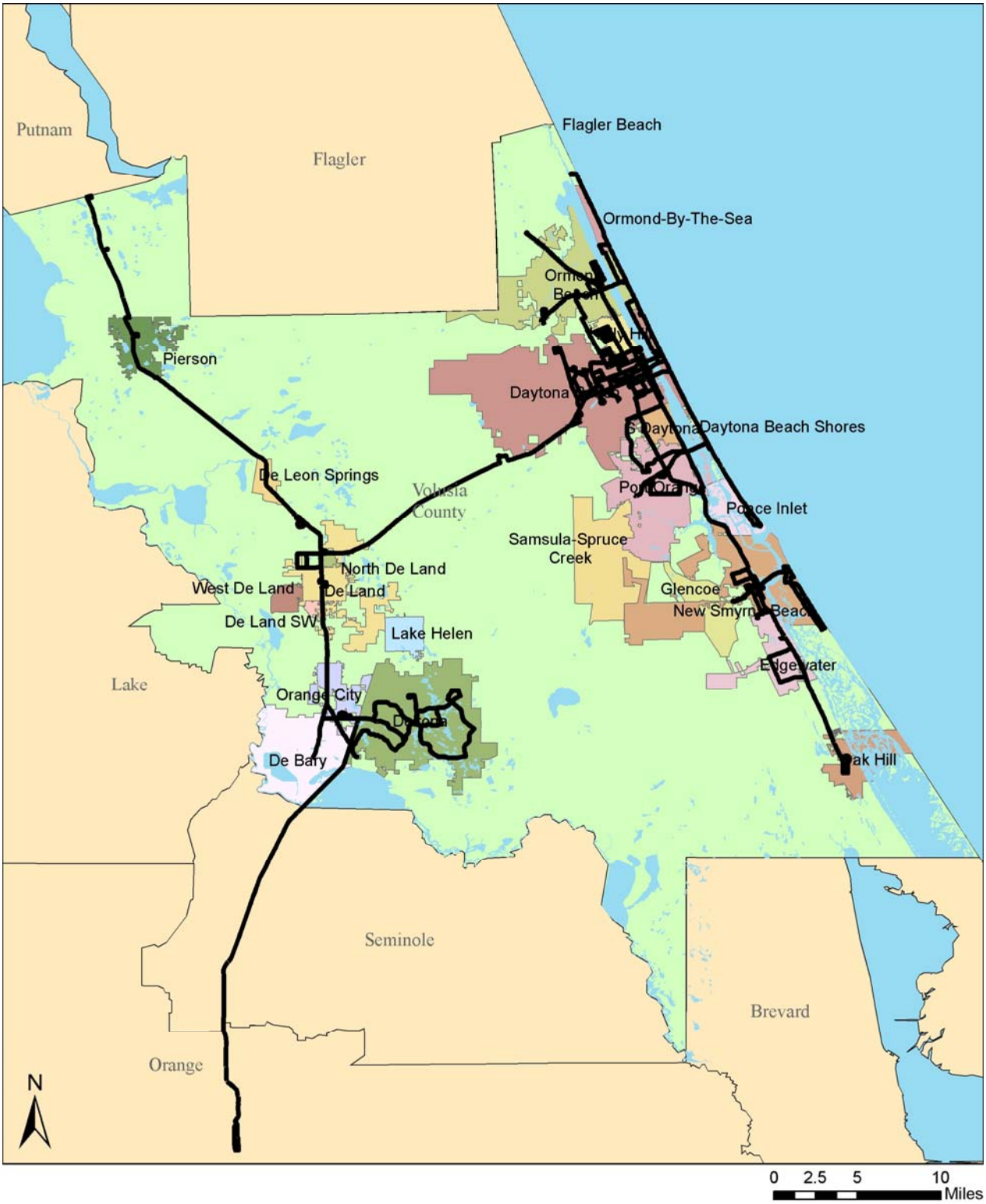
Adjacent Counties

As depicted in Figure 2-1, Volusia County if bordered by the Atlantic Ocean to the east, and by the following counties from north to south, counter-clockwise: Flagler, Putnam, Lake, Seminole, and Brevard.

Seminole County (part of the LYNX system serving Seminole, Orange and Osceola counties) and Brevard County have both fixed route bus and paratransit bus service, Lake County has paratransit services and is scheduled new fixed route service in 2007. The other surrounding counties do not have any fixed route service. Rather, their citizens are served by their local Community Transportation Coordinator (CTC).

The only fixed route transit link between counties is the Orlando I-4 Express bus service that provides 3 daily morning trips from the Saxon Boulevard Park-n-Ride lot in Orange City to Orlando, with 3 return trips in late afternoon/early evening. This route is directed toward commuter trips from west Volusia County to the greater Orlando area.

Figure 2-1
Incorporated Areas in Volusia County, 2000 with Existing VOTRAN Routes



CHAPTER THREE

PERFORMANCE EVALUATION

INTRODUCTION

This chapter summarizes the results of the performance evaluation of VOTRAN's fixed route system and the demand response system operating in Volusia County, Florida. The performance evaluation of VOTRAN was conducted using a sample of peers which were selected based on similar service area populations, operating characteristics, and demographics.

The Purpose of Performance Review

A performance review is one method of evaluating transit performance and consists of those aspects of the transit agency's operation that can be measured quantitatively with data from a standard reporting instrument, in this case the National Transit Database (NTD). The NTD provides a consistent reporting format over a period of years, allowing for the measurement of performance indicators over time and a comparison of performance indicators between transit systems. However, a performance review does not provide insight into the quality of service and passenger satisfaction with the service. On-board surveys and other surveying techniques must complement the performance review in order to get a complete picture of the value of transit to the community.

In addition to understanding the limits of this analysis, caution should be exercised in interpreting the meaning of the various measures. The performance review does not provide information regarding what aspects of performance are within the control of the agency and what measures are not. For instance, local policy decisions on land use, zoning, and parking can greatly dictate the types of services that will work for the community and therefore greatly impact performance. Another example is operating expenses, which can vary greatly between transit systems based on work rules and collective bargaining agreements and cause huge variances in financial efficiency measures.

National Transit Database

To receive federal funds, transit properties are required to report a variety of data in a standardized format to the Federal Transit Administration (FTA), resulting in what is known as the National Transit Database (NTD). These documents provide standardized measures of reporting that enable a more accurate comparison of information between properties. Since 1979, when this reporting requirement was instituted, additional refinements in data collection and reporting have increased the accuracy and comparability of the data.

Data Reliability - All NTD data submitted to the FTA are subject to considerable review and validation through manual and automated methods. Each report is thoroughly examined by the FTA's data analysts for identification of any errors or inconsistencies. The analyst then notifies the reporting agency of these errors and requires the agency to resubmit its data after

addressing the FTA's concerns. Once the FTA is satisfied with the data, the final report is accepted. All of the data presented in this analysis are through FY 2004, which is the latest validated NTD data set currently available. For this performance review, CUTR did not collect any original data or conduct any audits or on-site analyses of the data or data collection procedures.

Data Definitions - To fully understand the data presented in NTD reports, it is important to understand the definitions of the terms used in the documents. In many instances, these definitions differ from initial perceptions and may be subject to interpretation. The data collection procedures further specify exactly what is being referred to by a given term. For example, "passenger trip" refers to an individual boarding a transit vehicle. A person riding a bus from the corner to the office takes one passenger trip and a second passenger trip to return home. Likewise, a person transferring from one bus to another is considered to have made two passenger trips to get to his or her destination. In spite of these definitions and continued refinements in data collection procedures, there remain some discrepancies between systems as to how terms are defined and how information is collected. Accordingly, caution should be used in interpreting findings, especially for those variables that are more likely to be subject to variation in definitions.

Performance Measure Categories - The evaluation measures that are used throughout the performance review are divided into two major categories: operational measures and financial measures. These categories are further subdivided into general operational, vehicle, employee, service, and general financial and efficiency measures. Operational measures indicate the productivity and effectiveness of day-to-day transit operations. Financial measures display the overall expenses and revenues as well as the cost efficiency of the system. The substantial amount of data available through NTD reporting provides an opportunity to develop a large number of measures. Performance measures that typically provide a good representation of overall transit system performance have been selected for this review.

PART ONE: FIXED-ROUTE TRANSIT SERVICE

Table 3-1 lists the performance measures selected for the review of VOTRAN's fixed route service.

Table 3-1
Selected Performance Review Measures
Fixed Route Transit Services

Operational Measures	Financial Measures
Service	***Expense and Revenue***
Service Area Population	Operating Expenses
Service Area Density	Maintenance Expenses
Passenger Trips	Local Revenue
Passenger Miles	Local Contribution
Average Passenger Trip Length	Passenger Fare Revenue
Revenue Miles	Other Non-Fare Revenue
Revenue Hours	Average Fare
Route Miles	
	Efficiency
Vehicle	Operating Expense per Capita
Vehicles Available in Maximum Service	Operating Expense per Passenger Trip
Vehicles Operated in Maximum Service (VOMS)	Operating Expense per Revenue Mile
Revenue Miles per Vehicle in Max. Service	Operating Expense per Revenue Hour
Average Age of Fleet (in yrs.)	Maintenance Expense per Revenue Hour
	Maintenance Expense per VOMS
Employee	Farebox Recovery
Total Employee FTEs	
Revenue Hours per Employee FTE	
Passenger Trips per Employee FTE	
Effectiveness	
Vehicle Miles per Capita	
Passenger Trips per Capita	
Passenger Trips per VOMS	
Passenger Trips per Revenue Mile	
Passenger Trips per Revenue Hour	

VOTRAN SYSTEM YEAR AT-A-GLANCE

A basic overview of VOTRAN's fixed-route transit system performance based on the selected performance measures is shown in Table 3-2. The source of the data is VOTRAN's FY 2003 and FY 2004 NTD reports. Table 3-2 also displays the percent change for each measure over the last fiscal year.

Table 3-2
VOTRAN System Year At-a-Glance (FY 03 - FY 04)

SELECTED PERFORMANCE MEASURES	FY 2003	FY 2004	% CHANGE 2003 - 2004
OPERATIONAL MEASURES			
Service Area Population	454,581	468,663	3.1%
Service Area Density	377	388	3.1%
Passenger Trips	2,836,863	2,908,054	2.5%
Passenger Miles	16,114,121	16,170,006	0.3%
Average Passenger Trip Length	5.68	5.56	-2.1%
Revenue Miles	2,534,359	2,601,922	2.7%
Revenue Hours	158,747	162,269	2.2%
Route Miles	646.3	620.3	-4.0%
Vehicles Available	55	56	1.8%
Vehicles Operated in Maximum Service	48	48	0.0%
Revenue Miles per Vehicles in Maximum Service	52,799	54,207	2.7%
Average Age of Fleet (in years)	4.76	5.00	5.0%
Total Employee FTEs	137.23	139.61	1.7%
Revenue Hours per Employee FTE	1,157	1,162	0.5%
Passenger Trips per Employee FTE	20,672	20,830	0.8%
Vehicle Miles per Capita	5.97	5.94	-0.5%
Passenger Trips per Capita	6.24	6.21	-0.6%
Passenger Trips per Vehicles in Maximum Service	59,101	60,584	2.5%
Passenger Trips per Revenue Mile	1.12	1.12	-0.2%
Passenger Trips per Revenue Hour	17.87	17.92	0.3%

Table 3-2 (continued)
VOTRAN System Year At-a-Glance (FY 03 - FY 04)

SELECTED PERFORMANCE MEASURES	FY 2003	FY 2004	% CHANGE 2003 - 2004
FINANCIAL MEASURES			
Operating Expense	$8,576,200	$8,872,418	3.5%
Maintenance Expense	$1,864,465	$1,743,853	-6.5%
Local Revenue	$7,333,976	$7,844,349	7.0%
**Local Contribution*	*$5,715,870*	*$5,952,363*	*4.1%*
**Passenger Fare Revenue*	*$1,417,835*	*$1,486,934*	*4.9%*
**Other Non-Fare Revenues*	*$200,271*	*$405,052*	*102.3%*
Average Fare	$0.50	$0.51	2.3%
Operating Expense per Capita	$18.87	$18.93	0.3%
Operating Expense per Passenger Trip	$3.02	$3.05	0.9%
Operating Expense per Revenue Mile	$3.38	$3.41	0.8%
Operating Expense per Revenue Hour	$54.02	$54.68	1.2%
Farebox Recovery	16.5%	16.8%	1.4%

**The sum of these three categories equal total local revenue.*

FIXED ROUTE PEER AND TREND ANALYSIS

Utilizing VOTRAN's NTD reports, a fixed route trend analysis for fiscal years 2000 through 2004 was conducted to track the performance of VOTRAN's fixed-route motorbus system over a five-year time period. Performance measures are grouped into categories and presented in tabular form (Tables 3-4 and 3-6), including the percent change for each measure.

A fixed-route peer review analysis was also conducted to compare VOTRAN's performance with other similar transit systems in the United States. The Florida Transit Information System program (FTIS), which was jointly developed by FDOT and the Lehman Center for Transportation Research (LCTR) at Florida International University (FIU) is a useful tool in selecting suitable peer systems based on NTD data. FTIS was utilized to select VOTRAN's potential peer systems by evaluating the following data sets: vehicles operated in maximum service, service area population, service area population density and overall operating expense. The top 34 ranked systems were selected for further analysis.

A more detailed method was utilized for selecting the peer systems from this subset. Four additional characteristics taken from Census data: county population, county population density, median age, and per capita income (adjusted based on the Cost of Living Index or COLI) were combined with the four NTD characteristics listed above. The two county population characteristics were given half the weight of the other characteristics, so as not to overvalue the importance of population data. Census data was utilized to select peer systems because it allows for a comparison of county demographics in addition to system operating characteristics. The more detailed the ranking process, the more likely that truly comparable systems will be selected as peers leading to more useful results.

Each system was then compared to VOTRAN in a composite ranking table. For each characteristic, the percentage difference between the agencies and VOTRAN were calculated. These percentages were added together to form a composite score for each agency. The lower the composite score, the more similar an agency's characteristics were to VOTRAN's.

After the initial rankings were completed, a regional adjustment was incorporated to favor systems in geographically similar regions. Systems in Southeastern states were assigned a 100% adjustment and Central and Midwestern states were assigned a 25% adjustment to their scores. Systems in any other region had no adjustments made to their scores. Although a regional adjustment reflects a potential bias, this adjustment was intended to make it more likely that systems with economic circumstances similar to Volusia County were selected. With a regional adjustment, if a system from outside the southeast remained in the selected peer group, then it can be considered a peer of VOTRAN.

Based on the ranking process described above, generally the top 8 to 12 systems ranked are selected as peers. In the case of VOTRAN, The top 7 non-Florida peers were selected. However, in order to include at least two Florida peers, the 2nd highest ranked Florida system, StarMetro, was included. Table 3-3 displays the peers selected.

Table 3-3
VOTRAN's Fixed Route Peer Systems, FY 2004

Florida Peer Systems	Non-Florida Peer Systems
Lee County Transit (Fort Myers, FL)	Chattanooga Area Regional Transit Authority (Chattanooga, TN)
StarMetro (Tallahassee, FL)	Central Arkansas Transit Authority (North Little Rock, AR)
	Capital Transit Corporation (Baton Rouge, LA)
	Sonoma County Transit (Santa Rosa, CA)
	Stark Area Regional Transit Authority (Canton, OH)
	Capital Area Transit (Raleigh, NC)
	Chatham Area Transit (Savannah, GA)

Graphics throughout this chapter (Figures 3-2 through 3-30) illustrate the selected operational and financial measures. There are two types of graphs displayed: trend area graphs and peer group bar graphs. The trend area graphs show VOTRAN's performance in each measure for the five-year period from FY 2000 to FY 2004. The percent change over this period is shown at the top of each graph. The percent change from year to year is also displayed. The peer group graphs show VOTRAN's performance in relation to its peer systems for the most recent validated year of data, FY 2004. The peer mean of the entire group is displayed with a dark grey bar and a vertical black line. VOTRAN's value is shown with a bright yellow bar. Peer systems are represented with dark blue bars. Individual peer system data for all measures shown in these graphs is available in Appendix A-1.

A comparison of VOTRAN's performance with its peer groups as a whole is displayed later in this chapter in Tables 3-5 (Operational Measures) and 3-7 (Financial Measures). These tables show VOTRAN's value for each measure as well as the peer group mean for the Florida peers

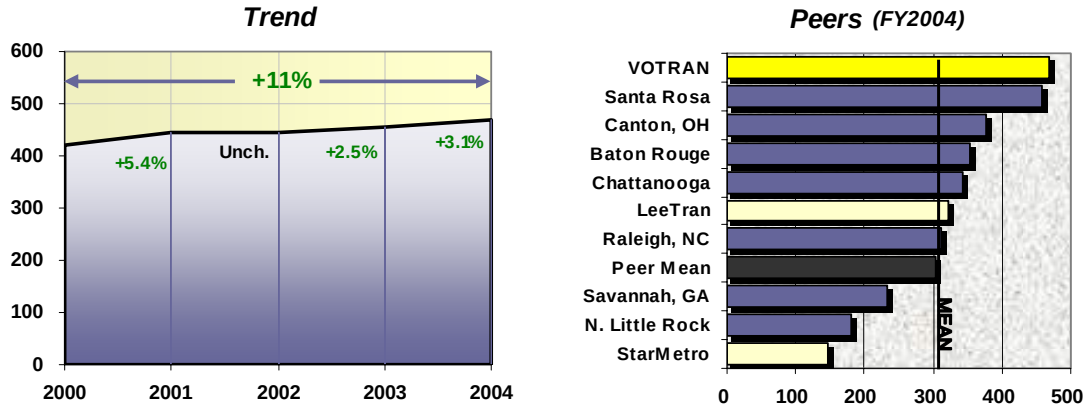
and the non-Florida peers. VOTRAN's deviation from each peer group mean is shown as a percentage of the mean values.

Operational Performance Measures

Service Measures

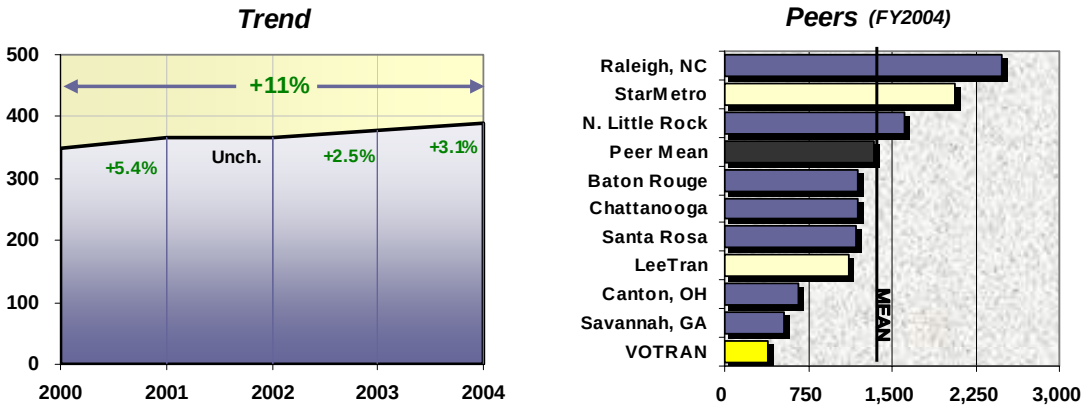
VOTRAN reported a service area population of 468,660 in FY 2004. This is an 11 percent increase to the service area population reported in FY 2000. VOTRAN ranked 1st among its peers in this measure (Figure 3-1). However, VOTRAN has chosen to use the entire population of Volusia County as the measure reported to NTD. Using the Florida Transit Information System (FTIS) GIS software, the actual service area population as measured from ¾ of mile from all fixed routes was 349,520. This would have placed VOTRAN 4th among its peers, but still higher than both Florida peers.

Figure 3-1
Service Area Population (000's)



VOTRAN's service area density which divides the service area population into the square mileage of the service area rose at the same rate as service area population as VOTRAN has not adjusted their service area size. VOTRAN has decided to define Volusia County as their service area, which has a size of 1207 square miles. This results in VOTRAN's service area density being the smallest among its peers and 71 percent lower than the peer mean (Figure 3-2). A more reasonable approach to calculate the fixed route service area would be to use ¾ mile buffer around the fixed route service. This results in a service area size of 294 square miles and a service area density of 1,189, which would place VOTRAN in the middle of the pack among its peers.

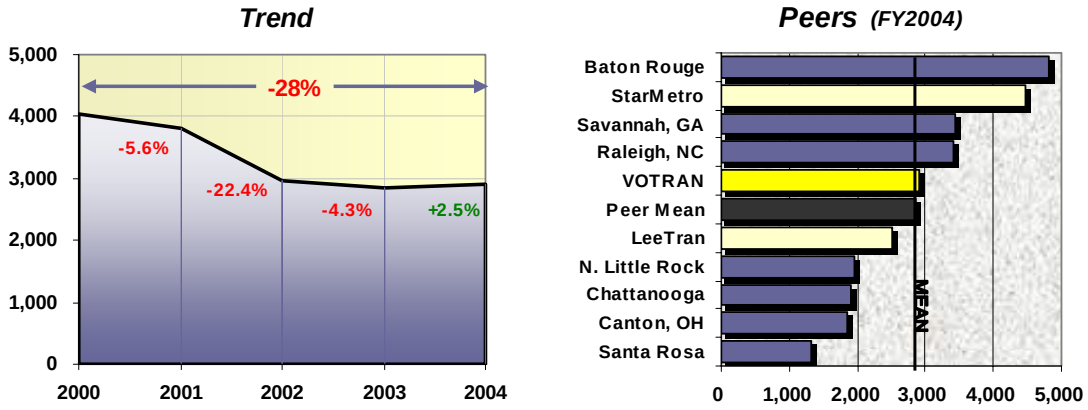
Figure 3-2
Service Area Density (Population per Sq. Mile)



Other agencies may also interpret their service area as the entire area of the county, city, or jurisdiction that they reside in, so caution must be taken when attempting to interpret service area characteristics.

Ridership on VOTRAN has decreased 28 percent over the five-year trend period, with the largest decrease occurring in FY 2001. Despite the sharp decrease, VOTRAN still ranked 5th among its peers and 2 percent above the peer mean for this measure in FY 2004 (Figure 3-3). It should be noted that the ridership reported in FY 2000 and FY 2001 contained two components that impacted the amount: ridership from the beach tram that was subsequently discontinued; and, an application of a "fare box adjustment factor" that is no longer utilized. When accounting for these factors, the actual ridership levels have remained relatively constant over the five year period.

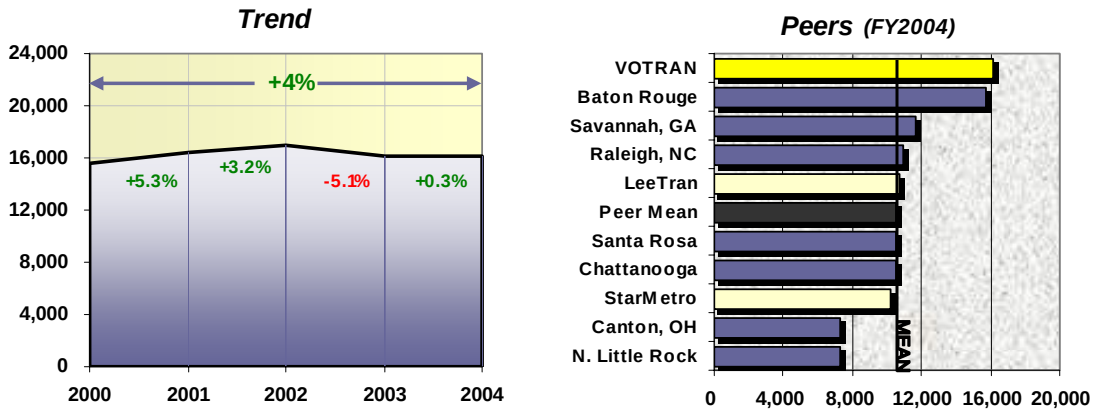
Figure 3-3
Passenger Trips (000's)



The number of passenger miles is a NTD measure that multiplies the number of passenger trips by the average passenger trip length to estimate the total number of miles passengers traveled. In some regards, passenger miles more accurately portray actual utilization of the bus system

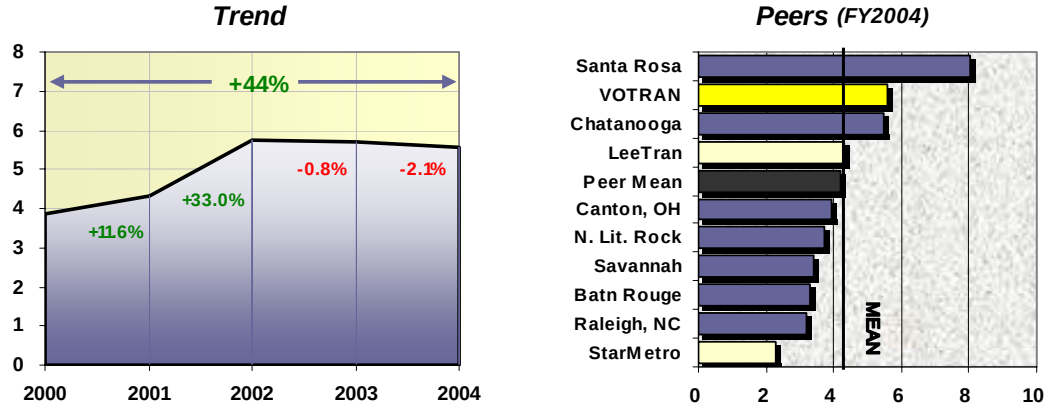
since a system could have a high volume of short passenger trips while the bus is empty for a majority of its trip. Passenger Miles on VOTRAN rose 4 percent over the five year trend period as shown in Figure 3-4, even though passenger trips decreased. Compared to its peers, VOTRAN ranked 1st overall, and 53 percent higher than the peer mean.

Figure 3-4
Passenger Miles (000's)



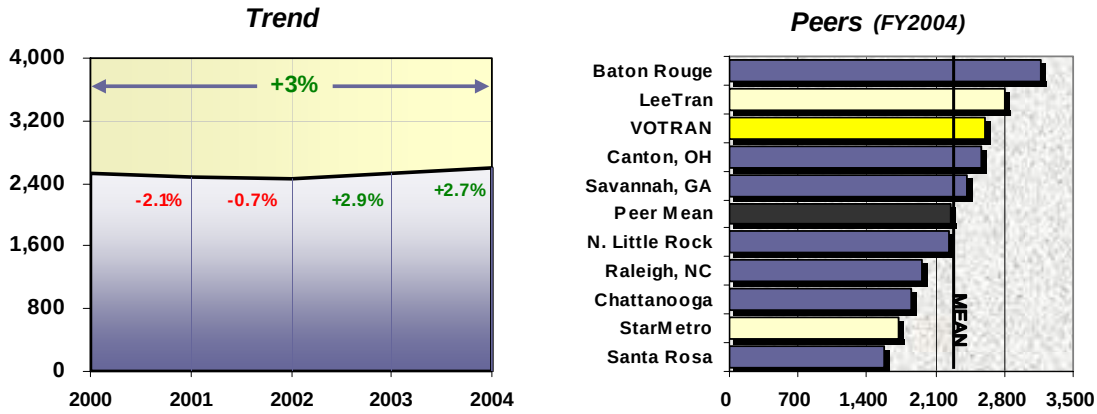
As depicted in Figure 3-5, VOTRAN's average passenger trip was 3.86 in FY 2000, and 5.56 in FY 2004; a 44 percent increase. The largest increase (33 percent) occurred from FY 2001 to FY 2002. VOTRAN had the 2nd highest average trip length in FY 2004 behind only Sonoma County Transit (Santa Rosa).

Figure 3-5
Average Passenger Trip Length (Miles)



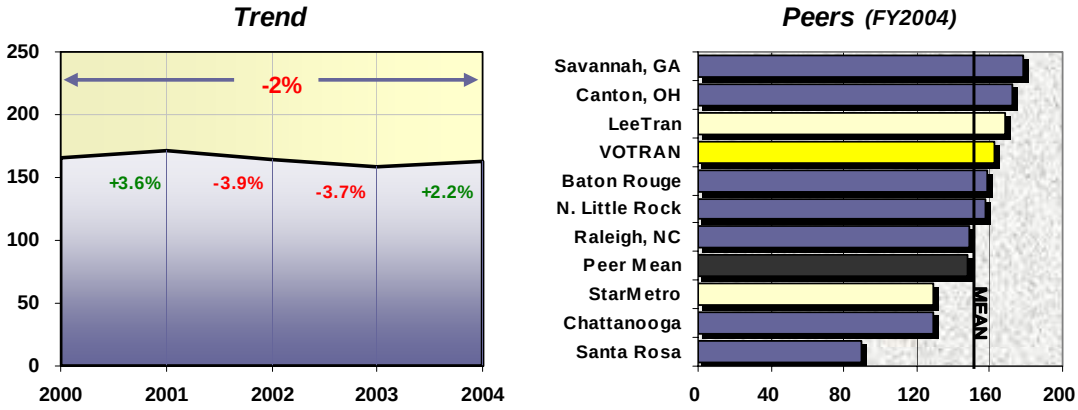
VOTRAN's revenue miles of service over the five-year period are displayed in Figure 3-6. The number of revenue miles operated by VOTRAN increased 3 percent over the trend period. Figure 3-6 also shows the peer group comparison for revenue miles. VOTRAN ranked 3rd among its peers for this measure, 15 percent higher than the peer mean.

Figure 3-6
Revenue Miles (000's)



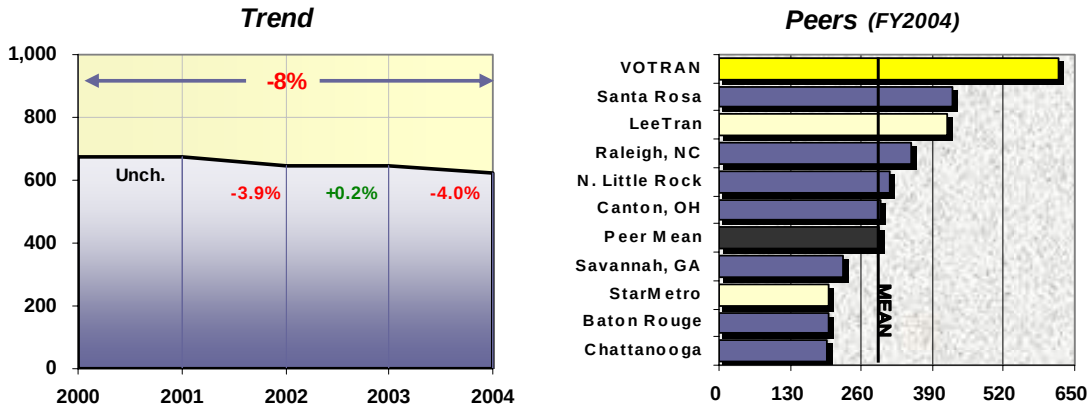
VOTRAN's revenue hours of service over the five-year period are displayed in Figure 3-7. The number of revenue hours decreased by 2 percent even though revenue miles have increased. Figure 7 also shows the peer group comparison for revenue hours. VOTRAN ranked 4th and 10 percent higher than the peer mean.

Figure 3-7
Revenue Hours (000's)



The number of route miles in a fixed-route system refers to the number of unique one-way route lengths. If two routes operate along the same corridor, the route length of the corridor (in miles) is only counted once. This is another measure that indicates a level of service component – the level of service coverage. It should be noted that the VOTRAN service area is very large, much larger than its peers. VOTRAN had an 8 percent reduction in route miles during the five year trend period. However, as shown in the peer graph in Figure 3-8, VOTRAN is operated more route miles than any peer and is 112 percent higher than the peer mean.

Figure 3-8
Route Miles



Vehicle Measures

Figures 3-9, 3-10, and 3-11 depict the peer and trend data for vehicles available and operated in maximum service. These two variables were combined into one graph to depict VOTRAN's overall vehicle trend. The number of vehicles in the fleet was reduced from 63 vehicles in FY 2000 to 56 vehicles in FY 2004. Vehicles operated in maximum service also dropped from 51 to 48 during the same time frame. The discontinuation of the beach tram and subsequent retirement of the trams accounted for most of these decreases. VOTRAN now has a lower spare ratio due to a lower ratio of vehicles in the fleet to vehicles in maximum service. VOTRAN's 56-vehicle fleet in FY 2004 was only four less than the peer mean of 60 vehicles. Similarly, VOTRAN's 48 vehicles in maximum service was near the average of all peers (48.3).

Figure 3-9
Total Vehicles and Vehicles in Maximum Service

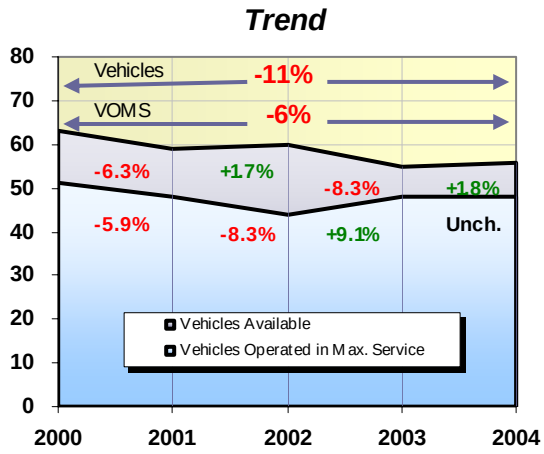


Figure 3-10
Total Vehicles

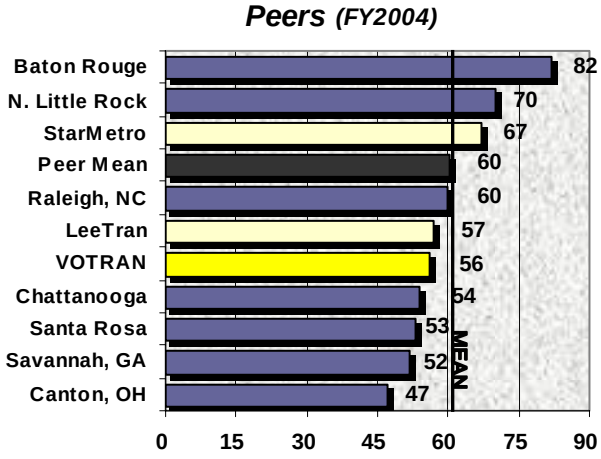
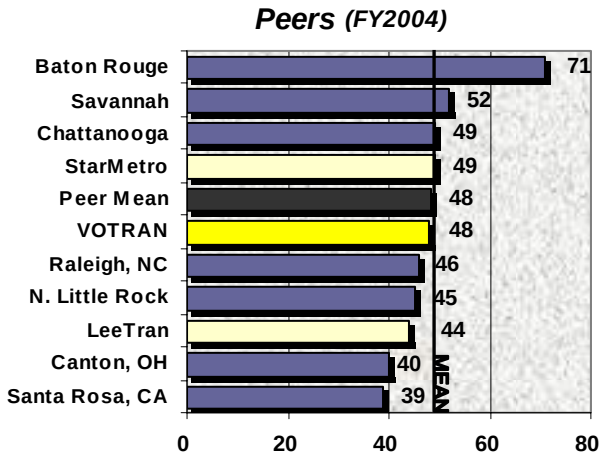
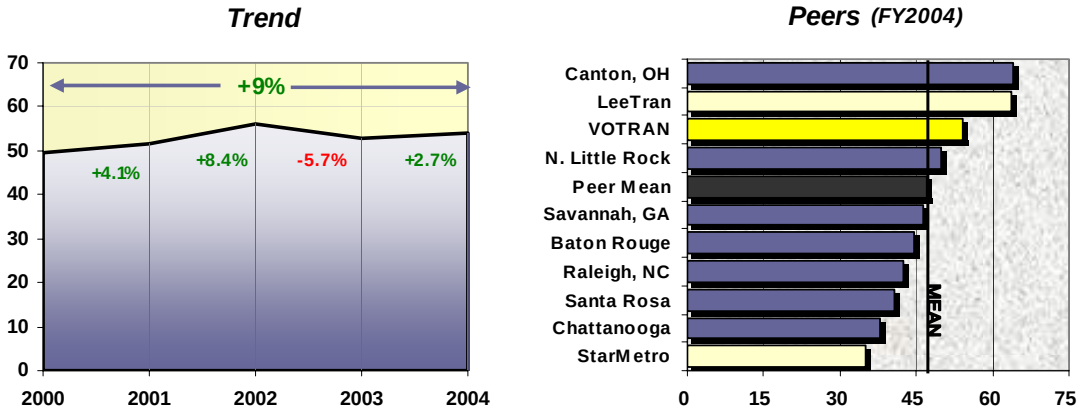


Figure 3-11
Vehicles in Maximum Service



Revenue miles per vehicle in maximum service is a measure showing the degree of utilization of each vehicle in service. The larger the number of revenue miles, the more demand placed upon each vehicle. Figure 3-12 shows that VOTRAN's revenue miles per vehicle in maximum service has increased 9 percent over the five-year period as the number of vehicles have decreased. VOTRAN was 3rd among its peers for this measure, trailing only LeeTran and Stark Area RTA in Canton, Ohio.

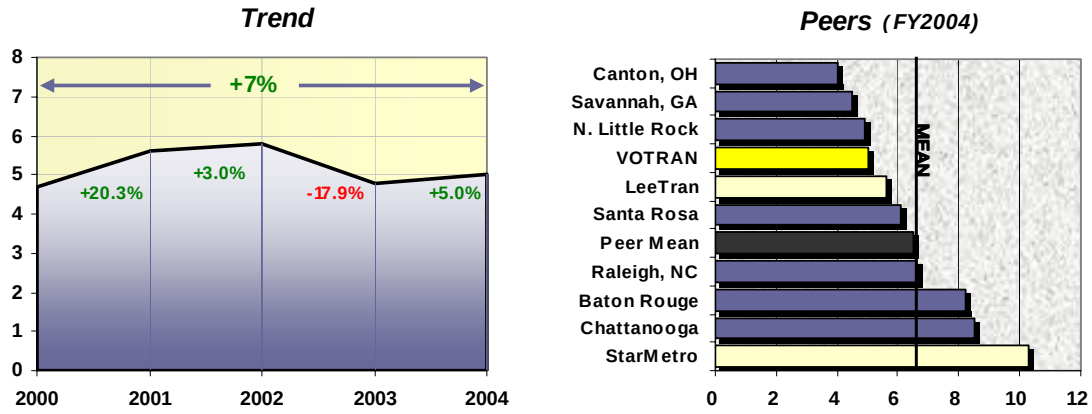
Figure 3-12
Revenue Miles per Vehicles in Maximum Service (000's)



Since FY 2000, the average age of VOTRAN's vehicle fleet increased 7 percent from 4.7 years to 5 years in FY 2004, as shown in Figure 3-13. VOTRAN had the 4th youngest fleet among its peers in FY 2004 and youngest among Florida peers.

Figure 3-13

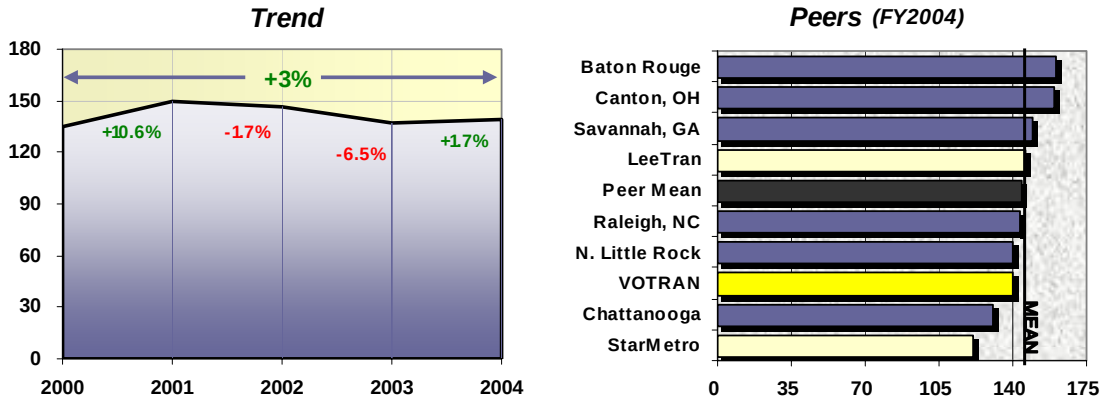
Average Age of Fleet (Years)



Employee Measures

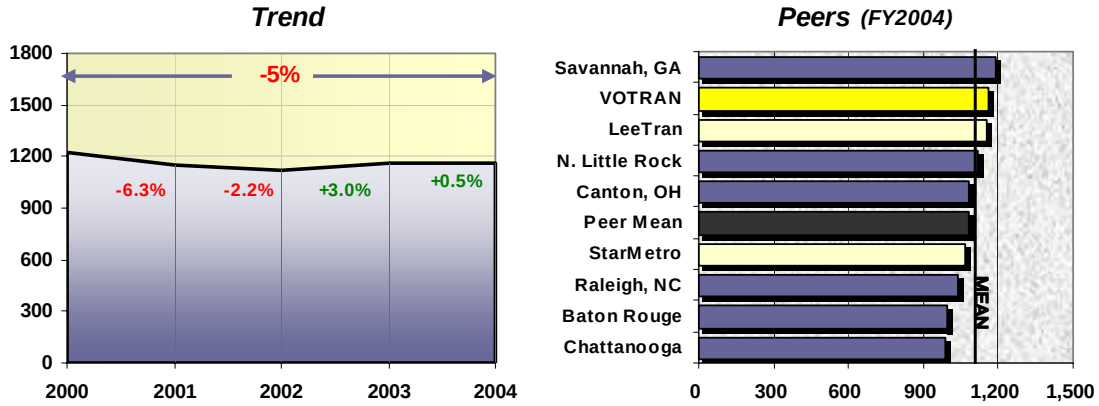
VOTRAN's employment data, as measured by employee Full Time Equivalents (FTEs), has increased 3 percent over the trend period. FTEs are used as a unit of measurement instead of the overall employee count because it more accurately portrays overall hours in the case of an agency utilizing part-time employees. VOTRAN employs 3 percent fewer FTEs than the peer group mean (139.6 versus 143.9) for FY 2004 as shown in Figure 3-14.

Figure 3-14
Total Employee FTEs



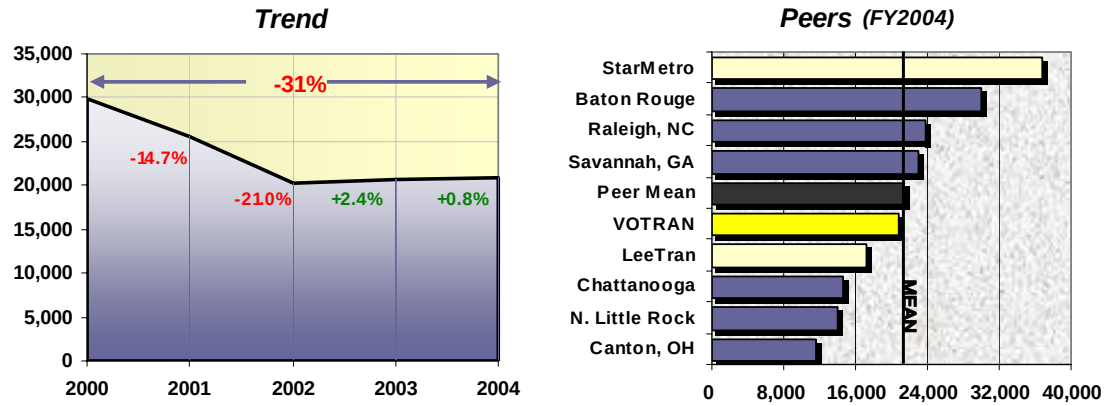
Labor productivity (measured as revenue hours of service per employee FTE), decreased 5 percent (as shown in Figure 3-15), as employee FTEs rose and revenue hours declined. VOTRAN ranked 2nd for this measure.

Figure 3-15
Revenue Hours per Employee FTE



Passenger trips per employee FTE is another measure of labor productivity (Figure 3-16). VOTRAN's trend for this measure was a substantial decrease of 31 percent as passenger trips decreased 28 percent while Employee FTEs rose 3 percent. Despite this decrease, VOTRAN remained within 3 percent of the peer mean for this measure.

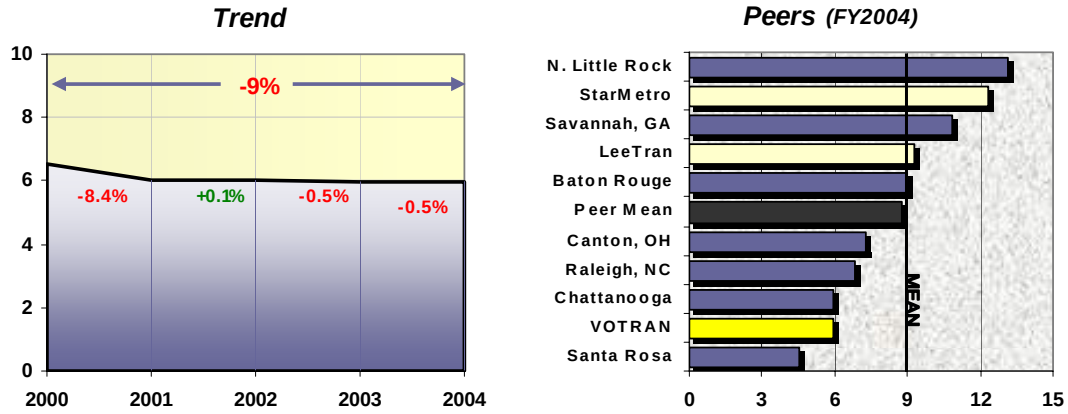
Figure 3-16
Passenger Trips per Employee FTE



Effectiveness Measures

VOTRAN's service supply, as measured by the number of vehicle miles per capita, decreased 9 percent during the five-year trend period (Figure 3-17), with a majority of the decrease occurring from FY 2000 to FY 2001. VOTRAN is 32 percent below the peer mean for this measure. Since this is a per capita measure, it is greatly influenced by the decision to use the entire county population as the service area population, even though the entire county is not within ¾ of a mile of a fixed route. Using this definition, VOTRAN would be nearly equal with the peer mean for this measure.

Figure 3-17
Vehicle Miles per Capita



Four measures that reveal the service effectiveness of a fixed route system are passenger trips per capita, passenger trips per vehicle operated in maximum service, passenger trips per revenue mile, and passenger trips per revenue hour. The peer and trend data for VOTRAN is shown in the next set of Figures (3-18 through 3-21). VOTRAN has experienced decreases in all four measures over the five-year time period primarily due to a decrease in ridership. Despite these losses, compared to its peers, VOTRAN ranked near the peer mean for three of the four measures. The exception is passenger trips per capita in which VOTRAN had 42 percent fewer passenger trips per capita than its peer mean. This is once again due to VOTRAN's designation of their service area.

Figure 3-18
Passenger Trips Per Capita

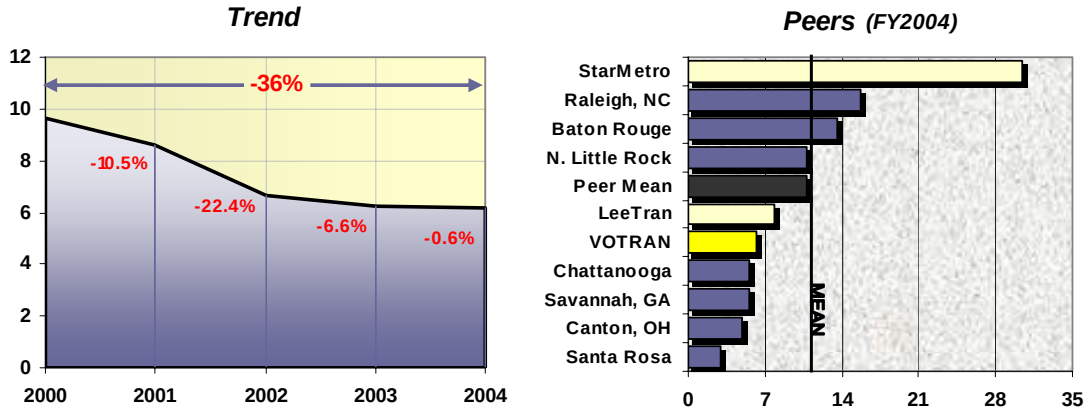


Figure 3-19
Passenger Trips per Vehicles in Max. Service

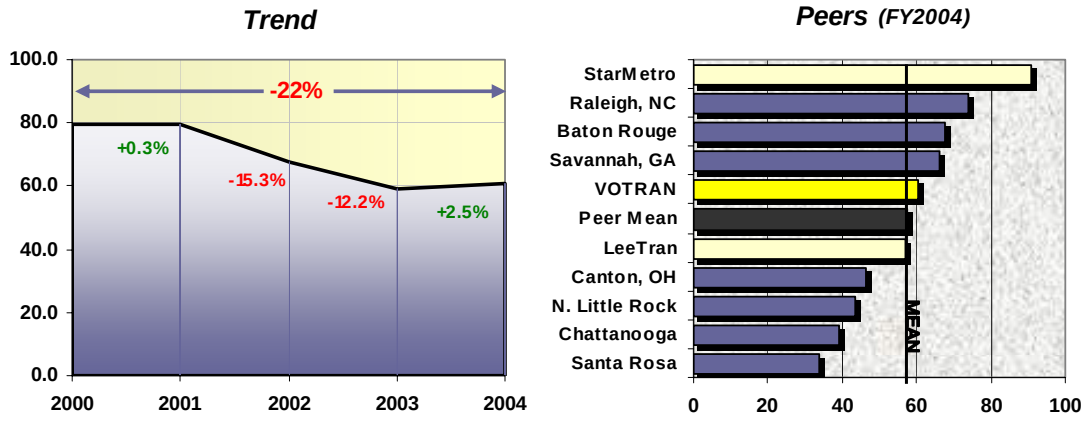


Figure 3-20
Passenger Trips per Revenue Mile

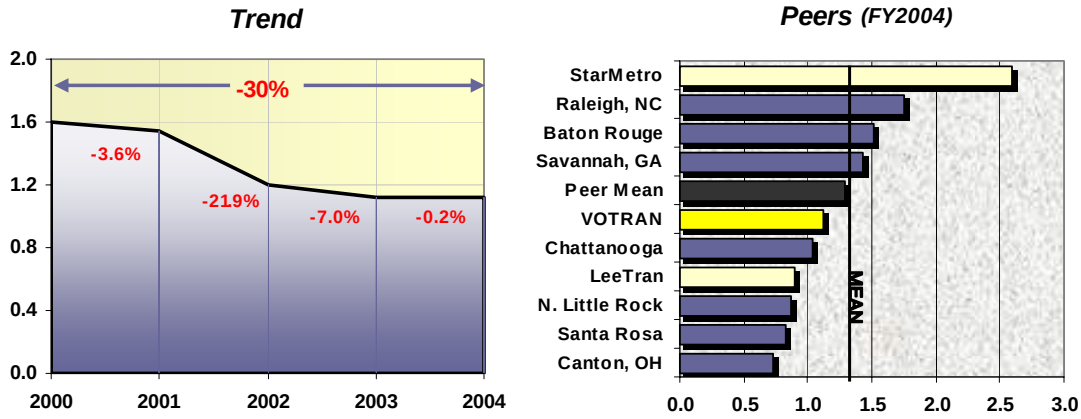


Figure 3-21
Passenger Trips per Revenue Hour

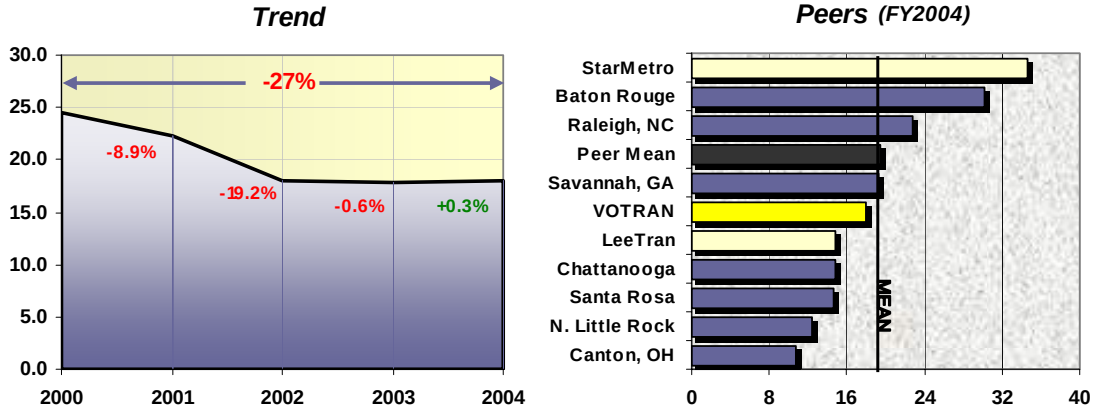


Table 3-4 shows VOTRAN's operational measures for FY 2000 through FY 2004 as well as the percent change over the five-year trend period.

Table 3-4
Trend Analysis – VOTRAN Operational Measures

Measure	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	% Change 2000-2004
Service Area Population	420.431	443,343	443,343	454,581	468,663	11.5%
Service Area Density	348	367	367	377	388	11.5%
Passenger Trips	4,046,072	3,817,964	2,963,067	2,836,863	2,908,054	-28.1%
Passenger Miles	15,611,101	16,442,216	16,974,203	16,114,121	16,170,006	3.6%
Average Passenger Trip Length	3.86	4.31	5.73	5.68	5.56	44.1%
Revenue Miles	2,531,865	2,479,548	2,462,762	2,534,359	2,601,922	2.8%
Revenue Hours	165,554	171,570	164,805	158,747	162,269	-2.0%
Route Miles	671.6	671.6	645.3	646.3	620.3	-7.6%
Vehicles Available	63	59	60	55	56	-11.1%
Vehicles Operated in Max. Service	51	48	44	48	48	-5.9%
Rev. Miles per Veh. in Max. Service	49,644	51,657	55,972	52,799	54,207	9.2%
Average Age of Fleet	4.68	5.63	5.80	4.76	5.00	6.8%
Total Employee FTEs	135.09	149.40	146.81	137.23	139.61	3.3%
Revenue Hours per Employee FTE	1,226	1,148	1,123	1,157	1,162	-5.2%
Passenger Trips per Employee FTE	29,951	25,555	20,183	20,672	20,830	-30.5%
Vehicle Miles per Capita	6.55	6.00	6.00	5.97	5.94	-9.2%
Passenger Trips per Capita	9.62	8.61	6.68	6.24	6.21	-35.5%
Passenger Trips per VOMS	79,335	79,541	67,342	59,101	60,584	-23.6%
Passenger Trips per Rev Mile	1.60	1.54	1.20	1.12	1.12	-30.1%
Passenger Trips per Rev Hour	24.44	22.25	17.98	17.87	17.92	-26.7%

Table 3-5 shows VOTRAN's value for each operational measure as well as a comparison to the peer group mean. VOTRAN's deviation from the peer group mean is shown as a percentage of the mean value.

Table 3-5
Peer Analysis – Operational Measures, FY 2004

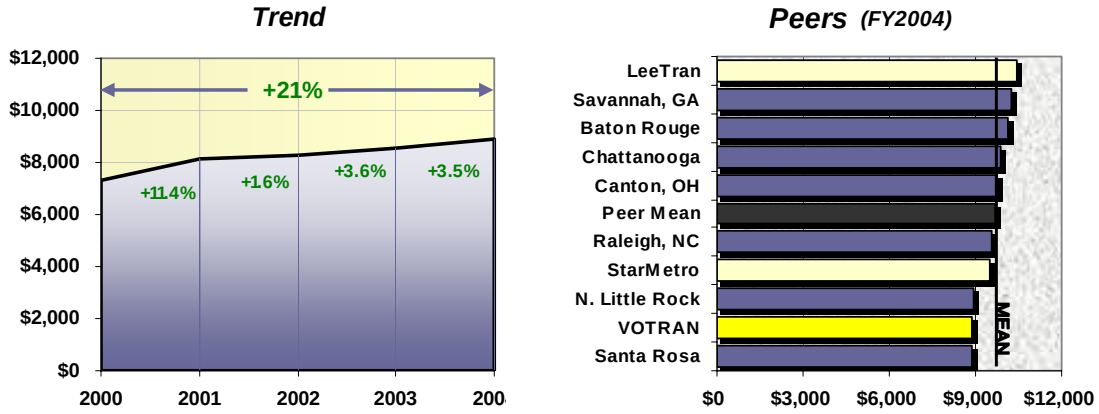
Measure	VOTRAN	Florida Peer Group Mean	VOTRAN: % From Mean	Non-Florida Peer Group Mean	VOTRAN: % From Mean
Service Area Population	468,663	234,298	100%	322,667	45%
Service Area Density	388	1,590	-76%	1,266	-69%
Passenger Trips	2,908,054	3,486,129	-17%	2,671,149	9%
Passenger Miles	16,170,006	10,518,417	54%	10,577,378	53%
Average Passenger Trip Length	5.56	3.30	69%	4.44	25%
Revenue Miles	2,601,922	2,399,872	16%	2,253,815	15%
Revenue Hours	162,269	148,974	9%	147,791	10%
Route Miles	620.3	309.4	101%	287.0	116%
Vehicles Available	56	62	-10%	60	-6%
Vehicles Operated in Max. Service	48	47	3%	49	-2%
Revenue Miles per Vehicles in Max. Service	54,207	49,446	10%	46,543	16%
Average Age of Fleet (in years)	5.00	7.95	-37%	6.11	-18%
Total Employee FTEs	139.61	133.49	5%	147.32	-5%
Revenue Hours per Employee FTE	1,162	1,112	5%	1,068	9%
Passenger Trips per Employee FTE	20,830	27,034	-23%	19,498	7%
Vehicle Miles per Capita	5.94	10.81	-45%	8.21	-28%
Passenger Trips per Capita	6.21	19.10	-68%	8.41	-26%
Passenger Trips per VOMS	60,584	74,059	-18%	52,953	14%
Passenger Trips per Revenue Mile	1.12	1.74	-36%	1.16	-4%
Passenger Trips per Revenue Hour	17.92	24.72	-27%	17.88	0%

Financial Performance Measures

Expense and Revenue Measures

Figure 3-22 shows that VOTRAN's total operating expenses increased each year expect for a total increase of 21 percent over the five year period. Despite the increase, VOTRAN's operating expenses are still below the peer mean for this measure.

Figure 3-22
Operating Expenses ($000's)



As a subset of total operating expenses, VOTRAN has seen its maintenance expenses remain the same over the five year period. From FY 2000 to FY 2001, there was a large increase of 18.9 percent, but through FY 2004, maintenance expenses have decreased about the same amount. VOTRAN spends the least for maintenance among all of its peers as shown in Figure 3-23.

Figure 3-23
Maintenance Expenses

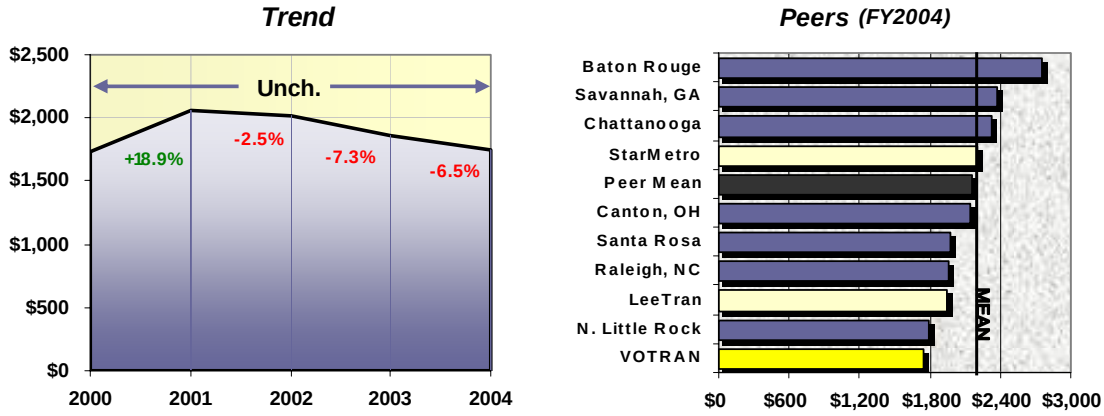
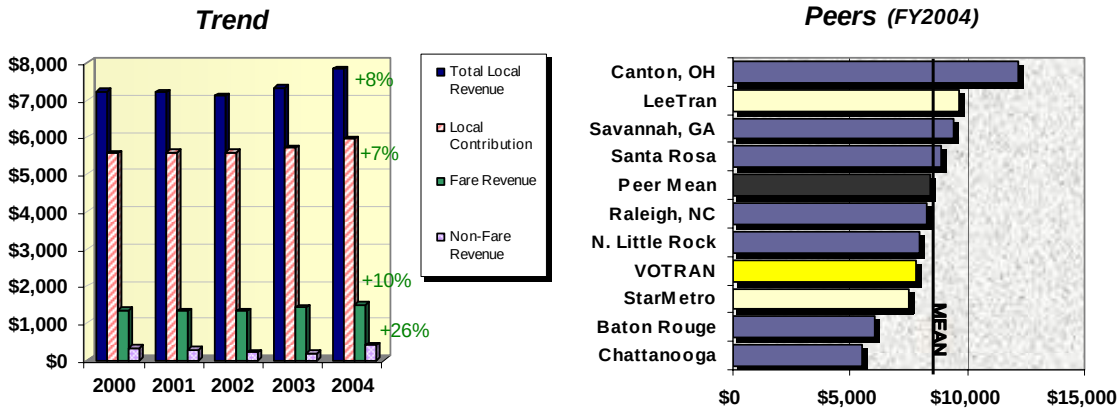


Figure 3-24 shows VOTRAN's total local revenue as well as local revenue sources, which are divided into three groups. Overall, local revenue has increased 8 percent from FY 2000 to FY 2004. Funding from local contribution has risen 7 percent over the five years. Passenger fare

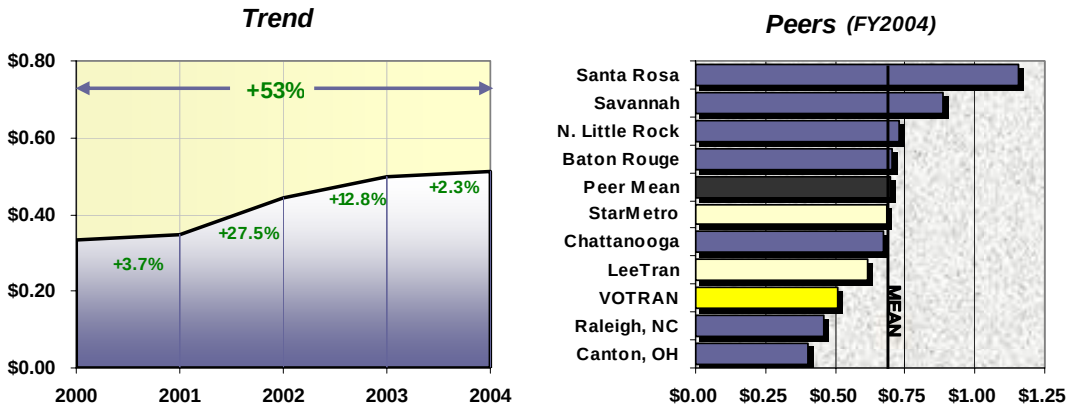
revenues were up 10 percent over the five-year trend period, while revenues from other non-revenue sources increased 26 percent. Note, that passenger fare revenues used in this analysis do not match what was reported for the NTD. Revised figures more accurately reflect VOTRAN's passenger fares for fixed route service. Total funding from local revenues ranked 7th among its peers and just below the peer mean.

Figure 3-24
Local Revenues ($000's)



Average fare is calculated by dividing the total passenger fare revenue by the total number of passengers. Average fare may be higher in systems that do not offer a special rate for transfers, but require passengers to pay full fare for each trip. The average fare may be lower in systems in which passengers utilize discounted daily or monthly passes. VOTRAN's average fare per passenger trip experienced a large increase from FY 2002 to FY 2003, and also increased in the other years, resulting in a cumulative 53 percent increase in the last five years (Figure 3-25). Even with this large increase, VOTRAN's average fare is still lower than the average of its peers.

Figure 3-25
Average Fare



Efficiency Measures

The first set of efficiency measures use the overall operating expense and other performance measures to create ratios of cost efficiency. The measures include operating expenses per capita, per passenger trip, per revenue mile and per revenue hour. Figures 3-26 through 3-29 display VOTRAN's peer and trend data for these measures. All four measures increased during the trend period, resulting in less cost efficiency for VOTRAN. Despite these decreases in efficiency, In FY 2004, VOTRAN was more efficient than the peer mean in all four measures and was ranked 1st in two of the measures (operating expense per capita and operating expense per revenue hour).

Figure 3-26
Operating Expense Per Capita

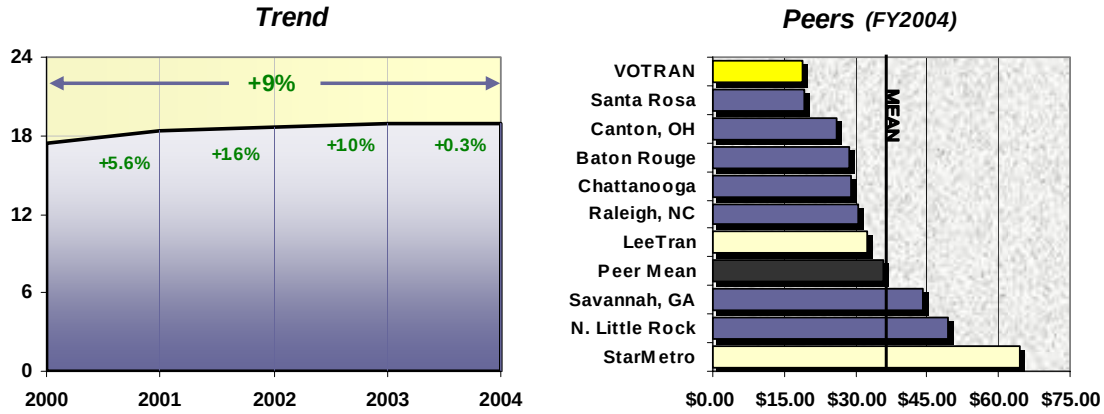


Figure 3-27
Operating Expense Per Passenger Trip

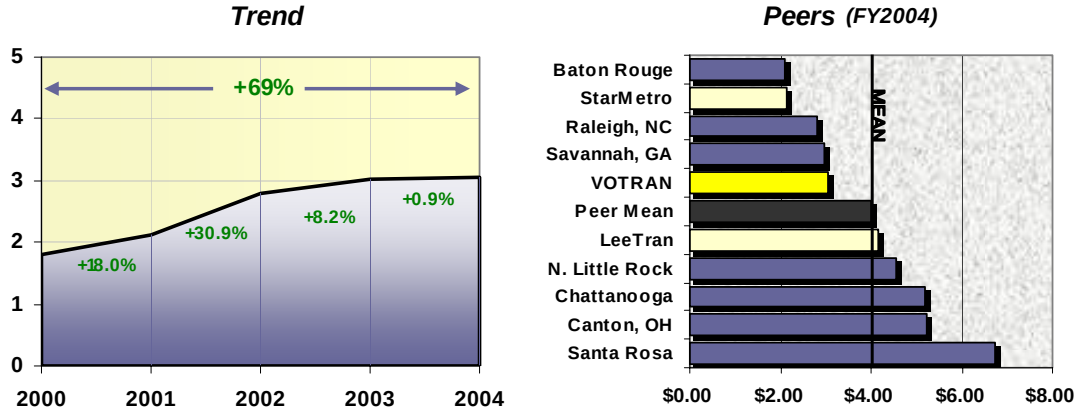


Figure 3-28
Operating Expense Per Revenue Mile

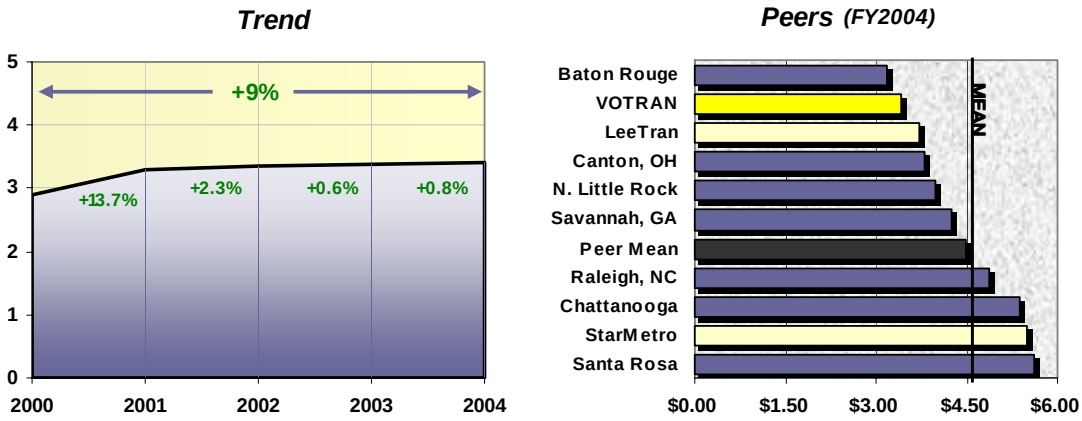
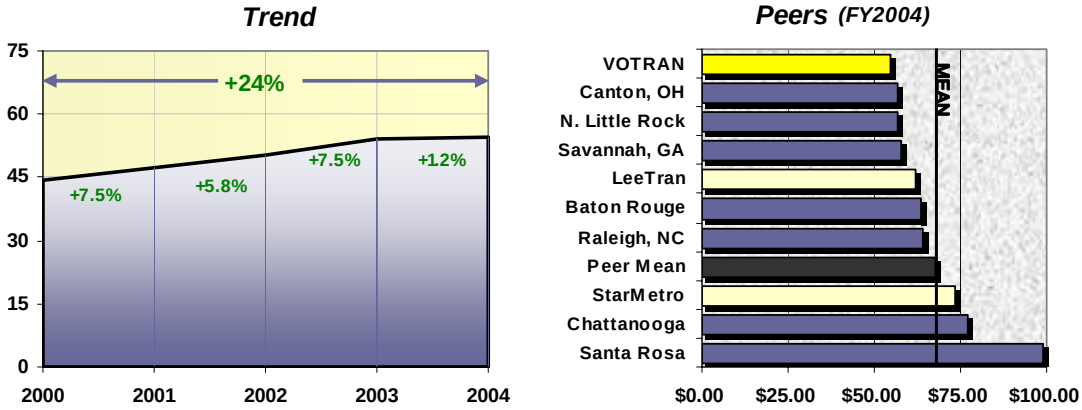


Figure 3-29
Operating Expense Per Revenue Hour



The next set of efficiency measures compare the maintenance expense with total revenue hours and the number of vehicles operated in maximum service to create ratios of cost efficiency. Figures 3-30 and 3-31 display VOTRAN's peer and trend data for these measures. Both measures remained relatively stable over the five year period, with actual decreases over the last two years. In FY 2004, VOTRAN was more efficient than the peer mean in both measures and was ranked 1st in both measures.

Figure 3-30
Maintenance Expense Per Revenue Hour

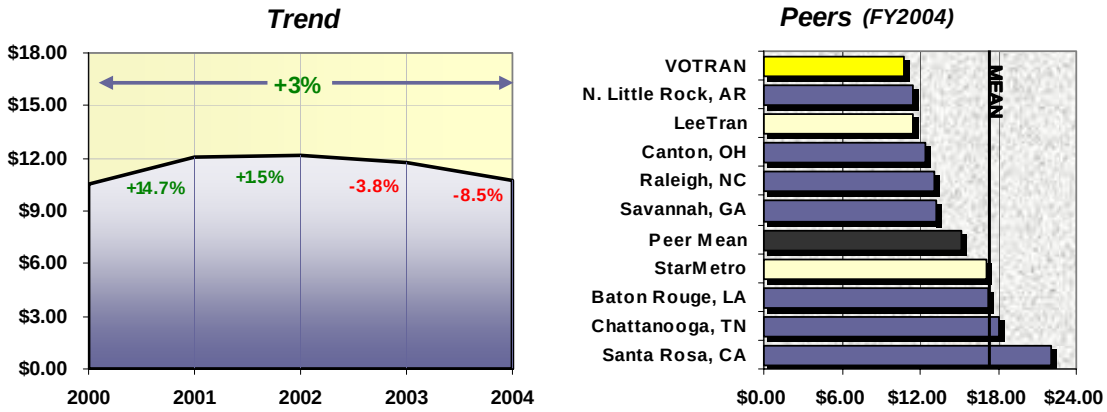
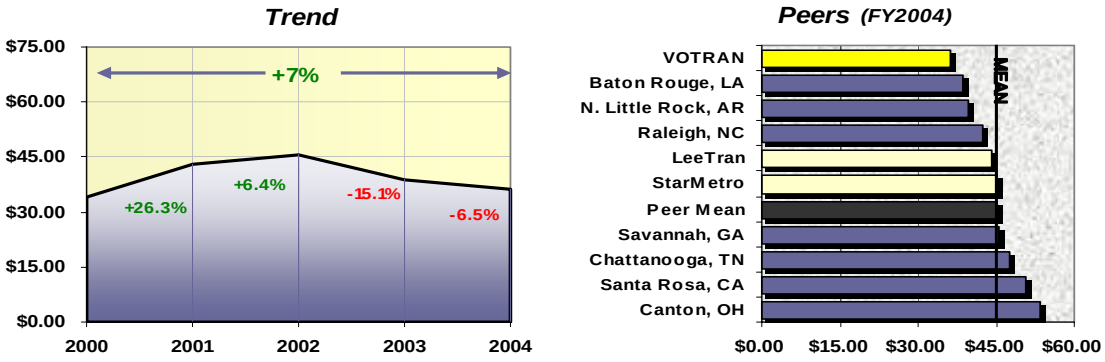


Figure 3-31
Maintenance Expense Per Vehicles Operating in Maximum Service



Farebox recovery is a ratio that shows the amount an agency receives in the form of passenger fares as a percentage of total operating expenses. VOTRAN's farebox recovery ratio decreased the first two years of the trend period, but bounced back slightly in FY 2003 and 2004 (Figure 3-32). Overall, the five year trend saw a decrease in the farebox recovery ratio from 18.5 percent to 16.8 percent. VOTRAN's farebox recovery ranked 5th among its peers, 16 percent lower than the peer mean.

Figure 3-32

Farebox Recovery

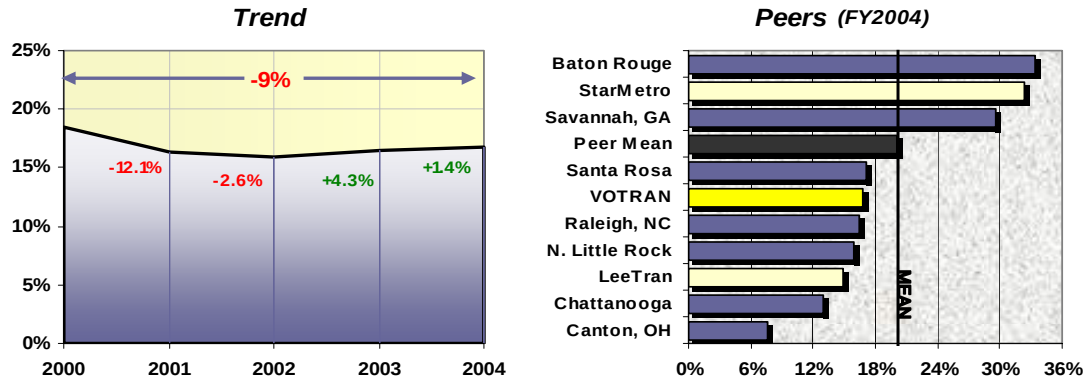


Table 3-6 shows VOTRAN's financial measures for FY 2000 through FY 2004 as well as the percent change over the five-year trend period.

Table 3-6
Trend Analysis – VOTRAN Financial Measures

Measure	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	%Change 2000-2004
Operating Expense	$7,317,569	$8,150,431	$8,281,829	$8,576,200	$8,872,418	21.2%
Maintenance Expense	$6,488,799	$6,662,486	$6,514,433	$7,286,012	$7,781,231	0.5%
Local Revenue	$7,240,425	$7,201,671	$7,103,695	$7,333,976	$7,844,349	8.3%
**Local Contribution*	*$5,565,042*	*$5,582,077*	*$5,586,858*	*$5,715,870*	*$5,952,363*	*7.0%*
**Passenger Fare Rev*	*$1,354,465*	*$1,325,842*	*$1,312,402*	*$1,417,835*	*$1,486,934*	*9.8%*
**Other Non-Fare Rev*	*$320,918*	*$293,752*	*$204,435*	*$200,271*	*$405,052*	*26.2%*
Average Fare	$0.33	$0.35	$0.44	$0.50	$0.51	52.7%
Operating Expense Per Capita	$17.40	$18.38	$18.68	$18.87	$18.93	8.8%
Operating Expense Per Passenger Trip	$1.81	$2.13	$2.80	$3.02	$3.05	68.7%
Operating Expense Per Revenue Mile	$2.89	$3.29	$3.36	$3.38	$3.41	18.0%
Operating Expense Per Revenue Hour	$44.20	$47.50	$50.25	$54.02	$54.68	23.7%
Maintenance Expense per Revenue Hour	$10.48	$12.03	$12.21	$11.74	$10.75	2.5%
Maintenance Expense per VOMS	$34.03	$42.99	$45.73	$38.84	$36.33	6.7%
Farebox Recovery	18.5%	16.3%	15.8%	16.5%	16.8%	-9.5%

**These three categories equal total local revenue.*

Table 3-7 shows VOTRAN's value for each measure compared to its Florida peers as well as the mean for the non-Florida peer systems. VOTRAN's deviation from each set of peers is also shown as a percentage difference from the mean values.

Table 3-7
Peer Analysis – Financial Measures, FY 2004

Measure	VOTRAN	Florida Peer Group Mean	VOTRAN: % From Mean	Non-Florida Peer Group Mean	VOTRAN: % From Mean
Operating Expense	$8,872,418	$9,966,104	-11%	$9,627,791	-8%
Maintenance Expense	$7,781,231	$2,075,314	-16%	$2,186,020	-20%
Local Revenue	$7,844,349	$8,583,234	-9%	$8,335,047	-6%
Average Fare	$0.51	$0.65	-22%	$0.71	-28%
Operating Expense per Capita	$18.93	$48.54	-61%	$32.39	-42%
Operating Expense per Passenger Trip	$3.05	$3.14	-3%	$4.23	-28%
Operating Expense per Revenue Mile	$3.41	$4.62	-26%	$4.44	-23%
Operating Expense per Revenue Hour	$54.68	$67.67	-19%	$67.78	-19%
Maintenance Expense per Rev Hour	$10.75	$13.93	-23%	$15.37	-30%
Maintenance Expense per VOMS	$36.33	$44.63	-19%	$45.45	-20%
Farebox Recovery	16.8%	23.6%	-29%	19.0%	-12%

Fixed Route Performance Findings

In order to draw some general conclusions about VOTRAN's fixed route performance, it is beneficial to create indicator scales that depict relative improvement/decline for each performance measure for the trend analysis and relative strength/weakness for each performance measure for the peer analysis. The following indicator scales should be used strictly as a guideline and may not indicate improvement, decline, strength, or weakness due to extenuating factors. The scales are presented in Table 3-8 and 3-9 below.

Table 3-8
Trend Indicator Scale

Indicator	% Change over Trend Period	Performance
+++	+30% or higher	Major improvement
++	+16% to +29%	Substantial improvement
+	+5% to +15%	Moderate improvement
0	-4% to +4%	Slight improvement/decline or no change
-	-5% to -15%	Moderate decline
--	-16% to -29%	Substantial decline
---	-30% or lower	Major decline

Table 3-9
Peer Indicator Scale

Indicator	% Difference from Peer Mean	Performance
+++	+30% or higher	Major strength
++	+16% to +29%	Substantial strength
+	+5% to +15%	Moderate strength
0	-4% to +4%	Comparable
-	-5% to -15%	Moderate weakness
--	-16% to -29%	Substantial weakness
---	-30% or lower	Major weakness

Operational Measures

Tables 3-10 through 3-15 show the individual indicators for each performance measure selected for this analysis. In terms of service operational measures, VOTRAN's ridership substantially decreased, but passenger miles increased due to a higher average passenger trip length. The amount of service supplied remained about the same over the trend period. VOTRAN's service measures remain an area of strength as compared to their peers, especially in the areas of passenger miles and route miles.

Table 3-10
Operational Measures: Service

Measure	% Change 2000-2004	Trend Indicator	% From FY 2004 Peer Mean	Peer Indicator
Service Area Population	12%	+	55%	+++
Service Area Density	12%	+	-71%	---
Passenger Trips	-28%	--	2%	0
Passenger Miles	4%	0	53%	+++
Average Passenger Trip Length	44%	+++	33%	+++
Revenue Miles	3%	0	15%	+
Revenue Hours	-2%	0	10%	+
Route Miles	-8%	+	112%	+++

Table 3-11 displays the peer and trend performance for vehicle operational measures. VOTRAN's had a slight decrease in both vehicles and vehicles operated in maximum service and therefore each vehicle was utilized more to provide about the same amount of service. Vehicle utilization is higher at VOTRAN than its peers, yet the average age of the fleet is also younger.

Table 3-11
Operational Measures: Vehicle

Measure	% Change 2000-2004	Trend Indicator	% From FY 2004 Peer Mean	Peer Indicator
Vehicles Available	-11%	-	-7%	-
Vehicles Operated in Maximum Service	-6%	-	-1%	0
Revenue Miles per Vehicle in Max. Service	9%	+	15%	+
**Average Age of Fleet*	*7%*	-	*-23%*	++

** This measure is given a positive indicator for a negative % and vice versa.*

Table 3-12 displays the peer and trend performance for employee operational measures. Passenger trips decreased while the number of employees increased slightly leading to a major decrease in passenger trips per Employee FTE. VOTRAN tracks close to its peer mean for each of these measures.

Table 3-12
Operational Measures: Employee

Measure	% Change 2000-2004	Trend Indicator	% From FY 2004 Peer Mean	Peer Indicator
Total Employee FTEs	3%	0	-3%	0
Revenue Hours per Employee FTE	-5%	-	8%	+
Passenger Trips per Employee FTE	-31%	---	-3%	0

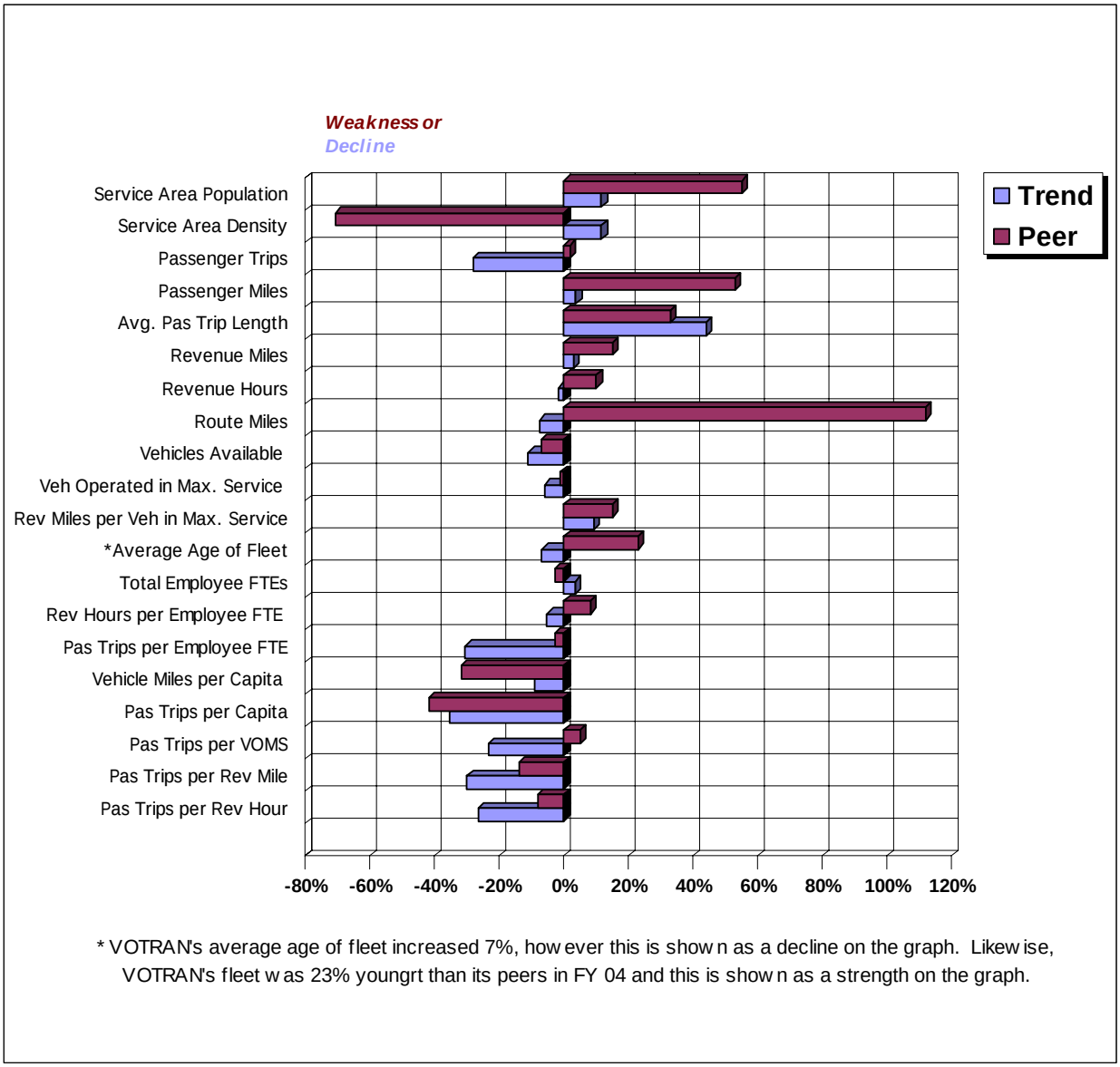
Table 3-13 displays the peer and trend performance for effectiveness operational measures. VOTRAN has seen a drastic decrease in all of these measures due to the decrease in passenger trips. Compared to its peers, VOTRAN is below the peer mean in all measures save passenger trips per vehicles in maximum service.

Table 3-13
Operational Measures: Effectiveness

Measure	% Change 2000-2004	Trend Indicator	% From FY 2004 Peer Mean	Peer Indicator
Vehicle Miles per Capita	-9%	-	-32%	---
Passenger Trips per Capita	-36%	---	-42%	---
Passenger Trips per VOMS	-24%	--	5%	+
Passenger Trips per Revenue Mile	-30%	---	-14%	-
Passenger Trips per Revenue Hour	-27%	--	-8%	-

Figure 3-33 displays a complete picture of all selected peer and trend operational measures. Bars to the left of zero percent indicate a declining trend or a weakness for VOTRAN when compared to its peers. Bars to the right of zero percent indicate an increasing trend or a strength compared to its peers.

Figure 3-33
Peer and Trend Summary: Operational Measures



* VOTRAN's average age of fleet increased 7%, however this is shown as a decline on the graph. Likewise, VOTRAN's fleet was 23% youngrt than its peers in FY 04 and this is shown as a strength on the graph.

Financial Measures

The analysis of financial performance measures differ from operational performance measures, because they are not ranked on a peer and trend indicator scale. There are three primary reasons for not using peer and trend indicators. First, the national inflation rate, as defined by the percentage change in the Consumer Price Index (CPI), must be considered when looking at the trend in financial measures. The CPI has increased at a steady rate of approximately 2.5 percent per year over the last decade, and has increased approximately 12 percent over the five-year trend period (FY 2000 to FY 2004). Therefore, if an agency sees an increase in local funding by 12 percent over this time frame, they are only matching the inflation rate and therefore in real dollars, there has been no real increase. Secondly, some financial measures are positive when their values are negative and vice versa (i.e. operating expense per revenue hour declines 18 percent and this is viewed as a positive outcome). Finally, some financial measures can be seen as positive or negative depending on the goals of the agency. For example, an agency's operating expenses will rise during periods of system growth, which can be considered a positive for transit. However, operating expenses can also rise because of less efficient management, which would be a negative factor.

Tables 3-14 and 3-15 show the peer and trend performance for the selected financial operating measures. Table 3-14 looks only at expense and revenue measures. Like most every agency, VOTRAN has experienced operating and maintenance expense increases during the trend period. Total operating expenses increased 21 percent and total maintenance expenses (as a subset of total operating expenses) increased 1 percent. Factoring in the 12 percent inflation rate, these increases are not unreasonable. VOTRAN's operating expense was 9 percent lower than its peer mean, while maintenance expense was 19 percent lower. VOTRAN's total local revenue has risen 8 percent, but is still 7 percent lower than its peer mean. VOTRAN's average fare jumped 53 percent even without an increase in fares.

Table 3-14
Financial Measures: Expense & Revenue

Measure	% Change 2000-2004	% From Overall Peer Mean
Total Operating Expense	21%	-9%
Total Maintenance Expense	1%	-19%
Total Local Revenue	8%	-7%
Average Fare	53%	-27%

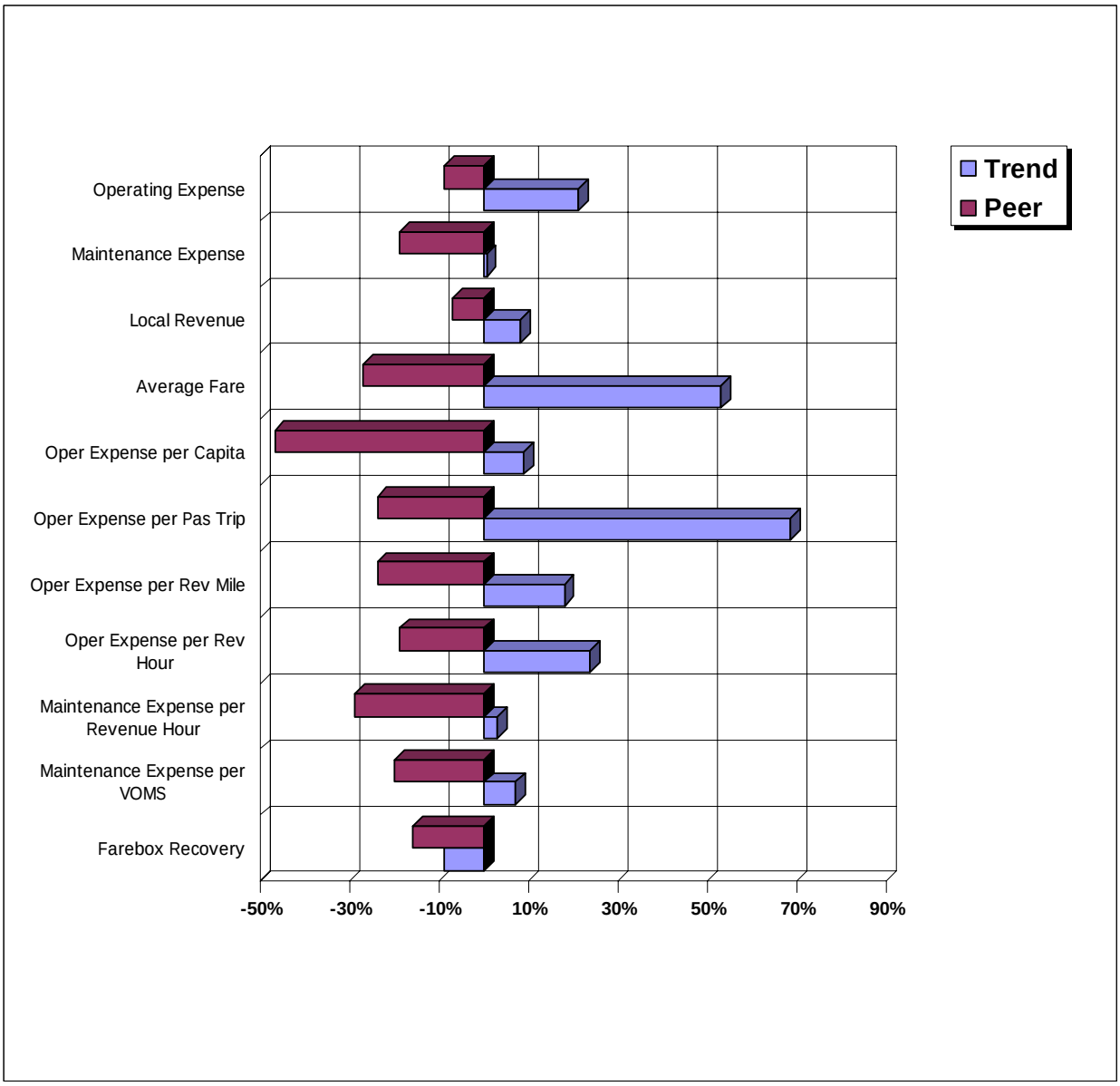
Table 3-15 shows the peer and trend performance for financial efficiency measures. VOTRAN's operating expenses have risen while other measures have remained flat or decreased, leading to decreases in efficiency. However, VOTRAN still ranked below the overall peer mean in all efficiency measures. Farebox recovery has decreased 9 percent and is now 16 percent lower than the peer mean.

Table 3-15
Financial Measures: Efficiency

Measure	% Change 2000-2004	% From Overall Peer Mean
Operating Expense per Capita	9%	-47%
Operating Expense per Passenger Trip	69%	-24%
Operating Expense per Revenue Mile	18%	-24%
Operating Expense per Revenue Hour	24%	-19%
Maintenance Expense per Revenue Hour	3%	-29%
Maintenance Expense per VOMS	7%	-20%
Farebox Recovery	-9%	-16%

Figure 3-34 displays a summary of all of VOTRAN's peer and trend financial measures. Bars to the left of zero percent indicate that a measure has decreased or is smaller than the peer average. Bars to the right of zero percent indicate that a measure has increased or is larger than the peer average. The total inflation rate for the five-year period is shown on the graphic as a dashed line. While expenses are increasing for VOTRAN, compared to its peers, VOTRAN's expenses are low and expense per unit of service (capita, trip, revenue miles or hours) is substantially lower.

Figure 3-34
Peer and Trend Summary: Financial Measures



PART TWO: DEMAND RESPONSE SERVICE

Part Two of the performance review summarizes the performance of VOTRAN's paratransit service. Paratransit services (also known as demand response in NTD reporting) consist of directly operated and purchased transportation services. Directly operated services are operated by VOTRAN themselves and the data will be fairly consistent from year to year because it is compiled from one source. Purchased transportation services are contracted out to other agencies that provide the services. These agencies are responsible for tracking their performance and reporting data to VOTRAN which then compiles the data for NTD. Because the number of agencies providing service vary from year to year and the method of tracking performance vary from agency to agency, purchased transportation service performance tends to vary considerably from year to year. That being said, it is still worthwhile to look at the performance trends for all demand response service whether directly operated or purchased and that is what is done in this analysis (a five year trend from 2000 to 2004).

The second method of analysis is the peer review. The method of peer review for demand response service is vastly different from fixed route. Because of large discrepancies in operating philosophies among agencies and the issue of directly operated versus purchased transportation, no individual comparisons are made between agencies, but rather VOTRAN is compared to the peer group as a whole.

For the demand response performance evaluation, the same operational and financial measures from the fixed-route analysis were used, with a few exceptions. First, because of the nature of demand response services, the number of route miles is not applicable. Second, data related to employees is typically not collected for demand response services. Finally, local revenues or passenger fares are not included, as the fare structure of demand response service varies widely from transit agency to transit agency and therefore is not a measure that will provide an accurate reflection of performance. See Table 3-16 for a complete list of measures that are included in this review.

The reader should also use caution in interpreting some of the specific indicators in the demand response service peer analysis. Due to differing institutional and legal structures, demand response services are organized differently from community to community, and especially from state to state. As a result, some data definitions vary by system.

Table 3-16
Selected Performance Review Measures
Demand Response Service

Operational Measures	Financial Measures
Service	***Expense and Revenue***
Service Area Population	Operating Expenses
Service Area Density	Maintenance Expenses
Passenger Trips	
Passenger Miles	***Efficiency***
Average Passenger Trip Length	Operating Expense per Capita
Revenue Miles	Operating Expense per Passenger Trip
Revenue Hours	Operating Expense per Revenue Mile
	Operating Expense per Revenue Hour
Vehicle	
Vehicles Available in Maximum Service	
Vehicles Operated in Maximum Service	
Revenue Miles per Vehicle in Max. Service	
Average Age of Fleet (in yrs.)	
Effectiveness	
Vehicle Miles Per Capita	
Passenger Trips per Capita	
Passenger Trips per Vehicles in Max. Service	
Passenger Trips per Revenue Mile	
Passenger Trips per Revenue Hour	

VOTRAN DEMAND RESPONSE YEAR AT-A-GLANCE

A basic overview of VOTRAN's demand response performance based on the selected performance measures is shown in Table 3-17. The source of the data is VOTRAN's FY 2003 and FY 2004 NTD reports. Table 3-17 also displays the percent change for each measure over the last fiscal year.

Table 3-17
VOTRAN Demand Response Service Year At-a-Glance (FY 03 - FY 04)

SELECTED PERFORMANCE MEASURES	FY 2003	FY 2004	% CHANGE 2003 - 2004
OPERATIONAL MEASURES			
Service Area Population	454,581	468,663	3.1%
Service Area Density	376.62	388.29	3.1%
Passenger Trips	313,961	315,647	0.5%
Passenger Miles	2,432,687	3,097,188	27.3%
Average Passenger Trip Length	7.75	9.81	26.6%
Vehicle Miles	2,591,704	2,622,309	1.2%
Revenue Miles	2,426,722	2,436,910	0.4%
Revenue Hours	170,993	170,078	-0.5%
Vehicles Available	83	95	14.5%
Vehicles Operated in Maximum Service	77	75	-2.6%
Revenue Miles per Vehicles in Maximum Service	31,516	32,492	3.1%
Average Age of Fleet (in years)	3.94	4.60	16.8%
Vehicle Miles per Capita	5.70	5.59	-1.9%
Passenger Trips per Capita	0.69	0.67	-2.5%
Passenger Trips per Vehicles in Maximum Service	4.08	4.21	3.2%
Passenger Trips per Revenue Mile	0.13	0.13	0.1%
Passenger Trips per Revenue Hour	1.84	1.86	1.1%
FINANCIAL MEASURES			
Operating Expense	$5,673,818	$5,786,963	2.0%
Maintenance Expense	$846,345	$903,300	6.7%
Operating Expense per Capita	$12.48	$12.35	-1.1%
Operating Expense per Passenger Trip	$18.07	$18.33	1.4%
Operating Expense per Revenue Mile	$2.34	$2.37	1.6%
Operating Expense per Revenue Hour	$33.18	$34.03	2.5%

DEMAND RESPONSE TREND ANALYSIS

Utilizing VOTRAN's NTD reports, a demand response trend analysis for fiscal years 2000 through 2004 was conducted to track the performance of VOTRAN's demand response service over a five-year time period. Performance measures are grouped into categories and presented in tabular form (Tables 3-18 and 3-19), including the percent change for each measure.

Graphics throughout this chapter (Figures 3-33 through 3-55) illustrate the selected operational and financial measures. The trend area graphs show VOTRAN's performance in each measure for the five-year period from FY 2000 to FY 2004. The percent change over this period is shown at the top of each graph. The percent change from year to year is also displayed.

A comparison of VOTRAN's performance with its peer groups as a whole is displayed later in this chapter in Tables 3-21 (Operational Measures) and 3-22 (Financial Measures). These tables show VOTRAN's value for each measure and the peer group mean, minimum, and maximum. VOTRAN's deviation from the peer group mean is shown as a percentage of the mean value.

Operational Performance Measures

Service Measures

VOTRAN, which serves Volusia County, reported a service area population of 468,663 in FY 2004. This is an 11 percent increase to the service area population reported in FY 2000. VOTRAN's service area density which divides the service area population into the square mileage of the service area also rose 11 percent over the trend period as the service area size was not adjusted (Figures 3-34 and 3-36).

Figure 3-35
Service Area Population (000's)

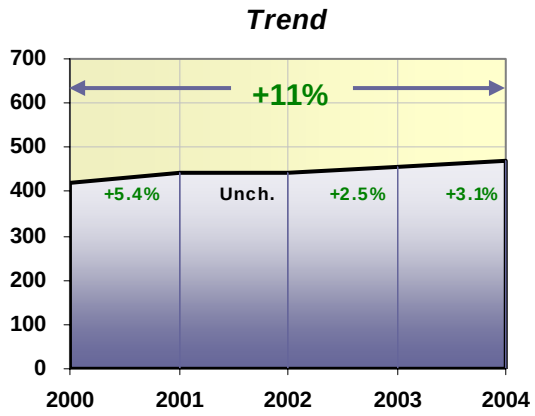
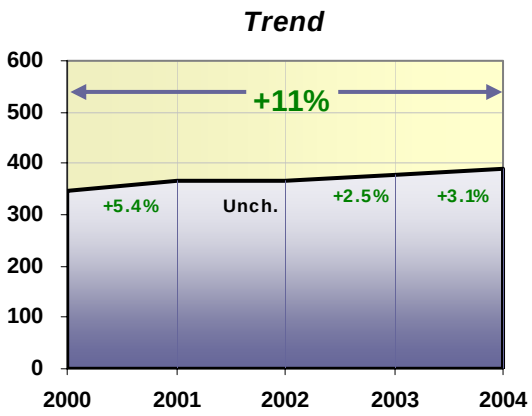


Figure 3-36
Service Area Density
(Pop. per Sq. Mile)



Passenger trips on VOTRAN's demand response system had remained fairly level, rising just 2 percent over the five year trend period as shown in Figure 3-37. The number of passenger miles is a NTD measure that multiplies the number of passenger trips by the average passenger trip length to estimate the total number of miles passengers traveled. Passenger Miles on VOTRAN fell slightly over the trend period (as shown in Figure 3-38).

Figure 3-37
Passenger Trips (000's)

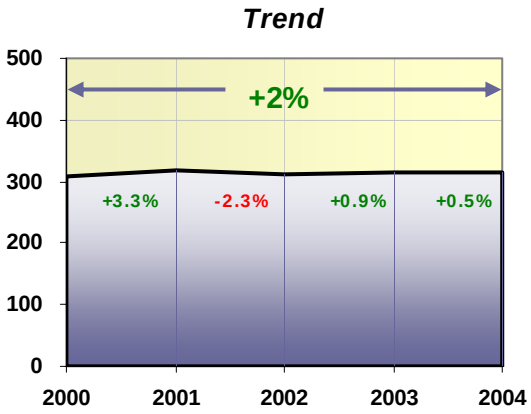
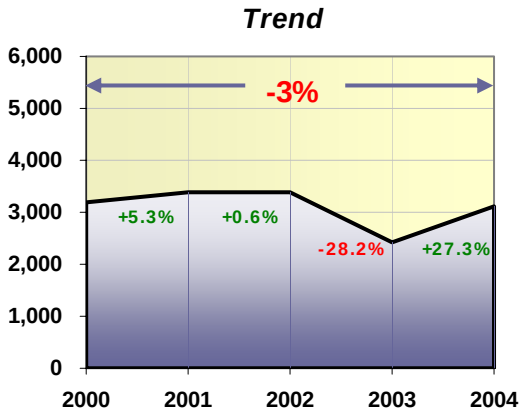
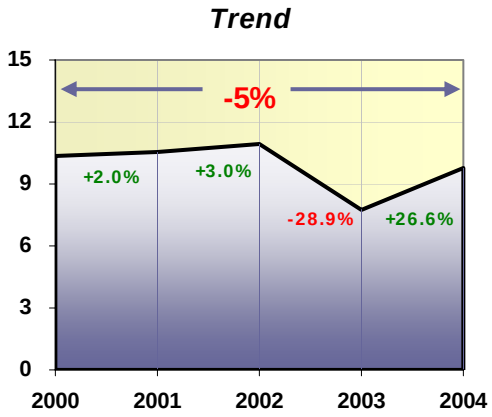


Figure 3-38
Passenger Miles (000's)



VOTRAN's average passenger trip was 10.37 in FY 2000, and has decreased to 9.81 in FY 2004 (Figure 3-39). A large decrease (29 percent) occurred from FY 2002 to FY 2003 coinciding with the drop in passenger miles.

Figure 3-39
Average Passenger Trip Length (Miles)



VOTRAN's revenue miles of service over the five-year period are displayed in Figure 3-40. The number of revenue miles operated by VOTRAN increased 17 percent since FY 2000, with the largest increase occurring the first year of the trend period. VOTRAN's revenue hours of service over the five-year period are displayed in Figure 3-41. The number of revenue hours has increased a sizeable 49 percent since FY 2000.

Figure 3-40
Revenue Miles (000's)

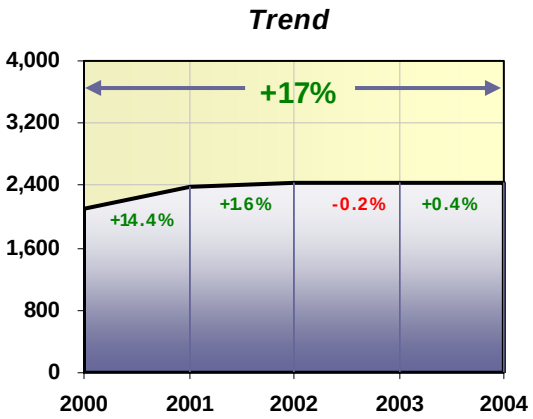
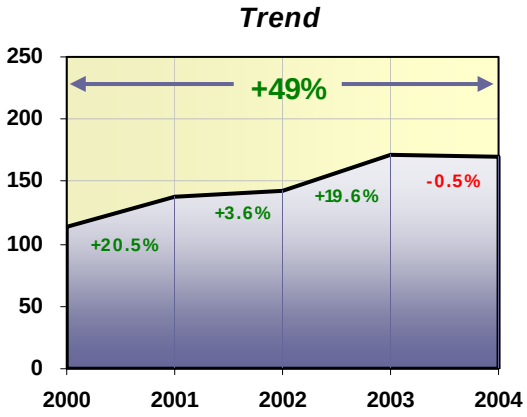


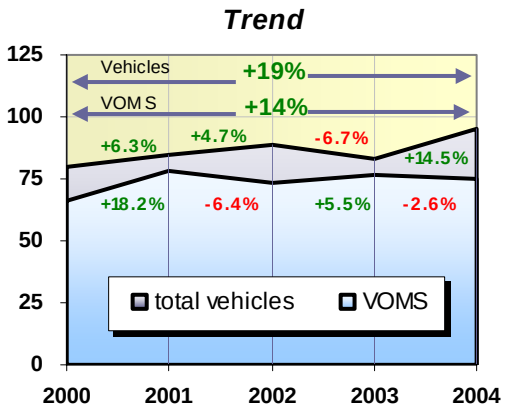
Figure 3-41
Revenue Hours (000's)



Vehicle Measures

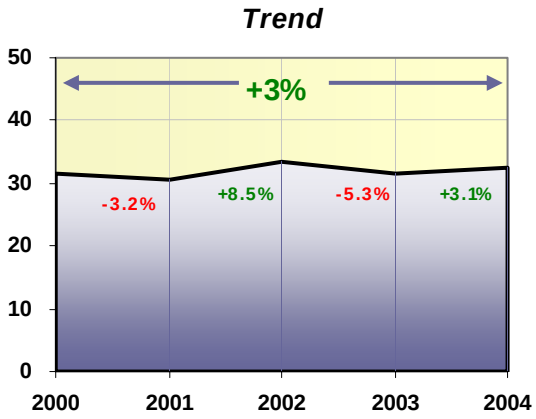
Figure 3-42 depicts the trend data for vehicles available and operated in maximum service. These two variables were combined into one graph to show VOTRAN's overall vehicle trend. The number of vehicles in the fleet has steadily increased since FY 2000. In FY 2000, VOTRAN's demand response fleet was comprised of 80 vehicles. By FY 2004 that number had increased to 95. Vehicles operated in maximum service have also risen from 66 to 75 in the same period.

Figure 3-42
Total Vehicles and Vehicles in Maximum Service



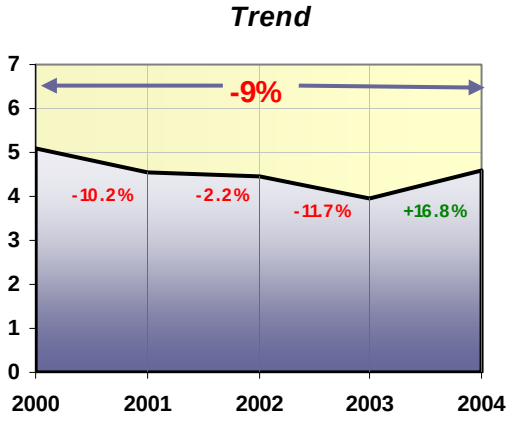
Revenue miles per vehicle in maximum service is a measure showing the degree of utilization of each vehicle in service. The larger the number of revenue miles, the more demand placed upon each vehicle. Figure 3-43 shows that VOTRAN's revenue miles per vehicle in maximum service has increased 3 percent over the five-year period as the growth in revenue miles of service has slightly outpaced the number of vehicles.

Figure 3-43
Revenue Miles Per Vehicles in Maximum Service (000's)



VOTRAN's average age of their fleet has been reduced by 9 percent over the 5 year period, despite a 17 percent increase in the last fiscal year (Figure 3-44). The average age of the demand response system fleet in FY 2004 stood at 4.6 years.

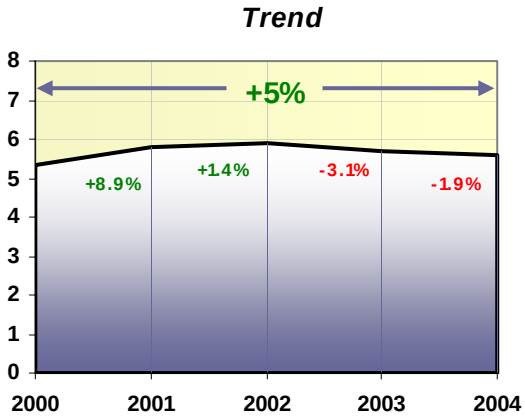
Figure 3-44
Average Age of Fleet (Years)



Effectiveness Measures

VOTRAN's service supply, as measured by the number of vehicle miles per capita, increased 5 percent during the five-year trend period (Figure 3-45), increasing the first 2 years, but falling back over the last 2 years.

Figure 3-45
Vehicle Miles per Capita



As with the fixed-route service, four measures that reveal the service productivity of a demand response system are passenger trips per capita, passenger trips per vehicle operated in maximum service, passenger trips per revenue mile, and passenger trips per revenue hour. The peer and trend data for VOTRAN is shown in the next set of Figures (3-46 through 3-49). VOTRAN has experienced decreases in all of these measures over the five-year time period, due to increased service and population, but flat ridership.

Figure 3-46
Passenger Trips Per Capita

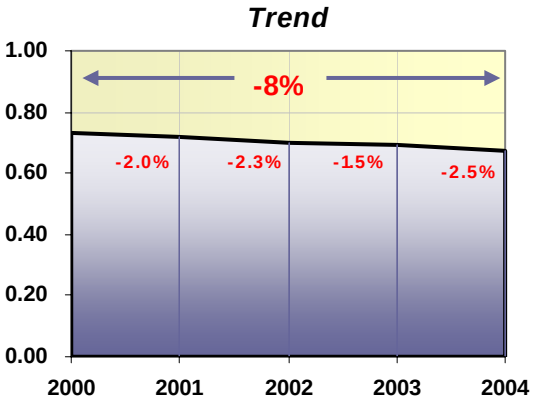


Figure 3-47
Pas Trips Per Veh in Max Service

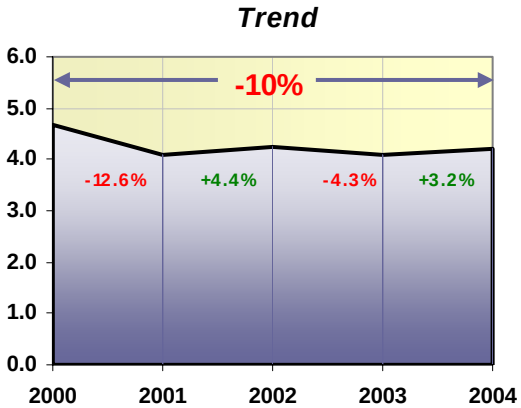


Figure 3-48

Passenger Trips Per Revenue Mile

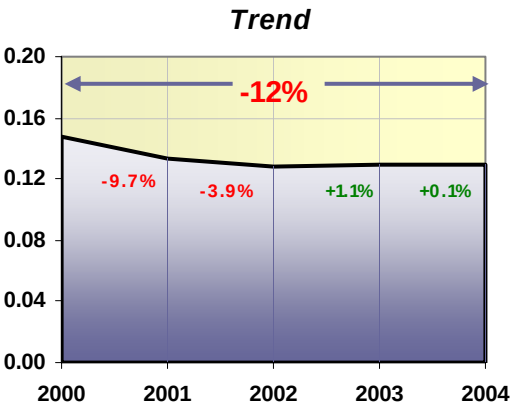


Figure 3-49

Passenger Trips Per Revenue Hour

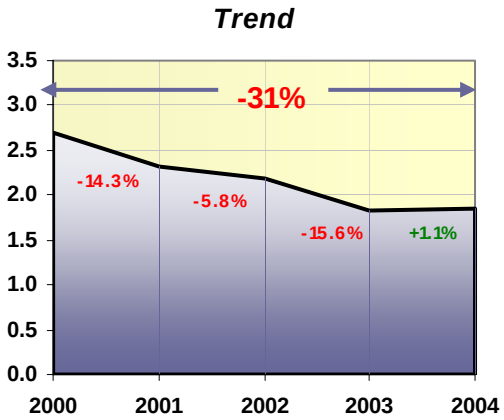


Table 3-18 summarizes the operational measure graphs by showing the data for FY 2000 through FY 2004 as well as the percent change over the five-year trend period.

Table 3-18
Trend Analysis – VOTRAN Operational Measures

Measure	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	% Change 2000-2004
Service Area Population	420,431	443,343	443,343	454,581	468,663	11.5%
Service Area Density	348.33	367.31	367.31	376.62	388.29	11.5%
Passenger Trips	308,277	318,439	311,013	313,961	315,647	2.4%
Passenger Miles	3,197,978	3,368,695	3,389,624	2,432,687	3,097,188	-3.2%
Average Passenger Trip Length	10.37	10.58	10.90	7.75	9.81	-5.4%
Revenue Miles	2,090,569	2,392,655	2,430,605	2,591,704	2,622,309	16.6%
Revenue Hours	114,499	137,991	143,024	170,993	170,078	48.5%
Vehicles Available	80	85	89	83	95	18.8%
Vehicles Operated in Max. Service	66	78	73	77	75	13.6%
Rev. Miles per Veh. in Max. Service	31,675	30,675	33,296	31,516	32,492	2.6%
Average Age of Fleet	5.08	4.56	4.46	3.94	4.60	-9.4%
Vehicle Miles per Capita	5.33	5.80	5.88	5.70	5.59	5.0%
Passenger Trips per Capita	0.73	0.72	0.70	0.69	0.67	-8.1%
Passenger Trips per VOMS	4.67	4.08	4.26	4.08	4.21	-9.9%
Passenger Trips per Rev Mile	0.15	0.13	0.13	0.13	0.13	-12.2%
Passenger Trips per Rev Hour	2.69	2.31	2.18	1.84	1.86	-31.1%

Financial Performance Measures

Expense and Revenue Measures

Figure 3-50 shows that VOTRAN's total operating expenses decreased from FY 2000 to FY 2001, but have increased since then for a total of 17 percent over the trend period. As a subset of total operating expenses, VOTRAN has seen its maintenance expenses rise 24 percent over the five-year period as shown in Figure 3-51, exhibiting a similar trend to overall operating expenses.

Figure 3-50
Operating Expenses ($000's)

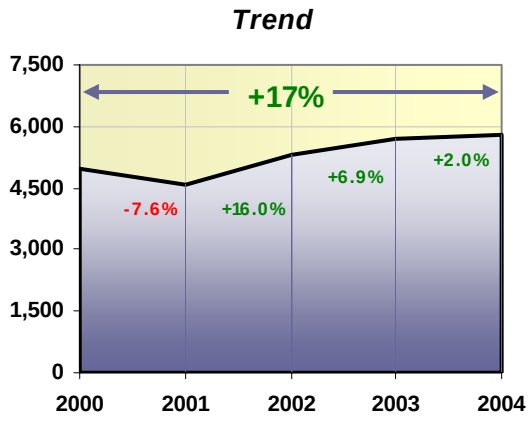
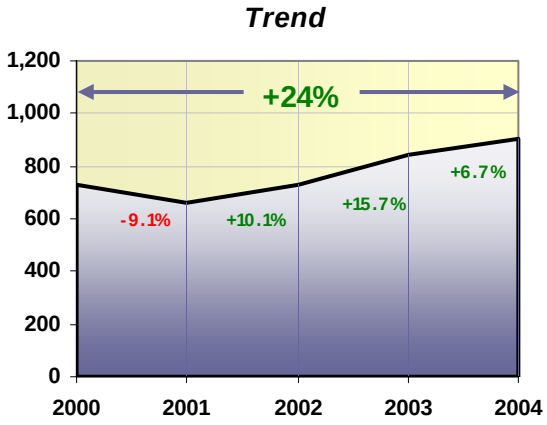


Figure 3-51
Maintenance Expenses ($000's)



Efficiency Measures

Financial efficiency measures use the overall operating expense and other performance measures to create ratios of cost efficiency. The measures include operating expenses per capita, per passenger trip, per revenue mile and per revenue hour. Figures 3-52 through 3-55 display VOTRAN's trend data for these measures. Operating expense per capita and operating expense per passenger trip both have increased since FY 2000, but operating expense per revenue mile remains unchanged, and operating expense per revenue hour decreased. One thing that is consistent for all four measures is that there was a large drop from FY 2000 to FY 2001 and then generally an increase since then.

Figure 3-52
Operating Expense Per Capita

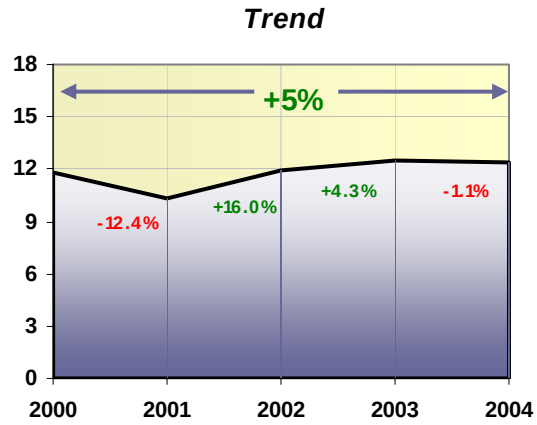


Figure 3-53
Operating Expense Per Pas. Trip

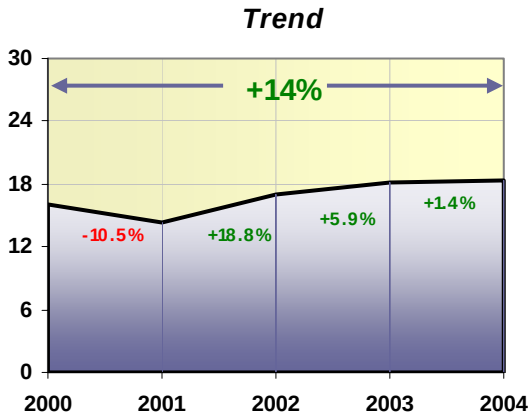


Figure 3-54
Operating Expense Per Revenue Mile

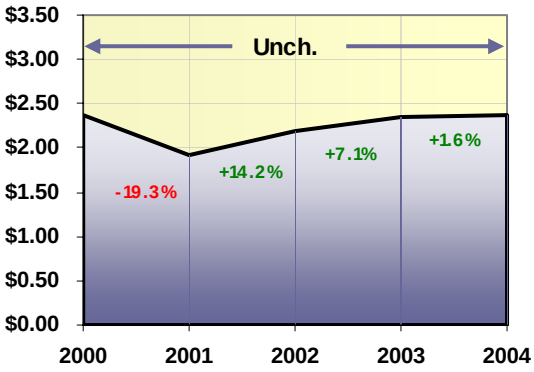


Figure 3-55
Operating Expense Per Revenue Hour

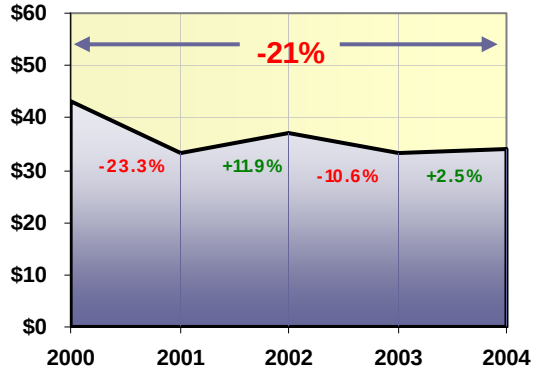


Table 3-19 summarizes the financial measure graphs by showing the data for FY 2000 through FY 2004 as well as the percent change over the five-year trend period.

Table 3-19
Trend Analysis – VOTRAN Financial Measures

Measure	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	%Change 2000-2004
Operating Expense	$4,950,282	$4,574,605	$5,306,938	$5,673,818	$5,786,963	16.9%
Maintenance Expense	$731,174	$664,272	$731,336	$846,345	$903,300	23.5%
Operating Expense Per Capita	$11.77	$10.32	$11.97	$12.48	$12.35	4.9%
Operating Expense Per Passenger Trip	$16.06	$14.37	$17.06	$18.07	$18.33	14.2%
Operating Expense Per Revenue Mile	$2.37	$1.91	$2.18	$2.34	$2.37	0.3%
Operating Expense Per Revenue Hour	$43.23	$33.15	$37.11	$33.18	$34.03	-21.3%

DEMAND RESPONSE PEER ANALYSIS

A demand response peer review analysis was conducted to compare VOTRAN's performance with other similar transit systems in the United States. The Florida Transit Information System program (FTIS), which was jointly developed by FDOT and the Lehman Center for Transportation Research (LCTR) at Florida International University (FIU) is a useful tool in selecting suitable peer systems based on NTD data. FTIS was utilized to select VOTRAN's potential peer systems by evaluating the following data sets: vehicles operated in maximum service, service area population, service area population density and overall operating expense. The top 30 ranked systems and all systems that were peers in the 2002 TDP were selected for further analysis.

A more detailed method was utilized for selecting the peer systems from this subset. Four additional characteristics taken from Census data: county population, county population density, median age, and per capita income (adjusted based on the Cost of Living Index or COLI) were combined with the four NTD characteristics listed above. The two county population characteristics were given half the weight of the other characteristics, so as not to overvalue the importance of population data. Census data was utilized to select peer systems because it allows for a comparison of county demographics in addition to system operating characteristics. The more detailed the ranking process, the more likely that truly comparable systems will be selected as peers leading to more useful results.

Each system is compared to VOTRAN in a composite ranking table. For each characteristic, the percentage difference between the agencies and VOTRAN are calculated. These percentages are added together to form a composite score for each agency. The lower the composite score, the more similar an agency's characteristics are to VOTRAN's.

After the initial rankings were completed, a regional adjustment was incorporated to favor systems in geographically similar regions. Systems in Southeastern states were assigned a 100% adjustment and Central and Midwestern states were assigned a 25% adjustment to their scores. Systems in any other region had no adjustments made to their scores. Although a regional adjustment reflects a potential bias, this adjustment was intended to make it more likely that systems with economic circumstances similar to Volusia County were selected. With a regional adjustment, if a system from outside the southeast region remained in the selected peer group, then it can be considered a peer of VOTRAN.

Based on the ranking process described above, generally the top 8 to 12 systems ranked are selected as peers. The top 9 systems with the lowest composite scores were selected (see Table 3-20). Manatee County Area Transit (MCAT) was also selected in order to have three Florida peers.

Table 3-20
VOTRAN's Demand Response Peer Systems, FY 2004

Florida Peer Systems	Non-Florida Peer Systems
Space Coast Area Transit (Cocoa, FL)	Worcester Regional Transit Authority (Worcester, MA)
Sarasota County Area Transit (Sarasota, FL)	Red Rose Transit Authority (Lancaster, PA)
Manatee County Area Transit (Bradenton, FL)	Memphis Area Transit Authority (Memphis, TN)
	Corpus Christi Regional Transportation Authority (Corpus Christi, TX)
	Kitsap Transit (Bremerton, WA)
	LAKETRAN (Grand River, OH)
	Charlotte Area Transit System (Charlotte, NC)

Table 3-21 shows VOTRAN's value for each operational measure as well as a comparison to the peer group mean. VOTRAN's deviation from the peer group mean is shown as a percentage of the mean value. VOTRAN is operating more service in the form of revenue miles and revenue hours than any of its peers. Revenue miles operated are 46 percent higher than the peer mean and revenue hours operated is 63 percent higher. For the most part, this has not translated into higher ridership as VOTRAN's ridership is only 9 percent higher than the peer mean. This also translates into lower service ratios as passenger trips per capita, per VOMS, per revenue mile, and per revenue hour are all at least 16 percent lower than the peer mean.

Table 3-21
Peer Analysis – Operational Measures, FY 2004

Measure	VOTRAN	Peer Group Minimum	Peer Group Maximum	Peer Group Mean	VOTRAN: % From Mean
Service Area Population	468,663	227,511	888,627	433,863	8%
Service Area Density	388.29	378.30	3,085.51	1,125.31	-65%
Passenger Trips	315,647	89,754	520,062	288,453	9%
Passenger Miles	3,097,188	584,870	9,184,360	2,947,329	5%
Average Passenger Trip Length	9.81	6.23	17.66	9.54	3%
Revenue Miles	2,622,309	584,870	2,530,627	1,665,396	46%
Revenue Hours	170,078	39,177	137,621	104,619	63%
Vehicles Available	95	28	144	81	17%
Vehicles Operated in Max. Service	75	22	114	60	25%
Rev. Miles per Veh. in Max. Service	32,492	17,761	63,510	31,781	2%
Average Age of Fleet	4.60	2.20	11.40	4.66	-1%
Vehicle Miles per Capita	5.59	2.44	12.92	5.43	3%
Passenger Trips per Capita	0.67	0.28	1.95	0.81	-17%
Passenger Trips per VOMS	4.21	3.37	7.37	5.02	-16%
Passenger Trips per Rev Mile	0.13	0.12	0.26	0.17	-24%
Passenger Trips per Rev Hour	1.86	1.67	4.03	2.70	-31%

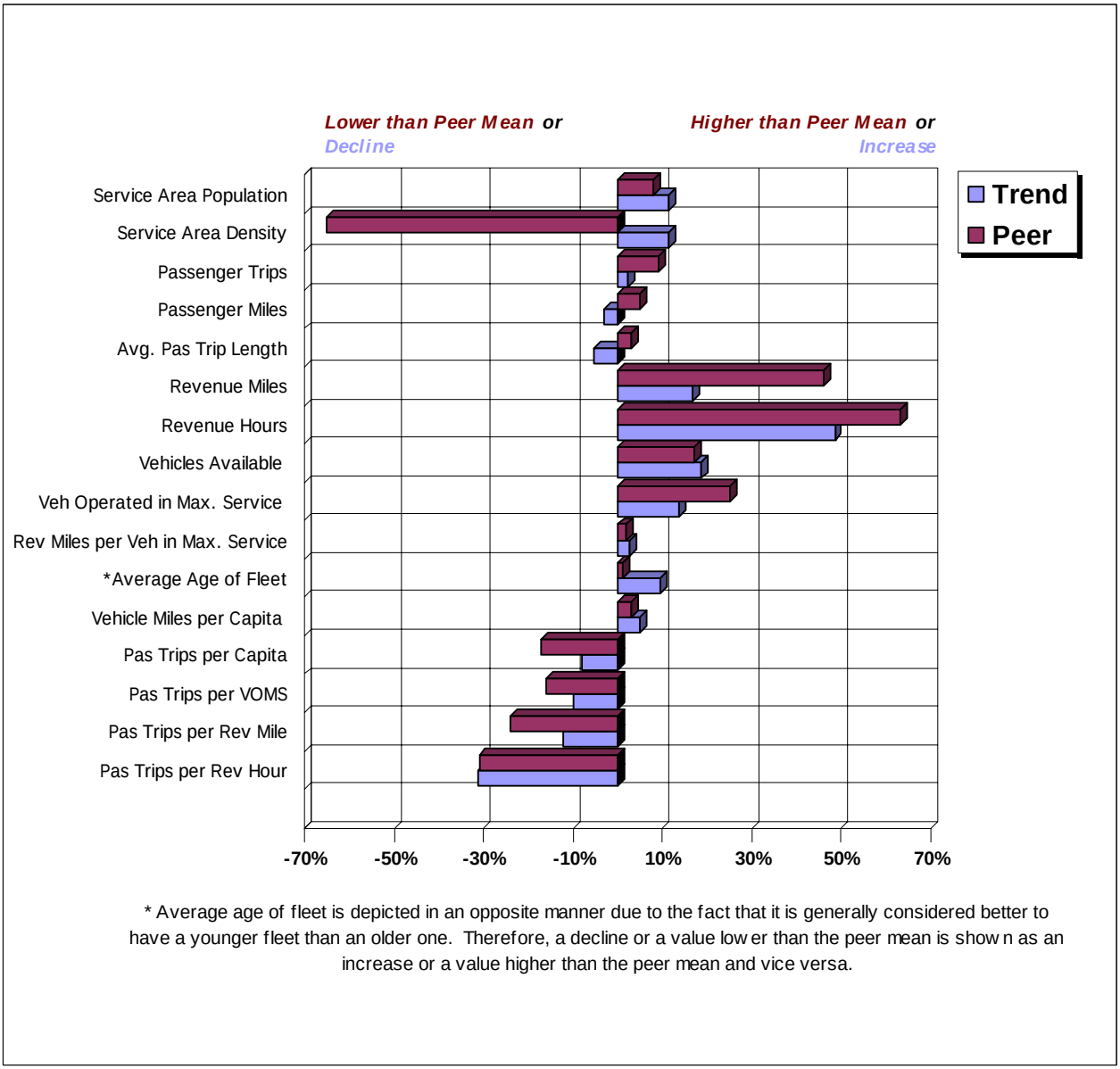
Table 3-22 shows VOTRAN's value for each measure compared to its Florida peers as well as the mean for the non-Florida peer systems. VOTRAN's deviation from each set of peers is also shown as a percentage difference from the mean values. VOTRAN's expenses are higher which makes sense because as shown in Table 3-22, it is operating more service than its peers. Despite higher expenses, VOTRAN is more cost efficient on average than its peers as evidenced by the efficiency ratios. On average, VOTRAN is expending $34.03 to operate one revenue hour of service, which is 28 percent below the peer mean and near the minimum for the peer group.

Table 3-22
Peer Analysis – Financial Measures, FY 2004

Measure	VOTRAN	Peer Group Minimum	Peer Group Maximum	Peer Group Mean	VOTRAN: % From Mean
Operating Expense	$5,786,963	$1,915,824	$8,067,521	$4,906,873	18%
Maintenance Expense	$903,300	$349,443	$1,382,442	$690,443	31%
Operating Expense per Capita	$12.35	$4.31	$34.04	$14.22	-13%
Operating Expense per Passenger Trip	$18.33	$8.72	$30.65	$18.81	-3%
Operating Expense per Revenue Mile	$2.37	$2.12	$3.95	$2.97	-20%
Operating Expense per Revenue Hour	$34.03	$33.12	$65.01	$47.11	-28%

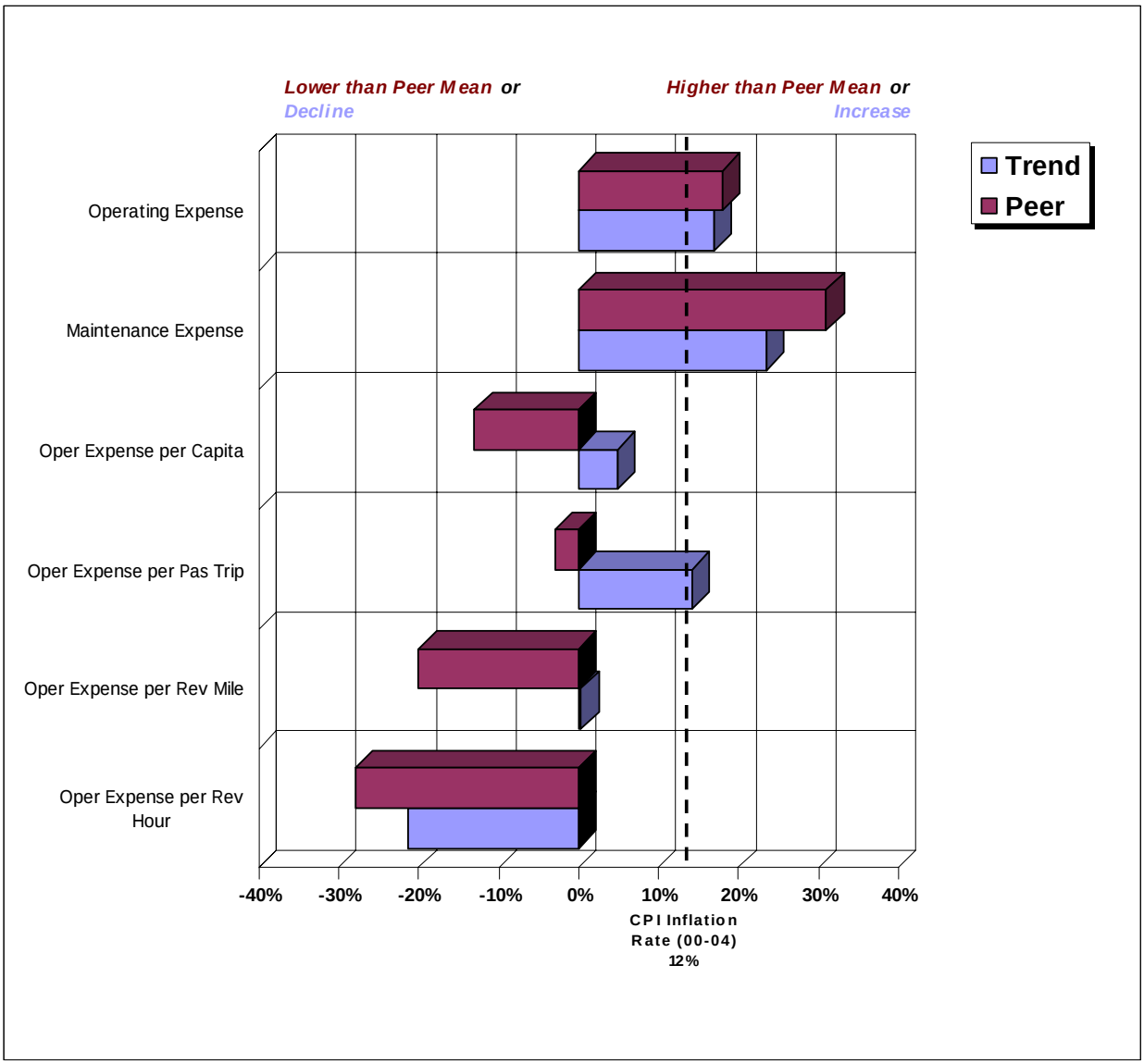
Figure 3-56 displays a complete picture of all selected peer and trend operational measures. Bars to the left of zero percent indicate a declining trend or a value lower than the peer mean for that measure. Bars to the right of zero percent indicate an increasing trend or a value higher than the peer mean for that measure. As is evidenced by the graph, VOTRAN is providing much more service than its peers and has been increasing the amount of service over the trend period. However, the increase in service has not led to an equal increase in ridership. As a result, VOTRAN fares poorly in the effectiveness measures both on a trend and peer basis.

Figure 3-56
Peer and Trend Summary: Operational Measures



* Average age of fleet is depicted in an opposite manner due to the fact that it is generally considered better to have a younger fleet than an older one. Therefore, a decline or a value lower than the peer mean is shown as an increase or a value higher than the peer mean and vice versa.

Figure 3-57
Peer and Trend Summary: Financial Measures



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CHAPTER FOUR

PUBLIC INVOLVEMENT

INTRODUCTION

Chapter Four presents the results of several approaches undertaken during the TDP process to obtain public input. Included in this chapter is information about Volusia County public transportation needs and issues identified through the following public involvement process, including: an analysis of an on-board passenger survey of the fixed route VOTRAN service, an analysis of a passenger survey mailed to current users of the VOTRAN GOLD demand response system, an analysis of a survey of VOTRAN employees, a summary of community leader interviews, a summary of a group meetings and discussions with the MPO's Citizen Advisory Committee, Technical Coordinating Committee, and Local Coordinating Committee, as well as the Handicapped Adults of Volusia County (HAVOC) and two public workshops.

VOTRAN ON-BOARD CUSTOMER SURVEY

This section of the TDP summarizes the results of a customer survey conducted on board VOTRAN fixed-route buses during April and May, 2006. The purpose of the on-board survey was to obtain information about current customer demographics, travel behavior, and satisfaction with specific aspects of VOTRAN's fixed-route bus service. The questionnaire that was utilized for this survey task is included in Appendix A-3.

The information gathered as part of the customer survey has many uses including planning or enhancing bus schedules, aiding in the location of new bus stops, modifying the existing fare structure, planning focused marketing campaigns and, in combination with other studies, identifying historical ridership trends and comparing these data with other transportation services in other areas of Florida. The resulting information from this survey becomes an invaluable tool in determining who is using VOTRAN service and why. When faced with major policy issues such as service improvements/realignments or changes in fares, the data from this survey become a major source of information for evaluating the effects of the proposed changes.

Survey Methodology

As mentioned, the customer survey was designed to obtain descriptive information regarding the demographic traits and travel behavior of VOTRAN customers, as well as their satisfaction with specific aspects of VOTRAN's fixed-route bus service. In addition, questions rating the quality of VOTRAN's fixed-route bus service in a number of important areas were included on the survey. This information will enable VOTRAN to focus on relevant transit needs and issues such as evaluating span of service, modifying bus schedules, locating bus stops, modifying fare structure, planning focused marketing campaigns, and identifying historical ridership trends, among others.

During conduct of the customer survey, surveyors were assigned to cover approximately 50 percent of the blocks (i.e., a specific period of time that a bus is assigned to a route, usually corresponding to the driver's work shift) of each of VOTRAN's routes. Since Tuesday,

Wednesday, and Thursday are the most typical travel days of the week, these were the days that most of the surveys were conducted. A single surveyor was scheduled for each block and stayed on the bus distributing surveys until the end of that particular shift. Since most blocks are comprised of interlined routes (e.g., 1A-60, 3-4, etc.), the surveyors were instructed to stay on the buses and continue surveying despite the interlining. It was not necessary to distinguish between respondents on each of the interlined routes since the first question on the survey accomplished this task.

Surveys were personally handed to customers as they boarded buses or as they assumed their seats. Customers were encouraged to return their completed surveys to the surveyors as they alighted the buses. However, due to time constraints (i.e., customers traveling a short distance), some customers took the surveys with them to fill out and return at a later time. These persons were asked to return their surveys either to any surveyor they encountered on another bus, to the VOTRAN office, or to the customer service representative at the transfer plaza. As time permitted, surveyors also provided assistance in completing surveys to those customers who required and/or requested it. In order to collect information on all bus trips people made each day, customers were asked to complete a survey every time they boarded a bus regardless of whether or not they completed one while traveling on a route earlier the same day or on a prior survey day. Temporary staff under the direct supervision of CUTR and VOTRAN carried out the survey distribution.

Survey Analysis

The analysis of the customer survey is comprised of three sections: demographics, travel behavior, and customer satisfaction with specific aspects of VOTRAN fixed-route bus service. Each section provides information that will be useful in improving the performance and service offered by VOTRAN.

Demographic data consists of such information as customer age, gender, annual household income, ethnicity, and vehicle availability for trip-making purposes. These demographic data will facilitate the identification of VOTRAN customer market characteristics and may also be used to determine how specific market segments have changed over time. In addition, this information also can assist in determining the need for customer facilities such as the improved design and favorable location of bus stops, shelters, and benches.

Travel behavior includes data such as trip purpose, length and frequency of use, fare type, alternative transportation, reason for riding VOTRAN, and mode(s) of access and egress. This information can assist VOTRAN in effective scheduling and general policy decisions regarding overall VOTRAN service.

User satisfaction is determined from Question 25 on the survey. This question asked customers to rate their perception of VOTRAN service by means of 22 performance characteristics, including the overall quality of VOTRAN service. Strengths and weaknesses of the system as perceived by customers are identified from a list of five discrete responses. Customers were asked to rate their satisfaction level with VOTRAN service from "very satisfied" to "very unsatisfied." By distinguishing customer sensitivities regarding specific characteristics of the system, VOTRAN is better able to prioritize improvements to the service.

A total of 5,196 surveys were available for distribution; a total of 1,355 completed surveys were collected and analyzed. This results in an overall response rate of 26 percent—an above

average rate for this type of survey where the industry norm is in the 10 to 20 percent range. CUTR performed all of the survey data entry, tabulations, and review of the tabulated customer survey data. The number of returned surveys of 1,355 yields an accuracy of within ± 5 percent at the 95 percent confidence level. This means that with the same sampling procedures, 95 times out of 100 the results will be within ± 5 percent of the true value, that is, those values that would be obtained if a 100 percent census of all customers on all routes were conducted. Table 4-1 below contains response rates by question, which ranged from a low of 9.4 percent (Q.14a how might VOTRAN make it's maps and schedules easier to use) and 98.1 percent (Q. 2 where did you come from before you got on the bus for THIS trip?)

Each survey question was analyzed independently and the results for each question are provided in a number of figures and tables throughout the following sections. As appropriate, results of the current survey have been compared to those of the survey conducted in 2002, and in some instances, 1999. A brief narrative that explains the relevance of the findings being reported accompanies the figures and/or tables. All responses were included in the analysis regardless of whether or not an individual survey was completed entirely. The following are the major findings from the survey of VOTRAN customers.

VOTRAN Customer Demographics

A number of questions were asked on the survey to establish a demographic profile of VOTRAN customers. The demographic-related questions included:

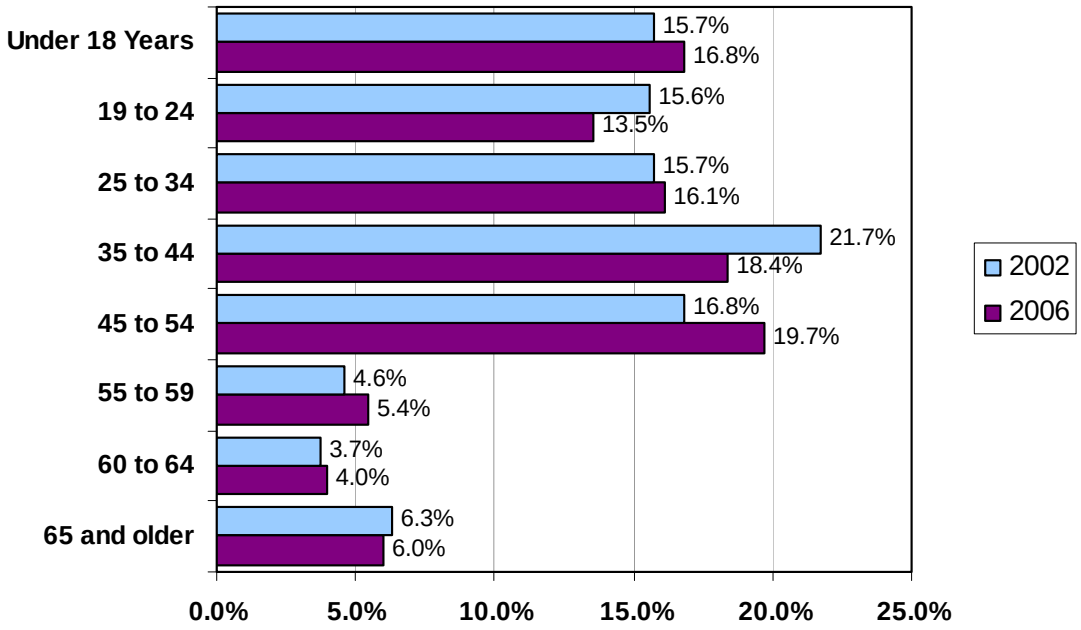
- Age (Question 17);
- Gender (Question 18);
- Ethnic heritage (Question 19);
- Total household income for 2005 (Question 20);
- Personal vehicle availability (Question 21);
- Household vehicle availability (Question 22);
- Residency status (Question 23); and
- Residential ZIP code (Question 24).

Table 4-1
Response Rates by Question

Question	Responses	Response Rate	Question	Responses	Response Rate
Q1	1,103	81.4%	Q25a	1,190	87.8%
Q2	1,329	98.1%	Q25b	1,183	87.3%
Q3	1,165	86.0%	Q25c	1,183	87.3%
Q4	1,320	97.4%	Q25d	1,144	84.4%
Q5	1,320	97.4%	Q25e	1,150	84.9%
Q6	1,291	95.3%	Q25f	1,167	86.1%
Q7	1,311	96.8%	Q25g	1,159	85.5%
Q8	1,310	96.7%	Q25h	1,162	85.8%
Q9	1,311	96.8%	Q25i	1,168	86.2%
Q10	1,304	96.2%	Q25j	1,144	84.4%
Q11	1,301	96.0%	Q25k	1,136	83.8%
Q12	1,286	94.9%	Q25l	1,131	83.5%
Q13	1,283	94.7%	Q25m	1,125	83.0%
Q14	1,270	93.7%	Q25n	1,120	82.7%
Q14a	127	9.4%	Q25o	1,152	85.0%
Q15	1,078	79.6%	Q25p	1,148	84.7%
Q16	867	64.0%	Q25q	1,149	84.8%
Q17	1,249	92.2%	Q25r	1,143	84.2%
Q18	1,257	92.8%	Q25s	1,151	84.9%
Q19	1,239	91.4%	Q25t	1,151	84.9%
Q20	1,041	76.8%	Q25u	1,149	84.8%
Q21	1,234	91.1%	Q25v	1,149	84.8%
Q22	1,246	92.0%	Q26(1)	770	56.8%
Q23	1,207	89.1%	Q26(2)	746	55.0%
Q24	1,078	79.6%	Q26(3)	689	50.8%

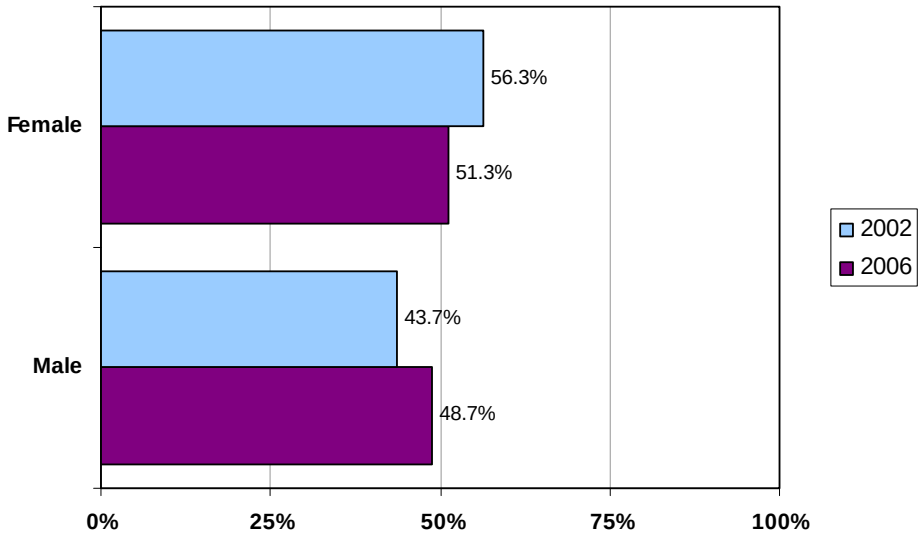
Figure 4-1

Q17. Your age is...



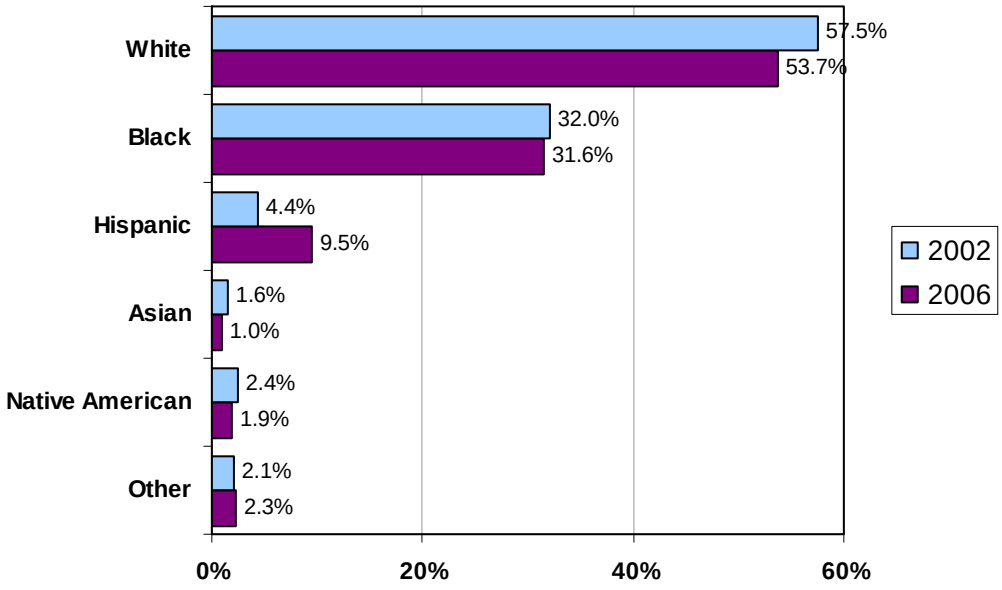
Age - The results from the customer survey shown in Figure 4-1 indicate that, VOTRAN's ridership is getting both older and younger. The percentage of customers 18 and under increased to 16.8 percent, from 15.7 percent in 2002. The percentage of customers age 19 to 44 dropped by 5 percent, while those age 45 and over increased 3.9 percent. The two age ranges that have the greatest proportion of VOTRAN's ridership continue to be 35 to 44 and 45 to 54, which can be classified as "mid-career" riders. According to the *2005 Florida Statistical Abstract*, the median age in Volusia County is 43.6 years (Table 1-38).

Figure 4-2
Q18. Your gender is...



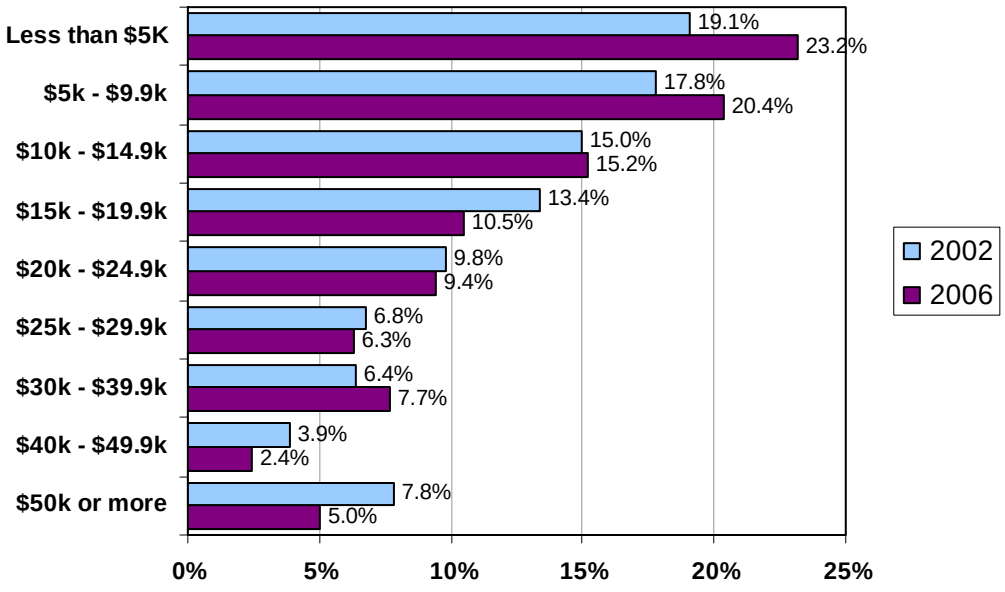
Gender - More women continue to utilize VOTRAN service than men (51.3 percent to 48.7 percent, respectively) in 2006, although the gender gap considerably tightened since 2002. This distribution is consistent with the gender composition of other transit systems throughout the state. According to the *2005 Florida Statistical Abstract*, 51.3 percent of Volusia County residents are female and 48.7 percent are male (Table 1.31. The gender frequency distribution of VOTRAN passengers is shown in Figure 4-2, exactly matching the County's distribution.

Figure 4-3
Q19. Your ethnic heritage is...



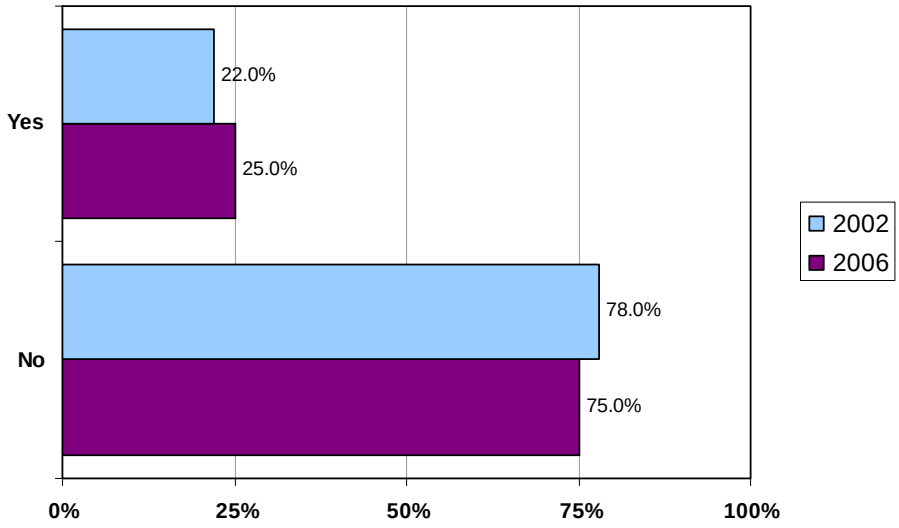
Ethnic Heritage – The survey's ethnic heritage results show that 53.7 percent of customers are white and 31.6 percent are black, both slipping from their 2002 percentages. These proportions continue to be atypical compared to those found at other transit systems in Florida where blacks typically represent a much larger share of customers. The number of Hispanic riders more than doubled since 2002 from 4.4 percent to 9.5 percent, representing the fastest growing segment of riders on VOTRAN. The percentage of Asians, Native Americans, and other races continue to make up a small percentage of riders (about 5 percent total). The frequency distribution for this question is illustrated in Figure 4-3.

Figure 4-4
Q20. What was the range of your total household income for 2005?



Total Household Income for 2005 - A total of 43.6 percent of VOTRAN customers live in households with 2005 annual incomes of less than $10,000, an increase from 2002 of 6.7%. So, based on years of 2 to 3 percent annual inflation rates, VOTRAN's customers appear to be actually getting poorer. All other income brackets had their percentages stay essentially the same or decrease with the exception of $30,000-$39,900 which increased slightly. According to the *2005 Florida Statistical Abstract*, the median household income for Volusia County was $35,010 (Table 5.48). This means that at least 85 percent of VOTRAN's ridership has a below average household income. The frequency distribution for the income question is shown in Figure 4-4.

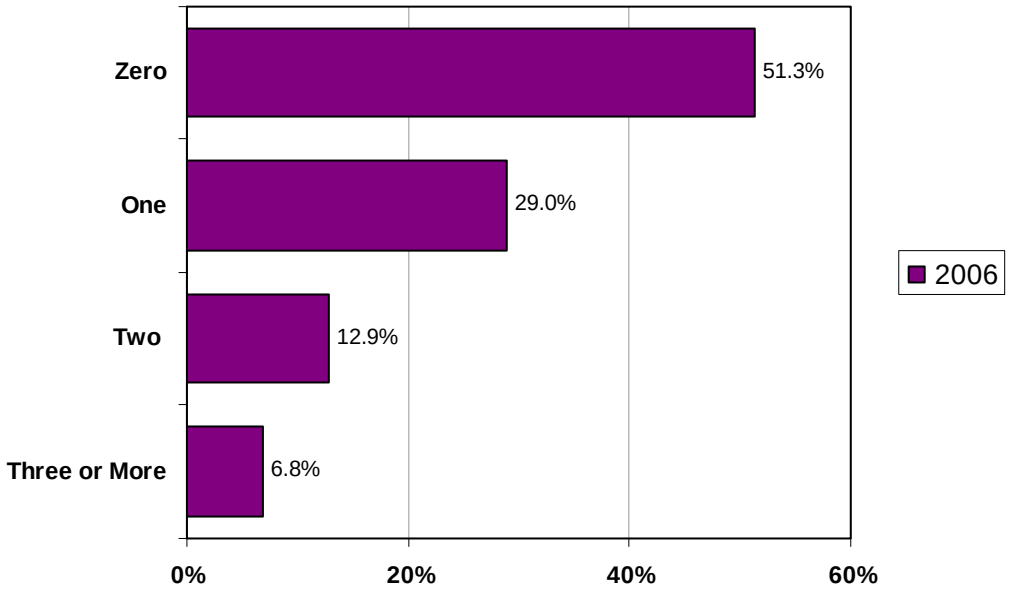
Figure 4-5
Q21. Do you have a car or other personal vehicle that you could have used to make THIS trip?



Personal Vehicle Availability – 75 percent of VOTRAN customers indicated not having a car or other personal vehicle that could have been used to make the trip they had just taken using transit. Conversely, 25 percent of the customers had access to a vehicle that could have been used to make the trip, but they chose to use transit anyway. Much like the income results, the distribution for this particular question indicates that VOTRAN still is serving a primarily transit-dependent customer base. The frequency distribution for this question is shown in Figure 4-5.

Figure 4-6

Q22. How many working automobiles do you have in your household?



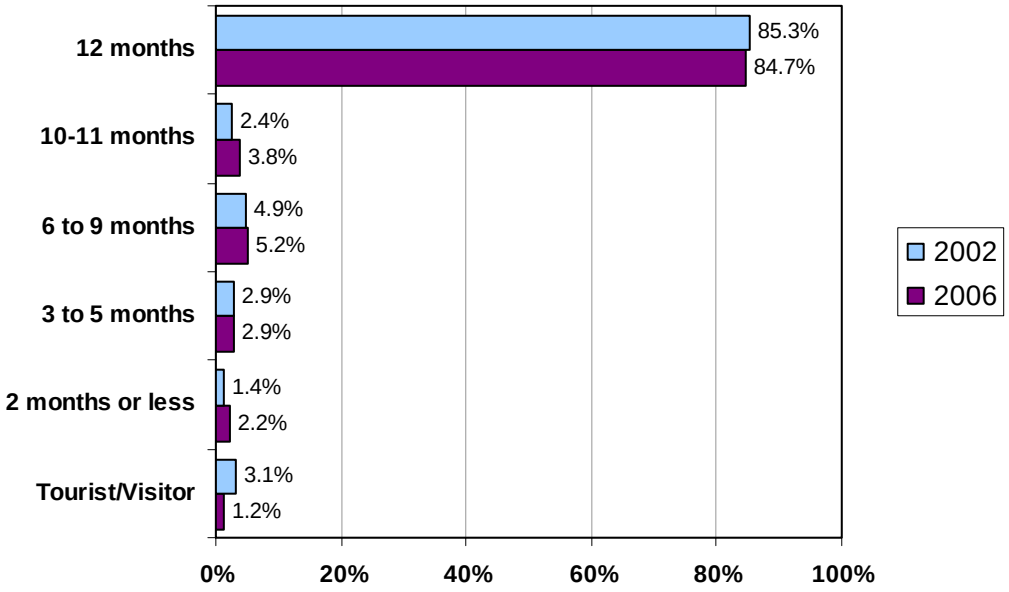
Household Vehicle Availability - The number of working vehicles available in their household was not asked on the 2002 survey, but was on the 1999 survey. The results for the 1999 household vehicle question indicated that 53 percent of VOTRAN's customers resided in zero-vehicle households. For the 2006 survey, this question was asked again, with similar results. 51.3 percent of households had zero vehicles available. 29 percent stated they had one vehicle and 12.9 percent stated two. Three or more was the answer for only 6.8 percent of respondents.

A cross tabulation of number of vehicles in households by age is shown in Table 4-2. Those age 65 and older are the most likely age group to live in a household that owns zero cars (75.4 percent). The highest percentage of 1-auto households was in the age group of 25-34. Those under 18 years of age are likely to still be living with parents and therefore have more vehicles available in their household (2 vehicles – 26 percent), (3 or more – 18.9 percent).

Table 4-2
No of Vehicles in Household (Q22) by Age (Q17)

Age	No. of Vehicles			
	Zero	One	Two	3 or more
Under 18	20.4%	34.7%	26.0%	18.9%
19 to 24	40.2%	32.3%	17.7%	9.8%
25 to 34	52.1%	35.1%	6.7%	6.2%
35 to 44	57.3%	28.0%	11.0%	3.7%
45 to 54	64.5%	23.7%	10.5%	1.3%
55 to 64	67.6%	24.3%	5.4%	2.7%
65 or older	75.4%	21.7%	1.4%	1.4%
Percent of Total	51.4%	29.3%	12.5%	6.8%

Figure 4-7
Q23. How many months out of the year do you reside in Volusia County?



Residency Status – According to the results of Question 23 on residency status, the vast majority of VOTRAN customers continue to be full-time residents of Volusia County. Roughly 85 percent of customers are full-time residents. The number of tourists/visitors using the system dipped from 3 percent in 2002 to just over 1 percent in 2006. The frequency distribution for this question is shown in Figure 4-7.

Residential ZIP codes - Question 25 asked VOTRAN customers to provide the ZIP code of their residence. Customers provided a total of 57 different ZIP codes, 51 of which were found to be "listed" ZIP codes (i.e., can be associated with an identified location in the United States using U.S. Postal Service information). 9 of the ZIP codes represent locations outside Florida – in the States of Georgia, Kentucky, Michigan, Mississippi, North Carolina, Oklahoma, Pennsylvania, and Washington D.C. Not surprisingly, the 10 ZIP codes provided most by customers (which represent approximately 80 percent of the listed ZIP codes) were all located within Volusia County. These are presented in Table 4-3.

Table 4-3

Q24. Top 10 ZIP Codes Indicated by VOTRAN Customers

ZIP Code	Location	% of Listed Zip Codes
32114	Daytona Beach	29.4%
32117	Daytona Beach/Holly Hill	13.7%
32118	Daytona Beach/Daytona Beach Shores	11.5%
32725	Deltona	5.0%
32720	DeLand	3.9%
32174	Ormond Beach	3.7%
32119	Daytona Beach/South Daytona	3.6%
32738	Deltona	3.6%
32127	Port Orange/Ponce Inlet	3.2%
32176	Ormond Beach	2.9%

The overall results for this particular question indicate that the majority of VOTRAN customers continue to reside within the cities/communities of Daytona Beach and surrounding cities of Daytona Beach Shores, South Daytona, Holly Hills, and Ponce Inlet. Other cities that were cited were Deltona, DeLand, Ormond Beach, Port Orange, Edgewater, New Smyrna Beach, and Orange City. The percentage of customers who live in Deltona and DeLand zip codes (West Volusia) increased considerably since 2002 and they now rank as the 2nd and 3rd most lived in zip codes of VOTRAN customers behind Daytona Beach and surrounding cities.

VOTRAN Customer Travel Behavior, Fare Usage, and Special Areas of Concern

Similar to the customer demographics section, a number of questions were asked in order to establish fare usage and travel behavior characteristics of VOTRAN customers, as well as identify their opinions on two special areas of concern for the system: the user-friendliness of bus route and schedule information. Information gathered included:

- Trip origin and destination (trip purpose) (Questions 2 and 5);
- Modes of access and egress (Questions 4 and 7);
- Transferring (Question 6);
- Fare payment type (Question 8);
- Frequency of system use (Question 9);
- Reason for riding (Question 10);

- Alternative means of transportation (Question 11);
- Length of system use (Question 12);
- Method for obtaining information about VOTRAN (Question 13);
- Difficulty with using bus route and schedule information (Question 14):
- Thing like most about riding the bus (Question 15);
- Thing like least about riding the bus (Question 16)

Trip Origin/Destination - Question 2 and Question 5 on the survey asked customers to indicate the origin and destination of their trips. Customers were given several discrete options to select from such as home, work, shopping/errands, and visiting/recreation. Similar to the 2002 survey results, the most common trip origin (62.5 percent) of customers was "home." The most indicated destination was "work," with 33.7 percent of customers. Home and work as origins and destinations have made a bit of a comeback from the 2002 survey which reported decreases in these types of trips from the 1999 survey. Similarly, "school" and "college" trips were down after being up in 2002. The fact that the 2006 survey was taken during the summer may have affected these percentages. The results for these questions are shown in Table 4-4.

Table 4-4
Q2 and Q5 - Trip Origin and Trip Destination

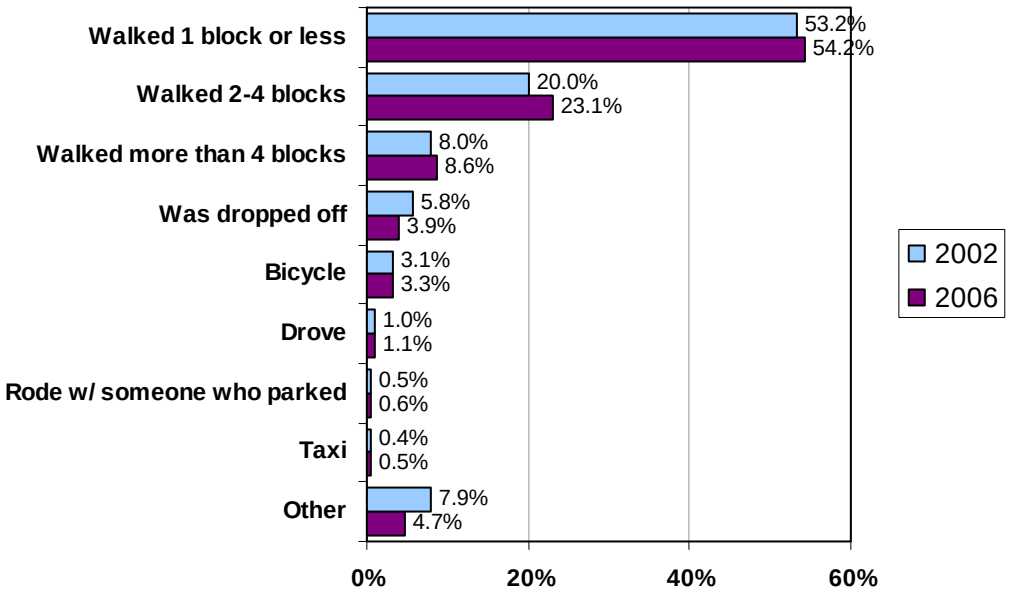
Place	Trip Origin		Trip Destination	
	2002	2006	2002	2006
Home	57.1%	62.5%	29.6%	28.9%
Work	15.0%	18.6%	26.8%	33.7%
School (K-12)	7.9%	4.9%	7.7%	5.5%
College	3.5%	1.6%	4.0%	3.6%
Doctor/Dentist	1.6%	2.4%	5.1%	4.5%
Shopping/Errands	6.5%	3.8%	15.9%	8.7%
Visiting/Recreation	4.2%	1.2%	6.7%	4.7%
Church	0.5%	0.4%	0.8%	0.8%
Other	3.7%	4.6%	3.4%	9.6%

A cross tabulation of trip destination by age is shown in Table 4-5. 24.8 percent of customers age 18 or younger listed school as their destination. The 19-24 age group had a 13.7 percent response rate for college as their destination. The highest rates of work trips were for age groups 35-44 (44.9 percent), and 25-34 (41.7 percent). Doctor/Dentist trips and shopping trips were more common for the over 55 set, and those over 65 were most likely to use the bus for recreation or visiting trips (10.8 percent).

Table 4-5
Trip Destination (Q5) by Age (Q17)

Age	Trip Destination								
	Home	Work	School	College	Doctor	Shopping	Recreation	Church	Other
Under 18	26.7%	16.7%	24.8%	4.3%	2.4%	7.1%	6.7%	0.5%	11.0%
19 to 24	33.9%	32.7%	0.0%	13.7%	2.4%	6.5%	3.0%	0.0%	7.7%
25 to 34	24.1%	41.7%	2.0%	5.0%	4.5%	6.5%	6.5%	0.0%	9.5%
35 to 44	26.9%	44.9%	0.9%	0.4%	5.3%	8.4%	3.5%	0.4%	9.3%
45 to 54	32.5%	40.4%	0.4%	1.7%	4.6%	7.1%	3.3%	1.7%	8.3%
55 to 64	33.9%	26.1%	0.9%	0.9%	5.2%	17.4%	3.5%	0.9%	11.3%
65 or older	31.1%	13.5%	0.0%	0.0%	9.5%	16.2%	10.8%	2.7%	16.2%
Percent of Total	29.4%	33.4%	4.9%	3.9%	4.4%	8.7%	4.9%	0.7%	9.8%

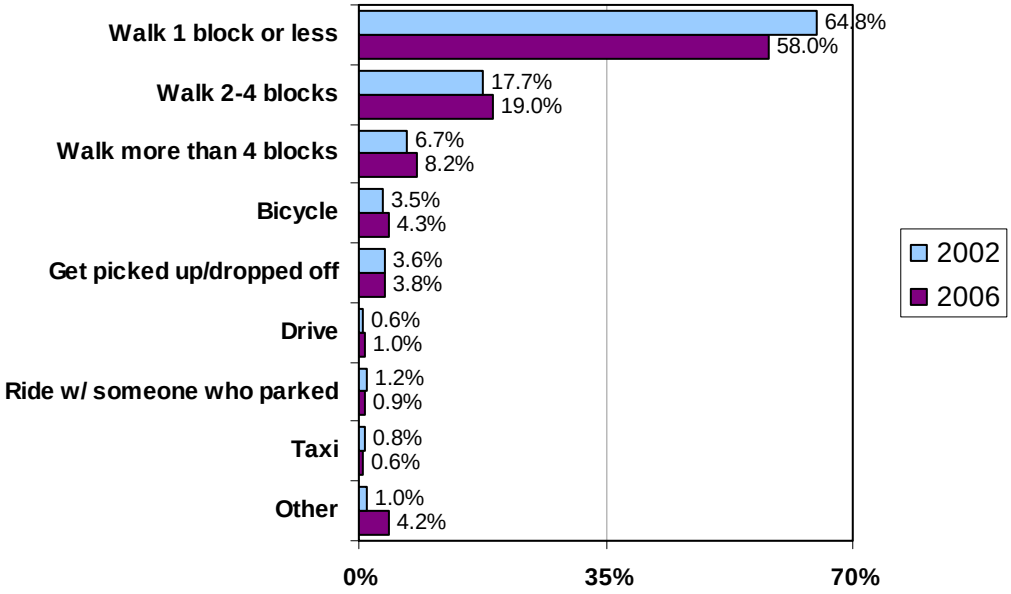
Figure 4-8
Q4. How did you get to the bus stop for THIS trip?



Mode of Access - According to the 2006 survey results, as shown in Figure 4-8, 54.2 percent of customers walked one block or less to a bus stop to access VOTRAN service. Further, a total of 77.3 percent walked four blocks or less to access VOTRAN. The total percentage of customers who walked any length of distance was 85.9 percent. The next greatest percentages of customers either were “dropped off” (3.9 percent) or rode a bicycle (3.3%)

Comparatively, these results are quite similar to those from the 2002 survey. The primary differences between the two years are a greater number of walkers in the 2-4 block range and a decrease in the number of customers who chose other.

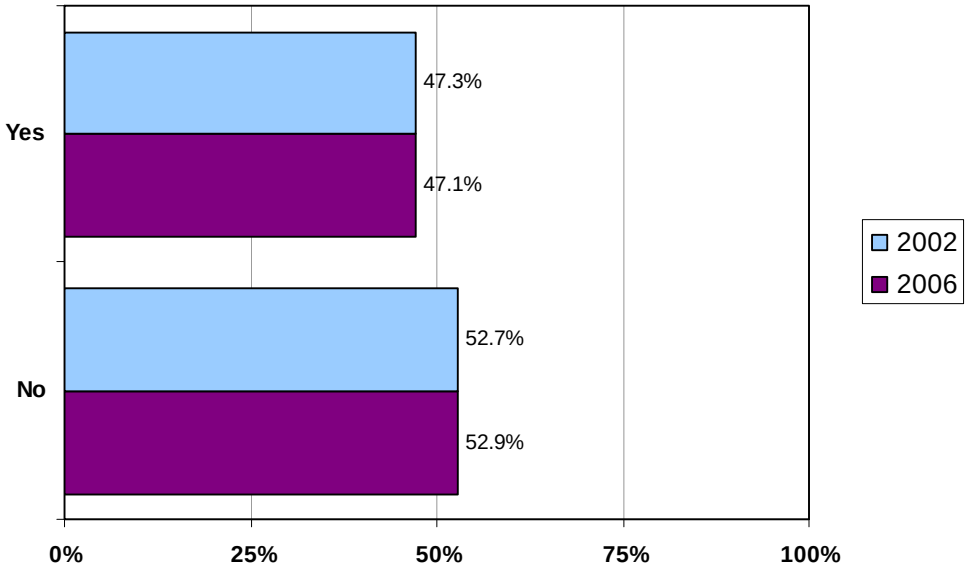
Figure 4-9
Q7. After you finish your bus travel,
how will you get to your final destination?



Mode of Egress - Question 7 on the survey asked customers to indicate how they reached their final destination after alighting a VOTRAN bus. The survey results presented in Figure 4-9 indicate that 77 percent of customers walked four blocks or less to reach their final destination. This was down from 82.5 percent in 2002. However, 77 percent still indicates that VOTRAN continues to do a relatively efficient job in locating bus stops near its customers' destinations (as well as origin points, as evidenced in the discussion on access mode). Aside from walking some distance to a final destination, other popular egress modes include "get picked up/dropped off" (3.8 percent) and "bicycle" (4.2 percent).

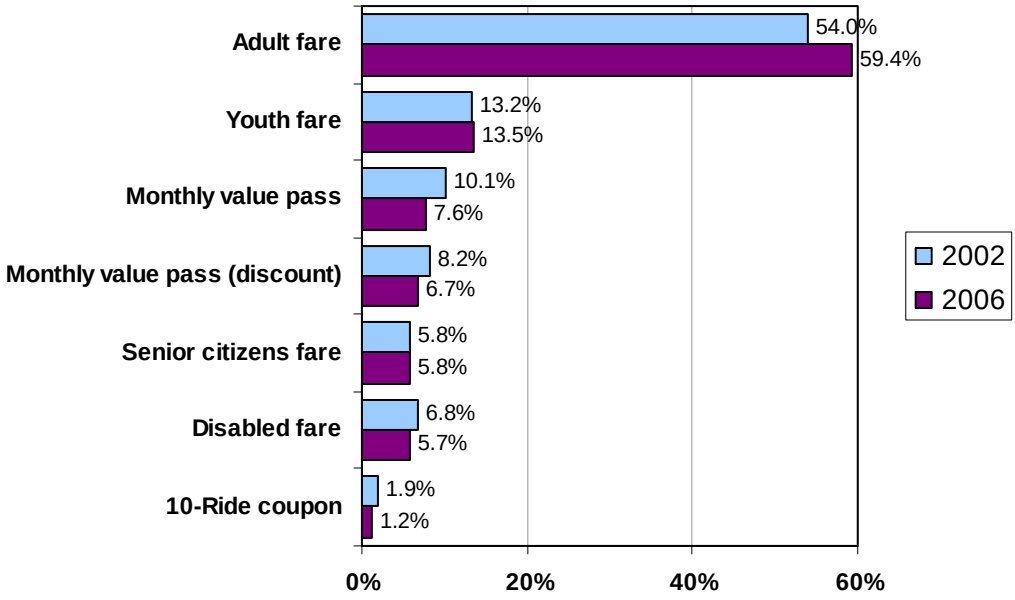
A comparison to the 2002 survey results show that the overall mode-of-egress distribution has not changed much over time. However, the proportion of walking customers is walking longer distances (i.e., two to four blocks, and more than four blocks). Bicycle usage continues to increase slightly, up to 4.3 percent in 2006.

Figure 4-10
Q6. Do you need to transfer to complete THIS trip?



Transferring - Question 6 on the survey asked customers to indicate whether they had to transfer (i.e., utilize more than one bus route) to complete their trip. If a customer answered affirmatively to this question, they then were asked to provide the VOTRAN routes from which they were transferring to and from. According to customers, 52.9 percent indicated that no transfer was required for them to complete their trip (almost an identical percentage to the 2002 survey). VOTRAN's resulting 47.1 percent customer transfer rate is still higher than Florida transit industry norms, wherein other public transit systems usually experience a 30 to 40 percent transfer rate. Figure 4-10 shows the frequency distribution for this question. In examining the results of the second portion of Question 6, it was determined that the two most frequently-made transfers are between Routes 20 and 60 (6.7 percent of all respondent specified transfer pairs), and Routes 20 and 21 (4.0 percent). No other pairings accounted for more than 3 percent of total transfers. In terms of specific routes, Route 60 (17.5 percent), Route 10 (17.0 percent), Route 12 (16.5 percent), and Route 6 (16.3 percent) were the most often cited routes that involved a transfer.

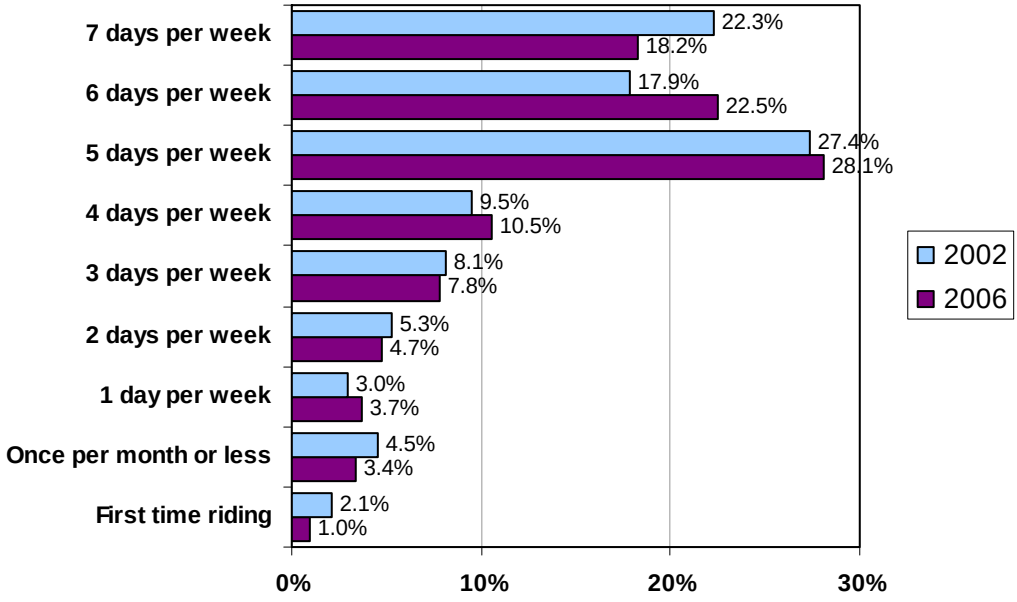
Figure 4-11
Q8. What type of fare do you usually pay when you ride the bus?



Fare Payment Type - The results for this question from both the 2002 and 2006 on-board surveys are presented in Figure 4-11. As shown in the figure, the most utilized fare payment type continues to be the Adult Fare ($1.00), with 59.4 percent of customers using this method. The full cash fare is followed by the Youth fare (50¢ - 13.5 percent) and the full-fare Monthly Value Pass ($35.00 -7.6 percent), which offers the most significant cost savings on a per-trip basis than any of the other full-fare payment methods. These findings are in line with Florida transit industry norms, wherein customers of other Florida public transit systems typically use the cash payment option instead of the various multi-ride fares that offer the greatest per-trip cost savings.

The comparison of the 2002 and 2006 results show that monthly pass use is down (14.3 percent versus 18.3 percent) reversing the trend from 1999 to 2002 of increased usage. Furthermore, the 10-ride coupon has been utilized less (1.2 percent versus 1.9 percent). The decreases in the use of these methods of payment have decreased even though VOTRAN has not changed its fares during the four years since the last survey was conducted. About 5 percent of customers have switched back to paying the adult fare. This may indicate a need for VOTRAN to continue to market the fiscal advantages of multi-ride pass use to its customers. Additionally, the system may want to consider exploring other fare offerings such as low cost daily and/or weekly passes that offer unlimited rides or some other low-cost, short-term multi/unlimited-ride fare payment method to target customer groups.

Figure 4-12
Q9. How often do you ride the bus?



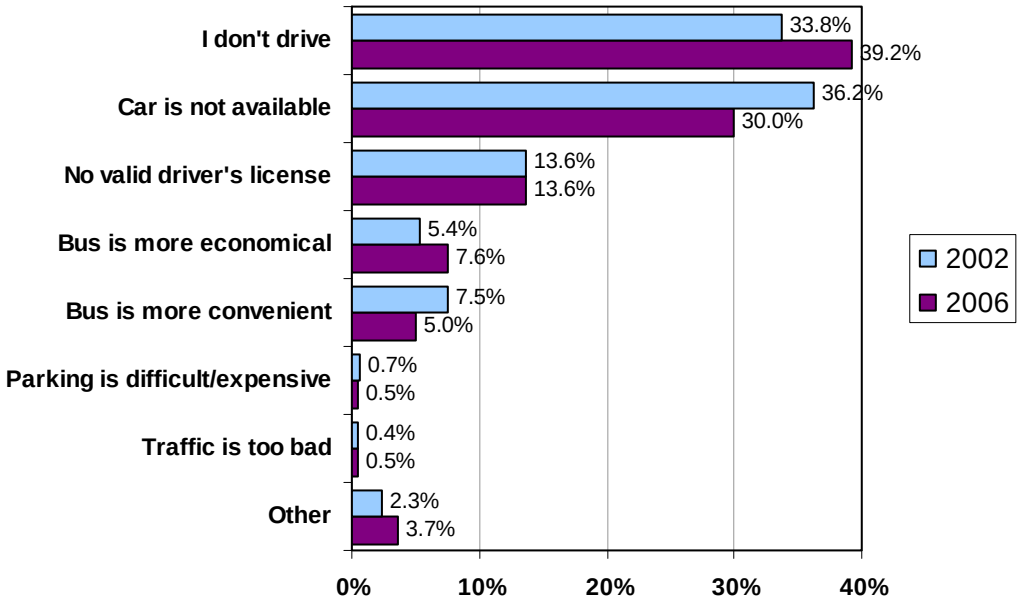
Frequency of Use - Question 9 asked customers how often they utilize VOTRAN bus service. Figure 4-12 indicates that the majority (68.8 percent) of customers continue to be very frequent users (i.e., 5 or more days per week) of VOTRAN. This is up slightly since the 2002 survey (67.6 percent). Interestingly, there was a 4.1 percent decrease in 7-day per week riders and a 4.6 percent increase in 6-day per week riders. Only 8.4 percent of customers use the system 1 or 2 days per week.

A cross tabulation of days riding per week by age is shown in Table 4-6. The age group that utilizes the bus all 7 days the most is 25-34 year olds (22.8 percent). 45 to 54 year olds ride the bus 6 days per week the most often (35.1 percent). Younger people under the age of 24 are more likely to use the bus service on an infrequent basis (1 day per week or 1 day per month) than the other age groups.

Table 4-6
Days Riding Per Week (Q9) by Age (Q17)

Age	Days per Week Riding Bus								
	7 days	6 days	5 days	4 days	3 days	2 days	1 day	1/month	1st Time
Under 18	14.3%	10.8%	32.0%	11.3%	12.3%	6.4%	6.4%	5.4%	1.0%
19 to 24	17.8%	11.8%	29.6%	15.4%	8.9%	7.1%	4.7%	3.6%	1.2%
25 to 34	22.8%	24.4%	28.4%	7.1%	4.1%	5.1%	2.5%	4.6%	1.0%
35 to 44	18.0%	28.1%	32.0%	7.5%	3.9%	3.5%	2.6%	3.5%	0.9%
45 to 54	18.2%	35.1%	22.7%	8.7%	7.0%	2.9%	3.3%	0.8%	1.2%
55 to 64	16.4%	25.9%	23.3%	13.8%	12.9%	1.7%	2.6%	2.6%	0.9%
65 or older	17.6%	18.9%	23.0%	13.5%	10.8%	8.1%	6.8%	1.4%	0.0%
Percent of Total	18.0%	23.0%	27.9%	10.3%	7.9%	4.7%	3.9%	3.3%	1.0%

Figure 4-13
Q10. What is the most important reason you ride the bus?

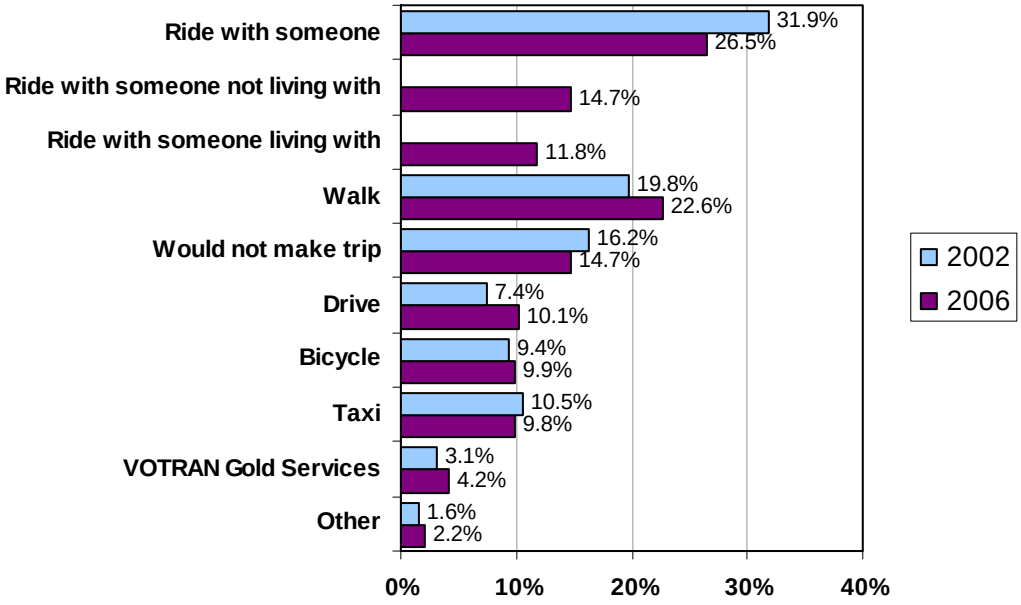


Reason for Riding VOTRAN - An important portion of any customer survey is to ask customers why they use public transit. In keeping with this, Question 10 asked customers to indicate what the most important reason is for their use of VOTRAN bus service. Figure 4-13 presents this question's results for both the 2002 and 2006 surveys. As shown in the figure, the two most frequently indicated responses on the current survey are and "I don't drive" (39.2 percent), and "car is not available" (30.0 percent). These also were the top two responses in the 2002 survey; however, the distributional order was reversed. Regardless, in both survey years, approximately 70 percent of VOTRAN customers make use of the system because they do not have access to and/or cannot drive an automobile. This finding seems to correlate to the results for Question 21, which found that 75 percent of VOTRAN's customers do not have a car or other personal vehicle that they could have used to make the trip they ultimately made using transit. The "Bus is more economical" reason increased 2.2 percent for a total of 7.6 percent of respondents. While the "Bus is more convenient" decreased 2.5 percent for a total of 5 percent of

respondents. This is in agreement with earlier results on the greater percentage of low household incomes (more economical) and the greater percentage of people walking longer distances to reach the bus (less convenient).

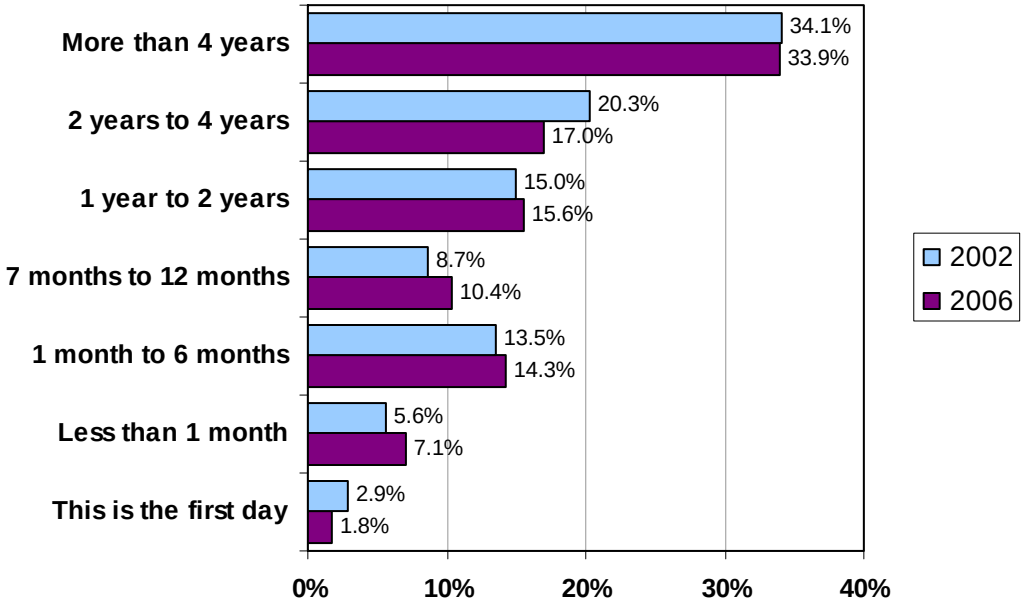
Figure 4-14

Q11. How would you make this trip if not by bus?



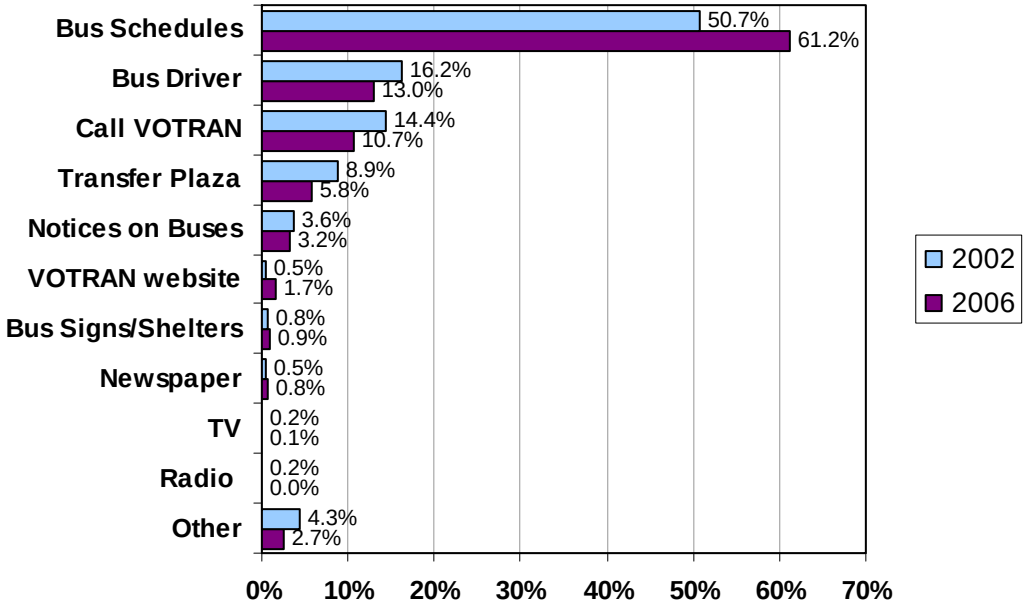
Alternative Transportation - Question 11 asked customers how they would make their trip if not by bus. Figure 4-14, shows the results for the 2002 and 2006 surveys. In the 2006 survey, "Ride with someone was divided into two sub-categories "Ride with someone living with" (14.7 percent), and "Ride with someone not living with"(11.8 percent). "Ride with someone" remained the most popular answer; however it was cited by customers 5.4 percent less than in 2002. Walking was the second most frequent answer (22.6 percent) and increased 2.8 percent over 2002 results. Other alternative options included not making the trip at all (14.7 percent), drive (10.1 percent), bicycle (9.9 percent) and taxi (9.8 percent). VOTRAN Gold Services (VOTRAN's demand response system), while still a relatively low 4.2 percent, did increase 1.1 percent from 2002 levels. This correlates with the older population that VOTRAN is serving in 2006.

Figure 4-15
Q12. How long have you been using VOTRAN bus service?



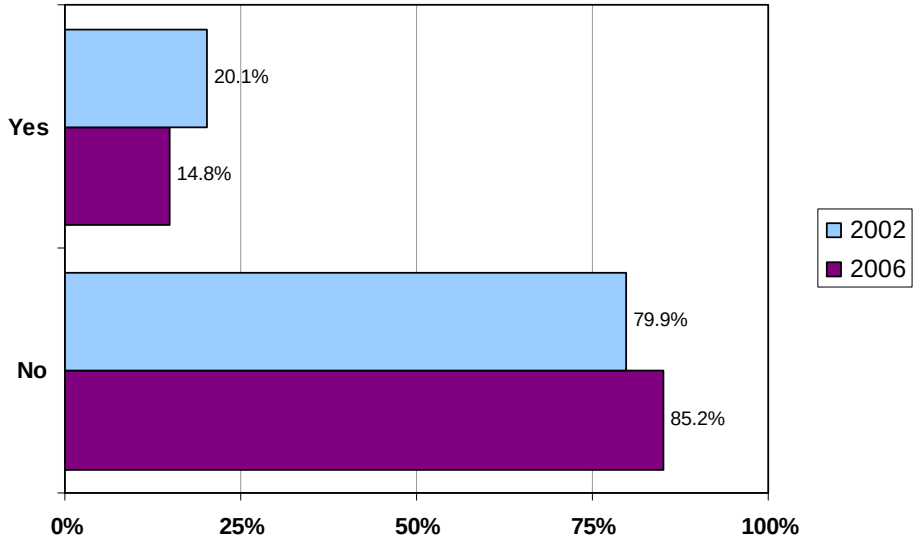
Length of Use - Question 12 asked customers how long they have been using VOTRAN. The results for this question, presented in Table 4-15, indicate that the majority of VOTRAN customers (50.9 percent) continue to be long-time users of the system, i.e., riding for two or more years. In 1999, 54.4 percent of VOTRAN customers had similar utilization tenure. Conversely, however, 23.2 percent of customers have been using the system's bus service for 6 months or less (including first-time users), and 33.6 percent have been riding for less than one year. From a public transit industry perspective, "new" customers are usually classified as those who have utilized a transit system for less than one year.

Figure 4-16
Q13. How do you usually get information on the bus service?



VOTRAN Information Acquisition - Question 13 on the survey asked customers to indicate how they *usually* get information on the bus service. The frequency distribution for this question is illustrated in Figure 4-16. The primary way for customers to obtain information about VOTRAN services continues to be the system's bus schedules, and this seems to be the case even more so in 2006 (61.2 percent) versus 2002 (50.7 percent). Most all other ways of obtaining information declined since the 2002 survey. Other frequently utilized methods include the system's bus drivers (13 percent), calling VOTRAN customer service (10.7 percent), and the transfer plaza (5.8 percent). Newspaper, radio, and TV continue to have an almost negligible impact on customer's looking for information about the bus service. The VOTRAN website saw a slight increase from 0.5 to 1.7 percent, but is probably not accessible to a large percentage of VOTRAN customers. To be fair, the question asked for customer's *most used* way to receive information and not the *only* way they do. Customers probably use more than one method to receive information. It makes sense that the bus schedules are used more than other forms as they are readily accessible and more portable than any other method.

Figure 4-17
Q14. Do you find it difficult to use VOTRAN's bus route and schedule information to plan your trips?



VOTRAN Route & Schedule Information Issues – Question 14 asked customers whether they found it difficult to use bus route and schedule information when planning their trips. Customers who responded affirmatively to this question then were asked to suggest how VOTRAN might make the information easier to use. According to the results for this question, shown in Figure 4-17, approximately 15 percent of customers find it difficult to use VOTRAN's bus route and schedule information, down from 20.1 percent in 2002.

Many of the customers who had difficulty using VOTRAN's route and schedule information elected to respond to the second part of the question: a total of 127 responses were provided, 93 of which actually pertained to the issue at hand (a number of survey respondents chose to indicate other characteristics of the system that they had issues with instead, such as span of service, route frequency, on-time performance, etc.). It is important to note that, because of the open-ended nature of this particular question and the fact that a number of individuals provided multiple suggestions. Table 4-7 breaks down the 93 responses by related topic area.

Table 4-7

Q14a. How might VOTRAN make its route maps and schedules easier to use?

Suggested Improvements	No. Indicating Response
Specifically Related to Maps	**33**
Provide individual route maps & schedules	7
Make maps easier to read	7
Provide more explanation on maps	6
Make maps more detailed	5
Provide better color coding of routes & information	4
Improve maps (in general, no specifics provided)	4
Specifically Related to Schedules	**16**
Make schedules easier to read	4
Provide more/better information on times (not always accurate)	4
List times for all stops	3
Define/identify stops better	3
Include more time points	2
Specifically Related to Availability of Information	**14**
Put information online as a "destination finder" like Map Quest	5
Put information at all bus stops	4
Provide more information on routes & schedules (in general)	3
Put information on all buses	1
Put information at transfer plaza	1
Generally Related to VOTRAN Information	**13**
Simplify	7
Make easier to use and/or understand	3
Make less confusing	3
Related to Both Schedules & Maps	**9**
Utilize bigger type size	5
Provide more/better information on streets & places	4
Specifically Related to Bus Stops	**7**
Put route arrival/departure times at bus stops	6
Put bus route numbers on bus stop signs	1
Miscellaneous	**1**
Provide maps and schedules in Spanish	1

From the suggestions presented in the table, there was no one response that appeared more than 7 times, meaning there is no real consensus among the customers on how to improve the route maps or schedules. Simplifying, providing individual route maps/schedules, and making maps easier to read were the most cited responses. Putting route arrival/departure times at bus stops and internet trip planning were cited by more customers than in the 2002 survey meaning there is a greater interest in technological improvements.

VOTRAN Customer Satisfaction

The final section reviews customer satisfaction with specific aspects of VOTRAN service as determined by responses to three questions on the survey. The responses to Questions 15 and 16 concerning what customers like the most and like the least about riding VOTRAN are discussed. Also analyzed are the responses to Question 25, which asked customers to rate their perception of 21 different service characteristics, as well as the overall quality of VOTRAN service, using a five-point scale (1 to 5). On this scale, a score of "5" indicated a "very satisfied" rating, while a score of "1" indicated a "very unsatisfied" rating, as shown in Table 4-8. The service aspects that are identified by customers as requiring improvements potentially can be addressed by VOTRAN through a variety of modifications to its system. By distinguishing customer sensitivities regarding specific characteristics of the system, VOTRAN will be better able to prioritize any necessary improvements to the system.

Table 4-8
Rating System Numerical Values

Satisfaction Category	Numerical Value
Very Satisfied	5.00
Satisfied	4.00
Neutral	3.00
Unsatisfied	2.00
Very Unsatisfied	1.00

Service Aspects Customers Liked Most and Least – As discussed, Questions 15 and 16 on the survey asked customers to list the one thing they like most and the one thing they like least about VOTRAN service, respectively. The analysis of Question 15 determined that this particular question was completed on 1,078 of the total 1,355 returned surveys (a question response rate of 79.6 percent). The open-ended comments were reviewed and grouped by assigning them unique identifier codes based on categorical similarities. If, contrary to the instructions, a customer chose to indicate more than one positive aspect, all of the included aspects were coded.

Once all of the indicated aspects were coded, those with identical codes were grouped to develop a distribution of the service aspects that the customers liked most. The top 15 aspects that the customers indicated liking most are presented in Table 4-9. It should be noted that the aspects in the table have been ranked according to the number of times each was included in the customers' responses for the 2006 survey (the 2002 ranks have been included for comparative purposes).

The results for Question 15 reveal that the service aspect customers currently like the most is that the service is economical (good value for the money). This was only the 4th highest ranked

service aspect in 2002. The value of the bus fare has increased in the customer's eyes due to the fact that the fare has not been increased since 2002. The ability to get where you want to go again ranked 2nd and will likely always rate high as that is the fundamental purpose of a bus service. VOTRAN's bus drivers (i.e., their courtesy, friendliness, helpfulness, etc.) dropped from 1st to 3rd. The number of customers that like the bus drivers has decreased, while the number of customers who cited bus drivers as an aspect they like least increased since the 2002 survey. Air Conditioning vaulted from 13th to 4th since the last survey. It turns out that air conditioning ranking only 13th in 2002 was an anomaly, as it ranked 1st in 1999. Convenience rounds out the top 5 most liked services.

In the case of Question 16, it was determined that 867 of the total 1,355 returned surveys included valid responses for this question (a question response rate of 64.0 percent). Similar to the process used for Question 15, the most frequent responses were grouped by assigning them unique identifier codes based on categorical similarities, with all indicated "dislikes" in each response receiving a separate code. The top 15 aspects that the customers indicated liking least are also included in Table 4-9.

The results for Question 16 indicate that VOTRAN's customers' aspect they liked least was the travel time and the fact that their ride takes too long. This was the 2nd highest ranked aspect in 2002 and highest ranked in 1999. As was the case in the previous surveys, specific reasons for the long trip lengths cited by customers included the slowness of the buses, routes being too long and/or circuitous, and buses having to stop too many times. Other passengers (i.e., when they are rude, loud, or have poor personal hygiene), VOTRAN's bus drivers (i.e., when they are rude, inconsiderate, or unhelpful), the necessity of having to wait for the bus and the long wait times that often occur (which further exacerbates the long travel time problem), and the infrequency of VOTRAN's service all moved up one spot in the rankings and round out the top 5. Limited service hours slipped from the least liked aspect in 2002 to only ranking 7th in 2006. VOTRAN addressed this concern after the 2002 survey and therefore more customers are happier with that aspect of the service.

Another interesting development is the number of customers who cited that they liked VOTRAN for the comfort & quality of the ride decreased, while more customers cited uncomfortable ride as their least liked aspect. Finally, cleanliness on the buses (11th least liked aspect) has become an issue since the 2002 survey.

Table 4-9
VOTRAN Service Aspects Customers Liked Most and Least (unweighted)

Aspect Liked Most	2002 Rank	2006 # Indicating Response	Aspect Liked Least	2002 Rank	2006 # Indicating Response
1. Economical	4	230	1. Travel time/takes too long	2	145
2. Ability to get where you want to go	2	155	2. Other passengers	3	116
3. Bus drivers	1	147	3. Bus drivers	4	80
4. Air conditioning	13	121	4. Having to wait/ wait time	5	69
5. Convenience	3	112	5. Infrequency of service	6	68
6. On-time performance	6	88	6. On-time performance	7	60
7. Meet people & see friends	5	70	7. Limited service hours	1	58
8. Quality of bus atmosphere	8	53	8. Need more weekend service	8	58
9. Ease of use	14	39	9. Overcrowding	9	49
10. Fast/efficient	15	28	10. Uncomfortable ride	14	37
11. Comfort/quality of ride	7	28	11. Cleanliness	-	35
12. Not driving/parking	9	24	12. Inconvenience	15	22
13. Not walking/biking	10	23	13. Schedule Issues	11	18
14. Safety	11	18	14. Bus Stop Issues	10	16
15. Availability of service	12	15	15, Transfer/connection Issues	12	12

Customer Perception of System Characteristics - Information included in this section summarizes the satisfaction of VOTRAN customers with various system performance characteristics and with overall service provided by VOTRAN. The results for each of the 21 performance characteristics and overall VOTRAN service in Question 25 are provided in Table 4-10. This table also includes a column that provides the average satisfaction rating for each of the characteristics, as well as VOTRAN service overall, based on the identified satisfaction distributions and the application of a numerical value to each rating (as shown previously in Table 4.8). For example, the mean satisfaction score for overall VOTRAN service is 4.25. This indicates that, on average, the customers' perception of VOTRAN falls just above the "satisfied" level. To further explain, consider the typical five-point educational grading system. In this

particular case, an "A" would represent "very satisfied" and an "F" would represent "very unsatisfied." Using this grading system, VOTRAN's mean score of 4.25 for overall quality of service would translate to about a B+.

Similar to the results for Questions 15 and 16, the average satisfaction ratings for the performance characteristics presented in Table 4-10 show that the customers are relatively satisfied with VOTRAN service, as a whole. The mean scores range from a low of 3.32 ("time of day the latest buses run on weekends") to a high of 4.49 ("value of bus fare"), indicating that VOTRAN's "grades" range from a C+ to a A-. However, only two of the aspects received grades as low as a C+, and they both deal with how late VOTRAN service operates (on weekdays and weekends), which corroborates the customers' least liked aspect (i.e., limited service hours) identified in the results for Question 16. The majority of VOTRAN's other characteristics scored in the B to B+ range.

Given the grades that VOTRAN's various service aspects received, it is apparent that customers are satisfied with the overall quality and performance of VOTRAN service. In comparison to previous surveys, 17 of the 22 characteristics (including overall VOTRAN performance) saw an increase in their satisfaction levels of at least .05 percentage points over the 2002 survey. The most improved characteristics were "frequency of service" (+0.19), "value of bus fare" (+0.20), "time latest bus runs on weekdays" (+0.59), "time latest bus runs on weekends" (+0.29), and "temperature inside buses" (+0.24). Four other characteristics saw little change (+ or – 0.01). Only "How clean buses and stops are" had a substantial decrease (-0.08). 2006 satisfaction levels, while higher than 2002 on the whole, do not approach the higher satisfaction levels in 1999 for the most part. "Value of bus fare" and "time latest bus runs on the weekdays" are the exceptions as they have surpassed their 1999 level of satisfaction.

Table 4-10
Customer Satisfaction with Service Performance Characteristics

Characteristic	Very Satisfied	Satisfied	Neutral	Unsatisfied	Vetry Unsatisfied	2006 Avg	2002 Avg	1999 Avg
Overall satisfaction with VOTRAN	49.2%	33.0%	14.0%	2.4%	1.4%	**4.25**	**4.11**	**4.37**
Frequency of service (how often buses run)	39.2%	24.0%	17.4%	10.6%	8.8%	**3.67**	**3.48**	**3.79**
Your ability to get where you want to go using the bus	53.7%	24.9%	13.5%	5.2%	2.7%	**4.20**	**4.12**	**4.31**
Number of times you need to transfer	46.4%	19.8%	15.8%	9.4%	8.6%	**3.79**	**3.80**	**3.94**
How easy it is to transfer between buses	56.2%	23.4%	14.1%	4.2%	2.1%	**4.26**	**4.16**	**4.30**
How regularly buses arrive on time	41.9%	28.4%	17.9%	7.5%	4.3%	**3.93**	**3.88**	**4.15**
Time it takes to make a trip by bus	39.2%	24.2%	17.4%	10.8%	8.4%	**3.68**	**3.67**	**3.83**
Value of bus fare (service you get for your money)	67.3%	20.2%	9.1%	2.3%	1.1%	**4.49**	**4.29**	**4.34**
How easy it is to **get** bus route & schedule information	62.4%	22.1%	10.5%	3.3%	1.7%	**4.39**	**4.34**	**4.48**
How easy it is to **use** bus route & schedule information	58.1%	24.1%	10.8%	4.9%	2.1%	**4.30**	**4.23**	**4.33**
Time of day the *earliest* buses run on weekdays	49.7%	21.8%	14.5%	6.3%	7.7%	**3.93**	**3.92**	**3.96**
Time of day the *latest* buses run on weekdays	39.9%	20.1%	15.5%	10.6%	13.9%	**3.50**	**2.91**	**3.34**
Time of day the *earliest* buses run on weekends	41.8%	20.4%	18.3%	8.7%	10.8%	**3.65**	**3.57**	**3.78**
Time of day the *latest* buses run on weekends	35.1%	18.6%	17.7%	12.7%	15.9%	**3.32**	**2.93**	**3.32**
How clean buses & bus stops are	45.0%	25.1%	17.9%	7.2%	4.8%	**3.94**	**4.02**	**4.16**
Safety/security at bus stop	48.5%	25.4%	16.8%	5.8%	3.5%	**4.07**	**4.02**	**4.28**
Safety/security while riding bus	57.0%	23.6%	13.6%	3.6%	2.2%	**4.28**	**4.23**	**4.44**
Safety/security after getting off bus	52.2%	25.0%	16.0%	4.2%	2.6%	**4.18**	**4.12**	**4.34**
Temperature inside the buses	58.5%	24.2%	11.3%	4.3%	1.7%	**4.32**	**4.08**	**4.31**
Availability of seats on the buses	53.9%	26.1%	14.4%	4.1%	1.5%	**4.26**	**4.10**	**4.28**
Bus driver's ability to drive the bus	64.7%	20.8%	10.1%	2.4%	2.0%	**4.42**	**4.43**	**4.55**
Bus driver's courtesy	61.7%	18.4%	11.4%	4.3%	4.2%	**4.26**	**4.20**	**4.44**

Most Important Service Characteristics Related to Customers' Use of Transit - In addition to having customers rate their respective satisfaction levels with the various performance characteristics of VOTRAN service, customers also were questioned about which three aspects of system performance (from the list presented in Question 25) were the most important to them in terms of their use of the transit system. Since customers were not required to list their three aspects in order of importance (and some elected to list fewer than three), the responses were combined and analyzed as a single distribution. The resulting percentage distribution of the performance characteristic responses for Question 26 is presented in Table 4-11. The corresponding response distribution from the 1999 and 2002 surveys has been included in the table, as well, for comparison purposes.

Table 4-11

Q26. Most Important Service Performance Characteristics -- Transit Usage

Characteristic	2006	2002	1999
Bus driver's courtesy	20.9%	10.1%	10.3%
Frequency of service (how often buses run)	15.1%	7.5%	7.2%
How regularly buses arrive on time	13.8%	7.2%	6.2%
Your ability to get where you want to go using the bus	10.3%	5.3%	6.5%
Bus driver's ability to drive the bus	10.2%	6.1%	6.3%
Time it takes to make a trip by bus	10.0%	5.2%	6.7%
Time of day the *latest* buses run on weekends	8.9%	9.6%	5.9%
Safety/security while riding bus	8.9%	5.8%	6.8%
Temperature inside the buses	7.2%	3.3%	5.6%
Value of bus fare (service you get for your money)	7.1%	3.2%	3.8%
Time of day the *latest* buses run on weekdays	6.5%	7.9%	5.4%
Availability of seats on the buses	6.3%	3.2%	3.0%
How clean buses & bus stops are	5.7%	2.3%	3.2%
Safety/security at bus stop	5.7%	3.4%	3.4%
Time of day the *earliest* buses run on weekdays	5.3%	5.3%	4.5%
Time of day the *earliest* buses run on weekends	4.5%	4.2%	3.6%
How easy it is to **get** bus route & schedule information	3.4%	3.6%	3.2%
How easy it is to transfer between buses	3.0%	2.5%	2.6%
Safety/security after getting off bus	3.0%	2.0%	1.6%
Number of times you need to transfer	2.4%	1.2%	1.3%
How easy it is to **use** bus route & schedule information	2.1%	1.1%	1.9%

According to VOTRAN's customers, the three service characteristics that are most important to them when riding the bus are: the bus driver's courtesy, frequency of service, and how regularly the bus arrives on time. As for VOTRAN's performance in these areas, driver courtesy (4.26)

received one of the higher average satisfaction ratings from customers according to the data presented in Table 4-10, but frequency of service (3.67) and how regularly the bus arrives on time (3.93) scored lower than a majority of the measures. The time the latest buses run on weekdays and weekends were the 2nd and 3rd highest rated important services in 2002, but have slipped in the rankings since VOTRAN addressed the need for later service since then. Note that the percentages are much higher in general for 2006 as more customers elected to answer this question than in 2002 or 1999.

VOTRAN On-Board Survey Summary

Based on the results from the survey of VOTRAN customers, a number of highlights are provided in the following section. The highlights are organized by report section for ease of reference.

Customer Demographics

• 54.2 percent of VOTRAN customers are between the ages of 25 to 54 years (median age for Volusia County is 43.6 years - *2005 Florida Statistical Abstract*).

• VOTRAN's ridership consists of a proportionally greater share of women (51.3 percent) than men (48.7 percent).

• The majority of VOTRAN ridership is composed of customers who indicated their ethnicity to be White (53.7 percent); 31.6 percent of customers indicated their ethnicity to be Black. 9.5 percent of VOTRAN's customers indicated being Hispanic (a 5 percent increase from 2002).

• 58.8 percent of VOTRAN customers live in households with 2005 annual incomes of less than $15,000. Additionally, 85 percent of VOTRAN customers have annual household incomes of less than $30,000 (the median annual household income for Volusia County was $35,010 - *2005 Florida Statistical Abstract*).

• 5.0 percent of VOTRAN customers live in households with a reported annual income for 2005 of $50,000 or more.

• 75.0 percent of VOTRAN customers do not have a car or other personal vehicle that they could have used to make the trip they took on transit.

• 84.7 percent of VOTRAN customers indicated being full-time residents of Volusia County.

• Based on the residential ZIP codes of VOTRAN customers, the bulk of VOTRAN's customer base resides within Daytona Beach, Port Orange, Holly Hill, South Daytona, Ormond Beach, Ponce Inlet, Deltona, DeLand, and New Smyrna Beach.

VOTRAN Customer Travel Behavior, Fare Usage, and Special Areas of Concern

• 62.5 percent of VOTRAN customers began their trips at home and 18.6 percent began their trips at work.

• 28.9 percent of VOTRAN customers ended their trips at home and 33.7 percent ended their trips at work.

• 77.3 percent of VOTRAN customers walk four blocks or less to a bus stop in order to access transit service.

• 77.0 percent of VOTRAN customers walk four blocks or less to reach their final destination after alighting a bus.

• The proportion of VOTRAN customers using the bicycle as their principal mode of transit access (0.6 percent in 1999; 3.1 percent in 2002, 3.3 percent in 2006) and egress (0.7 percent in 1999; 3.5 percent in 2002, 4.3 percent in 2006) continues to increase most probably due to the presence of bike racks on VOTRAN buses.

• 47.1 percent of VOTRAN customers have to make at least one transfer to complete their bus trips.

• The most utilized fare payment method among VOTRAN customers is the Adult Cash Fare of $1.00 (59.4 percent).

• 14.3 percent of VOTRAN customers utilize the Monthly Value Pass (full-fare or discounted), which is 4 percent lower than monthly pass usage was in 2002.
• 68.8 percent of VOTRAN customers use the system five or more days per week.

• The majority of VOTRAN customers use the system for two primary reasons: they do not drive (39.2 percent) or they do not have a car available to them (30.0 percent).

• 26.5 percent of VOTRAN customers would rely on a friend or relative to give them a ride if they could not make their trip by transit.

• 14.7 percent of VOTRAN customers would not make their trip at all if VOTRAN were not available for their use.

• 23.2 percent of VOTRAN customers are relatively new to the system, having used it for six months or less (including first-time riders).

• 61.2 percent of VOTRAN customers usually get information about the system from bus schedules, and only 0.9 percent listed newspapers, radio, or television as their first choice for getting information.

• 14.8 percent of VOTRAN customers indicated that they find it difficult to use VOTRAN's bus route and schedule information to plan their trips (down 5.3 percent from 2002 survey most likely due to schedule improvements).

The primary characteristics of the typical VOTRAN customer are:

- White female;
- Between the ages of 45 to 54 years;
- Has a total 2005 household income of less than $10,000;
- Has no car or other personal vehicle to use to make her trip;
- Resides in Volusia County year round;
- Has been using VOTRAN for more than 4 years;
- Rides VOTRAN 5 days per week; and
- Rides VOTRAN because does not drive.

Customer Satisfaction

- VOTRAN's most liked aspect was the fact that it is economical (good value for the money), followed by ability to get where you want to go, bus drivers, air conditioning, and convenience of service.

- VOTRAN's least liked aspect was travel time/trips take too long to complete, followed by other passengers (i.e. when they are loud, rude, inconsiderate, smelly, etc.), bus drivers (i.e. when they are rude, inconsiderate, unhelpful, etc.), having to wait and the amount of time spent waiting, and infrequency of service (making the travel times even longer).

- Based on average satisfaction ratings, VOTRAN customers are the most satisfied with the value of the bus fare, the bus driver's ability to drive the bus, how easy it is to get and to use bus route and schedule information, and the temperature inside the buses.

- The average satisfaction ratings indicated that VOTRAN customers are least satisfied with the hours of service on weekdays and weekend days (start and end times), the frequency of service, the amount of time it takes to make a trip by bus, and the number of transfers that must be made to complete a trip.

- Bus driver courtesy, frequency of bus service, and how regularly buses arrive on time were listed by VOTRAN customers as being the three most important service performance characteristics related to their use of transit service.

- A combined 82.2 percent of VOTRAN customers indicated being "very satisfied" or "satisfied" with VOTRAN service, overall. The overall average satisfaction rating for VOTRAN service is 4.25 out of a possible 5.00. These results indicate a decline from the overall satisfaction levels expressed in the 1999 survey, where a combined 74.9 percent of customers indicated being "very satisfied" or "satisfied" with VOTRAN service and the overall average satisfaction rating for VOTRAN service was 4.11 at that time.

The results from the 2006 survey of VOTRAN customers indicate that VOTRAN continues to provide a service that is a necessity to the majority of its customers. While many customers took advantage of the opportunity the survey afforded them to voice their complaints about the

various aspects of VOTRAN service that they would like to see improve, the overall results indicate that the system's customers are satisfied with the service currently being offered by VOTRAN. Nevertheless, it would be in VOTRAN's best interest to look into the feasibility of addressing any or all of those areas for improvement that were noted by its customers. In particular, frequency of service and how regularly buses arrive on time appear to have an increasing importance to VOTRAN's customers and satisfaction levels for these two characteristics are lower than the overall average rating. With this in mind, it is expected that the customer survey results will be an important tool for VOTRAN management and staff to help guide any current and/or future attempts to improve various aspects of the system's services.

VOTRAN GOLD PARATRANSIT CUSTOMER SURVEY

This section includes the results of the surveys mailed to the customers of the VOTRAN Gold paratransit system. The purpose of this survey was to collect detailed information about customer demographic characteristics and travel activity, and solicit input from the customers on their level of satisfaction with various aspects of VOTRAN Gold services.

Survey Methodology

In order to obtain a representative sample of VOTRAN Gold customers, the listing of passengers who utilized the paratransit system during February and March, 2006 was obtained from VOTRAN. This listing of active users identified 2,193 unique passengers residing in Volusia County, from which CUTR randomly selected 1,000 individuals to send the survey.

A 32-question survey was designed by CUTR with feedback from MPO and VOTRAN Gold staffs. The survey was designed to be simple and easily understood. Due to the characteristics of the passengers and the difficulty of administering an on-board survey in a paratransit environment, the decision was made to mail the survey to each passenger's home address. A self-addressed stamped return envelope was included with the surveys to facilitate the return of the completed surveys. The surveys were distributed and returned during the months of May and June 2006.

The survey instrument has a total of 32 numbered questions – with 28 utilizing multiple choice responses and 5 with open ended responses. The survey instrument can be found in Appendix A-4.

Each question did not have to be answered properly in order to have a valid survey. However, after thorough examination of each survey, any survey that appeared to be non-responsive, provided multiple responses to several questions, or otherwise appeared not to be a valid survey was deleted from the results.

The response rate for the survey was outstanding. As detailed in Table 4-12, of the 1,000 VOTRAN Gold demand response surveys mailed out, 442 were returned and determined to have a majority of valid responses. This represents a 44.2% response rate.

Table 4-12
Survey Response Rates

Surveys Distributed	Responses	Percentage
1,000	442	44.2%

Survey Analysis

The analysis of the passenger survey is divided into three sections: Customer demographics, trip characteristics and travel behavior, and customer satisfaction. Each section presents

combined survey results for both systems in graphical form as well as providing brief narrative comments.

The **Customer Demographics** section includes information about the customer's age, gender, ethnic heritage, total household income, household automobile availability, and possession of a valid driver's license. This profile and analysis can assist VOTRAN Gold in identifying its current customer base and serve as a guide for future marketing activities.

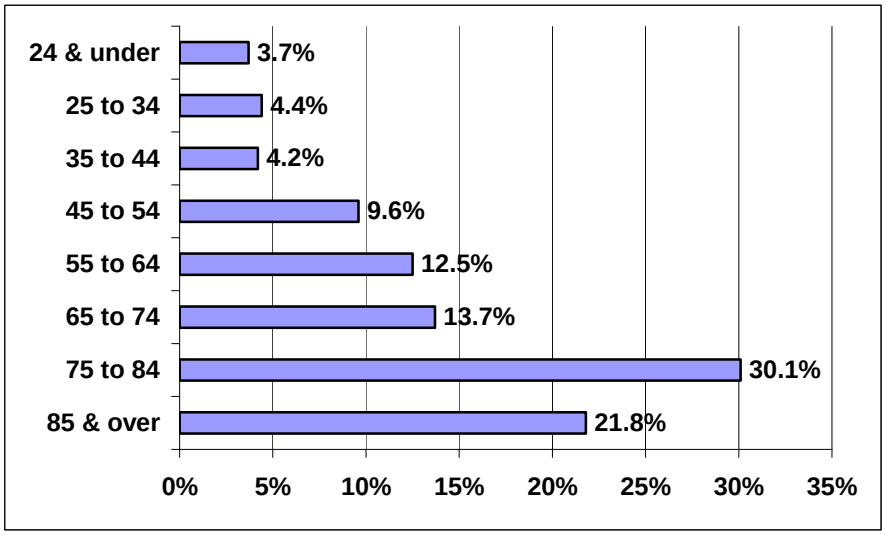
The **Trip Characteristic and Travel Behavior** section details specific attributes of the customer's individual trip and overall travel usage characteristics. Questions analyzed relate to travel frequency, tenure of service utilization, trip purpose, utilization of the bicycle and wheelchair lift features, fare type and utilization of the alternative transit service.

The **Customer Satisfaction** section presents the findings from a series of questions regarding the respondent's level of satisfaction with a variety of VOTRAN Gold service characteristics.

Customer Demographics

A series of questions were included in the survey instrument to learn more about the demographics of VOTRAN Gold's existing customer base including age, sex, ethnicity, income and access to an automobile.

Figure 4-18
Q22: What is your age?

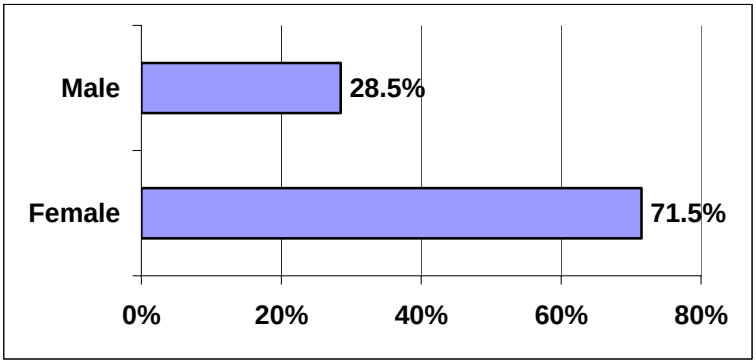


Question 22 asked the respondents to indicate which of the eight categories (i.e., 24 or under, 25 to 34, 35 to 44, 45 to 54, 55 to 64, 65 to 74, 75 to 84, and 85 and over) included their age. Figure 4-18 summarizes the results.

The results show that the VOTRAN Gold paratransit system is utilized primarily by senior citizens. The 75 to 84 age category received the largest response, with a significant number of passengers' ages 85 years and over. When the 75 to 84 and 85 and over categories are

combined, they account for 51.9% of the patrons. When combining the age 65 and over passengers, they represent 64.6% of all passengers. The other age group with over 10% of the passengers is the 55 to 64 category which accounts for 12.5% of all passengers.

Figure 4-19
Q23: What is your gender?



Question 23 asked the respondents to specify their gender. The results, displayed in Figure 4-19, show that females greatly outnumber males. Approximately 29% of the customers were male and 71% female.

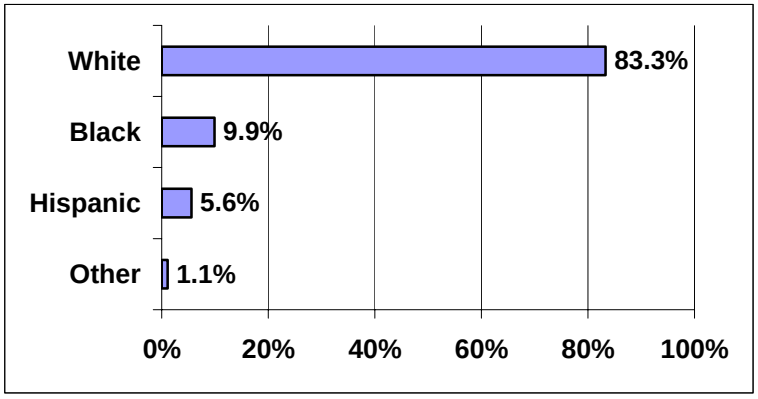
Table 4-13 displays cross-tabulation results of gender versus age to help better understand the VOTRAN Gold demand response passenger profile

Table 4-13
Gender (Q23) By Age (Q22)

GENDER	AGE								
	<24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
VOTRAN Gold Demand Response									
Male	1.6%	2.3%	2.3%	3.6%	4.5%	3.4%	7.0%	3.8%	28.5%
Female	2.1%	2.1%	1.9%	6.0%	8.0%	10.3%	23.1%	18.0%	71.5%

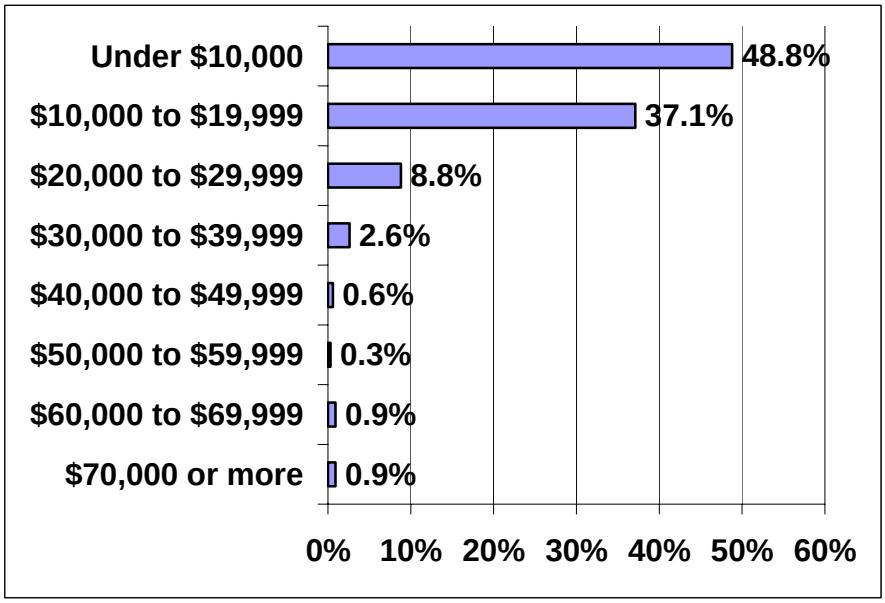
NOTE: Totals may not add up to 100% due to incomplete responses.

Figure 4-20
Q24: What is your ethnic heritage?



Question 24 asked respondents to indicate their ethnic heritage. The options provided were: White, Black, Hispanic and Other. The results are displayed in Figure 4-20. The White population accounted for 83% of the respondents, with the Black population at 10%, and the Hispanic responses at 5.6%. Just over 1% of "Other" responses were recorded.

Figure 4-21
Q25: What is your total household income?



Question 25 asked VOTRAN Gold demand response customers for their total household income**.** The possible responses were divided into eight $10,000 increments from under $10,000 to over $70,000. Approximately 86% of respondents were in the lower two income categories (i.e., under $19,999 in annual income). Figure 4-21 provides a graphical summary of the responses.

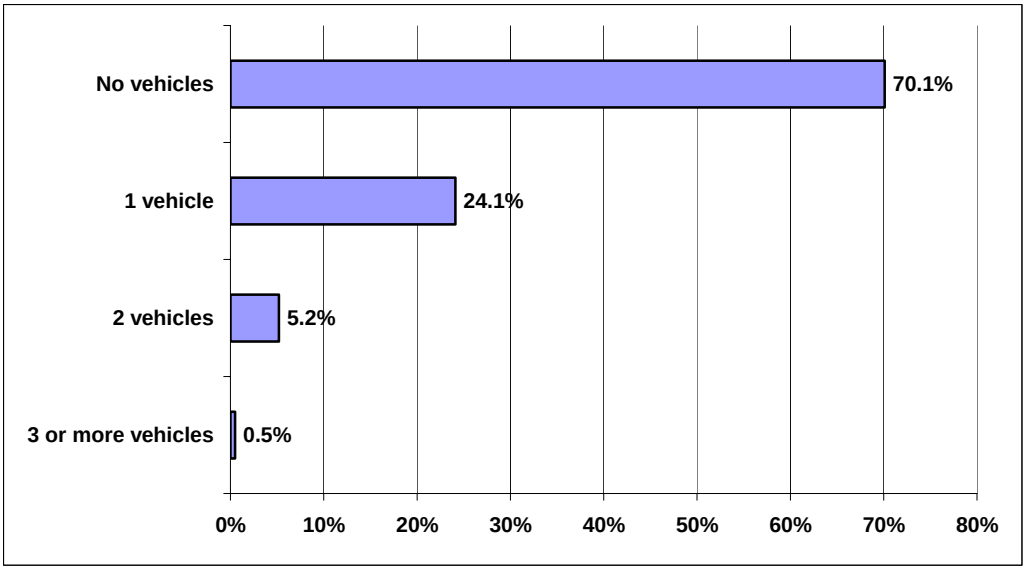
Table 4-14 cross-tabulates household income versus customer age.

Table 4-14
Household Income (Q25) By Age (Q22)

HOUSEHOLD INCOME	AGE								
	<24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
VOTRAN Gold Demand Response									
Under $10,000	2.1%	3.7%	1.9%	6.0%	8.4%	6.6%	11.4%	8.7%	48.8%
$10-19,999	1.5%	0.3%	0.6%	2.7%	3.9%	4.8%	14.3%	9.0%	37.1%
$20-20,999	0%	0.3%	0.3%	0.9%	0.9%	1.8%	3.2%	1.4%	8.8%
$30-39,999	0%	0%	0%	0.3%	0.3%	0.3%	0.6%	1.1%	2.6%
$40-49,999	0%	0%	0%	0%	0%	0.3%	0.3%	0%	0.6%
$50-59,999	0%	0%	0%	0%	0.3%	0%	0%	0%	0.3%
$60-69,999	0%	0%	0%	0.1%	0.1%	0.1%	0.6%	0%	0.9%
$70,000 & over	0%	0%	0%	0.3%	0%	0%	0.3%	0.3%	0.9%

NOTE: Totals may not add up to 100% due to incomplete responses.

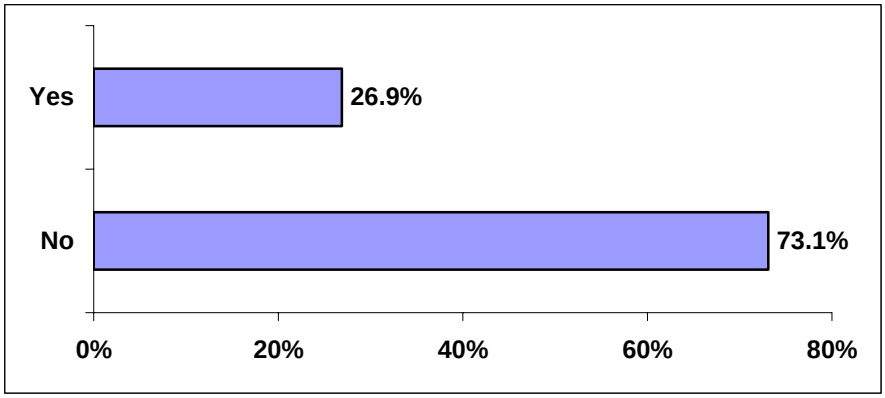
Figure 4-22
Q26: How many vehicles are available in your household?



Question 26 asked the respondents how many vehicles were available in their household. The multiple-choice answers were: no vehicles, one vehicle, two vehicles, or three or more vehicles. The complete results for this question are shown in Figure 4-22. Over 70% of the respondents

indicated that they had no vehicle available in their household. Those without an automobile can be classified as "captive passengers" who must rely upon others for their transportation needs.

Figure 4-23
Q27: Do you have a valid driver's license?



Question 27 asked the respondents if they possessed a valid driver's license. As detailed in Figure 4-23, approximately 27% of the passengers had a valid driver's license. The remaining respondents did not, more than 73%, and therefore must rely on others for their transportation.

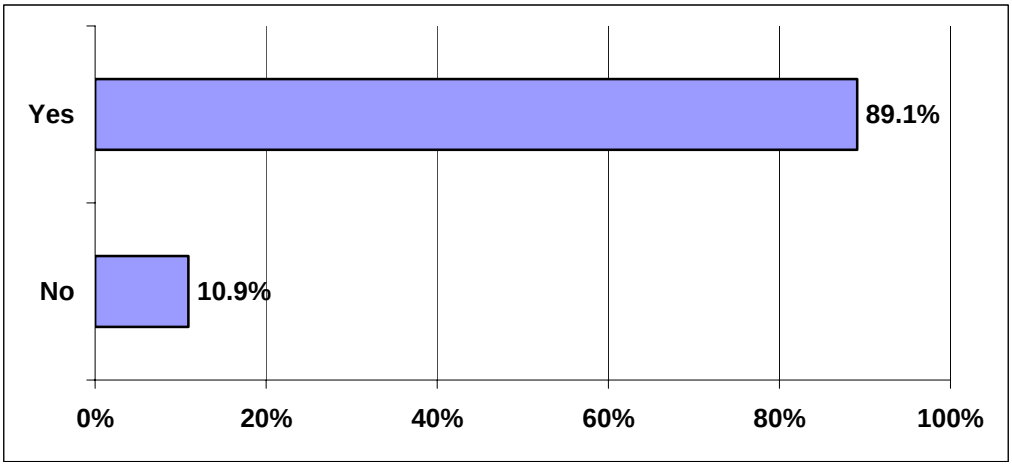
Table 4-15 cross-tabulates household income versus customer age.

Table 4-15
Possession of a Driver's License (Q27) By Age (Q22)

POSSESSION OF A DRIVER'S LICENSE	AGE								
	<24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
VOTRAN Gold Demand Response									
Yes	0%	0.3%	0.7%	2.5%	4.0%	3.3%	11.1%	5.0%	26.9%
No	3.9%	4.6%	3.3%	7.7%	8.7%	9.5%	19.0%	16.4%	73.1%

NOTE: Totals may not add up to 100% due to incomplete responses.

Figure 4-24
Q28: If you possess a driver's license, is it a Florida driver's license?

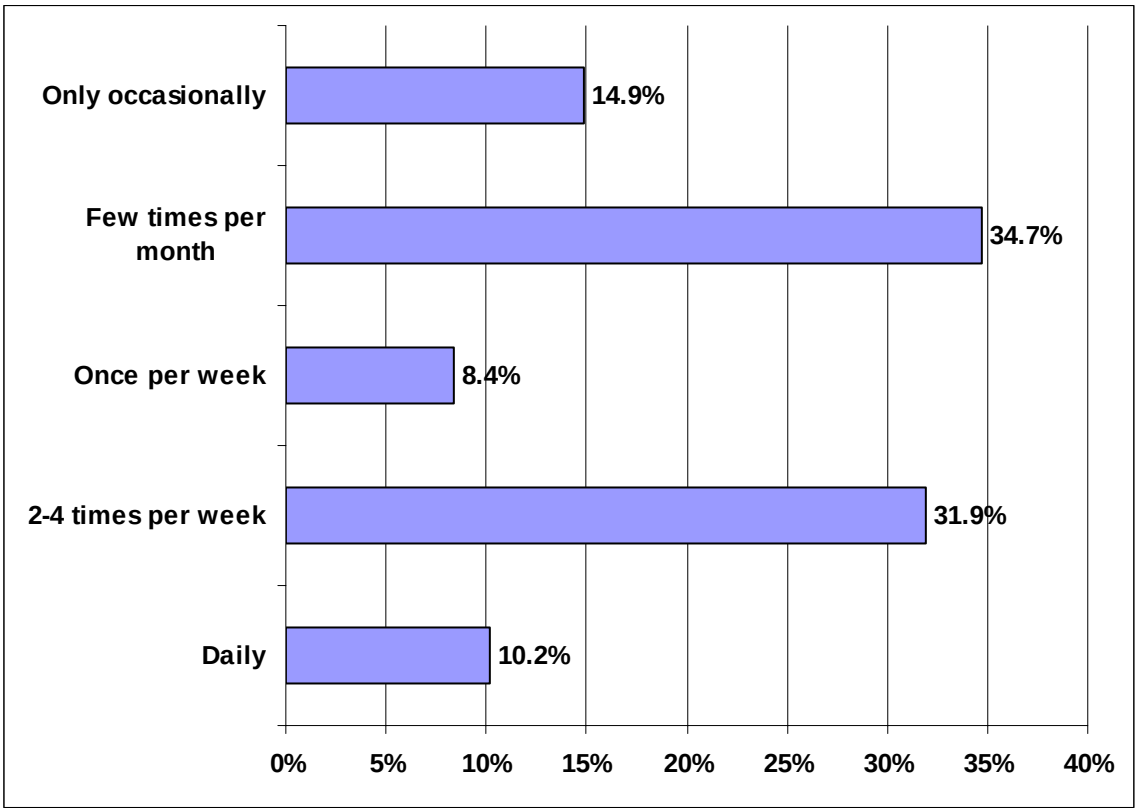


Question 28 asked those respondents with a valid driver's license if they have a Florida driver's license. As detailed in Figure 4-24, over 89% of the respondents have a valid driver's license obtained in the State of Florida.

Trip Characteristic and Travel Behavior

Another series of questions were asked to help determine specific attributes of the customer's individual trip and overall travel characteristics. The questions analyzed relate to travel frequency, tenure of service utilization, trip purpose, use of the bicycle and wheelchair lift features, and fare type.

Figure 4-25
Q1: How often do you use VOTRAN Gold service?



Question 1 asked the respondents how often they used VOTRAN Gold demand response services. As detailed in Figure 4-25 the most common response was a few times per month (34.7%). Almost 32% of riders report using the service 2 to 4 times per week.

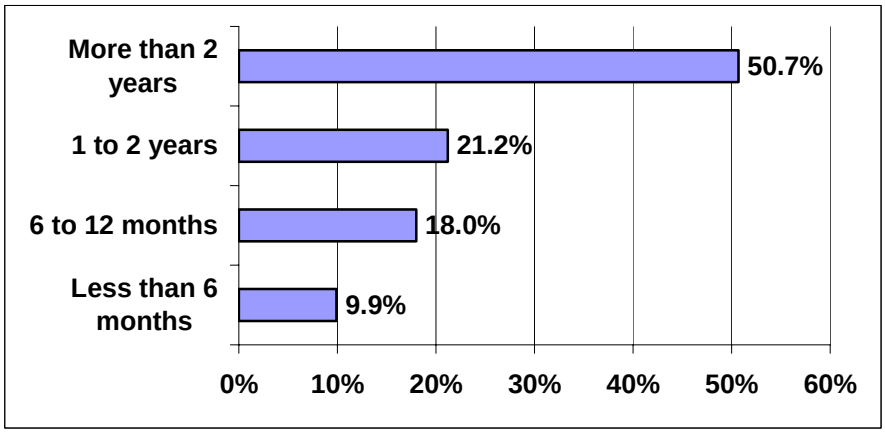
Table 4-16 cross-tabulates frequency of use versus customer age.

Table 4-16
Frequency of Use (Q1) By Age (Q22)

FREQUENCY OF USE	AGE								
	<24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
VOTRAN Gold Demand Response									
Daily	1.5%	1.0%	1.7%	1.7%	1.2%	1.0%	1.1%	1.0%	10.2%
2-4 Times/Week	2.0%	2.7%	0.7%	3.1%	4.4%	3.4%	11.0%	4.6%	31.9%
Once/Week	0.0%	0.3%	0.0%	0.5%	0.9%	1.3%	3.2%	2.2%	8.4%
Few Times/Month	0.2%	0.5%	1.2%	3.5%	4.8%	4.8%	12.0%	7.7%	34.7%
Occasionally	0.0%	0.0%	0.5%	0.6%	1.6%	3.3%	3.1%	5.8%	14.9%

NOTE: Totals may not add up to 100% due to incomplete responses.

Figure 4-26
Q4: How long have you been riding VOTRAN Gold?



Question 4 asked the respondents to indicate how long they had been using VOTRAN Gold services. As shown in Figure 4-26, approximately 51% of the passengers indicated they had been using that service for two or more years. Another 21% of these passengers have been using the system for 1 to 2 years. Those riding VOTRAN Gold for less than one year accounted for 27.9% of the responses – indicating that the system has been successful in attracting new ridership.

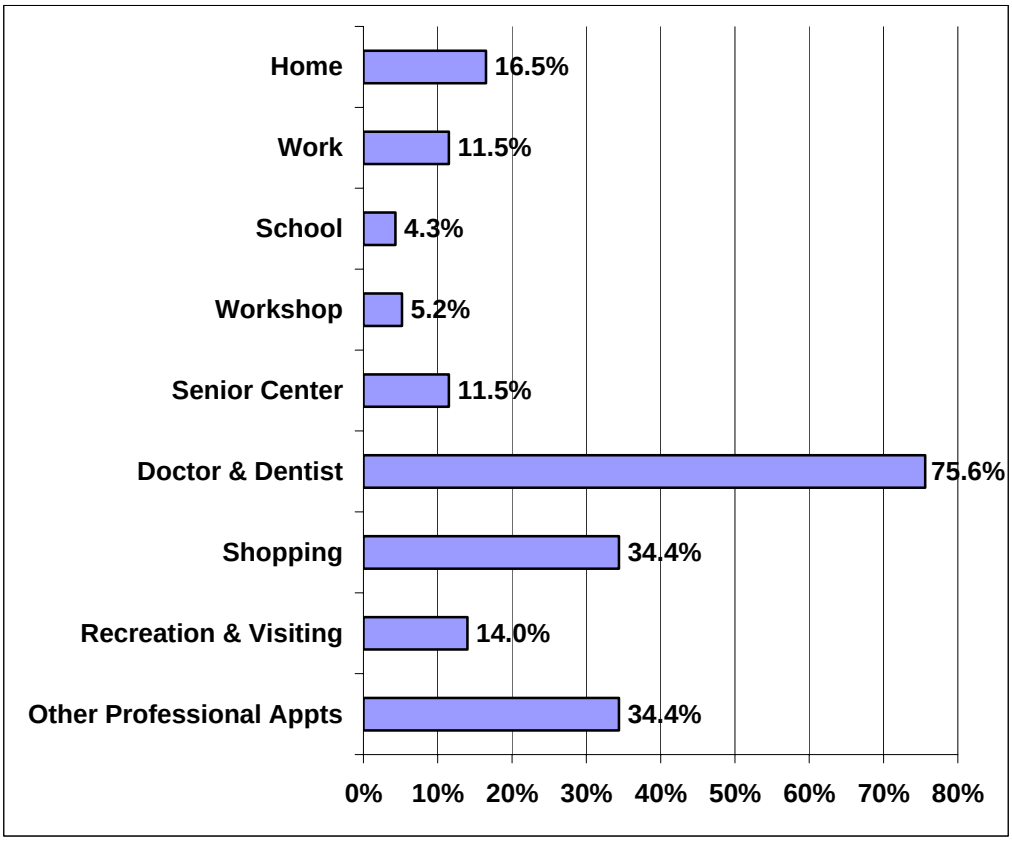
Table 4-17 cross-tabulates duration of use versus customer age.

Table 4-17
Duration of Use (Q4) By Age (Q22)

DURATION OF USE	AGE								
	<24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
VOTRAN Gold Demand Response									
Less than 6 Months	0.5%	0.6%	0.1%	1.1%	0.8%	1.6%	2.6%	2.6%	9.9%
6 to 12 Months	0.8%	1.1%	0.6%	0.8%	2.3%	2.8%	4.8%	4.8%	18.0%
1 to 2 Years	1.2%	0.5%	1.0%	1.6%	2.6%	2.9%	6.2%	5.2%	21.2%
More than 2 Years	1.1%	2.3%	2.4%	6.0%	7.0%	6.3%	16.6%	9.0%	50.7%

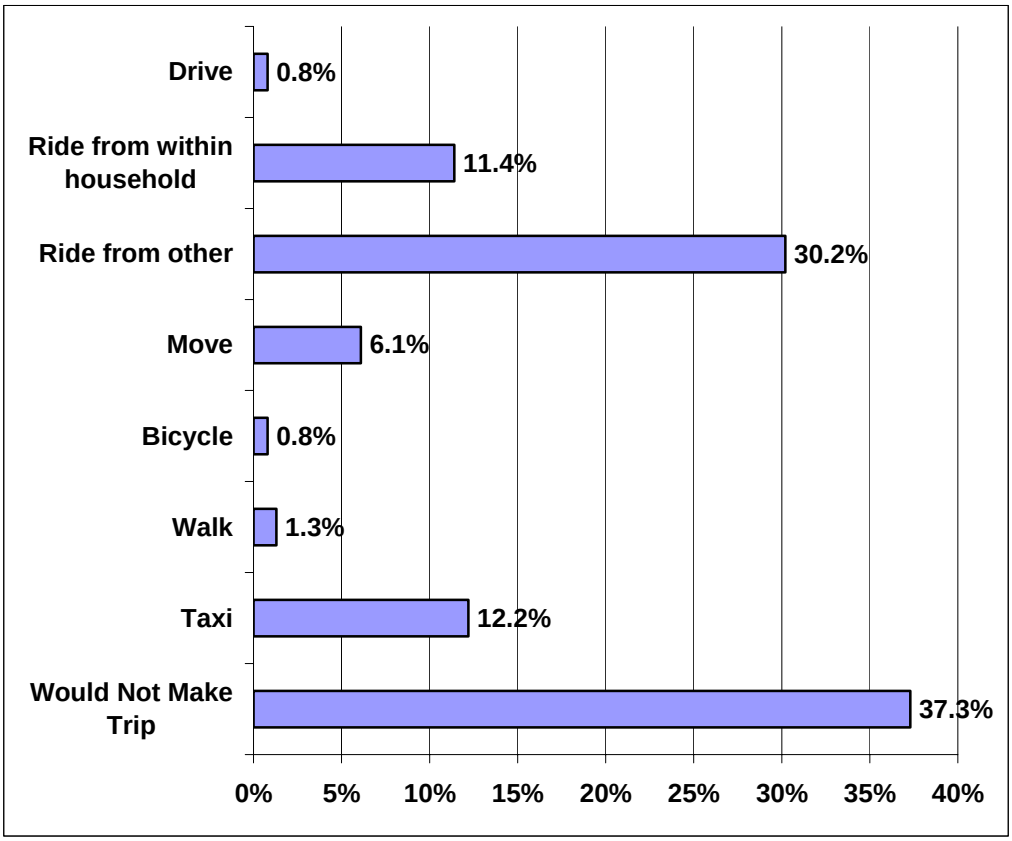
NOTE: Totals may not add up to 100% due to incomplete responses.

Figure 4-27
Q21: What are all of the trip purposes for which you use the bus service?



Survey question 21 asked customers what their trip purposes were when traveling on VOTRAN Gold. Figure 4-27 details their responses. Respondents were asked to list all of their trip purposes and were not limited to only one response. Doctor and dentist was the most frequently cited response, followed by shopping and other professional appointments. Other trip purposes were distributed generally equally over the other categories.

Figure 4-28
Q18: How would you get to your destination if the bus was not available?



Question 18 asked the respondents how they would get to their destination if the VOTRAN Gold demand response buses were not available. The responses to this question are detailed in Figure 4-28.

The passenger's top two responses (accounting for 67%) were not make the trip or ride with someone else. These responses reveal a transit dependent population. The next most frequent answer was to take a taxi. Less than one percent indicated that driving was an option. It is significant to note that approximately 37% of current VOTRAN Gold passengers indicated they would not make the trip if the bus was not available.

Figure 4-29
Q2: Do you use a wheelchair or electric scooter when riding the bus?

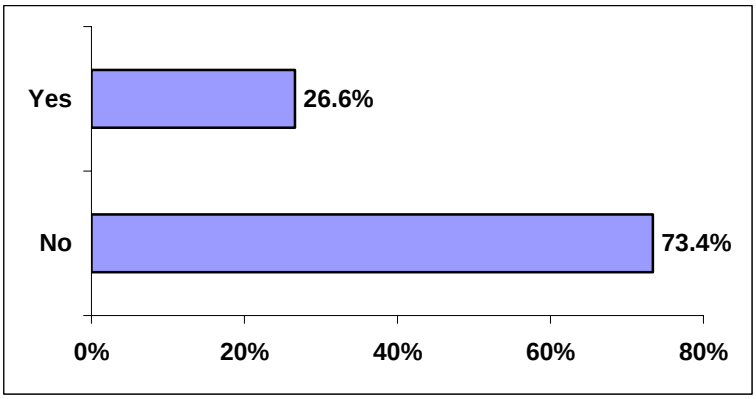
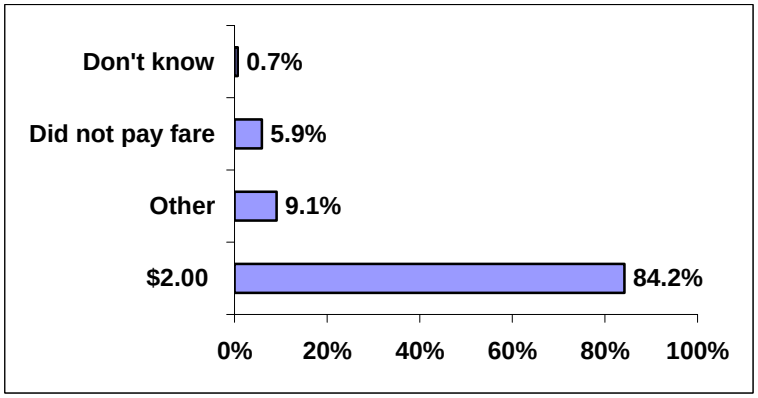


Figure 4-23 presents the responses to Question 2 which asked the respondents to indicate if they used a wheelchair when riding on the VOTRAN Gold paratransit system. The results showed that approximately 27% of the VOTRAN Gold demand response passengers used wheelchairs in their bus travels.

Figure 4-30
Q3: What fare do you usually pay for a one-way ride?

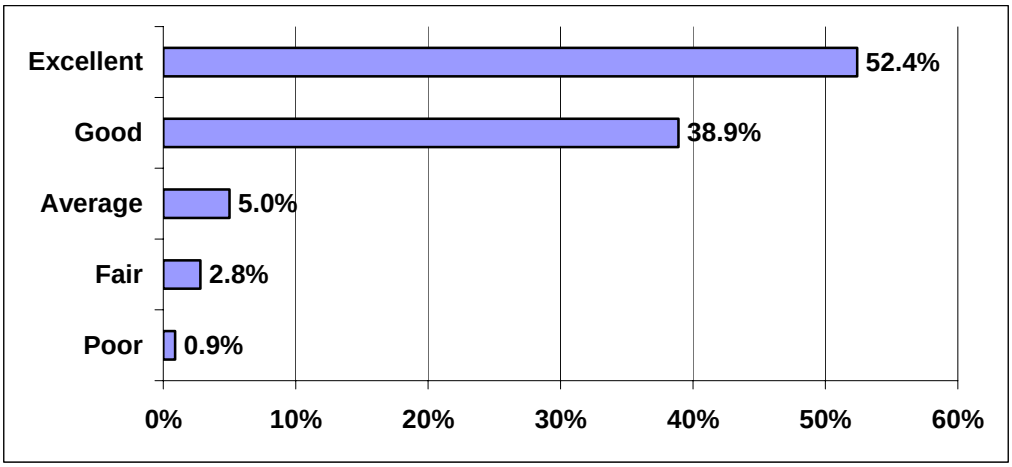


As detailed in Figure 4-30, Question 3 asked the respondents to indicate what bus fare they usually pay. Over 84% of the passengers indicated that they pay $2.00 per one-way trip.

Customer Satisfaction

This section presents the findings from a series of questions regarding the respondent's level of satisfaction with a variety of VOTRAN Gold demand response service characteristics.

Figure 4-31
Q6: How would you rate the overall quality of the service?



Question 6 asked the respondents to rate the overall quality of service by selecting one of five possible responses – excellent, good, average, fair or poor. As depicted in Figure 4-31, 91.3% of VOTRAN Gold customers gave the service excellent or good ratings.

Table 4-18 cross-tabulates the overall quality of service responses with the customer age.

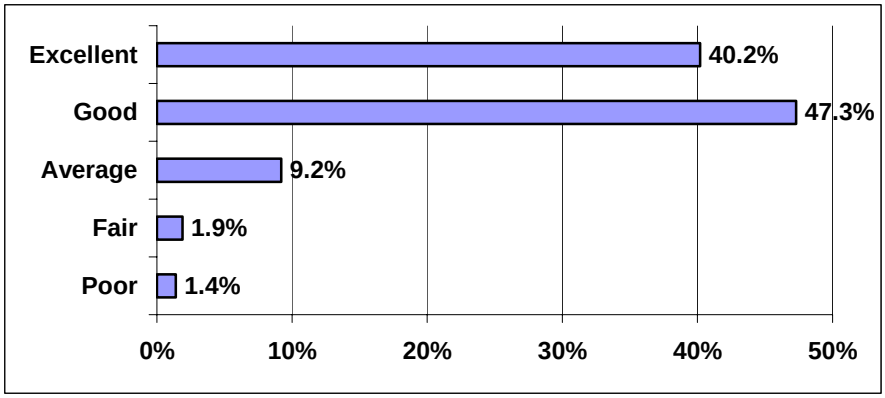
Table 4-18
Overall Quality of Service (Q6) By Age (Q22)

Overall Quality of Service	AGE								
	<24	25-34	35-44	45-54	55-64	65-74	75-84	85+	Total
VOTRAN Gold Demand Response									
Excellent	1.4%	1.4%	2.0%	5.0%	6.2%	7.4%	16.0%	13.0%	52.4%
Good	1.1%	2.7%	1.9%	4.2%	5.2%	5.2%	11.5%	7.1%	38.9%
Average	0.2%	0.2%	0.1%	0.6%	0.8%	0.5%	1.8%	0.8%	5.0%
Fair	0.8%	0.0%	0.5%	0.1%	0.2%	0.2%	0.5%	0.5%	2.8%
Poor	0.0%	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.0%	0.9%

NOTE: Totals may not add up to 100% due to incomplete responses.

Figure 4-32

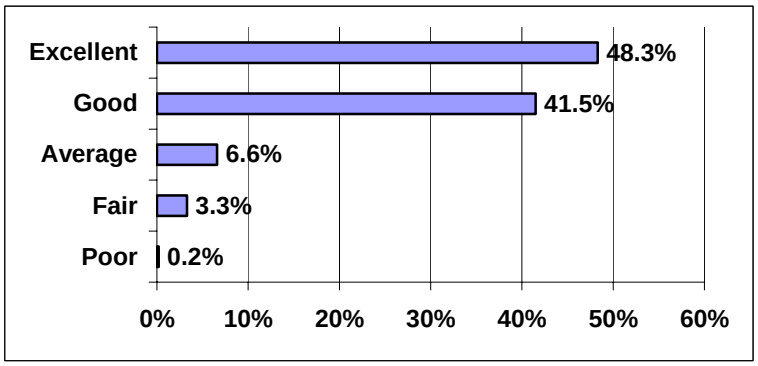
Q7: How would you rate the comfort of the vehicles?



A similar customer satisfaction question (Q7) focused on the passenger's impression of the comfort of the vehicles. The distribution of responses, shown in Figure 4-32, revealed an overall high satisfaction with the vehicles with just under 90% (87.5%) responding with excellent and good ratings.

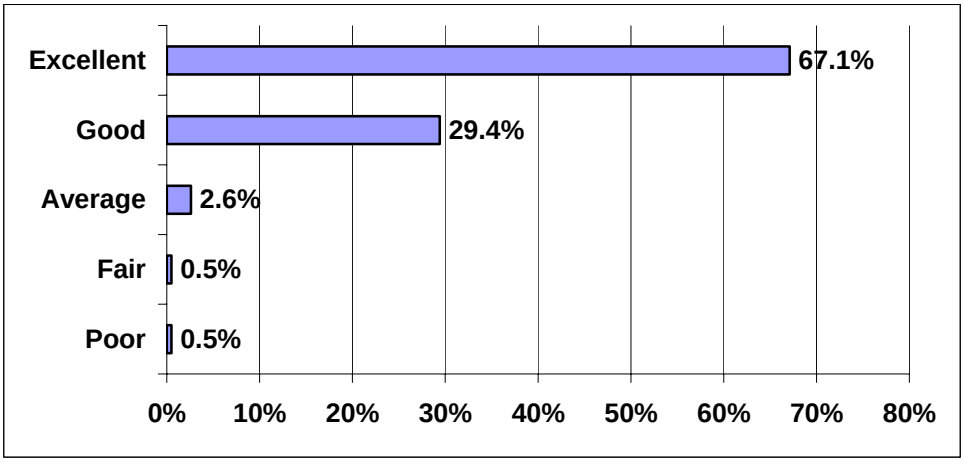
Figure 4-33

Q8: How would you rate the cleanliness of the vehicles?



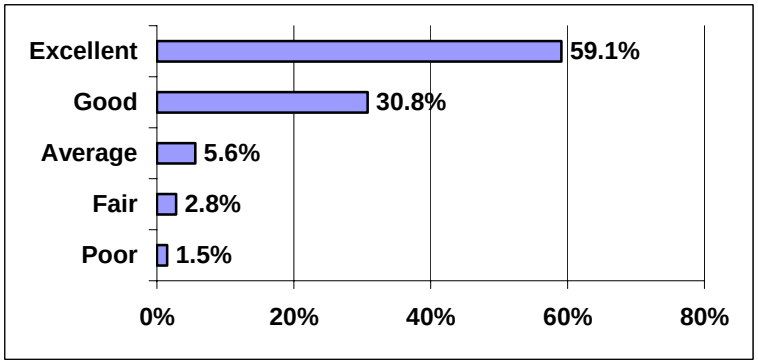
The third customer satisfaction question (Q8) related to the cleanliness of the vehicles. As depicted in Figure 4-33, these ratings were very impressive with combined excellent and good ratings of 89.8%.

Figure 4-34
Q10: How would you rate the courtesy and helpfulness of the drivers?



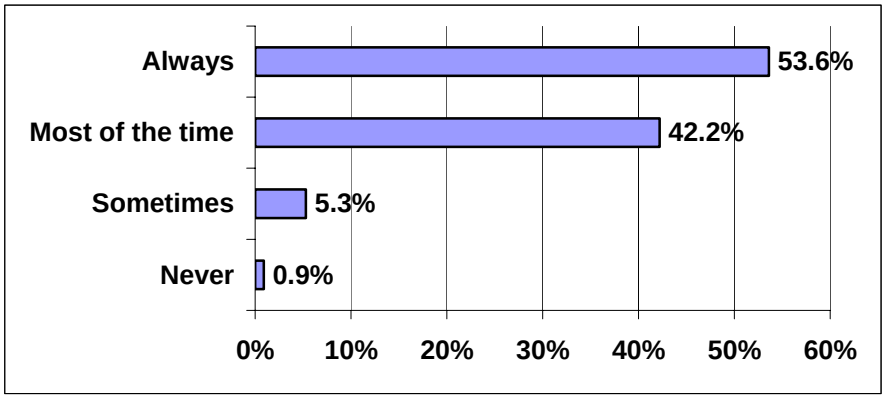
The next customer satisfaction question (Q10) focused on the courtesy and helpfulness of the bus drivers. Again, as detailed in Figure 4-34, VOTRAN Gold services received very impressive ratings for their driver's courtesy and helpfulness. When the excellent and good responses were combined, they represented 96.5% of the total responses – near perfection.

Figure 4-35
Q16: How would you rate the courtesy and helpfulness of the telephone reservationists?



Another component of the VOTRAN Gold demand response operation that was evaluated was the passenger's rating of the courtesy and helpfulness of the telephone reservationists. The respondents rated the reservation services high, with 89.9% of the responses being excellent and good. The complete ratings are summarized in Figure 4-35.

Figure 4-36
Q9: How often do you arrive at your appointments on time?



The final customer satisfaction question (Q9) asked the respondents to indicate how often they arrive at their appointments on time. As displayed in Figure 4-36, less than 54% of the respondents responded all of the time, but 95.8% replied that they arrived on time always or most of the time.

Table 4-19 portrays the results from the Rider Experience portion of the survey. Respondents were asked to rank the experiences of both VOTRAN Gold service provided by VOTRAN directly, as well as to rank the service provided by the contracted providers that provide trips. The results are displayed together for comparison purposes.

Table 4-19
Rider Experience

Category	VOTRAN Gold Operated by VOTRAN	VOTRAN Gold Operated by Contractor
Overall Quality		
Excellent	52.4%	40.3%
Good	38.9%	45.7%
Average	5.0%	7.6%
Fair	2.8%	5.1%
Poor	0.9%	1.2%
Comfort		
Excellent	40.2%	37.4%
Good	47.3%	48.3%
Average	9.2%	9.9%
Fair	1.9%	4.9%
Poor	1.4%	1.4%
Cleanliness of Vehicles		
Excellent	48.3%	44.1%
Good	41.5%	40.1%
Average	6.6%	9.2%
Fair	3.3%	4.5%
Poor	0.2%	2.2%
Courtesy/Helpfulness of Drivers		
Excellent	67.1%	55.5%
Good	29.4%	35.3%
Average	2.6%	6.2%
Fair	0.5%	2.5%
Poor	0.5%	0.4%
Do you arrive to appointments on time?		
Always	53.6%	53.6%
Most of the time	42.2%	39.9%
Sometimes	5.3%	5.2%
Never	0.9%	1.2%

Typical Rider Profile

Table 4-20 provides a description of the "Typical VOTRAN Gold Rider" based on the answers received from the passenger survey. The typical VOTRAN Gold rider is female, aged 75-84, is Caucasian, and has an annual income of less than $10,000. Usually there is no car available in the household, so the rider uses VOTRAN Gold service a few times per month to get to doctor and dental appointments. The rider has been using VOTRAN Gold services for more than two years, pays $2.00 per ride, and would not be able to make their trips were it not for the services provided by VOTRAN Gold.

Table 4-20
Typical VOTRAN Gold Rider Profile

Characteristics	VOTRAN Gold Paratransit System
Gender	Female
Age	75 to 84
Ethnic Heritage	Caucasian
Annual Household Income	Less than $10,000
Auto Availability	None
Main Trip Purpose	Doctor & Dentist
Frequency of Use	A few times per month
Duration of Use	More Than 2 Years
Alternative Transportation	Wouldn't Make Trip
Fare Type	$2.00 Per One-Way Trip

EMPLOYEE SURVEY

This section describes the results of a survey of VOTRAN employees. The survey instrument, included in Appendix A-5, was distributed to all VOTRAN bus operators, dispatchers, and customer service representatives. The purpose of the survey was to seek input from the employees about existing services and potential improvements to the service.

Survey Distribution

In April 2006, the survey was distributed to the 153 employees in the bus operator, dispatcher and customer service representative job classifications. A total of 37 completed surveys were returned for a response rate of 24.2%. The respondents were anonymous. The responder job functions were distributed as follows: 75.7% bus operators, 16.2% customer service representatives, and 8.1% dispatchers and others.

Table 4-21
Survey Response Summary

	Bus Operators	Customer Service Representatives	Dispatchers
Number of Responses	28	6	3
Total of All Responses	75.7%	16.2%	8.1%

Survey Results

Question 2 asked the employees to indicate the types of complaints they have received from customers and to assign a value of 1 through 5 to the top five most frequently mentioned, with #1 being the most frequent. The sum of the individual scores was used to determine the weighted ranking. In the weighting process, each #1 response received 5 points, #2 response 4 points, #3 response 3 points, #4 response 2 points, and #5 response 1 point. Table 4-22 summarizes the employee responses.

Table 4-22
Ten Most Frequent Passenger Complaints Identified by Employees

Customer Complaint	Rank	Times Mentioned	Weighted Rank
Bus service is not on time	1	18	80
Not enough Sunday service	2	16	48
Bus doesn't go where I want to go	3	15	46
Need more evening service	4	14	44
Rude and unfriendly drivers	5	13	43
Rude and dirty passengers	6	16	38
Not enough shelters or benches	7	10	27
Route information is unclear	8	10	26
Hard to make trip reservations	9	6	24
Need earlier morning service	10	9	21

Question 4 provided the employees with a list of eleven potential improvements to the VOTRAN bus services and asked them to indicate their top five choices. Employees were asked to assign a value of 1 through 5 to the top five most frequently mentioned, with #1 being the most frequent. The sum of the individual scores was used to determine the weighted ranking. In the weighting process, each #1 response received 5 points, #2 response 4 points, #3 response 3 points, #4 response 2 points, and #5 response 1 point.

As detailed in Table 4-23, the top ranked improvement, selected by 24 employees, was to provide additional daily service to respond to existing demand. The second ranked priority was to provide additional time within the existing schedules. The third highest weighted improvement requested was the improvement of customer pick-ups times.

Table 4-23
Employee Recommended Priorities for System Improvements

Potential Improvement	Rank	Times Mentioned	Weighted Rank
Operate additional daily service to meet demand	1	24	87
Provide more time within the schedules	2	23	80
Improve scheduling system of customer pick-ups	3	18	69
Provide better route and schedule information	4	19	47
Operate additional Sunday service	5	15	43
Operate additional evening service	6	15	41
Reduce headways, more frequent bus service	7	11	39
Improve reservation system	8	11	33
Improve bus stops with shelters, benches, etc.	9	11	29
Improve the maintenance of the buses	10	7	24
Lower bus fares	11	1	1

Question 5 provided the employees the opportunity to prioritize a list of seven specific candidate service improvements. Similar to the other questions, the employees were asked to assign a value of 1 through 7 to the top five most frequently mentioned, with #1 being the their highest priority. The sum of the individual scores was used to determine the weighted ranking. In the weighting process, each #1 response received 7 points, #2 response 6 points, and so forth with finally #7 response 1 point.

As detailed in Table 4-24, the top ranked improvement, selected by 28 employees, was to increase the service frequencies on selected bus routes on the east side of the VOTRAN service area. The second ranked priority among employees was to provide an expansion in the amount of VOTRAN Gold Services provided. As noted in the next four priorities, service area expansions and selected service frequency improvements were ranked higher than expanding the number of routes with night and Sunday service.

Table 4-24
Employee Recommended Priorities for Improvement Projects

Candidate Service Improvement	Rank	Times Mentioned	Weighted Rank
Improve the frequency of selected routes in East/Southeast Volusia County	1	28	158
Expand the amount of VOTRAN Gold Services	2	29	120
Expand the areas served in East/Southeast Volusia County	3	26	108
Improve the frequency of selected routes in West Volusia County	4	28	107
Expansion of routes with night service	5	24	96
Expansion of the routes with Sunday service	6	25	93
Expand the areas served in West Volusia County	7	26	91

In Questions 8, 9, and 10, the employees were asked to express their views of three additional service hour expansion options; additional earlier and later daily service, expanding Saturday service, and expanding Sunday service coverage. The employee responses, summarized in Table 4-25, revealed strong support for earlier and later daily service hours. When questioned about additional Saturday or Sunday service, however, the employees were split relatively equally.

Table 4-25
Employee Opinions Regarding Need For Service Expansion

	Additional Early Morning and Night Service		Additional Saturday Service		Additional Sunday Service Coverage	
	Yes	No	Yes	No	Yes	No
Totals	61.8%	38.2%	47.1%	52.9%	48.5%	51.5%

Question 6 asked employees to identify any safety problems on bus routes that they felt needed to be addressed. The responses included:

- Tight route schedules put pressure on drivers to operate too fast and unsafely, often not stopping for wheelchair passengers
- Turn around areas at both Wal-Marts need redone
- Some of the 1100 series of vehicles are too slow to accelerate
- Minimize left turns at non-signalized intersections
- Allowing passengers to flag down buses at non-bus stop areas is unsafe
- Some routes don't have enough time to safely and efficiently operate the service
- Examine routing of full size buses into shopping centers and apartment complexes to minimize potential traffic and safety conflicts
- Eliminate blind spots at railroad crossings

Question 7 probed the employees for suggested modifications to any VOTRAN routes or services. The responses included:

- Use mini-vans for early pickups and lighter loads for special need trips
- Expand paratransit service on West Side, especially on Saturdays
- All time points need to be examined since they haven't been changed for years despite increased traffic and higher passenger levels
- Not enough time for Routes #15 and #60.
- Examine schedules for Routes #3, #4, #6, #7 and #12 to address afternoon service connections problems
- Sunday service should be same as holiday service
- Operate trolleys year round and explore route alternative with other beach services
- Provide Sunday service to West Side
- Increase service frequency for Routes #3 and #4 to 30 minutes in major areas
- Route #5 should run on Saturday
- Expand Route #7 further west or southwest
- Route 10 on 1SB, not enough time on Sundays
- Route 20 on West Side, need to examine running times, consider splitting route into two routes
- Route #60 should stay out of Volusia Mall
- Expand Route #60 service hours to provide trips for evening shoppers at Volusia Mall
- Add Nova Road Express service

Question 11 asked for the employee's wish list, asking "if money were no object" what you would recommend in specific subject areas. The following are the responses received for each of the sub-questions.

To what part of the County not currently served by VOTRAN should service be added?

- Expand ADA services to entire county
- Port Orange, west and southwest
- Lake Helen, Oak Hill and service back on 15A in Deland
- Southeast
- West Volusia
- Provide Sunday service to portions of Nova Road
- West Volusia Sunday service
- Improved north-south service on Nova Road and Clyde Morris Boulevard
- Service to Sanford
- In Deland, add service to west campus of Daytona Beach Community College and Amtrak train station
- West Beville Road to Williamson Road
- County Fair Grounds
- Clyde Morris Boulevard from Granada to Dunlawton

What is the most important passenger amenity or service improvement that should be provided?

- Improve driver courtesy
- Clean seat belts and wheelchair straps
- Use low floor buses or lower bus steps
- Individual route bus schedules
- More passenger shelters
- Improve time reliability of route connections
- Implement some type of pass for VOTRAN Gold passengers
- Improve transfer plaza public address system

What is the most important (vehicle, technology, facility or maintenance) improvement that should be made?

- Improved driver seats for VOTRAN Gold vehicles
- New farebox system
- Improved radio system
- Hands free radio system
- Return VOTRAN Gold system to "open radio" procedures
- Global positioning system, vehicle locator system
- Open the transfer plaza earlier in the morning to accommodate female operators
- Improve West Side facilities

What single process or tool would you recommend to improve your ability to be more involved in decision-making related to schedule and policy changes?

- Improve internal communication before changes are implemented
- Allow more driver input in route planning and policy development
- Employee suggestion box
- More employee meetings
- Additional surveys related to all aspects of VOTRAN
- Better communication between management and employees

Questions 12 and 13 asked the employees for the greatest strengths and shortcomings of the transit services provided by VOTRAN. The following were the responses received.

Greatest Strength…

- The "Drivers"
- The VOTRAN Gold paratransit services
- Professionalism of all employees
- Friendly and helpful drivers
- Customer service
- Providing transit service to the disabled residents
- Provision of good and reliable service to the community

Greatest Shortcoming…

- Not enough VOTRAN Gold vehicles operated by VOTRAN, too great a reliance on private carriers
- Requiring all the East Side routes meet at the main transfer plaza
- In consistent application of the rules and procedures
- Not enough funding to meet all the passenger needs
- Poor internal communication
- Need more customer route information staff, less reliance on drivers and dispatchers
- Lack of working person oriented service, especially due to limited service hours

COMMUNITY LEADER INTERVIEWS SUMMARY

This section summarizes the interviews with community leaders that were conducted to gain insight into the attitudes and perceptions of the community related to transportation. The goal was to ascertain if the plans to improve existing and develop future transit services evolving from the Transit Development Plan process were consistent with the community's vision for public transportation.

Working with the project steering committee, a list of 12 individuals was identified which represented a cross-section of public, non-profit and private sector community leaders. Interviews, which averaged approximately 30 minutes, were conducted on July 11th and 12th of 2006.

Research Objective

The objectives of the community leader interviews were to:

- Measure the community leader's level of familiarity with VOTRAN
- Measure opinions related to VOTRAN's image and level of satisfaction
- Understand community issues
- Understand the desired role of public transportation
- Learn what transit improvements may be supported
- Seek recommendations regarding the future role of public transportation

Research Findings

- The community leaders were all aware of the existence of VOTRAN and the services it provided. When asked how familiar they were with VOTRAN on a scale of 1 to 5, with 1 being not very familiar and 5 very familiar, the responses ranged from 2 to 5 – with the average being a score of 3.4.

- While only 40% of respondents had ever used VOTRAN's services, all stated that their constituents used the VOTRAN bus system.

- When asked who they thought were the primary beneficiaries of VOTRAN services, the low income and senior residents were the predominate responses.

- While all of the respondents stated that they felt the public was aware of the VOTRAN bus system, several stated additional marketing of VOTRAN should be undertaken to increase the public awareness and knowledge of how to access specific VOTRAN services and of VOTRAN's importance to the community.

- VOTRAN was held in high regard by the majority of those interviewed. Those surveyed were asked to rate their satisfaction with VOTRAN on a scale of 1 to 10, with 1 meaning very unsatisfied to 10 being very satisfied, the responses ranged from 5 to 9, with group average of 7.5.

- All felt that the community impression of VOTRAN was very positive and that it was seen as an important public service.

- The general impression of VOTRAN was that it was a well managed transit system, with excellent staff and customer focused employees.

- When asked to identify what the primary responsibilities of VOTRAN to the community should be, the following responses received equal mention:
    - Provide safe, efficient bus transportation
    - Provide transportation for citizens without access to personal transportation
    - Provide transportation services for the disabled
    - Provide transportation for the seniors and elderly

  Another common response was to provide emergency transportation services.

- The community leaders cited VOTRAN's greatest strengths as their business approach; good management; the quality of service provided; their stability; their innovation; ability to provide clean, efficient and dependable service; and, their willingness to work with community partners.

- While the majority of the respondents did not feel there were significant traffic congestion or traffic safety problems in Volusia County, all felt the public transportation could play a roll in:
    - Traffic congestion
    - Traffic safety
    - Environmental issues
    - Economic development
    - Emergency Management functions

- When asked to rate the importance of VOTRAN to the community, the average group response was 8.2 on a scale of one to ten, with ten being very important.

- In terms of community budget priority, the respondent's primary response was that VOTRAN should be funded as a component of the overall transportation system. While one respondent cited VOTRAN as an essential service similar to fire and police, another stated it should be funded as a discretionary system similar to parks and libraries.

- When asked what new VOTRAN services they would support, the three primary responses included new bus routes, longer service hours, and more frequent service.

- When asked if Volusia County residents would support additional public funding for VOTRAN, the response was one of qualified support, citing the need to overcome the sentiment of "no new taxes".

- When asked what would be their primary conditions for supporting expansion and improvements to VOTRAN in the future, the responses were that it must be part of an overall strategic transportation plan and must be able to convince the public of the need and justification for the new service.

SUMMARY OF OTHER PUBLIC INVOLVEMENT ACTIVITIES

In addition to the surveys of passenger and employees and the interviews with the community leaders, a series of other public involvement activities were undertaken to gain an understanding of the community's perceptions of VOTRAN, the services it provides, the services most desired by users and non-users and the community's vision for the future of transit in Volusia County.

These outreach efforts included meetings with the TDP Steering Committee, the Transportation Disadvantaged Local Coordinating Board (TDLCB), VOTRAN and Volusia County Metropolitan Planning Organization (MPO) staff, the MPO Citizen Advisory and Technical Coordinating Committees, community groups such as the Handicapped Adults of Volusia County (HAVOC), and two public workshops.

Table 4-26 provides a graphical representation of the public involvement strategy and meeting schedule that was employed for the TDP Update effort.

Table 4-26

VOTRAN TDP/TDSP UPDATE
Public Involvement Strategy & Meeting Summary

	Steering Committee Kick-off Meeting	Senior Staff Workshops)	Perceptions Meetings -- Goals/Objectives	Employee Surveys	Community Leader Interviews	Passenger Surveys	Review of Deliverables (TM 1-6 + Final Draft Reports)	Develop Review Methodology	Evaluation of Alternatives	Present Revised Alternatives (TM #6)	Public Meeting to Present Revised Alternatives	Review Draft TDP and TDSP (2 review cycles)|	Presentation of Final Draft Reports for Approval	Other Public Involvement Opportunities (newsletters, websites, other meeting, etc.)
Participants														
Steering Committee	X						X	X	X	X		X		X
VOTRAN Representatives		X												
FDOT Representative														
MPO Representative		X												
RWFB Representative														
TDLCB Representatives														
VOTRAN Employees		X		X										X
VOTRAN Passengers						X					X			X
Review & Approval Groups														
MPO CAC			X							X				X
MPO TCC			X							X				X
HOVAC (Community Group)			X											X
TDLCB			X							X			X	X
MPO			X										X	X
Volusia Council (BCC)				X									X	X
Community Leaders					X						X			X
General Public						X					X			X

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CHAPTER FIVE

GOALS AND OBJECTIVES

INTRODUCTION

In order to develop goals and objectives for the Transit Development Plan, it is necessary to evaluate the needs of the community, support the plans and policies of local government agencies and identify areas where operating enhancements and efficiencies can be achieved. This chapter includes VOTRAN's goals and objectives and the process and activities utilized in their development. These goals and objectives will serve to guide the performance, development and evaluation of services through the next ten years (2007 – 2016).

DATA COLLECTION AND EVALUATION

As outlined in the previous chapters of this plan, a significant amount of data collection was conducted to understand the environment in which VOTRAN operates and to evaluate its strengths and weaknesses from the perspective of the community and as compared to transit agencies with similar characteristics. First, a thorough analysis of Volusia County's demographic and socioeconomic data was conducted for purposes of identifying markets with high propensity for transit utilization, potential new markets for VOTRAN, how its services relate to employment opportunities, commuter characteristics and land use. Second, a summary of VOTRAN services and those offered by the area's other transportation providers was completed to identify the markets served and existing and potential multi-modal connectivity. Third, a comprehensive evaluation of trends in VOTRAN's operating and financial performance was conducted along with peer group comparisons to highlight strengths and weaknesses for a variety of measures. Finally, a variety of market research activities were undertaken including: surveys of paratransit and fixed route service customers, a bus operator survey, community leader interviews and public workshops.

These activities were designed to gain an understanding of the community's perceptions of VOTRAN, the services it provides, the services most desired by users and non-users and the community's vision for the future of transit in Volusia County.

The identification of goals and objectives for a transit system is a fundamental step in the development of a TDP. This chapter summarizes the policy issues identified in discussions that CUTR held with community leaders, the TDP Steering Committee, the Transportation Disadvantaged Local Coordinating Board (TDLCB), VOTRAN and MPO staff, community groups, and members of the public through surveys and public workshops. The issues highlighted during these discussions form the basis for the proposed goals for VOTRAN.

In addition, this list of goals was supplemented by an examination of existing transit-related policies assembled from the comprehensive plans for Volusia County and a number of municipalities within the County, as well as surveys of transit passengers.

CONSISTENCY REVIEW OF OTHER PLANS

Pertinent portions of the following plans were reviewed in order to determine consistency and identify existing goals, objectives and policies that support transit:

- Local Government Comprehensive Plans
- Transit Development Plan for VOTRAN
- Long Range Transportation Plan for the Volusia County MPO
- Transportation Improvement Program for the Volusia County MPO
- Commission for the Transportation Disadvantaged 5 and 20 year plans

This TDP is consistent with all of the above-referenced plans. The transit-related policies assembled from the comprehensive plans of Volusia County and various municipalities are included in Appendix A-6.

VOTRAN GOALS

The proposed goals for VOTRAN are the result of an approach designed to solicit input from an array of community interests. As previously mentioned, interviews were conducted with key local officials, specifically the County Manager and six of the seven of the County Council members, as part of this process. The information gathered from the workshop meetings held with the TDLCB, Handicapped Adults of Volusia County (HAVOC), the MPO Technical Coordinating Committee, the MPO Citizens Advisory Committee, and public workshops were incorporated as well.

The proposed goals focus on five interrelated policy areas important to the effective operation of a transit system. These include:

- Availability, Efficiency, and Safety of Service
- Passenger Amenities and Marketing
- Transportation Planning Coordination
- Funding
- Public Involvement Process

VOTRAN's mission is:

> To identify and safety meet the mobility needs of Volusia County. This mission will be accomplished through a courteous, dependable, cost effective and environmentally sound team commitment to quality service.

The five VOTRAN goals are:

Goal 1:

Participate In and Ensure Availability of an Effective Public Transportation System that Safely and Efficiently Moves People Throughout, In, and Out of Volusia County

> This goal focuses on the quality and accessibility aspects of the existing system and the potential to enhance the transit system. The policy objectives under this goal address several of the major issues brought forth during discussions with the various community

groups and the review committee. These issues include expanding service as necessary in terms of hours of operation, frequency of service, and geographic coverage; monitoring overall and route-level performance in order to maintain and, where/when feasible, improve the efficiency of the provided service; continuing to monitor the ridership market in order to identify and address their needs; and ensuring the safest possible transit service.

Goal 2:

Provide and Enhance Quality Passenger Infrastructure and Facilities to Enhance Bus Service and Attract Discretionary Riders

In order to maintain existing riders and have the ability to attract the discretionary rider, transit systems must provide infrastructure and facilities that increase the riders' ease of utilizing the system as well as their level of comfort. These amenities include shelters and benches, user-friendly route and schedule information, and community outreach/education programs. Other amenities include advanced public transportation system technologies such as automatic fareboxes, bus enunciators, and passenger counters. Another major component of this goal is the continuation and expansion of creative marketing efforts to increase the visibility of VOTRAN. By ensuring the availability of publicized, easy-to-understand information for routes and schedules and participating in community outreach programs, VOTRAN will have a better opportunity to increase community awareness of the transit system and, in turn, potentially increase ridership.

Goal 3:

Coordinate the Transit System and Its Improvements with Transportation Planning Efforts of All Government Entities

This goal focuses on the coordination of planning efforts with other transportation providers and public agencies. The objective of this goal is to emphasize a coordinated process for service planning in the county's projected growth and redevelopment areas, the planning and construction of bus stops and other amenities that improve accessibility, and the formulation of intermodal strategies.

Goal 4:

Provide a Transit System that is, to the Maximum Extent Possible, Financially Feasible by Securing Adequate Funding

This goal focuses most importantly on the long-term financial feasibility of VOTRAN. Securing a dedicated funding source was discussed as being the most important activity in the successful achievement of this particular goal. An obvious objective of this goal is to secure a funding source to better enable VOTRAN to meet many of its needs identified for the ten-year time period of this transit development plan, as well as any needs that may arise in the future.

Goal 5:

Conduct a Proactive and Ongoing Public Outreach Program

> The fifth goal calls for the development and execution of a comprehensive public outreach program. This multifaceted goal includes mechanisms to provide public participation and involvement in the transit planning process to ensure fosters a community responsive transit system. Proactive public outreach programs are essential to provide adequate information on the system services and to encourage the utilization of the family of VOTRAN services. The development of a positive image of public transportation services is key element of the public outreach program.

Table 5-1 presents the proposed goals along with their corresponding policy objectives. Each policy objective outlined in the table addresses, in a broad policy context, actions to be taken in order to achieve the stated goal.

Table 5-1
VOTRAN GOALS AND OBJECTIVES

VOTRAN Goals and Objectives
Goal 1 **Participate In and Ensure Availability of an Effective Public Transportation System that Safely and Efficiently Moves People Throughout, In, and Out of Volusia County** • Continue to operate as the mobility manager for Volusia County, operating/coordinating transit and paratransit service, carpools, vanpools, and other TDM activities/strategies. • Provide the safest possible transit service; include safety provisions for pedestrians, bicyclists, and persons with disabilities at all transit facilities. • Comply with all requirements of the Americans with Disabilities Act of 1990 (ADA); improve access to transit for persons with disabilities. • Optimize the transit system and facilities, for both fixed-route and paratransit operations, to provide current level of service or better throughout the area. • Increase frequency of service on most congested corridors and busiest routes. • Increase the span of service, specifically to include night service on routes based on need. • Use appropriate-size vehicles, and develop flexible community bus routes to maximize ridership. • Enhance Park-and-Ride program and express bus service. • Continue to operate the VOTRAN vanpool program. • Coordinate and encourage intermodal strategies that lessen the dependency on single occupant vehicles. • Maintain, improve, or expand service to major intermodal facilities, terminals, employment centers, schools, activity centers, parks, recreational areas, cultural facilities, and social and medical facilities. • Continue to monitor overall system performance as well as individual route performance. • Provide a network of reasonable transit and paratransit connections to counties adjacent to Volusia County. • Maximize investment in beach trolley service and coordinate service with ultimate beach parking solutions. • Continue to explore opportunities to serve tourism and recreational oriented markets. • Explore the potential of rail modes for future use within the county and connecting to surrounding counties. • Continue to monitor ridership market through on-board surveys, customer satisfaction surveys, etc. • Conduct a Comprehensive Operational Analysis (COA) for the Eastern portion of the County to complement the Westside COA.

Goal 2

Provide and Enhance Quality Passenger Infrastructure and Facilities to Enhance Bus Service and Attract Discretionary Riders

- Provide additional shelters/benches at highly used bus stops, transfer points, and other locations as necessary.
- Maintain the VOTRAN bus stop inventory to assess the accessibility of existing stops and catalog existing amenities (e.g., phones, lighting, shelters, benches, etc.) at each stop.
- Work with the MPO and others to develop a standard for placement of bus stops, benches, and shelters that can be implemented countywide.
- Work with the MPO and others to promote adequate pedestrian access.
- Install bicycle racks at those bus stops where heavy bicycle use has been noted.
- Continue to utilize and enhance the use of Advanced Public Transportation System (APTS) Technology to improve the quality of the passengers' experience.
- Continue to review the effectiveness and user-friendliness and availability of current route and schedule information.
- Explore alternative methods to provide current route and schedule information, such as websites and enhanced telephone systems.
- Continue community outreach/education programs for fixed-route and paratransit services.
- Continue to coordinate transit services with other transportation providers in and adjacent to Volusia County.
- Improve the on-board riding experience of the passengers through the use of voice annuciators, security cameras, vehicle locator technology, and other enhancements.
- Utilize crime prevention through environment design (CPTED) techniques to promote proper design of transit passenger facilities to provide a safer environment for the bus passengers.

Goal 3

Coordinate the Transit System and Its Improvements with Transportation Planning Efforts of All Government Entities.

- Ensure public transportation in growth management discussions and processes including proportionate share of development impact funding for capital and operating of public transportation services
- Promote transit oriented and supportive design in the land use planning and development process.
- Initiate planning to provide transit service in projected growth areas of the county.
- Coordinate with local governments for the construction of accessible sidewalks, bus stops, and other bus stop improvements along existing roadways.
- Continue to coordinate with state and local government and transportation agencies the integration of transit needs/amenities into the land use planning and development process.
- Continue to ensure the coordination of all comprehensive plans and other related planning documents.
- Encourage local government to maintain higher densities near arterial and urban collector public transportation corridors.
- Encourage local government to remove land-use barriers that may restrict the use of public transportation.
- Require developers to include public transportation-compatible designs in their projects (e.g., parking lot requirements, bus shelters, bike facilities, sidewalks, etc.).
- Coordinate with the Florida Department of Transportation and agencies related with the development of passenger rail service into, adjacent to, and within Volusia County.

Goal 4

Provide a Transit System that is, to the Maximum Extent Possible, Financially Feasible by Securing Adequate Funding

- Maintain current Federal, State, and County funding sources for the fixed-route and paratransit systems.
- Identify and evaluate alternative funding sources for the fixed-route and paratransit systems.
- Secure a long-term dedicated funding source for the fixed-route and paratransit systems.
- Secure funding source for any future rail feeder service designed to link rail and intermodal facilities.
- Foster and develop public-private partnerships supporting the development of public transportation services.
- Continue to expand bus pass program.
- Strive to develop, manage, operate, and maintain, to the maximum extent possible, a cost feasible transit system.
- Provide transit service that is, to the maximum extent possible, effective and efficient and is operated in a fiscally-responsible manner.
- Develop a fare policy that ensures a fair balance between farebox recovery and affordability.
- Evaluate appropriate technologies to enhance service delivery (e.g., scheduling, vehicle location, etc.).

Goal 5

Conduct A Proactive and Ongoing Public Outreach Program

- Continue to increase the visibility of VOTRAN through creative marketing efforts.
- Provide early and continuing opportunities for the public to express views that relate to transit services, plans, and improvement programs and projects (e.g., surveys, grievance process, interviews, workshops, etc.).
- Provide complete information about transit issues, permit adequate public notice of time and place, and full public access to open public meetings where matters related to transit programs are being considered.
- Allow for public review and comment in the transit planning process.
- Utilize public and expert opinions about the overall quality and frequency of transit services in optimizing fixed-route and paratransit services.
- Educate the community on the use of the public transportation system through travel training and education of passengers and the public.
- Continue to provide opportunities for public officials to be exposed to and educated about public transportation and VOTRAN's services, in particular.
- Continue to utilize the Transportation Disadvantaged Local Coordinating Board and the MPO Citizens Advisory Committee to assist in providing input to management on all aspects of service planning.
- Enhance and improve all aspects of customer service and outreach.
- Work to develop a positive image of VOTRAN and public transportation.
- Develop public outreach programs to promote VOTRAN and to share and celebrate its accomplishments.
- Develop and conduct effective travel training programs to encourage use of VOTRAN's family of services.
- Develop outreach programs for targeted population groups, such as tourists, seniors, or teens.

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CHAPTER SIX

ASSESSMENT OF TRANSIT DEMAND

This chapter provides an assessment of the demand for transit services within Volusia County and examines several factors that influence the existing and potential transit needs of the community.

TRANSIT DEPENDENT ANALYSIS

One method of estimating the potential public transportation needs of a given area is to examine certain distinct segments of the population. This approach involves an analysis of segments of the study area's population that consist of persons who are most likely to depend on transit services to meet their mobility needs.

The U.S. Census information detailed earlier in this report allows for a collective examination of four population groups that are typically highly correlated with a person's or household's dependence on and need for public transportation services. These four factors are residents age 18 and under, residents age 65 and older, households at or below the poverty income level and households without access to an automobile. This analysis combines all four characteristics at the census block level and ranks each census block based on the prevalence of those population or household factors within each block.

The first step in identifying transit dependent census blocks involves the calculation of the percentage distribution of each characteristic within the block (i.e., total persons or households divided by total population) and assigning a percentage value. The average percentage value for all census blocks is then calculated. Each census block is assigned a score based on the difference between its value and the average value for that category.

When all four population categories are assigned scores, the results are added together for each census block, and the blocks are ranked by their composite score (from highest to lowest).

To determine potential levels of transit need, the standard deviation of the composite scores was calculated. Those census blocks that have a score of the average plus two standard deviations are categorized as **primary** census blocks.

Seventeen of Volusia County's 270 blocks were determined to be **primary.** These blocks have the highest concentration of transit dependent individuals and households; and, therefore have the greatest potential need for quality transit service.

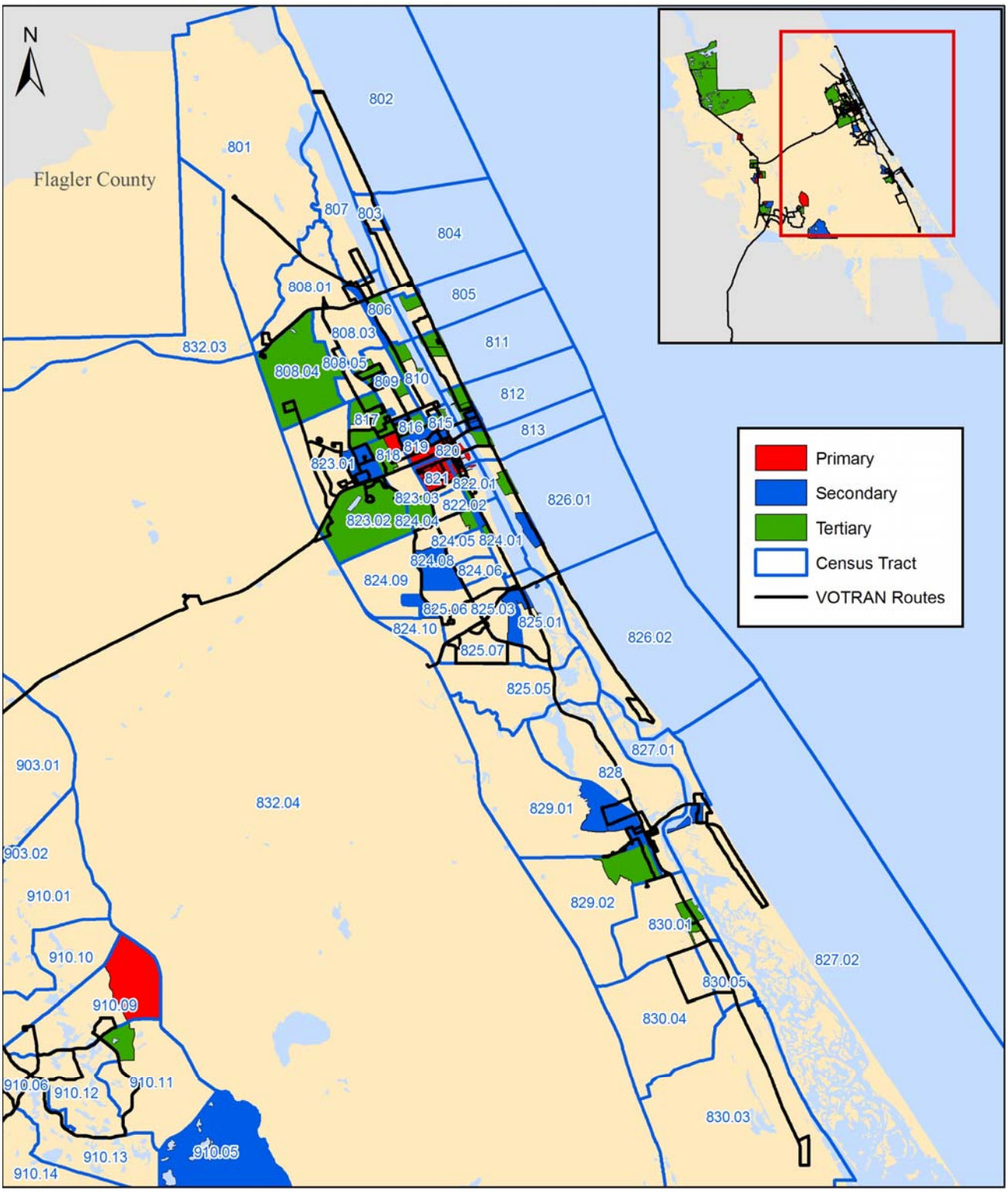
Twenty-four census blocks have a score of the average plus one standard deviation and are categorized as **secondary** census blocks.

A third category, **tertiary** census blocks, consists of the remainder of the blocks that scored above average but were not categorized as primary or secondary. There are thirty-four blocks dispersed throughout Volusia County that fall into this category.

Figures 6-1 and 6-2 graphically illustrate the location of the primary, secondary, and tertiary transit dependent census blocks in Volusia County. Although the demographics in these blocks may change over time, during the next several years these areas will have the highest demand for transportation services within Volusia County. The existing VOTRAN route structure is detailed in both of these graphics, allowing an examination of how the existing service matches up with those areas of high transit potential.

Figure 6-1

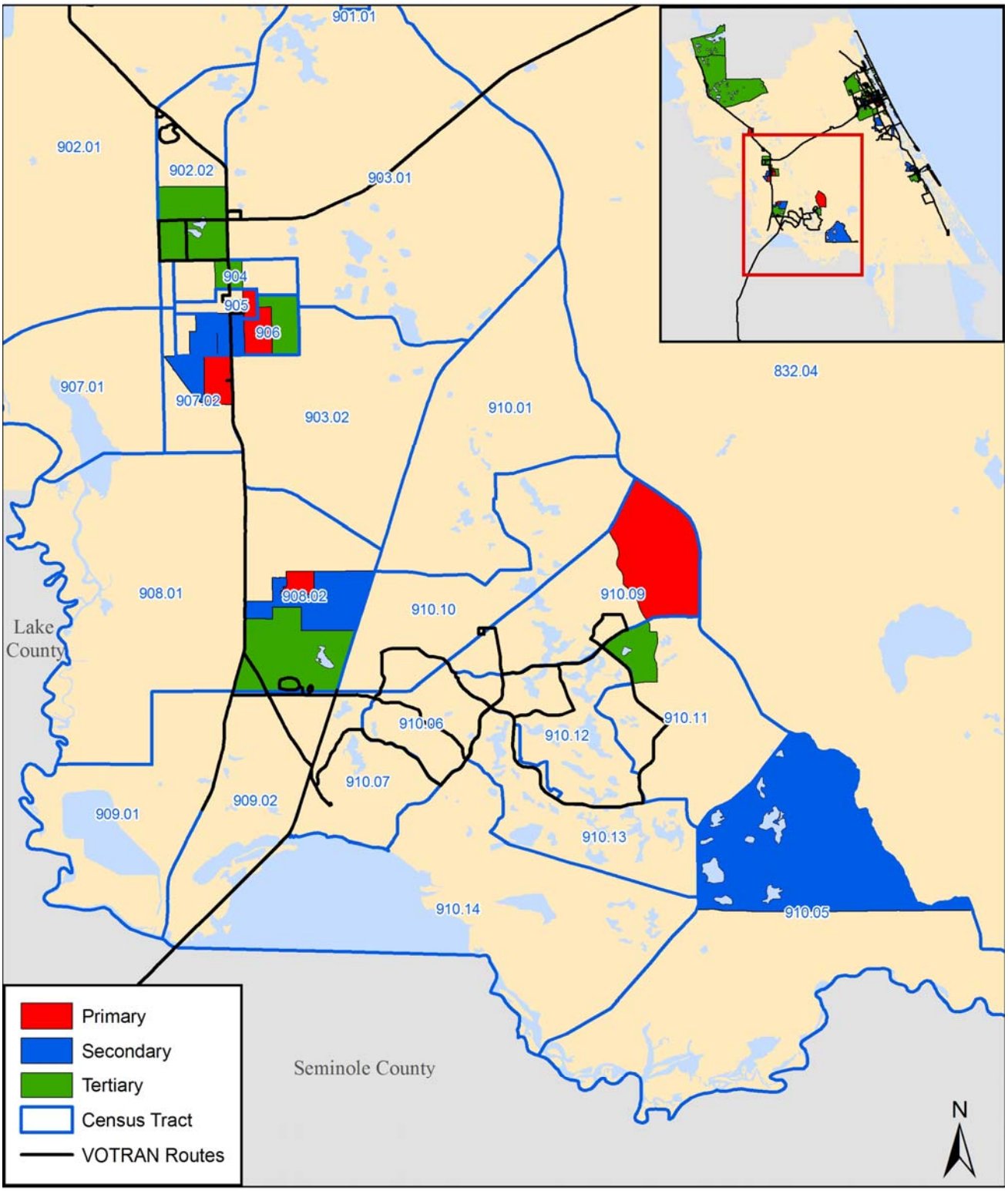
Transit Dependent Block Groups in Eastern Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 6-2

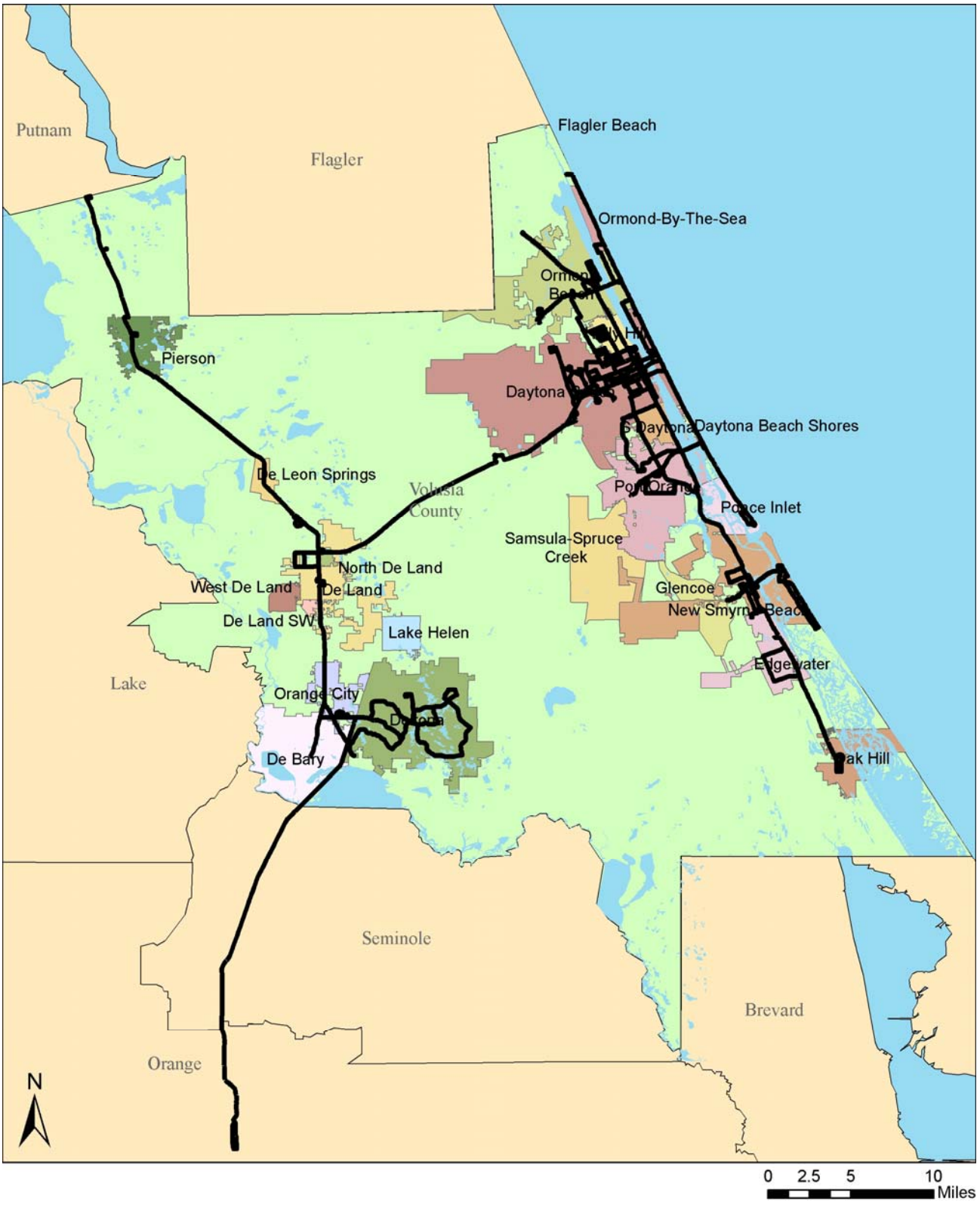
Transit Dependent Block Groups in Western Volusia County, Florida, 2000



Source: U.S. Census Bureau
Data compiled at the block group level

Figure 6-3

Incorporated Areas in Volusia County, 2000 with VOTRAN Routes

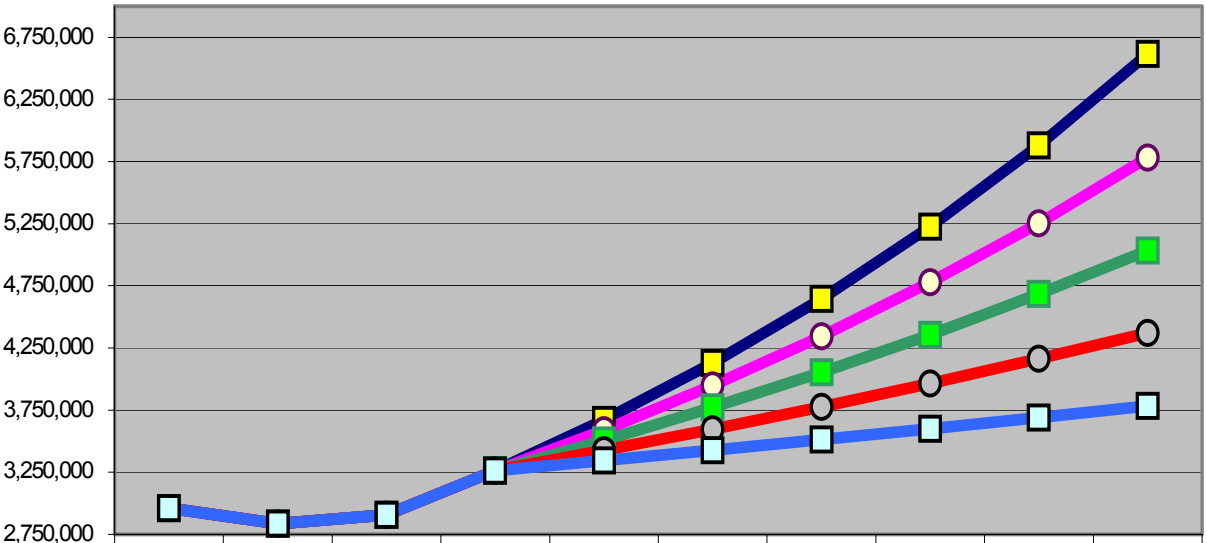


FIXED-ROUTE DEMAND ESTIMATES

Simple Projections of Future Ridership

One of the simplest and straightforward methods of estimated future ridership levels is to project future passenger levels using simple compounded growth rates. Figure 6-4 graphically depicts the past four years of ridership levels and forecasts annual passenger levels through Fiscal Year 2011. Using FY 2005 annual ridership data from the NTD report as the base, projections were made at five different growth rates: annual growth rates of 2.5%, 5%, 7.5%, 10% and 12.5%.

Figure 6-4
Simple Compounded Ridership Forecasts



	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Growth @ 12.5%	2,963,067	2,836,863	2,908,054	3,262,819	3,670,671	4,129,505	4,645,693	5,226,405	5,879,706	6,614,669
Growth @ 10%	2,963,067	2,836,863	2,908,054	3,262,819	3,589,101	3,948,011	4,342,812	4,777,093	5,254,803	5,780,283
Growth @ 7.5%	2,963,067	2,836,863	2,908,054	3,262,819	3,507,530	3,770,595	4,053,390	4,357,394	4,684,199	5,035,514
Growth @ 5%	2,963,067	2,836,863	2,908,054	3,262,819	3,425,960	3,597,258	3,777,121	3,965,977	4,164,276	4,372,490
Growth @ 2.5%	2,963,067	2,836,863	2,908,054	3,262,819	3,344,389	3,427,999	3,513,699	3,601,542	3,691,580	3,783,870

Ridership Trend Analysis

A more sophisticated approach to estimate future passenger levels is the use of a linear regression analysis, which examines past patterns to mathematically forecast future expected ridership for the VOTRAN fixed route system.

In the eighteen year period from 1984-2001, VOTRAN's ridership has, despite some fluctuation, increased steadily. By 2001, ridership had increased from 2,367,616 passenger trips in 1984 to 3,817,964 trips. Four periods of decline are evident in VOTRAN's ridership trend during that eighteen year period. The first occurred between 1984 and 1987, when the system's ridership fell more than 11 percent. After stabilizing in 1988 (increasing less than 3 percent), ridership increased 51 percent between 1988 and 1993. The second decline then occurred in 1994, when ridership decreased slightly (about a 2 percent decline), perhaps in response to the major changes that were occurring in the system at this time. The third and smallest decline occurred in 1997; total passenger trips decreased one percent in this fiscal year. Between 1999 and 2001, VOTRAN enacted route service changes that eliminated the need for some transfers. These service changes could be responsible for the 3 percent decrease in ridership during that period since trips are measure as "unlinked passenger trips" and the elimination of transfer would reflect a decrease in total trips taken while not affecting "real" ridership. Between fiscal years 2001 and 2002 VOTRAN eliminated special fixed-route service to the Daytona International Speedway resulting in approximately 22 percent less ridership in 2002 than in 2001. In the period between 2002 and 2004, ridership growth leveled off and then began to increase in a manner consistent with previous growth, in 2005.

In order to provide estimates of future ridership levels, a linear regression model was calibrated using VOTRAN's historical National Transit Database (NTD) data for the fiscal years 1986 to 2005. Linear regression models can be useful for forecasting, though the forecast becomes less and less accurate the farther into the future we attempt to predict. Florida mandates a ten year projection for the TDP updates leading to a fairly large amount of uncertainty in the later years of the forecast. However, five year updates of the TDP will allow for recalibration of the linear regression model presented here. Ridership levels were estimated through FY 2015. Our classical linear regression model takes the following form:

$$\ln y_t = \alpha + \beta_1 X_t + \beta_2 Fare_t + \delta_t + \varepsilon_t$$

Where $\ln y_t$ is the natural log of the dependent variable, ridership, to be forecast, at time t;

- α is the intercept constant term;
- X_t is the annual time trend;
- $Fare_t$ is a measure of real average fare, reported in 2004 dollars;
- δ_t is a dummy variable representing the elimination of the Speedway service;
- ε_t is the error term.

Linear regression of the above model results in the following regression equation:

$$\ln y_t = 14.79469 + .0427238X_t - .5085186Fare_t - .3504272\delta_t$$

The adjusted coefficient of determination for this model, denoted by R^2, is .9206, indicating a relatively good fit for the linear model. All independent variables were statistically significant at the 95-percent confidence level. Additionally, the variables were jointly significant, as indicated by an F (3, 16) statistic of 74.45. The dummy variable was included in the model in order to

control for the effects of the elimination of the Daytona International Speedway special fixed-route service. Years prior to 2001 were assigned a zero and years following were assigned a one. The year 2001 was assigned a fractional value to indicate the timing of the elimination during that fiscal year. Next, an attempt was made to fit the data to a quadratic model. The quadratic time trend however, was found to only be significant at a level less than the 90-percent confidence level. Root Mean Squared Error (RMSE) was computed for both models, and the linear model once again proved to be the better specification. In addition, an attempt was made to forecast ridership using a one-step-ahead projection. In this case, the lagged ridership was not found to be statistically different from zero and was eliminated from the model. The Durbin-Watson d-statistic for our linear model was 1.518, which tends to suggest that the model does not suffer from serious autocorrelation.

When computing the forecasted ridership, it was necessary to predict future values of the "real average fare" variable. Fare data from 1984 to present suggests a relatively stable real fare pattern, and therefore, for this analysis, the real average fare projection was fixed at the 2005 level of $0.51.

Table 6-1 shows the existing level of ridership (FY 2005) for VOTRAN and the forecasted ridership derived from the model for fiscal years 2006 through 2015. This represents an annual increase in ridership of 3.6 percent.

Table 6-1

Fixed-Route Ridership Projections

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Ridership	3,262,819	3,380,280	3,501,971	3,628,042	3,758,651	3,893,962
	FY 2011	**FY 2012**	**FY 2013**	**FY 2014**	**FY 2015**	
Ridership	4,034,145	4,179,374	4,329,832	4,485,706	4,647,191	

Peer Group Comparison

A third method for estimating future transit demand is to compare per capita ridership, service, and spending levels at VOTRAN with those at similar transit systems in Florida and the southeastern United States. The fixed-route peer review analysis contained in Chapter 3 presented a wide array of service attribute data for 9 similar transit systems. Of these 9, two are located in Florida and seven are operated in other southeastern states. Taking averages of service attributes, such as ridership, and applying them to VOTRAN's service area population allows us to estimate approximate levels of demand for transit in systems of this size. The results of this exercise are presented in Table 6-2.

As can be seen in Table 6-2, VOTRAN is significantly larger, in terms of service area population, than the other peer group systems. As a result, VOTRAN has not performed as well as its peers in terms of supply and service consumption; however, it naturally follows that they have exceeded their peers' performance in terms of cost efficiency. In FY 2005, VOTRAN

continued to provide fewer trips and service miles per person at a significantly lower per-capita cost.

Table 6-2
Peer Group Comparisons with VOTRAN, FY 2005

Measure	VOTRAN	Peer Group
Population	468,660	306,160
Passenger Trips per Capita	6.21	9.94
Vehicle Miles per Capita	5.94	8.22
Maximum Vehicles Operated	48	45.5
Operating Expenses per Capita	$18.93	$33.46
Ridership: VOTRAN Actual/Projected & Peer Group Mean	Actual 2,908,050 Projected 4,658,480	2,645,190
Vehicle Miles: Actual/Projected & Peer Group Mean	Actual 2,786,070 Projected 3,852,385	2,288,970
Operating Expense: VOTRAN Actual/Projected & Peer Group Mean	Actual $8,872,420 Projected $15,681,364	$9,094,720

Table 6-2 indicates that VOTRAN's poor performance, relative to its peers, is due in part to its greater population. With this in mind, the peer systems were grouped into subsets to determine if any one subset would be representative of VOTRAN's current of expected service levels. Three subsets were chosen, systems with population greater than 300,000, systems in Florida, and systems not in Florida.

Attribute averages for these chosen subsets are reported in Table 6-3. This table above suggests that VOTRAN compares more favorably with systems that have a population greater than 300,000. While they still lag slightly in average passenger trips and vehicle miles per-capita, they easily surpass their larger peer systems in operating cost efficiency. The Florida subset, with its smaller average population, fails to distinguish itself from the peer group as a whole. As before, when compared with VOTRAN, the population disparity is reflected by the greater per-capita ridership and operating cost inefficiency.

Table 6-3
Florida Systems Comparisons with VOTRAN, FY 2005

Measure	VOTRAN	Peer Subset 1: Population Over 300,000	Peer Subset 2: Florida	Peer Subset 3: Non-Florida
Service Area Population	468,660	345,200	267,650	322,670
Service Area Population Density (population/square mile)	388.29	1,099.4	1,520.57	1,266.88
Passenger Trips per Capita	6.21	6.87	13.51	8.41
Vehicle Miles per Capita	5.94	6.7	8.24	8.21
Maximum Vehicles Operated	48	44.14	37.67	48.83
Operating Expense per Capita	$18.93	$25.77	$35.97	$32.39

The peer subset analysis indicates that a large part of the discrepancy in service attributes between VOTRAN and its peers are due to the great disparity in service area population with the smaller included systems. However, it is clear that VOTRAN has lower ridership, less service, and lower expenses on a per-capita basis than would be expected for a peer system of its size. It is reasonable to attribute VOTRAN's below peer-average performance to its large population and service area. In fact, VOTRAN possesses the lowest population density of any of its peers.

Table 6-4 presents VOTRAN projections based upon the per-capita averages in the entire peer group and the three peer subsets.

Table 6-4

VOTRAN Projections Based on Per Capita Averages in Peer Groups, FY 2005

Measure	VOTRAN (Actual FY04)	Peer Group	Peer Subset 1: Population Over 300,000	Peer Subset 2: Florida	Peer Subset 3: Non-Florida
Projected Ridership	2,908,050	4,658,480	3,219,694	6,331,597	3,941,431
Projected Vehicle Miles	2,786,070	3,852,385	3,140,022	3,861,758	3,847,699
Projected Operating Expense	$8,872,420	$15,681,364	$12,077,368	$16,857,700	$15,179,897

As can be seen above, ridership estimates range from 3,219,694 passenger trips, if VOTRAN were to match the supply of the population peer subset, to 6,331,597 trips, if VOTRAN were to match the Florida peer subset. Projected annual vehicle miles range from 3.1 million to 3.87 million, and operating expense projections range from $12.1 million to $16.9 million.

Peer group analysis can be useful for comparing performance measures across similar systems. However, it is important to note that differences in system area demographics will have a pronounced effect on demand estimation. These analyses assume that consumers of transit are equal in all respects, and do not take into account factors such as quality of service, levels of urban development, and economic demographics. It is therefore unreasonable to expect VOTRAN to achieve a ridership level that approaches the upper range of its Florida peers. A more realistic estimate predicts that VOTRAN will perform more like its closest population subset peers over the next five years, resulting in an approximate increase in ridership of 10 percent. Preferably, VOTRAN should strive to increase ridership to its population peer subset averages while maintaining current levels of operating cost efficiency.

COMPLEMENTARY PARATRANSIT SERVICE

The final examination of the assessment of ridership demand is a review of the federal Americans with Disabilities Act (ADA) program requirements and the Florida Commission for Transportation Disadvantage (TD) program.

Chapter 427, Florida Statutes, mandates that each community plan and coordinate the funding and supply of transportation services for individuals who are transportation disadvantaged. Chapter 427.011(1) 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."*

In Volusia County, VOTRAN is the designated Community Transportation Coordinator. As such, it has the following responsibilities mandated under Florida Statue, Chapter 427:

- Assume full responsibility for the delivery or management of transportation services for the transportation disadvantaged;
- Execute uniform contracts for service using a standard contract to include performance standards for operators;
- Collect annual operating data for submittal to the Commission;
- Review all transportation operator contracts annually;
- Approve and coordinate the utilization of school buses and public transportation;
- Review all applications for federal, state and local grants for transportation disadvantaged funds;
- Establish priorities for non-sponsored trips provided from the TD Trust Fund allocated to local areas, in consultation with the local coordinating board; and
- Work cooperatively with local workforce boards to facilitate transportation for those in welfare transition.

Source: Florida Commission for the Transportation Disadvantaged

The services operated or coordinated by the CTC are most often paratransit services that are designed to be more flexible and personalized than conventional fixed route bus service by

utilizing low to medium capacity vehicles and trip reservation and scheduling services. However, the CTC is also charged with maximizing the utilization of traditional fixed route transportation whenever possible.

While there are a number of specific categories of individuals who are included in the general category of transportation disadvantaged, there are two similar but distinct programs (Transportation Disadvantaged and ADA) that the transportation disadvantaged can access. Each has its own eligibility criteria and service delivery requirements as outlined below, and individuals may be eligible to access both programs.

Americans with Disabilities Act (ADA)

In the ADA, the term disability is defined to include any physical or mental impairment that substantially limits one or more major life activities, a record of such an impairment, or being regarded as having such an impairment. Major life activities include caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning and working. An individual will be certified as ADA paratransit eligible if there is any part of the system in the designated service area which cannot be used or navigated by that individual due to a disability. Therefore, eligibility is determined based on a functional versus a medical model and applies to the particular trip and not the individual. For example, the trip is eligible if the disability prevents the individual from getting to and from a station/stop at the point of origin or destination if the individual is unable to independently recognize the destination and disembark or if the trip involves transfers and where the path of travel between modes is inaccessible or non-navigable.

In most cases, the ADA requires that public entities operating a fixed route system shall provide paratransit or other specials services to individuals with disabilities that are comparable to the level of service provided to individuals without disabilities. The six service criteria and operating standards include:

1. Service area – Bus systems must provide complementary paratransit service for trip origins and destinations that are within ¾ miles of the fixed route service.

2. Response time – Requests for service must be accepted during the administrative department's normal business hours; requests for service must be accepted if they are made any time during the day proceeding the day the trip is requested; trip requests must be accepted up to fourteen days in advance.

3. Fares – Fares charged to ADA eligible individuals (and their personal care attendants) can not be more than twice the full fare for a comparable trip made on the fixed route system.

4. Trip Purpose – Requests for all types of trip purposes must be accepted and handled on an equal basis.

5. Hours and Days of Service – Complementary paratransit service must be offered during the same days and hours that the fixed route system is in operation.

6. Capacity Constraints – Public entities may not limit the amount of service provided to ADA paratransit eligible individuals: the maximum pick-up window is one hour before or after the time the trip was requested.

Florida Transportation Disadvantaged Program

While the definition of transportation disadvantaged applies to ADA eligible individuals, the term is also commonly used to reference the State's Transportation Disadvantaged Program. The Commission for the Transportation Disadvantaged has oversight responsibility for this program, which is carried out on a local level by the Community Transportation Coordinator (in the case VOTRAN). This program includes trips sponsored by agencies including but not limited to: Medicaid, Department of Children and Families, Department of Elder Affairs and the Department of Health. Eligibility guidelines are developed by the sponsoring agencies. Additionally, the Transportation Disadvantaged Program provides oversight of the Transportation Disadvantaged Trust Fund, which is available to counties for the provision of trips. Individuals eligible under the TD program are 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 other life sustaining activities, or children who are handicapped or high-risk or at risk.

Unlike ADA, there is no requirement that the transit agency accommodate the travel needs of all of these individuals: there is limited funding and thus limited capacity. Other significant differences between the Transportation Disadvantaged Program and the ADA Program are:

1. Service Area – Services may be available throughout the entire county versus the corridors surrounding the fixed route system.

2. Response Time – There is no specified time frame for accepting reservations.

3. Fares – Fares are negotiable and not constrained by the fares on the fixed route system.

4. Trip Purpose – Trips may be prioritized based on capacity and availability. For example, medical trips may be given priority over social trips.

5. Hours and Days of Service – Hours of service are determined by the CTC, however based on sponsor demand the CTC may offer service 24 hours per day.

6. Capacity Constraints – The CTC may limit the amount of service available to eligible individuals.

Forecasts of TD Population

The Florida Transportation Disadvantaged Program serves two population groups, divided primarily due to the specifics of the funding arrangements. The first group is the "potential TD population" (also known as TD Category I). This potential TD population includes disabled, elderly, low-income persons, and children who are "high-risk" or "at-risk."

The second group of TD population (also known as TD Category II) includes those persons who are unable to transport themselves or to purchase transportation. These persons are eligible to receive the same subsidies as those in Category I, plus they are eligible to receive TD Trust Fund monies for non-sponsored general trips. Thus, this population group is actually a subset of the potential TD population.

Table 6-5 presents forecasts of the TD Population (Category I) and the Potential TD Population (Category II) in Volusia County. These forecasts were developed using the methodology outlined in the 1993 CUTR report, *Methodology Guidelines for Forecasting TD Transportation Demand at the County Level.*

Table 6-5
Forecasts of TD Populations in Volusia County

TD Population	Year					
	2006	2007	2008	2009	2010	2011
Category I	210,788	218,207	225,905	233,893	242,185	250,790
Category II	50,124	51,765	53,466	55,227	57,051	58,942

Tables 6-6 and 6-7 break down the Potential TD Population and TD Population groups in Volusia County. These estimates are derived from the CUTR publication *Florida Statewide Transportation Disadvantaged Plan: Population and Demand Forecasts 1996 - 2015*, July 1996. Persons in either of these population groups may be heavily dependent on some form of public transportation.

Demand for Program Trips

Persons in Category I are eligible to receive governmental and social service subsidies for program trips. A *program trip* is one made by a client of a government or social service agency for the purpose of participating in a program of that agency. Examples of program trips are Medicaid trips, trips to congregate meal sites, or trips to job training facilities.

The estimated demand for program trips is shown in Table 6-8. Program Trip demand is dependent upon the existence of the program to which the potential TD population group is transported. For example, demand for trips to sheltered workshops exists only because there are sheltered workshop programs. Thus, the demand for program trips is equal to the number of trips required to take advantage of the service offered by the program. Therefore, the demand for program trips depends on the funding level for the various social service programs.

Table 6-6
2006 Volusia County Potential Transportation
Disadvantaged Population (Category I)

Segments	Population Estimates	Percent of Total Potential TD
Disabled, Non-Elderly, Low Income	3,338	1.6%
Disabled, Non-Elderly, Non-Low Income	21,206	10.1%
Disabled, Elderly, Low Income	3,900	1.8%
Disabled, Elderly, Non-Low Income	40,928	19.4%
Non-Disabled, Elderly, Low Income	8,560	4.1 %
Non-Disabled, Elderly, Non-Low Income	89,834	42.6%
Non-Disabled, Non-Elderly, Low Income	43,022	20.4%
Total Potential Transportation Disadvantaged	210,788	100%

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

Table 6-7

2006 Volusia County Transportation
Disadvantaged Population (Category II)

Segments	Population Estimates	Percent of Total TD
Transportation Disabled, Non-Elderly, Low Income	1,530	3.1%
Transportation Disabled, Non-Elderly, Non-Low Income	9,719	19.4%
Transportation Disabled, Elderly, Low Income	2,280	4.6%
Transportation Disabled, Elderly, Non-Low Income	23,930	47.7%
Non-Transportation Disabled, Low Income, No Auto, No Fixed-Route Transit	12,665	25.2%
Total Transportation Disadvantaged Population	50,124	100%

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

Table 6-8
Forecasts of Volusia County
Program Trip Demand and Supply

Year	Potential TD Population (Category I)	Demand for Program Trips	Supply of Program Trips
2006	210,788	684,269	684,269
2007	218,207	697,955	697,955
2008	225,905	711,914	711,914
2009	233,893	726,152	726,152
2010	242,185	740,675	740,675
2011	250,790	755,489	755,489

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

Demand for General Trips

General trips are trips made by Transportation Disadvantaged persons (Category II) to destinations of their choice (not to agency programs). Examples of general trips are trips to work or grocery stores and non-Medicaid medical trips. Deriving the demand for general trips is different than for program trips. The methodology developed to forecast demand for general trips involves the use of trip rates derived in a study of paratransit demand conducted in 1990 for the San Francisco Bay Area Metropolitan Transportation Commission by Crain & Associates, Inc. and others (*San Francisco Bay Area Regional Paratransit Plan: Final Report*). The trip rates were developed from the actual experiences of paratransit systems around the country that were meeting most or all of the trip demand in their service areas. The use of these trip rates has been recommended by the Federal Transit Administration for estimating demand for ADA complementary paratransit.

Total demand for general trips is simply the TD population multiplied by the trip rates. The TD population (rather than the Potential TD population) was used to forecast demand, because the TD population is the pool of persons eligible for general trips funded by the state.

Table 6-9 shows the forecasts of the Volusia County TD population, as well as demand and supply estimates for general trips by the TD population for the years 2006 through 2011.

A gap exists between demand for general trips and the supply of these trips. Unmet demand refers to demand that currently exists in the TD transportation market, but is not being met due to factors such as funding, price, convenience, comfort, eligibility, and the availability of other transportation modes.

Table 6-9
Forecasts of Volusia County TD General Trip Demand and Supply

Year	TD Population (Category II)	Demand for General Trips	Supply of General Trips	Unmet Demand for General Trips
2006	50,124	651,612	126,467	525,145
2007	51,765	672,945	128,996	543,949
2008	53,466	695,058	131,576	563,482
2009	55,227	717,951	134,208	583,743
2010	57,051	741,663	136,892	604,771
2011	58,942	766,246	139,630	626,616

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

It should be noted that the figures related to the demand and supply of TD general purpose trips in Volusia County include some trips that will also fall under the category of ADA complementary paratransit services. The ADA provides for unconstrained delivery of paratransit trips for persons who cannot use the fixed-route bus system due to the nature and/or extent of their disability. Persons may be certified as eligible for ADA paratransit trips, as well as TD general purpose trips. Therefore, the figures for unmet demand included in Table 6-9 are inflated and reflect some duplication in the calculation of trip demand.

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CHAPTER SEVEN

NEEDS AND OPPORTUNITIES

This chapter provides a narrative description of a variety of existing needs and future opportunities for the VOTRAN bus system that emerged during the TDP process. These needs and opportunities are grouped into two general categories: first, VOTRAN service planning areas; and, second, key focus areas and strategic initiatives.

TRANSIT SERVICE PLANNING AREAS

The first category of needs and opportunities for the VOTRAN system provide a general description of these five service planning areas:

- West Side
- South East
- Beach Service
- East Side
- Paratransit Services

West Side Service Area

The West Side service area covers the western half of Volusia County, including DeLand, Deltona, Orange City, DeBary, DeLeon Springs and Pierson/Seville. The area's separation from east Volusia County and its disperse and low density development patterns and limited pedestrian amenities provides challenges to provide public transportation services and connect it to the other VOTRAN services.

The West Side service area includes four local routes as well as a connecting route to the Daytona Beach area. As summarized in Table 7-1, the majority of the buses operate on 120 minute frequencies (Routes #21 (Orange City), #22 (Deltona), and #24 (Pierson/Seville)), with only Route #20 (Deltona/DeLand) and Route #60 (East/West Connector) operating on hourly headways. All routes perform below the system average productivity.

Table 7-1
West Side Routes

Route	Service Frequency	Bus Requirements	Passengers per Hour (2005)
20 Deltona/DeLand	60	3	15.14
21 Orange City	120	1	9.78
22 Deltona	120	1	8.94
24 Pierson/Seville	120	1	6.96
60 West/East Connector	60	2	14.44
		Total = 8	System Average = 17.30

A private consultant, under contract to the MPO, just completed a Comprehensive Operations Analysis (COA) for VOTRAN's West Side service area. The COA analyzed the transit system's route structure and provision of service to determine how improved efficiencies may be achieved without impacting ridership significantly, and possibly even improving utilization of the system.

The recently completed West Side Comprehensive Operations Analysis (COA) include four suggested improvements over the next ten year period, with a recommendation to increase the peak bus requirements over that period from 8 to 11 buses:

- Near-term Improvements (FY 2007) – includes the temporary relocation of VOTRAN's West Side bus fueling and storage facility from the current School Board site on Eustace Avenue. The near-term recommendations include route restructuring to improve on-time performance and better overall connections for the service area. These service adjustments can be implemented without any additional costs.

- DeLand Intermodal Center (FY 2009) – adjusts service for the new DeLand Intermodal Center which will be located in DeLand on Euclid Avenue, just east of Woodland Boulevard. It was also recommended that a new local DeLand route be considered for implementation.

- Central Florida Commuter Rail service to DeBary (FY 2010) – The first phase of the commuter rail project will provide service from downtown Orlando to the proposed DeBary station located along the west of Saxon Boulevard extension. VOTRAN is pursuing the possibility of location of its permanent West Side bus facility adjacent to the DeBary commuter rail station. Two additional buses will likely be required to provide local service to the commuter rail station.

- Central Florida Commuter Rail Service to DeLand (FY 2015) – adjusts service to accommodate the extension of the commuter rail service to the DeLand Amtrak Station and a new commuter rail station to be located at Minnesota Avenue and Clara Avenue.

Three major transit facility improvements help shape these recommendations. First, the VOTRAN bus storage and operations facility must be temporarily relocated from the School Board site and then permanently moved to a new facility to be potentially constructed in conjunction with the DeBary commuter rail station development in FY 2010. Second is the opening of the DeLand Intermodal Center in FY2009. Finally, the second phase of the commuter rail service which will extend the service to a new commuter rail station in DeLand in FY 2015.

Express bus service to the Orlando area is currently available in the west side service area, with three trips to Orlando each weekday morning and three return trips in the evening. This service initiates at the Saxon Boulevard Park and Ride Lot in Orange City. This service is expected to be terminated with the initiation of the commuter rail service.

For the planning horizon of this TDP, the west side service area is envisioned to receive modest service improvements as detailed above. The initiation of the commuter rail service from DeBary (and eventually DeLand) will provide improved commuter opportunities to Seminole and Orange Counties for residents of the west side service area. Furthermore, due to the significant population and development growth planned for west Volusia, some additional service

improvements, including improvements in service frequencies, would be realistic for consideration within the ten year planning horizon of the TDP.

Due to development patterns, low densities and lack of passenger amenities in the west side service area, traditional public transportation services utilization will likely continue to lag below the system averages. The west side service area is a good candidate for alternative service delivery options, including route deviation and ride requests. The VOTRAN commuter assistance programs, such as the Vanpool Program, should also be promoted.

South East Service Area

The South East service area is the areas along the US-1 and SR A-1-A corridors in southeast Volusia County, including New Smyrna Beach, Edgewater and Oak Hill. Similar to the West Side service area, the South East area provides a non-traditional transit market. With the exception of Port Orange, the area is separated from the traditional transit markets of East Volusia County.

The South East service area includes five local routes and the three connecting routes to the Daytona Beach area. The majority of the buses operate on 60 minute frequencies – Routes #40 (Port Orange), #41 (Edgewater), and #42 (New Smyrna Beach Shuttle). The New Smyrna Beach mainland is served by two different routes, each operating on a 120 minute frequency. All routes perform below the system average productivity.

Table 7-2
South East Routes

Route	Service Frequency	Daily Bus Requirements	Passengers per Hour (2005)
40 Port Orange	60	1	13.66
41 Edgewater	60	1	8.58
42 New Smyrna Beach Shuttle	60	1	5.68
43 New Smyrna Beach Mainland	120	1/2	5.01
44 New Smyrna Beach Mainland	120	1/2	3.73
		Total = 4	System Average = 17.30

Additionally, Port Orange is served by three routes from the South Daytona area: Routes #4 (South Ridgewood), #7 (South Nova) and #12 (Clyde Morris).

The City of New Smyrna Beach Water Taxi service was initiated in September 2006 to provide two hour service between the City of New Smyrna Beach and Ponce Inlet. The initial three stops are expected to be expanded to six stops in the near future. VOTRAN provides connections to the Water Taxi at both New Smyrna Beach with its Route #42 (New Smyrna Beach) and at Ponce Inlet with VOTRAN Route #17A (South Atlantic).

VOTRAN's newest super stop is currently being developed in New Smyrna Beach and is scheduled to be opened in 2007. This will serve as the hub for VOTRAN's service in the South East service area.

The MPO has provided funding to conduct a Comprehensive Operations Analysis (COA) for VOTRAN's East Side service area, including the southeast routes and the beach service. This effort is scheduled for completion in the summer of 2007. This effort will provide recommendations for service modifications, enhancements, alternative service options, and service productivity and service improvements.

Similar to the West Side, due to development patterns, low densities, lack of passenger amenities, and the demographics of the population in the south east service area, traditional public transportation services utilization will likely continue to lag below the system averages. The south east service area is a good candidate for alternative service delivery options, including route deviation and ride requests. The VOTRAN commuter assistance programs, such as the Vanpool Program, should also be promoted.

Beach Service Area

The Beach Service Area is served by five VOTRAN bus routes and the seasonal VOTRAN beach trolley. The VOTRAN bus routes providing service to the beach service area include: Routes #1A (A1A North), #1B (Granada), #8 (Halifax), #17A (South Atlantic-Ponce Inlet) and #17B (South Atlantic-Dunlawton).

VOTRAN offers regular bus service along the beach area from 7:00 p.m. to approximately midnight from Monday though Saturday. VOTRAN's Routes #1A (A1A North), #1B (Granada), #17A (South Atlantic-Ponce Inlet) and #17B (South Atlantic-Dunlawton) are included in the VOTRAN night service, but operate on an abridged routing. The Beach Trolleys also run from 7:00 p.m. until midnight, however they become a part of the standard night service during this period of time.

VOTRAN's beach trolley, which operates 45-minute service along A-1-A between Granada Boulevard and Dunlawton Avenue for the eight month period from early January through Labor Day. Service is provided from 12:00 Noon to 7:00 p.m., Monday through Saturday. Due to its seasonal schedule, the VOTRAN Beach Trolley Service is not included on the regular VOTRAN schedules. For calendar year 2005, the Beach Trolley transported over 43,000 passengers, with an average productivity of 14.03 passengers per hour.

The Intermodal Transfer Facility (ITF), located at the Ocean Center, provides an excellent passenger transfer area for VOTRAN passengers using the Beach Trolley and the other VOTRAN buses serving the beach. The ITF acts as the main hub for all of VOTRAN's night and Sunday service. The Ocean Center, serves as the hub for all beachside activity in the Main Street area, is currently being expanded with completion expected in 2008. This will provide a good opportunity to examine VOTRAN's beach service, including possible increased service frequencies for the trolley service.

The beach service area would provide an excellent candidate for the public-private partnership in which the A1A corridor could be upgraded with unique transit amenities to promote greater use of both the trolleys and the VOTRAN buses.

The East Side COA, scheduled for FY 2007, will examine the beach area service to see if: (a) greater coordination could be achieved between the Trolley Service and the VOTRAN bus service; (b) the trolley service should be provided throughout the year; and (c) if more frequent trolley service should be provided upon the completion of the Ocean Center improvements.

East Side Service Area

The East Side Service Area consists of the balance of the VOTRAN fixed route service, including Ormond Beach, Holly Hill, Daytona Beach, South Daytona, Daytona Beach Shores, Ponce Inlet and Port Orange. Port Orange, mentioned previously in the South East service area section, acts as the connector between the South East and East Side service areas.

The route characteristics and performance for the VOTRAN bus serving the East Side service area indicate these routes are the top systems performers. The East Side service area represents a more traditional transit market.

Thirteen of the fifteen routes included in the East Side service area operate on hourly frequencies. The other two – Routes #10 (Medical Center) and #15 (Orange Avenue) operate on 30 minute headways.

VOTRAN currently operates six of the East Side routes on both a truncated schedule evening service (from 7:00 p.m. to approximately Midnight) and on Sundays (from 7:00 a.m. to 6:30 p.m.). This represents the only evening and Sunday bus service operated by VOTRAN.

Although the need for express bus service in Volusia County has been identified, no express service currently is provided other than the I-4/Orlando express service. VOTRAN should examine the feasibility of implementing limited-stop commuter express service along major corridors and between the County's service areas as it continues to modify and improve the service that it provides. Candidate corridors for express services include US 1, A-1-A, Nova Road, and International Speedway Boulevard.

Due to budget limitations and expansion of transit services in other areas (e.g., West Side service area, night and Sunday service, etc.), no significant improvements or expansion of the core East Side service area routes have taken place in recent years. Service adjustments to the core routes have required reductions and reassignments of other resources. While VOTRAN staff is to be commended for working on these operational efficiencies, the traditional VOTRAN transit market has not benefited from any significant addition of service hours or service areas.

As stated previously, VOTRAN will conduct a Comprehensive Operations Analysis (COA) for VOTRAN's East Side service area, including the southeast routes and the beach service, with the effort scheduled for completion mid-2007. This effort will provide comprehensive recommendations for service modifications, service enhancements, alternative services options, and similar service productivity and service improvements

Paratransit Service

The final transit service planning area is paratransit service, which overlays all of the other VOTRAN service areas. While the VOTRAN paratransit service planning is fully detailed in its

Transportation Disadvantaged Service Plan (TDSP), the provision of the paratransit service has direct impacts on all aspects of the VOTRAN service.

Under the provisions of the Americans with Disabilities Act (ADA) of 1990, complementary paratransit services must be provided to eligible residents and visitors. VOTRAN has taken a responsible approach to managing the ADA paratransit service provision that contains the costs related to services. Such actions include:

- strict eligibility and certification processes
- utilization of the mandatory bus pass program
- travel training to move passengers to the fixed route system

KEY FOCUS AREAS AND STRATEGIC INITITIATIVES

While the previous needs and opportunities were addressed to specific geographical areas, the following are key focus areas and strategic initiatives that will impact the overall VOTRAN system, including:

- Commuter Rail
- Technology
- Infrastructure and Facilities
- Buses and Support Vehicles
- Other Capital Items
- Community Relations, Outreach, & Marketing Activities
- Transit Education Programs
- Coordination/Interaction with Local Governments and Other Agencies
- Florida Growth Management Act and Proportionate Fair-Share Transit Opportunity
- SAFETEA-LU Programs

Commuter Rail

The Florida Department of Transportation (FDOT), in cooperation with local government officials in Orange, Seminole, Volusia and Osceola counties and the federal government, are developing a commuter rail transit project to run along a 61-mile stretch of existing rail freight tracks in the four-county area.

The 31-mile Phase 1 segment would serve 10 stations, linking DeBary to Orlando. Service could begin as soon as 2009. Phase 3, planned for FY 2015, will extend the service 7 miles from DeBary to DeLand.

As the Central Florida Commuter Rail Project continues to progress, VOTRAN should be prepared to develop and operate feeder bus service to support the rail service.

Technology

VOTRAN has embarked on an aggressive program to implement a series of technology improvements known as Advanced Public Transportation Systems (APTS). The VOTRAN APTS program, a $4.1 million investment, is designed with three primary goals:

- To increase the productivity of the system
- To create a more customer service oriented system
- To improve the quality of the employee's job

The APTS technologies include systems that tracks vehicle location, coordinated transfers between routes, facilitates faster, more efficient paratransit reservations and service delivery, collect real-time service and operational information, and provide data to help both customers and management.

Specific APTS components included in this effort include: electronic fare boxes that will permit the use of a variety of fare media and allow the introduction of daily and weekly passes; mobile data terminals, automatic passenger counters, automatic vehicle locators, automatic stop announcers, improved telephone system, and web-based customer information.

Infrastructure and Facilities

VOTRAN must continue to maintain and re-invest in its infrastructure and facilities. This would include:

- Temporarily locating its West Side service facility
- Designing and constructing a permanent West Side service facility in conjunction with the commuter rail service implementation
- Maintain and upgrade its existing administrative, operations and maintenance facility on Big Tree Road in South Daytona

- Monitor the need for future expansion of the Big Tree facility and take appropriate actions for land acquisition and preliminary design

- Maintain and upgrade the VOTRAN Transfer Facility in Daytona Beach

- Continuing to maintain and develop "super stops" to accommodate transfer locations between routes

- Continuing to maintain and expand the bus shelter and bus programs

- Continuing to maintain and expand the "Stow and Go" bicycle and bus program, including providing bicycle racks on all fixed route buses and bicycle racks at major bus stops

- Continuing to invest in safety and security systems

- Continuing to maintain and upgrade transit technologies, including computer and communication systems

Bus and Support Vehicles

VOTRAN must continue the vehicle replacement program and purchase new expansion vehicles for fixed-route and paratransit services. New buses will be lift-equipped to comply with ADA provisions and include compatible technologies.

Other Capital Items

VOTRAN should:

- Continue to maintain an adequate supply of spare parts, shop tools, and physical plant equipment, as well as ensure that all tools and equipment are in top working condition, to properly operate and maintain the existing vehicle fleet

- Ensure the availability and working condition of all computers, fax machines, photocopy machines, and any other miscellaneous equipment necessary for the daily office operations of the system

- Ensure the general upkeep and maintenance of its buildings and facilities

Regional Transit Training Center

In partnership with the Florida DOT, VOTRAN is currently developing a regional training center that will provide training for VOTRAN maintenance and operations personnel, contractor personnel, and other public transportation agencies in the northeast Florida region. In addition to providing classroom space for training, the center will an assortment of mechanic training aides (such as air brake boards) and will feature a driver simulator unit.

The second phase of this project will be included a mobile driver simulator unit. The estimated $380,000 cost of the unit will be funded from state and federal grants.

Community Relations, Outreach, & Marketing Activities

It is critical that VOTRAN focuses on community relations and more directed marketing efforts to develop better relationships with the business community, universities, schools, community associations, social service agencies, and other groups that are the most likely source of new riders for VOTRAN. Specifically, VOTRAN should concentrate on developing outreach practices geared towards attracting choice riders.

Transit Education Programs

Another outreach effort is the development and implementation of "transit education" programs. The idea behind the concept is the belief that everyone, including elected officials, current riders, the public, and VOTRAN employees, should all be better educated (on varying levels) about transit issues. For example, if elected officials and the public are better educated about transit's usefulness and benefits, they may be more willing to support additional funding for VOTRAN. Current transit users could benefit by learning more about transit and how to fully utilize the system's capabilities.

In conjunction with efforts to improve community relations and marketing of the system, VOTRAN may want to take advantage of its anticipated increased access to the general public, businesses, and existing and potential customers, by developing and providing basic transit education/training courses.

Coordination/Interaction with Local Governments and Other Agencies

VOTRAN needs to continue to be a major partner in the development of and revisions to long range transportation planning issues in the county. Involvement in the development, review, and completion of all county planning documents should be a goal of the transit system, especially those plans that may include any transit improvements, impacts, etc. For example, the need for VOTRAN's involvement in county planning issues related to the improvements to the county infrastructure (e.g., sidewalks, curb cuts, etc.) and the development of county-wide bus stop specifications.

Similar to this interaction with local governments on long-range planning issues, VOTRAN must continue to coordinate its activities as a reviewer in the ongoing updates to local comprehensive plans and related zoning issues. With VOTRAN maintaining a presence in all transportation planning efforts of other government agencies, the integration of transit needs and amenities into the land use planning and development process will be assured. It will also facilitate VOTRAN's participation in the early planning stages of all new major developments, which will, in turn, ensure the "transit-friendliness" of the developments. This is particularly important given the concerns expressed by participants in the public workshops about the disparity in bus stop accessibility between municipalities.

The propagation of rail planning efforts throughout the region should also be the precursor to intergovernmental and interagency discussions related to the impacts of potential rail alternatives. It would be in VOTRAN's best interest to be an active participant in all discussions related to rail alternatives and impacts that they might have on VOTRAN services and/or VOTRAN's service area.

In addition, VOTRAN should also continue to coordinate the transit services that it provides with those of other transit providers in and adjacent to Volusia County for purposes of providing inter and intra-county services in the most effective and efficient manner. This may become an even more important task in the future as rail transit becomes a more viable alternative for the region.

Florida Growth Management Act and Proportionate Fair-Share Transit Opportunity

In 2005, the Florida Legislation passed S.B. 360, which made the first changes to growth management act since 1985. S.B. 360 introduced many new options and requirements related to growth management including the requirement that local governments to adopt a proportionate fair-share ordinance.

This provides Florida's public transportation systems potential funding assistance and partnerships, since multimodal solutions are consistent with intent of S.B. 360 and Chapter 163.3180 (Concurrency) does not exclude transit solutions.

Transit improvements can be considered for proportionate fair-share contributions. Potential transit improvements:

- Bus Rapid Transit (BRT) Corridors
- Capital Investments (new buses, super stops, bus bays, on street passenger amenities, shared parking, intermodal facilities)
- Technology Improvements (Transit signal priority, AVL, trip planning software, kiosks)
- Increased Frequency

VOTRAN should work closely with the MPO, local governments, and agencies, developers, and the FDOT to identify how transit improvements can be included and funded in proportionate fair-share ordinances and calculations. Proportionate Fair-Share provides an excellent opportunity to access the financial support to allow VOTRAN to improve its existing services and to expand its service area to provide public transportation to the developing areas of Volusia County.

SAFETEA-LU Programs

With the passage of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in August 2005, the US Department of Transportation modified one Federal Transportation Administration (FTA) program and added another that will directly impact on VOTRAN. Both of these programs are formula programs, as opposed to discretionary programs.

The first is the Job Access/Reverse Commute (JARC) grant program (FTA Section 5316). The purpose of this grant program is to develop transportation services designed to transport welfare recipients and low income individuals to and from jobs, training and child care, and to develop reverse commute transportation services for residents of urban centers and rural and suburban areas to suburban employment opportunities. Emphasis is placed on projects that use mass transportation services.

The federal contribution to eligible projects is 50 percent. The remaining 50 percent may be derived from other federal programs where eligible, state and/or local sources, but excluding revenue derived from providing mass transportation services unless the funds are received through a service agreement.

SAFETEA-LU requires that by FY 2007, projects selected under JARC must be derived from a locally developed coordinated public transit/human service transportation plan beginning in FY 2007.

Eligible activities for Job Access grants include the capital and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs. Also included are the costs of promoting the use of transit by workers with nontraditional work schedules, promoting the use of transit vouchers, and promoting the use of employer-provided transportation including transit benefits. For Reverse Commute grants, operating costs, capital costs and other costs associated with reverse commute by bus, train, carpool, vans or other transit service are eligible.

The Daytona Beach urbanized area was allocated $137,918 in JARC funds for FY 2006. Similar funding levels are forecast in SAFETEA-LU thru FY 2009.

The second is the New Freedom Program grant program (FTA Section 5317). This grant program provides formula funding for transportation services beyond those required by the Americans with Disabilities Act (ADA) to assist persons with disabilities to get to and from jobs and employment support services.

Capital funding is provided on an 80/ 20 federal/local match basis. Operating assistance may not exceed 50 percent of the net operating cost of the project.

Similar to the JARC program, SAFETEA-LU requires that by FY 2007, projects selected under the New Freedom Program must be derived from a locally developed coordinated public transit/human service transportation plan.

Working in coordination with its MPO, the recipient offers an area-wide solicitation for applications for grants to the recipient and subrecipients. Selected projects must be derived from a coordinated human services transportation plan developed through a process that includes representatives of public, private, and nonprofit transportation and human service providers as well as the general public.

The Daytona Beach urbanized area was allocated $86,503 in New Freedom funds for FY 2006. Similar funding levels are forecast in SAFETEA-LU thru FY 2009.

VOTRAN should take the initiative to work with the MPO to develop the locally developed coordinated public transit/human service transportation plan to determine the best use of both the JARC and New Freedom allocations.

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CHAPTER EIGHT

RECOMMENDATIONS

This chapter of the TDP assimilates public involvement, needs, opportunities, and alternatives and creates a mechanism to translate these efforts into an action plan. The projects and services recommended for implementation are detailed.

The next and final chapter of the TDP will provide a summary of available transit financial sources, apply costs to these recommendations, and develop operating and capital financial plans. The recommendations are not listed in any prioritized order. The recommended phasing of the recommendation is listed in parentheses, indicating the fiscal year (FY) for initiation of activity.

RECOMMENDED ACTIONS

1. Pursue the establishment of a long-term dedicated funding source for VOTRAN. *(ongoing)*

The VOTRAN system receives its county funding support from the General Revenue Fund. Current policy guidance from Volusia County Government is that VOTRAN should not expect to receive any significant increases in county funding support for the foreseeable future. With state and federal transit funding also forecasted to be stable, expansions and service improvements will be limited.

Volusia County should work toward identifying a permanent source of dedicated funding for future VOTRAN improvements. One available option that may be used to help fund any recommended improvements is an increase in the County's sales tax. Volusia County is eligible to levy up to an additional 2.5 percent of local discretionary sales surtaxes (up to 1 percent for the charter county transit system surtax, up to 1 percent for the local government infrastructure surtax, and up to 0.5 percent for the school capital outlay surtax).

Another potential revenue source for Volusia County would be the Charter County Transit System Surtax that can be levied up to 1 percent by those charter counties who adopted their charter prior to January 1, 1984 (among which includes Volusia County). Generally, the use of the proceeds is for the development, construction, operation, and maintenance of fixed guideway rapid transit systems (including commuter rail), bus systems, and roads and bridges. If the County elected to levy the full 1 percent of the transit system surtax, it is estimated that this additional one cent of sales tax would generate approximately $75.1 million of revenue annually for the entire county, with Volusia County Board of County Commissioner's share being approximately $36.9 million.

Regardless of origin, a dedicated funding source will help ensure the continued fiscal health of the system.

2. Pursue Florida Growth Management Act and Proportionate Fair-Share Transit Opportunities. *(ongoing)*

In 2005, the Florida Legislation passed S.B. 360, which made the first changes to growth management act since 1985. S.B. 360 introduced many new options and requirements related to growth management including the requirement that local governments to adopt a proportionate fair-share ordinance.

This provides Florida's public transportation systems some potential funding assistance and partnerships, since multimodal solutions are consistent with intent of S.B. 360 and Chapter 163.3180 (Concurrency) does not exclude transit solutions.

Transit improvements can be considered for proportionate fair-share contributions. Potential transit improvements:

- BRT Corridors
- Capital Investments (new buses, super stops, bus bays, on street passenger amenities, shared parking, intermodal facilities)
- Technology Improvements (Transit signal priority, AVL, trip planning software, kiosks)
- Increased Frequency

VOTRAN should work closely with the MPO, local governments, and agencies, developers, and the FDOT to identify how transit improvements can be included and funded in proportionate fair-share ordinances and calculations. Proportionate Fair-Share provides an excellent opportunity to access the financial support to allow VOTRAN to improve its existing services and to expand its service area to provide public transportation to the developing areas of Volusia County.

3. Initiate Planning and Implementation of New SAFETEA-LU Grant Programs. *(ongoing)*

With the passage of the Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) in August 2005, the US Department of Transportation modified one Federal Transportation Administration (FTA) program and added another that will directly impact on VOTRAN. Both of these programs are formula programs, as opposed to discretionary programs.

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transportation including transit benefits. For Reverse Commute grants, operating costs, capital costs and other costs associated with reverse commute by bus, train, carpool, vans or other transit service are eligible.

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Capital funding is provided on an 80/20 federal/local match basis. Operating assistance may not exceed 50 percent of the net operating cost of the project.

Similar to the JARC program, SAFETEA-LU requires that by FY 2007, projects selected under the New Freedom Program must be derived from a locally developed coordinated public transit/human service transportation plan.

Working in coordination with its MPO, the recipient offers an area-wide solicitation for applications for grants to the recipient and subrecipients. Selected projects must be derived from a coordinated human services transportation plan developed through a process that includes representatives of public, private, and nonprofit transportation and human service providers as well as the general public.

The Daytona Beach urbanized area was allocated $86,503 in New Freedom funds for FY 2006. Similar funding levels are forecast in SAFETEA-LU thru FY 2009.

VOTRAN should take the initiative to work with the MPO to develop the locally developed coordinated public transit/human service transportation plan to determine the best use of both the JARC and New Freedom allocations.

4. Respond to the West Side service area Comprehensive Operations Analysis recommendations for the VOTRAN fixed-route bus system. ***(FY2007 through FY2015)***

A private consultant, under contract to the MPO, just completed a Comprehensive Operations Analysis (COA) for VOTRAN's West Side service area. The COA analyzes the transit system's route structure and provision of service to determine how improved efficiencies may be achieved without impacting ridership significantly, and possibly even improving utilization of the system.

The primary purpose of the COA is to provide an independent analysis of the existing system and recommendations concerning service improvements, modifications, and/or expansions. The analysis covered those aspects of service that generally are not visible to the riding public, such as master route schedules, operator work assignments, on-time performance, route productivity in terms of ridership and revenue, and network-level routing and route segmentation.

The recommendations of the West Side COA were packaged in four phases over the next ten year period:

- Near-term Improvements (FY 2007) – includes the temporary relocation of VOTRAN's West Side bus fueling and storage facility from the current School Board site on Eustace Avenue. The near-term recommendations include route restructuring to improve on-time performance and better overall connections for the service area. These service adjustments can be implemented without any additional costs.
  (No net increase in daily bus requirements)

- DeLand Intermodal Center (FY 2009) – adjusts service for the new DeLand Intermodal Center which will be located in DeLand on Euclid Avenue, just east of Woodland Boulevard. It was also recommended that a new local DeLand route be considered for implementation.
  (Recommended possible increase of one bus in daily service)

- Central Florida Commuter Rail service to DeBary (FY 2010) – The first phase of the commuter rail project will provide service from downtown Orlando to the proposed DeBary station located along the west of Saxon Boulevard extension. VOTRAN is pursuing the possibility of siting its permanent West Side bus facility adjacent to the DeBary commuter rail station.
  (Recommended increase of two buses in daily service)

- Central Florida Commuter Rail Service to DeLand (FY 2015) – adjusts service to accommodate the extension of the commuter rail service to the DeLand Amtrak Station and a new commuter rail station to be located at Minnesota Avenue and Clara Avenue.
  (No net increase in daily bus requirements)

The capital and operating expenses detailed for these improvements will be incorporated into the TDP operating and capital plans.

VOTRAN should work toward the implementation of these recommendations as funding is available; other events unfold, and needs warrant.

5. Develop feeder service to support the Central Florida Commuter Rail Project. *(FY2010-2016)*
As the Central Florida Commuter Rail Project continues to progress, VOTRAN should be prepared to develop and operate feeder bus service to support the rail service. The West Side COA provides an outline of the planned implementation of the commuter rail service and provides specific recommendations for VOTRAN to consider.

Additionally, VOTRAN should pursue enhanced connections to the commuter rail service from east Volusia County. This should be coordinated with recommendation #8 which calls for the reduction in Route 60's service frequency from 60 to 30 minutes.

6. Conduct a Comprehensive Operations Analysis for the East Side service area for the VOTRAN fixed-route bus system. *(FY2007)*
The MPO has provided funding to conduct a similar COA for VOTRAN's East Side service area, including the southeast routes and the beach service. This effort is scheduled for completion in the summer of 2007. This effort will provide comprehensive recommendations for service modifications, service enhancements, alternative services options, and similar service productivity and service improvements.

The East Side COA should specifically examine and analyze the series of service improvements detailed in Recommendations #7 through #12. VOTRAN should adjust the TDP staging recommendations to concur with the recommendations of the East Side COA effort.

Whereas the specific recommendations from the East Side COA can not be detailed at this time, VOTRAN should plan on working toward the implementation of these recommendations as funding is available and needs warrant.

7. Increase frequency of service in US 1 corridor. ***(FY2008)***
The US 1 Transportation Study identified a locally-preferred transportation alternative that will improve mobility within the US 1 corridor while minimizing any impacts to neighborhoods and businesses in the study area. This alternative maintains the existing roadway configuration of US 1 and, among other improvements, is highlighted by a high emphasis on transit, bicycle, and pedestrian enhancements. It is envisioned that the planned improvements to the US 1 corridor will be phased in over the next 20 years.

It is recommended that VOTRAN pursue the reduction of headways on the corridor's two primary routes (Routes 3 and 4) from 60 to 30 minutes. These bus routes are two of the busiest VOTRAN bus routes and operate at capacity during peak periods. If budget permits, these service frequency improvements should be for the entire service span of the routes. If budget limits preclude this, the increased service frequencies should be implemented during peak periods, and then expanded to longer hours when demand justifies and budget permits.

8. East-West Service (Route #60) Service Frequency Improvements ***(FY2010)***
With the initiation of the Central Florida Commuter Rail Service, a need will exist to provide a connection to the rail service for East Volusia residents. One option available to VOTRAN includes increasing the service frequency on the Route 60 East-West Connector. As one of VOTRAN's most utilized routes, it is recommended that VOTRAN pursue a reduction in Route 60's service frequency from 60 to 30 minutes. Prior to implementing this improved frequency, VOTRAN staff should analyze the implications of this service improvement on their ADA complementary paratransit service requirements. The other option for providing the East Volusia commuter rail connection through use of small commuter vans, targeted to specific groups.

9. Improvements to the Beach Service area. (*FY2009)*
The Beach Service Area is served by five VOTRAN bus routes and the seasonal VOTRAN beach trolley. The VOTRAN bus routes providing service to the beach service area include: Routes #1A (A1A North), #1B (Granada), #8 (Halifax), #17A (South Atlantic-Ponce Inlet) and #17B (South Atlantic-Dunlawton).

VOTRAN offers regular bus service along the beach area from 7:00 p.m. to approximately midnight from Monday though Saturday. VOTRAN's Routes #1A (A1A North), #1B (Granada), #17A (South Atlantic-Ponce Inlet) and #17B (South Atlantic-Dunlawton) are included in the VOTRAN night service, but operate on an abridged routing. The Beach Trolleys also run from 7:00 p.m. until midnight, however they become a part of the standard night service during this period of time.

VOTRAN's beach trolley, which operates 45-minute service along A-1-A between Granada Boulevard and Dunlawton Avenue for the eight month period from early January through Labor Day. Service is provided from 12:00 p.m. to 7:00 p.m., Monday through Saturday. Due to its

seasonal schedule, the VOTRAN Beach Trolley Service is not included on the regular VOTRAN schedules.

The Intermodal Transfer Facility, located at the Ocean Center, serves as the hub for all beachside activity in the Main Street area. The Ocean Center is currently being expanded, with completion expected in 2008. Expansion of trolley service should be timed to coincide with the opening of the Convention Center.

It is recommended that the East Side COA examine all of the beach area service to see if: (a) greater coordination could be achieved between the Trolley Service and the VOTRAN bus service; (b) the trolley service should be provided throughout the year; (c) if more frequent trolley service should be provided upon the completion of the Ocean Center improvements. Due to the different service frequencies of the Trolleys (i.e., 45 minutes) and the VOTRAN buses (i.e., 60 minutes), adjustments to the service frequencies of the trolley to either 30 or 60 minutes would be required to achieve maximum coordination between the trolleys and the buses; and, (d) maintain or improve coordination with the existing New Smyrna Beach Water Taxi service and any planned expansions.
The beach service area would provide an excellent candidate for the public-private partnership in which the A1A corridor could be upgraded with unique transit amenities to promote greater use of both the trolleys and the VOTRAN buses.

10. Implement more frequent service of some VOTRAN routes. ***(FY2012-2016)***
VOTRAN service currently is provided at a frequency of one bus per hour or better on 80% of its 25 routes. The five exceptions are three routes in the West Side service area (Routes #21, 22, and 23) and the two New Smyrna Beach Mainland routes (#43 and #44) which operate on 120 minute frequencies.

VOTRAN should continue efforts to improve service for existing patrons by utilizing its route performance monitoring program to identify routes that may warrant increased frequencies.

As funding becomes available, VOTRAN should phase in improved frequencies to bring the West Side routes up to a minimum of 60 minute service and to provide 30-minute headways on its most heavily-utilized routes. In addition to Routes #3, #4 and #60 previously recommended for more frequent service, other candidates should be drawn from those routes that exceed the system average productivity as expressed in passengers per hour.

Increased service frequencies would help the system attract choice riders out of their automobiles, which is much more difficult to do with infrequent service.

11. Review Saturday, Evening, Sunday and Holiday Schedules. ***(FY2007 and ongoing)***
As part of the East Side COA, VOTRAN should review the current policies and practices regarding services in addition to their core schedule, which include Evenings, Saturday, Sunday and Holidays.

It is recommended that based on the findings of the East Side COA, that VOTRAN continue in its efforts to identify additional funding that would permit expansion of the non-weekday service areas and service spans.

Currently, on Saturday VOTRAN does not operate Route #5 "Center Street" or some portions of other routes. These past practices and decisions should be reexamined to see if the reduced Saturday service levels are justified or if the weekday schedule should be utilized on Saturdays.

VOTRAN currently operates six routes on a truncated schedule evening service from 7:00 p.m. to approximately Midnight that provide service to the limited East Side service area only.

On Sundays, VOTRAN operates the same six buses operated in the evening service, but on truncated routes serving the core East Side service area only. This represents only about 15 percent of the weekday average daily level of service (in terms of revenue miles of service).

12. Begin planning additional express bus service along major corridors and between distinct service areas in the county. *(FY2012-2016)*

The need for express bus service in Volusia County was identified in the interviews with key local officials as well as in the results of both the customer on-board and operator surveys as a desirable service improvement. VOTRAN should begin examining the feasibility of implementing limited-stop commuter express service along major corridors and between the County's service areas as it continues to modify and improve the service that it provides. Candidate corridors may include US 1, Nova Road, A-1-A, and International Speedway Boulevard.

13. Ensure the availability of user-friendly transit marketing information. *(ongoing)*

In recent years, VOTRAN has made significant progress in restructuring and reformatting its route and schedule information. The schedules are now bi-lingual and present easy-to-use information and include route maps. VOTRAN has also updated the Gold brochure is developing display maps for the major transfer facilities.

VOTRAN should continue to work toward improving their customer information, to improve their graphic presentations, and to offer this information throughout the service area. For example, it would be beneficial to have information displays available at busier bus stops, major transfer points (i.e., all super stops), and any tourist-frequented locales.

A system map should be developed that shows the VOTRAN service (or at least by east side and west side service areas) without the use of inserts should be developed for presentations and other outreach efforts.

The VOTRAN website provides an excellent opportunity to communicate with both users and non-users. The current website an effort should be undertaken to overhaul the current website to make it more user friendly, more comprehensive and offer improved communication information and links. It is recommended that the VOTRAN website provide the option for the user to access single route information (i.e., timetable and map) with the option to print out that information on a route-by-route basis.

VOTRAN should continue to work with Volusia County to improve mapping tools that may be utilized to create more user-friendly and interactive maps and schedules on VOTRAN's website. VOTRAN staff should also work to improve accessibility of passenger information for persons with visual disabilities (i.e., Braille info that identifies bus stop signs from other signage).

14. Continue to work toward the establishment of a countywide policy for the installation of bus shelters and benches. *(ongoing)*

It has been commented that one of the primary barriers to implementing bus shelters and other amenities throughout the county is the differences in standards and policies related to this

endeavor that exist among the County's municipalities. Some cities do not want benches with advertising along their roadways; others do not want shelters. And, in some cases, city design requirements make the installation of a shelter prohibitively costly. Yet, the users of the system want more benches and shelters. Transit supporters also see these amenities as necessities in being able to attract the discretionary rider.

VOTRAN should continue to pursue the establishment of a countywide policy related to the implementation of bus stop amenities. Under such a policy, the policy should include minimal design guidelines to ensure a level of consistency in the location, placement, and physical characteristics of the amenities.

15. Maintain and utilize bus stop inventory. *(ongoing)*
VOTRAN currently has approximately 2,300 bus stops throughout its service area. These stops range from a simple bus stop sign, or a sheltered transfer site at a mall, to the major transfer plaza in downtown Daytona Beach which serves many routes.

VOTRAN has developed a bus stop inventory program that catalogs the location of each bus stop, specifying each of the available amenities (e.g., shelter, lighting, phone, bench, trash receptacle, passenger information displays, etc.), and the accessibility of each stop for persons with disabilities. The inventory is geocoded into ArcView, a geographic information system (GIS) software package, which allows for specific data analysis and mapping capabilities.

It is recommended that VOTRAN continue to maintain the inventory database and update it as necessary, especially as new shelters and other amenities are added, so that it will continue to be a useful planning tool.

16. Continue to install bus shelters and amenities at key bus stop locations. *(ongoing)*
The purchase of 74 new shelters is scheduled during the ten years of the plan, with 17 shelters scheduled for installation in FY 2007 and FY 2008, with 5 shelters per year thereafter. VOTRAN should utilize adopted guidelines in determining is the bus shelters are warranted and where the shelters can be safely installed. VOTRAN should investigate emerging options for the delivery of passenger amenities, including sign poles with attached seating.

VOTRAN should continue to maintain and expand its inventory of bus shelters, benches and other passenger amenities.

17. Install bicycle racks at bus stops and transfer points, as necessary. *(ongoing)*
With the success of the VOTRAN "Stow-n-Go" program, it is recommended that VOTRAN continue to install bicycle racks on all fixed-route buses. Additionally, it is recommended that VOTRAN provide bicycle racks as an amenity at its super stops, and at other appropriate stops and transfer points.

This TDP recommends the purchase of a total of 100 racks, for a total capacity of 200 bicycles. Each individual rack holds two bicycles. It is recommended that five units (to hold up to 10 bicycles) be placed at each super stop, and that the remaining racks be placed at other stops within the system deemed appropriate by VOTRAN. If the bicycle racks prove to be heavily used, VOTRAN should explore placing bicycle storage lockers at its major stops/transfer points.

18. Continue to monitor all technology advancements applicable to public transportation. *(ongoing)*

In May 2004, the Volusia County Council approved an aggressive technology program designed to enhance transit operations and management. The project which is currently at the final stages of implementation included a variety of Advanced Public Transportation Systems (APTS) improvements including: Mobile Data Terminals (MTD), Automatic Vehicle Locators (AVL), Automatic Passenger Counters (APC), fare revenue systems, and improvements to the telephone and radio systems. VOTRAN should complete the implementation of this phase of the APTS projects.

The APTS technologies installed includes systems that tracks vehicle location, coordinates transfers between routes, facilitates faster, more efficient paratransit reservations and service delivery, collects real-time service and operational information, and provides data to help both customers and management.

Specific APTS components included in this effort include: electronic fare boxes that will permit the use of a variety of fare media and allow the introduction of daily and weekly passes; mobile data terminals, automatic passenger counters, automatic vehicle locators, automatic stop announcers, improved telephone system, and web-based customer information.

VOTRAN should continue to monitor the ever-changing state-of-the-art in transit-related technologies for potential future application. The planning and provision of service, as well as its inherent effectiveness and/or efficiency, can be enhanced through the utilization of technology.

The VOTRAN customer service portfolio should pursue the implementation of travel planning software in the VOTRAN website, Interactive Voice Recognition (IVR) options to permit direct queries and responses automatically by telephone, displays and transmissions of real time bus arrival information, and other similar technological customer service.

VOTRAN should plan for the replacement and upgrade of existing and planned technology applications.

19. Continue to develop and implement super stops, as prioritized. *(ongoing)*

A “super stop” is defined as a facility that can accommodate up to four buses at a time and would include, at a minimum, large passenger shelters, adequate lighting, route and fare information, seating, and landscaping.

VOTRAN has identified five super stops locations to be implemented within the next five years. The first super stop, which will be at New Smyrna Beach, is currently under development and is scheduled to be opened in 2007. The other four super stops programmed for implementation include:

- Dunlawton Square FY 2008
- Market Place FY 2009
- Volusia Mall FY 2010
- Northgate FY 2011

Another super stop was planned for DeLand. The City of DeLand subsequently secured federal funding for this their Intermodal Transfer Facility (ITF) which will be located in DeLand on Euclid Avenue, just east of Woodland Boulevard. Scheduled for completion in FY 2008, the DeLand ITF will include staging areas for VOTRAN, Greyhound and taxis.

VOTRAN should continue to identify potential super stop sites for development.

20. Continue to work with other Government agencies to enhance community "walk ability" and to achieve better bus stop accessibility. *(ongoing)*
Increasing pedestrian accessibility and enhancing community walk ability is essential to promote non-automobile related travel modes. Easy and safe access for the general public to bus stops will promote greater utilization of public transportation. Without accessible bus stops, it will prove difficult to transition many of the paratransit users onto the VOTRAN fixed-route service.

It would be in the best interest of VOTRAN to continue its proactive efforts in encouraging the County, its municipalities, and the State to meet enhance pedestrian access, including the ADA requirements for various accessibility needs such as sidewalks and curb cuts at and adjacent to bus stops. Accessible bus stops with amenities such as benches and shelters should be the goal, both for the benefit of current users as well as to help entice paratransit users and discretionary riders to utilize fixed-route service.

VOTRAN, the County, its municipalities, and FDOT should ensure that pedestrian accessibility is adequately addressed and incorporated into their land use planning and infrastructure requirements and standards.

21. Continue to track the performance of individual routes via VOTRAN's formal route monitoring program. *(ongoing)*
It is recommended that VOTRAN continue to conduct formal data monitoring and analysis of the performance of the fixed route and paratransit services.

VOTRAN should examine their existing processes to integrate the wealth of information that will be collected with the newly installed bus technology. For example, the Automatic Vehicle Locator (AVL) systems will provide on-time performance data. Similarly, the Automatic Passenger Counters (APC's) coupled with the AVL system, will provide great detail in passenger activity at a bus stop level. Efforts should be made to automate as many of the data management processes as possible.

22. Maintain VOTRAN's involvement in the transportation planning process. *(ongoing)*
As the Volusia County mobility manager, VOTRAN must be involved in transportation decisions within Volusia County. This involvement is supported by the current intermodal emphasis at the federal and state levels and the increased recognition of the role that transit can play in a community. This can probably best be accomplished through continued involvement in the MPO's technical and citizen advisory committees, and the development of local comprehensive plans and the long-range transportation plan for the County. It is imperative that VOTRAN ensures that its goals and objectives continue to correlate with those found within all local plans, and vice versa.

VOTRAN should continue to utilize the MPO planning funding to support service planning and performance analysis.

23. Continue to encourage public input through interaction with local advisory/advocacy groups and committees. *(ongoing)*
Public involvement should continue to be promoted. Transit systems with open channels for public input tend to be successful. VOTRAN has been proactive in making presentations and soliciting public input, as well as actively participating in the MPO's technical coordinating and citizen advisory committees. The system regularly participates in meetings with the TDLCB,

among other organizations, and has been lauded by all parties throughout the TDP process for the level of its public involvement.

24. Strive to ensure that all municipalities recognize and support VOTRAN's involvement as a review agency in the local land use planning process. ***(ongoing)***

On a global level, land use patterns affect the potential for transit ridership. At a more immediate level, amenities such as sidewalks can make a difference in attracting potential riders. With the assistance and support of the MPO, the County, and all local municipalities, VOTRAN should continue to be involved as a reviewer of local comprehensive plans, plan amendments, and development proposals and re-zonings in its current and future planned service areas. VOTRAN, the MPO, the County and the all local municipalities should move to implement the Site Planning Review Study recommendations.

25. Continue to operate commuter express bus service (i.e., I-4 Express Link) to Downtown Orlando until the Central Florida Commuter Rail service is initiated. ***(FY2007-FY2010)***

In conjunction with LYNX, VOTRAN currently provides express commuter bus service on I-4 between the Volusia Park-and-Ride on Saxon Boulevard and the LYNX Transit Center in Downtown Orlando. Three morning peak and three late afternoon/evening peak trips with limited stops are operated each weekday. While the service has not yet achieved planned ridership of 120 passengers per day, it currently carries about 65 daily passengers.

Assuming continuation of Florida DOT funding, the commuter express bus service should be continued until the initiation of the Central Florida Commuter Rail service, at such time it should be discontinued.

26. Continue to address the mobility needs of Volusia County residents, particularly those in transit-dependent and/or growth areas, as is financially feasible. ***(FY2007 and ongoing)***

The majority of the areas identified as being transit-dependent in nature are reasonably well served by the existing transit system, but VOTRAN should give these areas priority when considering improvements. In terms of mobility needs, these areas are extremely important.

Developing growth areas should be monitored and considered for transit services when VOTRAN has the opportunity to improve and/or expand its services. This analysis should be implemented immediately and continued on a regular cycle (e.g., every third year) through the TDP planning period.

27. Continue to capitalize preventative maintenance activities, as necessary. ***(ongoing)***

Federal legislation has amended the definition of a capital project placing several new items in the general definition and formally codifying in the Federal Transit Administration authorizing statute several items that had been modified in the past through separate appropriations acts. The use of FTA capital funds to cover expenses related to preventative maintenance was one of the changes to the definition of capital, initially approved in the FY 1998 Department of Transportation Appropriations Act. As defined in the Act, preventative maintenance includes all maintenance costs.

VOTRAN should, when it has more available capital funds than operating funds, capitalize preventative maintenance activities to allow operating funds to be reserved for more restrictive activities.

28. Continue the vehicle replacement program and purchase new expansion vehicles for fixed-route and paratransit services. *(ongoing)*
VOTRAN's current fleet inventory consists of forty-two 35 foot buses, eight 30-foot buses, two 28-foot buses, and four 35-foot trolley buses.

For VOTRAN's fixed-route service, thirty-three 35-foot buses, eight 30-foot buses, four 28-foot buses, and four 35-foot trolley buses are scheduled to be purchased as replacement vehicles during the ten years of the TDP. The proposed ten year budget in the following section assumes bus replacement on an ongoing basis. Funding is being coordinated with the MPO through flexing of FTP funds. The MPO has adopted a policy to provide 30 percent set aside which goes directly to VOTRAN for vehicle replacement.

In addition, new vehicles will need to be purchased for increased frequency of service on various routes.

As for VOTRAN's paratransit service, VOTRAN's current fleet inventory consists of 44 vehicles. Over the TDP's ten year planning horizon, 57 paratransit vehicles are scheduled for replacement. The replacement vehicles will consist of 22-foot cutaways and 25-foot cutaways. No expansion vehicles are slated for purchase during this time because it is assumed that any additional increase in demand for paratransit service that exceeds VOTRAN's supply will be accommodated by a recommended taxi voucher program and/or the brokering of the additionally-required service to the existing private paratransit contractors.

Nevertheless, it is important for VOTRAN to continue to do its best to accommodate paratransit demand through the use of its own paratransit fleet as this facilitates increased multi-loading, thus, reducing overall operating costs for the paratransit program.

29. Continue the replacement or purchase of associated maintenance equipment and shop tools, as necessary. *(ongoing)*
VOTRAN should maintain an adequate supply of spare parts, shop tools, and physical plant equipment, as well as ensure that all tools and equipment are in top working condition, to properly operate and maintain the existing vehicle fleet.

30. Continue the replacement or purchase of associated office equipment, as necessary. *(ongoing)*
VOTRAN should ensure the availability and working condition of all computers, fax machines, photocopy machines, and any other miscellaneous equipment necessary for the daily office operations of the system.

31. Continue the replacement or purchase of associated computer software, as necessary. *(ongoing)*
To support its investment in APTS technologies and to provide its staff with adequate tools and equipment to perform their duties, VOTRAN should continue to purchase and upgrade its computer technology (both hardware, software and support peripherals).

32. Continue the replacement or purchase of capital items related to facility renovation, as necessary. *(ongoing)*
VOTRAN should ensure the general upkeep and maintenance of its buildings and facilities. This may include, but not be limited to, the need for painting, carpet replacement, repairs, and any

other miscellaneous capital items necessary for the maintenance/renovation of the system's facilities.

33. Continue to replace service vehicles, as necessary. *(ongoing)*
VOTRAN should ensure that it has the necessary fleet of vehicles to maintain and service its transit vehicles when needed by replacing the older, less efficient vehicles according to established replacement criteria. Currently, VOTRAN forecasts a service vehicle fleet requirement of nine vehicles. Over the ten years of the TDP, VOTRAN has scheduled the replacement of eighteen service vehicles through FY2016. This assumes no growth in the service vehicle requirements during this period.

34. Continue the vehicle replacement program and purchase new expansion vehicles for the Vanpool Program. *(ongoing)*
As part of Volusia County's Commuter Assistance Program, a vanpool program is currently in place that has several vans operating between Daytona Beach and the areas such as Orlando and Cape Canaveral. This program is currently operates 29 vans and is programmed to accommodate a maximum level of 34 vanpool vehicles.

It will be necessary for VOTRAN to continue to replace the program's vehicles at the end of their useful life (average life span is assumed to be five years or 100,000 miles), as well as purchase expansion vehicles to reach the 34 vanpool target. To accomplish this, VOTRAN has scheduled the replacement or expansion of 64 vanpool vehicles over the 10 years covered by their TDP.

VOTRAN should continue to monitor and evaluate its Vanpool Program and consider the program's expansion if warranted and financially feasible.

35. Continue to maintain, provide and plan for adequate facilities and infrastructure for the system. ***(ongoing)***
VOTRAN needs to maintain its existing administrative, operations and maintenance facilities and plan for future needs and expansions. VOTRAN must address both the temporary relocation and permanent relocation of its West Side operations facility. This will include planning, land acquisition, design and construction activities.

VOTRAN should begin examination for the need and planning for expanding it main Big Tree administrative, operations and maintenance facility to accommodate future growth and expansion of the system.

36. Continue with Development of Regional Transit Training Center *(FY 2007-2009)*
In partnership with the Florida DOT, VOTRAN is currently developing a regional training center that will provide training for VOTRAN maintenance and operations personnel, contractor personnel, and other public transportation agencies in the northeast Florida region. In addition to providing classroom space for training, the center will an assortment of mechanic training aides (such as air brake boards) and will feature a driver simulator unit.

VOTRAN should continue to pursue the implementation of the second phase of this project will be included a mobile driver simulator unit. The estimated $380,000 cost of the unit will be funded from state and federal grants

37. Continue with VOTRAN's Mobility Manager Programs. ***(ongoing)***

As the Volusia County "mobility manager", VOTRAN is also active in coordinating other public transportation services. Examples would include:

1. The "bike on buses" program, where all fixed route VOTRAN buses are equipped with bicycle racks
2. Park-and-Ride programs to encourage car pooling and use of the VOTRAN bus system
3. Special event shuttles
4. Emergency evacuation responses
5. VOTRAN's vanpool program that provides subsidized vans for groups traveling to common destinations, primarily work oriented travel
6. RideShare matching which is designed to match commuters with similar commuting schedules and destinations. The prospective commuter provides VOTRAN with their commuting specifics and VOTRAN matches them with prospective rides.
7. Guaranteed Ride Home is a program that provides individuals with an emergency ride home from the workplace in emergency situations

VOTRAN should continue to take an active role in these and other commuter assistance programs. The development of an employer transit subsidy program should be explored.

38. Continue to use special full wrap advertising on buses. ***(ongoing)***

"Super graphic" buses (i.e., buses that are specially painted with full-wrap advertising) at VOTRAN and around the state have proven to be extremely popular. These vehicles not only attract the attention of the public and media, but also can be a major source of revenue to the transit system. It is recommended that the system continue, and seek to expand where possible, its current super graphics program on its vehicles. VOTRAN should, however, take care to ensure a consistent visual identification on all of its buses.

39. Develop and implement a series of transit education programs. ***(FY2007 and ongoing)***

VOTRAN should continue its practice to undertake "transit education" programs oriented toward educating special interest groups on the benefits of public transportation and related transit issues, including government officials, current transit and paratransit users, the general public, and even transit employees. Better understanding of transit and its benefits, may in turn produce positive results for VOTRAN, such as increasing the support for additional transit funding and improving ridership and overall system utilization.

Transit education programs should also be developed focusing on the education of potential VOTRAN passengers. Such efforts should be directed toward seniors, pre-teen school children, employees, and similar special market groups.

In conjunction with efforts to improve community relations and marketing of the system through its Community Relations Coordinator, it is recommended that VOTRAN continue to develop and formalize these activities and to expand education and outreach programs. This effort should be implemented immediately and continued on a regular cycle (e.g., every third year) through the TDP planning period.

40. Ensure consistency with Local Comprehensive Plan Transportation Element. ***(ongoing)***

The Transportation Element of the current Volusia County Comprehensive Plan contains a policy establishing a level of service standard for fixed-route mass transit service. The standard is based on minimum residential densities and downtown non-residential floor space

requirements for varying levels of fixed-route bus service that were provided in the last major TDP update. According to this information, the least frequent bus service, with peak headway of 60 minutes, would generally require at least 4 dwelling units per acre in the service area, and a minimum downtown size of 3.5 million square feet of non-residential floor space. In addition to maintaining consistency with the established transit level of service standard, VOTRAN should encourage and support any efforts to increase densities along major corridors so that improved transit efficiencies and increased usage will result.

41. Develop and initiate activities to generate more tourist ridership. *(ongoing)*
Given the presence of Volusia County as a major tourist destination in the State, either due to its coastal resources or its various annually-occurring venues, VOTRAN should continue to encourage the use of public transportation by visitors of the area. VOTRAN should collaborate with the Ocean Center and other agencies and organizations involved in tourist-related activities to include current transit system and route information in information packets. Particularly, planners and attendees of scheduled and proposed conventions or meetings should be informed of public transportation alternatives while in the Volusia County area.

VOTRAN should establish a more Bus Rapid Transit (BRT) like trolley service along AIA. Such service, with shelters and information kiosks with real-time wait displays, creates a more user-friendly system that is easily accessible by those who are not familiar with the area.

BRT is defined by the Federal Transit Administration as "A rapid mode of transportation that can provide the quality of rail transit and the flexibility of buses." BRT combines a variety of physical and operating components into an integrated system that displays a distinct identity and high quality image. These components include: running ways, stations, vehicles, service characteristics, route structure, fare collection, Intelligent Transportation Systems, and system branding.

BRT oriented services can offer reduced travel times, more reliability, increased comfort, additional passenger amenities, a unique look or image, and improved safety.

42. Coordinate with the institutions of higher learning in Volusia County to explore potential transit markets and pursue access agreement for students and staff. *(ongoing)*
Within the VOTRAN service area are several institutions of higher education, including: Bethune-Cookman College, Daytona Beach Community College/University of Central Florida at Daytona Beach, Embry-Riddle Aeronautical University, Keiser College, and Stetson University.

VOTRAN should coordinate with these institutions to explore building potential transit markets and filling their student, faculty and staff transportation needs. Potential mutual involvement could range from distribution of VOTRAN schedules, selling of bus passes, funding and providing passenger amenities, to the establishment of an unlimited access agreement to provide fare-free transit to students and staff. Such efforts would help reduce parking demand on campus, increase access to campus, and significantly increase student transit ridership.

To this point, the majority of the recommendations were directed toward the VOTRAN system as a whole – both fixed-route and paratransit services.

The VOTRAN Gold paratransit services are also directed by the Transportation Disadvantaged Service Plan (TDSP), which should be considered as a supplement to this planning document. The TDSP was developed around the following seven Goals:

- Implement a fully coordinated transportation system
- Provide an efficient and effective coordinated transportation system
- Distribute information on Paratransit (ADA, TD, Medicaid) Services
- Operate a Safe Transportation System
- Ensure Program Accountability
- Secure funding necessary to meet above stated goals
- Participate in Efforts to Improve Community Accessibility in Volusia County

The last four recommendations are meant to complement the TDSP plan:

43. Continue to seek dedicated sources of funding to minimize the prioritization of TD non-sponsored trips. *(ongoing)*
Since VOTRAN assumed the role of CTC in 1994, paratransit ridership has increased from 66,848 to over 315,000 annual trips. Reductions in federal and state operating assistance suggest that future service demands will exceed VOTRAN's anticipated financial capabilities. In order to bring the demand for TD non-sponsored trips in line with financial capacity, VOTRAN has developed trip priorities as established by the Volusia County Transportation Disadvantaged Local Coordinating Board. However, trip priorities can negatively impact the future mobility of the transportation disadvantaged population of Volusia County.

Therefore, it is recommended that VOTRAN seek to minimize the prioritization of TD non-sponsored trips by identifying and securing additional dedicated sources of funding for the TD non-sponsored trips.

44. Continue to educate customers on VOTRAN's service policies, such as pick-up windows and no-shows. *(ongoing)*
VOTRAN should continue to seize opportunities to educate customers on service policies, such as pick-up windows and no-show/late cancellation policies. VOTRAN's current pick-up window policy allows for a one-hour pick-up window for trips within the individual's community and a two hour pick-up window for cross county trips. Trips are scheduled by the individual's appointment time. Customers failing to show-up for scheduled trips or who cancel their trips at the last moment create scheduling inefficiencies and utilize already limited resources. VOTRAN should continue to monitor and enforce its no-show and late cancellation policies.

45. Continue to provide additional training opportunities for contracted operator drivers and monitor the training provided by the contractors. *(ongoing)*
VOTRAN should continue to provide training for their contractor's management staff as well as defensive driving classes for the contracted drivers. VOTRAN should continue to provide opportunities for the contracted drivers to attend customer service and passenger sensitivity training when it is being offered for the VOTRAN employees.

VOTRAN should continue to monitor contractor performance and identify training deficiencies or service quality concerns.

46. Continue to maximize the use of the fixed-route bus system. VOTRAN currently has a bus pass program for Medicaid clients. *(ongoing)*
Medicaid clients who have one or more medical appointments per month are eligible to receive a monthly pass good for any number of trips on the fixed-route bus service. Medicaid clients who take advantage of this program give up their paratransit rights, unless the fixed-route

service is not able to accommodate their medical needs. This program has resulted in cost savings for both VOTRAN and the Medicaid program, as use of the fixed-route system is more cost-efficient than providing door-to-door paratransit service. The bus pass program also provides greater mobility and independence to the clients.

VOTRAN should continue the bus pass program, as it will result in overall cost effectiveness and free up capacity on the paratransit system.

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CHAPTER NINE

OPERATING AND CAPITAL PLANS

The previous chapter assimilated public involvement, needs, opportunities, and alternatives and created a mechanism to translate these efforts into an action plan. The projects and services recommended for implementation were detailed.

This final TDP chapter provides a summary of available transit financial sources, applies costs to the recommendations, and develops operating and capital financial plans.

TRANSIT FINANCIAL ASSISTANCE FUNDING SOURCES

This section describes current funding sources for public transportation systems operated in Florida. The sources are categorized for the three types of funding – federal, state, and local with a brief outline describing VOTRAN's use or potential use. Much of the information is from the *Guidebook for Start-Up Transit Agencies* prepared by the National Center for Transit Research (NCTR) at CUTR in July 2006 and the *Local Government Financial Information Handbook* prepared for the Florida Legislative Committee on Intergovernmental Relations in September 2006. Also illustrated are tax revenue scenarios for possible sources of additional funding for transit.

Federal Funding Sources

The Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFETEALU), which authorizes federal transit and highway programs through Fiscal Year (FY) 2009, was signed into law in August 2005.

SAFETEA-LU builds on the success of two previous surface transportation authorization laws, the Intermodal Surface Transportation Efficiency Act and the Transportation Equity Act for the 21st Century. Under it, the federal transit program structure remains largely the same, retaining formula programs that target federal investment to systems and communities based on need and capital investment programs that address special needs and projects. The following transit programs are included in SAFETEA-LU:

Formula Grants

Formula programs are those under which funds are apportioned by a formula specified in authorizing law. SAFETEA-LU moved several programs from other categories into a new "Formula and Bus Capital" category for authorization beginning in FY 2006. After providing for some set asides, the remaining funds are apportioned using statutory formulas for the Urbanized Area Formula Program, the Elderly and Persons with Disabilities Program, and the Non-Urbanized Area Formula Program. This discussion will only include the Urbanized Area Formula Grant Program, the Section 5307 Program.

Section 5307 Urbanized Area Formula Grant Program

Under this program, urbanized areas with populations of greater than 200,000 can only use their apportionments for capital expenses. Urbanized areas with populations under 200,000 are eligible to use their Section 5307 funds for operating expenses. VOTRAN receives two Section 5307 allocations. The first, for the Daytona Beach-Port Orange urbanized area (200,000 and over group) and the second is for the Deltona urbanized area (under 200,000 group).

The use of VOTRAN's Section 5307 funding for the Daytona Beach-Port Orange area is limited to capital items such as buses, some ADA related expenses and bus maintenance expenses. In FY 2006, VOTRAN's apportionment for this area was $3,812,703.

The FY 2006 appropriation for the Deltona area, which was $1,548,996, can also be used for operating expenses.

With the passage of the SAFETEA-LU, the US Department of Transportation modified one FTA program and added another that will directly impact on VOTRAN. Both of these programs are formula programs, as opposed to discretionary programs.

Section 5316 Job Access/Reverse Commute (JARC) Grant Program.

The purpose of this grant program is to develop transportation services designed to transport welfare recipients and low income individuals to and from jobs, training and child care, and to develop reverse commute transportation services for residents of urban centers and rural and suburban areas to suburban employment opportunities. Emphasis is placed on projects that use mass transportation services.

The federal contribution to eligible projects is 50 percent. The remaining 50 percent may be derived from other federal programs where eligible, state and/or local sources, but excluding revenue derived from providing mass transportation services unless the funds are received through a service agreement.

SAFETEA-LU requires that by FY 2007, projects selected under JARC must be derived from a locally developed coordinated public transit/human service transportation plan beginning in FY 2007.

Eligible activities for Job Access grants include the capital and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs. Also included are the costs of promoting the use of transit by workers with nontraditional work schedules, promoting the use of transit vouchers, and promoting the use of employer-provided transportation including transit benefits. For Reverse Commute grants, operating costs, capital costs and other costs associated with reverse commute by bus, train, carpool, vans or other transit service are eligible.

The Daytona Beach urbanized area was allocated $137,918 in JARC funds for FY 2006. Similar funding levels are forecast in SAFETEA-LU thru FY 2009. No specific allocation was designated for the under 200,000 urbanized as.

Section 5317 New Freedom Program Grant Program

This grant program provides formula funding for transportation services beyond those required by the Americans with Disabilities Act (ADA) to assist persons with disabilities to get to and from jobs and employment support services.

Capital funding is provided on an 80/ 20 federal/local match basis. Operating assistance may not exceed 50 percent of the net operating cost of the project.

Similar to the JARC program, SAFETEA-LU requires that by FY 2007, projects selected under the New Freedom Program must be derived from a locally developed coordinated public transit/human service transportation plan. Working in coordination with its MPO, the recipient offers an area-wide solicitation for applications for grants to the recipient and subrecipients. Selected projects must be derived from a coordinated human services transportation plan developed through a process that includes representatives of public, private, and nonprofit transportation and human service providers as well as the general public.

The Daytona Beach urbanized area was allocated $86,503 in New Freedom funds for FY 2006. Similar funding levels are forecast in SAFETEA-LU thru FY 2009. No specific allocation was designated for the under 200,000 urbanized areas.

Discretionary Grants

Section 5309 Discretionary Capital Investment Grants and Loans

SAFETEA-LU continued the major capital investment program structure defined in ISTEA and TEA-21 with the following three programs: New Starts, Fixed Guideway Modernization, and Bus and Bus Related Programs. Of these three programs, only the Bus Programs is a potential source of capital funding for Volusia County.

Bus Program –The bus category is a discretionary capital grant program; the Federal Transit Administrator has the authority to select among meritorious projects. In making project decisions, FTA tries to address urgent needs and distribute the bus category funds among urban and rural localities and among the states in a balanced way. In any given year, a grant applicant should confer with the FTA Region 4 Office to assess the availability of funds and the possibility of receiving the funds. Additionally, any request for these funds must be closely coordinated with members of the Volusia County congressional delegation. This funding source could be used to supplement bus purchases and fund bus-related facilities. These funds are not eligible for operating expenses. The 20% local match required for the 80% federal share of the Section 5309 funds can be toll revenue credits, and to a limited extent, labor expenses directly attributable to certain capital projects.

Flexible Funding Opportunities

Flexible funding programs authorized by ISTEA and TEA-21, have been maintained in SAFETW-LU. Many of these sources may be used for either transit or highway projects. The following flexible funding programs may be used for transit projects: the Surface Transportation Program (STP), and the Congestion Mitigation and Air Quality Improvement (CMAQ) program. Since the latter program is only for air quality non-attainment areas, Volusia County would not be eligible for this funding source.

Flexible funds, such as STP funds, can be transferred from the FHWA to the FTA for project approval. Flexible funds that are programmed for transit specific projects must result from the local and state planning and programming process, and must be contained in an approved State Transportation Improvement Program (STIP). Once transferred, these funds are treated as FTA formula funds and may be used for any non-operating purpose eligible under the FTA program.

Surface Transportation Program

STP funds are distributed among the states based upon each state's lane-miles of federal-aid highway; total vehicle miles traveled on those highways and estimated contributions to the Highway Account of the Highway Trust Fund. Once the funds are distributed to the states, sub-allocations are developed for each local area. STP funds may be used for any transit capital project including bus terminals and facilities and rolling stock. Transit agencies interested in pursuing STP funds for use on transit capital projects must work with their local metropolitan planning organizations and district FDOT offices to obtain access to those funds. Currently, the MPO's STP policy allocates 30 percent of the urbanized area's STP funds to VOTRAN for bus replacements. This provides an average of $2.3 million annually to VOTRAN.

Innovative Financing Options

State Infrastructure Banks

The State Infrastructure Bank (SIB) Program was authorized by the National Highway System Designation Act of 1995. The SIB is an entity created at the state level that is allowed to receive federal grant funds and use them to make loans and loan guarantees for transportation projects. The SIB can support both publicly and privately managed highway and transit projects. The State of Florida was one of the original SIB pilot states, which developed a SIB program that has made loans to other governmental entities and has been used to advance Florida Department of Transportation highway projects.

The primary benefits for a transit agency that wishes to participate in the SIB program include being able to advance the purchase of capital equipment or other capital investments with an interest-free loan prior to being awarded the federal funds or having the local funds to do so. An added benefit is being able to lock in the current purchase prices for those items.

State Funding Sources

State Transportation Trust Fund (STTF)

The two major contributors to this fund are State fuel sales tax revenue (of which 90 percent goes to the STTF), and the State Comprehensive Enhanced Transportation System (SCETS) tax. Other sources include Florida's fuel use tax, aviation fuel tax, vehicle licensing fees, initial auto registration fees and rental car surcharges. In accordance with Section 206.46, Florida Statutes, a minimum of 15 percent of all revenues distributed by the STTF are to be dedicated annually by the FDOT for public transit and capital rail projects.

Public Transit Block Grant Program

From the STTF, block grants are issued to the State's public transit operators pursuant to Section 341.053, Florida Statutes. Funds are awarded to those public transit providers eligible to receive funding from the Federal Transit Administration's Section 5307 and 5311 programs and to the Community Transportation Coordinators (CTCs). The FDOT distributes 85 percent of the funds allocated to the program to Section 5307 providers and to Section 5311 providers who are not CTCs. The Florida Commission for the Transportation Disadvantaged distributes 15 percent of the funds to the CTCs according to its own procedures.

Block Grant funds may be used for eligible capital and operating costs of public transit providers. Funds may also be used for transit service development and transit corridor projects. Projects must be consistent with applicable approved local government comprehensive plans. State participation is limited to 50 percent of the non-federal share of capital projects. Up to 50 percent of eligible operating costs can be paid from program funds or an amount equal to total revenue, excluding farebox, charter, advertising revenue and federal funds received by the provider for operating costs, whichever amount is less.

The Public Transit Office of FDOT allocates Block Grant funds to eligible transit properties using a formula that distributes funds based on three equal components: total county population, annual passengers transported and annual vehicle miles traveled. Since the passenger and vehicle-mile data is obtained from the agency's National Transit Database reports, allocations are based upon certified data that is several years old. Under this formula, as an agency adds additional service (i.e., vehicle miles) and/or transports more passengers, its Block Grant allocation would increase. Such increases, however, are subject to and based upon statewide NTD statistics and fund allocations.

In FY 2006, Volusia County's allocation of Block Grant funds was approximately $2 million.

Public Transit Service Development Program

The Service Development Program was enacted by the Florida Legislature to provide initial funding for special projects. The program is selectively applied to determine whether a new or innovative technique or measure can be used to improve or expand public transit in an area. Service Development projects specifically include projects involving the use of new technologies, services, routes, increased vehicle frequencies, the purchase of special transportation services and other strategies to increase service to the riding public applicable to specific localities or user groups.

Service Development projects are subject to specified time durations, but can last no more than three years for system operations and maintenance projects and no more than two years for marketing and technology projects.

Local Funding Sources

Data represented in this section was extracted from the *September 2006 Local Government Financial Information Handbook* developed by the Florida Legislative Committee on Intergovernmental Relations.

Local Option Fuel Taxes

Local governments are authorized to levy up to 12 cents of local option fuel taxes in the form of three separate levies, as described below.

1 to 6 Cents Local Option Fuel Tax

Local governments are authorized to levy a tax of 1 to 6 cents on every net gallon of motor and diesel fuel sold in a county. This tax may be authorized by an ordinance adopted by a majority vote of the governing body or voter approval in a county-wide referendum. Tax proceeds may only be used for transportation expenditures, including public transportation operations and maintenance. Volusia County currently levies all 6 cents, the maximum allowable. In FY 2007 this tax is estimated to generate $14,086,133 county-wide, with the County's share being $8,062,762.

1 to 5 Cents Local Option Fuel Tax

County governments are authorized to levy a tax of 1 to 5 cents on every net gallon of motor fuel sold within a county. This tax is levied by an ordinance adopted by a majority plus one vote of the membership of the governing body or voter approval in a county-wide referendum. The tax proceeds may be used for transportation expenditures needed to meet the requirements of the capital improvements element of an adopted local government comprehensive plan, including those improvements for the public transportation system. Currently, Volusia County levies 5 cents per gallon, the maximum allowed, which in FY 2007 is forecasted to generate $10,239,669 county-wide, with the County's split being $5,861,084.

Ninth-Cent Fuel Tax

The Ninth-Cent Fuel Tax is a tax of 1 cent on every net gallon of motor fuel and diesel fuel sold within a county. The tax may be authorized by an ordinance adopted by an extraordinary vote of the governing board or voter referendum. County and municipal governments may use the tax proceeds for transportation expenditures, including, but not limited to public transportation operations and maintenance. Volusia County has also levied this tax, which is estimated to generate $2,485,263 in FY 2007.

Local Discretionary Sales Surtaxes

The governing authority in each county may levy a discretionary sales surtax of 0.5 to 1.0 percent. The levy of the surtax shall be pursuant to ordinance enacted by a majority of the members of the county governing authority and approved by a majority of the electors of the county voting in a referendum on the surtax. The proceeds of the surtax may be expended by a county and municipalities within the county. The surtax, which is limited for use on capital projects, may be used to finance, plan or construct. Volusia County has not levied the 1 percent surtax. In FY 2007 the estimated revenue from this tax if fully enacted is estimated to be $75.1 county-wide, with the County's share being $36.9 million. The proceeds from this tax can be used for infrastructure, which would include major transit capital investments such as operations and maintenance facilities or administrative centers.

Charter County Transit System Surtax

Another potential revenue source for Volusia County would be the Charter County Transit System Surtax that can be levied up to 1 percent by those charter counties who adopted their charter prior to January 1, 1984 (among which includes Volusia County). Generally, the use of the proceeds is for the development, construction, operation, and maintenance of fixed guideway rapid transit systems (including commuter rail), bus systems, and roads and bridges. If the County elected to levy the full 1 percent of the transit system surtax, it is estimated that this additional one cent of sales tax would generate approximately $75.1 million of revenue annually for the entire county, with Volusia County Board of County Commissioner's share being approximately $36.9 million.

Dedicated Millage Rates

Currently, three counties in Florida dedicate millage to their transit systems. The systems receiving revenue from dedicated millage rates are HARTline in Hillsborough County, PSTA in Pinellas County, and Lakeland Area Mass Transit District in Polk County. These ad valorum taxes have been a major source of revenue for the systems.

Based adopted FY 2007 Volusia County Annual Budget documents, each mill of tax would generate $36.57 million in revenues for in Volusia County.

Municipal Service Taxing Unit

The Board of County Commissioners may establish a Municipal Service Taxing Unit (MSTU) to fund the capital and operating expenses associated with public transit services. The boundary of the MSTU may include unincorporated areas of the county as well as municipalities, subject to the consent by the governing bodies of the affected municipalities. The funding source is a mechanism for using ad valorem taxes without impacting the general millage cap for the county.

Municipalities

Individual municipalities receive transportation funding primarily from the state-initiated municipal gas tax and the local option gas tax, which was previously discussed. These and other local municipal funding sources could be provided to support public transportation.

VOLUSIA COUNTY TRANSIT FUNDING SOURCES

VOTRAN's funding structure includes federal, state, and local resources. For Fiscal Year 2006, federal funding included Federal Transit Administration (FTA) Section 5307, 5310 and 5311 funds, while State funding came from Florida Department of Transportation (FDOT) Block Grant and Service Development Program funds, Transportation Disadvantaged Commission funds and other state grants. Local funds came from Volusia County general revenue funds. Revenues were also generated by the transit system and included passenger fare revenue, auxiliary transportation funds and other non-transportation funds.

Table 9-1 provides a summary of the actual and projected revenue funding sources for VOTRAN for FY 2006 and 2007.

TEN-YEAR TRANSIT DEVELOPMENT PLAN – FINANCIAL PLAN

Up to this point, the TDP process has not been constrained by fiscal considerations, in accordance with its strategic intent. Demographics, survey results, review committee input, and trend and peer analyses have all been used to assess the demand for transit service and to identify mobility needs for Volusia County. The recommendations presented have been based on discoveries made during the earlier stages of the TDP development and future directions provided by community leaders, VOTRAN staff, the TDP review committee, as well as many others. The final step in the transit development plan process is to estimate the costs associated with implementing these recommendations and compare them against current and anticipated financial resources.

This final section of the chapter provides a summary of available transit financial sources, applies costs to the recommendations, and develops operating and capital financial plans for the TDP ten year planning horizon. Recommendations are separated by those that are forecasted to be funded based on current revenue sources, and the unfunded projects.

The following financial tables are provided:

- Table 9-1 VOTRAN Annual Budgets, FY2006 and FY2007
  This provides the past two VOTRAN annual operating and capital budget summaries, detailed by major fund categories.

- Table 9-2 Estimated Costs of Recommendations
  These two tables provide cost estimates in 2006 dollars of the TDP recommendations. Assumed unit costs and quantities of the recommendations are detailed. Capital and operating costs are calculated. Fiscal years impacted by the improvements are detailed.

- Table 9-3 Funded Recommendations by Fiscal Year
  Those projects that can be funded with existing forecasted revenues are detailed by fiscal year.

- Table 9-4 Un-Funded Recommendations by Fiscal Year
  Those projects that are currently un-funded based on existing forecasted revenues are detailed by fiscal year.

To summarize, VOTRAN is in position to maintain its existing service levels and maintain a strong capital investment program to maintain it bus fleet and facilities. However, due to static operating revenues, VOTRAN will be limited adding any new services or improving existing service levels unless additional operating revenues are identified.

Table 9-1
VOTRAN Annual Budgets
FY2006 and FY2007

Category	2006 Budget	2007 Budget	% Difference
OPERATING EXPENSES			
Personnel Expenses			
• Salaries	$ 6,800,817	$ 7,110,445	4.55%
• Fringes	$ 3,701,481	$ 4,054,962	9.55%
Sub-Total	$ 10,502,298	$ 11,165,407	6.31%
Operating Expenses			
• Contracted Services	$ 4,928,361	$ 5,061,898	2.71%
• Fuel	$ 2,199,766	$ 2,738,217	24.48%
• Maintenance Material	$ 1,644,240	$ 1,177,650	-28.38%
• Other	$ 2,072,224	$ 2,035,408	-1.78%
Sub-Total	$ 10,844,591	$ 11,013,173	1.55%
TOTAL OPERATING	**$ 21,346,889**	**$ 22,178,580**	**3.90%**
CAPITAL EXPENSES			
Buses and Vehicles	$ 7,709,777	$ 7,751,320	0.54%
Technologies	$ 8,900,615	$ 7,383,276	-17.05%
Buildings	$ 3,369,740	$ 4,480,623	32.97%
Other	$ 1,179,047	$ 1,134,747	-3.76%
TOTAL CAPITAL	**$ 21,159,179**	**$ 20,749,966**	**-1.93%**
TOTAL EXPENSES	**$ 42,506,068**	**$ 42,928,546**	**0.99%**
REVENUES			
Federal	$ 23,866,750	$ 23,595,892	-1.13%
State	$ 3,739,716	$ 2,845,925	-23.90%
Fare Box	$ 4,417,691	$ 4,279,514	-3.13%
Local Tax	$ 9,435,184	$ 9,891,432	4.84%
Miscellaneous	$ 1,046,727	$ 2,315,783	121.24%
TOTAL REVENUES	**$ 42,506,068**	**$ 42,928,546**	**0.99%**

Table 9-2
Estimated Costs of Recommendations

Project Number	Project Description	Unit Costs (2006$)	Number Of Units	Annual Operating Costs (2006$)	Annual Farebox Revenue	Net Annual Operating Costs (2006$)	Total Capital Costs (2006$)	Fiscal Years Affected
4	**West Side COA Recommendations**							
	* DeLand ITF Route Modification							
	Operating Costs	$50 per hour	3990 hrs/bus	$199,500	$19,950	$179,550	n/a	FY09-16
	Capital Costs	$350,000	1	n/a	n/a	n/a	$350,000	FY09
	* Commuter Rail Route Modification							
	Operating Costs	$50 per hour	3990 hrs/bus	$399,000	$39,900	$359,100	n/a	FY10-16
	Capital Costs	$350,000	2	n/a	n/a	n/a	$700,000	FY10
5	**Commuter Rail Support**							
	* East Side Express Connector							
	Operating Costs	$50 per hour	2000 hrs/bus	$100,000	$10,000	$90,000	n/a	FY12-16
	Capital Costs	$350,000	1	n/a	n/a	n/a	$350,000	FY12
7	**Increased Service Frequency US 1 Corridor**							
	* Route #3							
	Operating Costs	$50 per hour	3990 hrs/bus	$299,250	$29,925	$269,325	n/a	FY08-16
	Capital Costs	$350,000	1.5	n/a	n/a	n/a	$525,000	FY08
	* Route #4							
	Operating Costs	$50 per hour	3990 hrs/bus	$299,250	$29,925	$269,325	n/a	FY08-16
	Capital Costs	$350,000	1.5	n/a	n/a	n/a	$525,000	FY08
8	**Increase Service Frequency**							
	* Route #60							
	Operating Costs	$50 per hour	3990 hr/bus	$399,000	$39,900	$359,100	n/a	FY10-16
	Capital Costs	$350,000	2	n/a	n/a	n/a	$700,000	FY10
9	**Beach Service Area Improvements**							
	" Additional Beach Trolleys							
	Operating Costs	$50 per hour	3000 hrs/bus	$300,000	$30,000	$270,000	n/a	FY09-16
	Capital Costs	$295,000	2	n/a	n/a	n/a	$590,000	FY09
	* Other Improvments	$50 per hour	2000	$100,000	$10,000	$90,000	n/a	FY12-16
10	**Increased Service Frequency**							
	* Routes TDB in COA							
	Operating Costs	$50 per hour	3990 hrs/bus	$798,000	$79,800	$718,200	n/a	FY12-16
	Capital Costs	$350,000	4	n/a	n/a	n/a	$1,400,000	FY12-16
11	**Sunday, Evening & Saturday Service**							
	* Additional Service Hours TBD in COA	$50 per hour	1800 hrs/bus	$360,000	$36,000	$324,000	n/a	FY12-16
12	**Express Bus Routes**							
	* Addition of Express Buses TBD in COA							
	Operating Costs	$50 per hour	2500 hrs/bus	$250,000	$25,000	$225,000	n/a	FY12-16
	Capital Costs	$ 350,000.00	2	n/a	n/a	n/a	$700,000	FY12-16

Table 9-2
Estimated Costs of Recommendations (Continued)

Project Number	Project Description	Unit Costs (2006$)	Number Of Units	Annual Operating Costs (2006$)	Annual Farebox Revenue	Net Annual Operating Costs (2006$)	Total Capital Costs (2006$)	Fiscal Years Affected
16	**Bus Shelters and Passenger Amenities**							
	* Shelters	$ 12,500.00	74	n/a	n/a	n/a	$925,000	FY07-16
17	**Bicycle Racks**	$150	100	n/a	n/a	n/a	$15,000	FY07-16
18	**Technology**	n/a	n/a	n/a	n/a	n/a	$1,000,000	FY07-16
19	**Super Stops**							
	* Dunlawton Square (FY 2008)	$125,000	1	n/a	n/a	n/a	$125,000	FY08
	* Market Place (FY 2009)	$125,000	1	n/a	n/a	n/a	$125,000	FY09
	* Volusia Mall (FY 2010)	$125,000	1	n/a	n/a	n/a	$125,000	FY10
	* Northgate (FY 2011)	$125,000	1	n/a	n/a	n/a	$125,000	FY11
27	**Captitalize Preventative Maintenance Activities**	n/a	n/a	n/a	n/a	n/a	$24,000,000	FY07-16
28	**Bus Replacement Program**							
	* 35-Foot Fixed Route Buses	$350,000	33	n/a	n/a	n/a	$11,550,000	FY07-16
	* 30-Foot Fixed Route Buses	$330,000	8	n/a	n/a	n/a	$2,640,000	FY07-16
	* 28-Foot Fixed Route Buses	$160,000	4	n/a	n/a	n/a	$640,000	FY07-16
	* 35-Foot Fixed Route Trolleys	$295,000	4	n/a	n/a	n/a	$1,180,000	FY07-16
	* 22-Foot Paratransit Cutaway	$80,000	39	n/a	n/a	n/a	$3,120,000	FY07-16
	* 25-Foot Paratransit Cutaway	$90,000	18	n/a	n/a	n/a	$1,620,000	FY07-16
29	**Replace and Purchase Equipment & Shop Tools**	n/a	n/a	n/a	n/a	n/a	$200,000	FY07-16
30	**Replace and Purchase Office Equipment**	n/a	n/a	n/a	n/a	n/a	$650,000	FY07-16
31	**Replace and Purchase Computer Software**	n/a	n/a	n/a	n/a	n/a	$750,000	FY07-16
32	**Replace and Purchase Items for Facility Renovation**	n/a	n/a	n/a	n/a	n/a	$650,000	FY07-16
33	**Replace Service Vehicles**	$50,000	18	n/a	n/a	n/a	$900,000	FY07-16
34	**Replace and Expand Vans for Vanpool Program**	$33,000	64	n/a	n/a	n/a	$2,112,000	FY07-16
35	**Maintain and Provide Facilities & Infrastructure**							
	* West Side Facility	$10,000,000	n/a	n/a	n/a	n/a	$10,000,000	FY09-11
	* East Side Big Tree Complex	$3,000,000	n/a	n/a	n/a	n/a	$3,000,000	FY12-16
	* Main Transfer Plaza	$500,000	n/a	n/a	n/a	n/a	$500,000	FY12-16
36	**Regional Transit Training Center**							
	* Second Phase: Mobile Dirver Simulator Unit	$380,000	1	n/a	n/a	n/a	$380,000	FY09

Table 9-3
Funded Recommendations by Fiscal Year
Estimated Costs (assumes 3% operating and 5% capital annual inflation factors)

Project #	Project Description	FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
		Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital
4	**West Side COA Recommendations**																				
	* DeLand ITF Route Modification					$196,144	$405,169	$202,029		$208,090		$214,332		$220,762		$227,385		$234,207		$241,233	
	* Commuter Rail Route Modification							$404,179		$416,305		$428,794		$441,658		$454,907		$468,555		$482,611	
9	**Beach Service Area Improvements**																				
	" Additional Beach Trolleys (trolleys funded)						$682,999														
16	**Bus Shelters and Passenger Amenities**		$223,125		$234,281		$72,352		$75,969		$79,768		$83,756		$87,944		$92,341		$96,958		$101,806
17	**Bicycle Racks**		$1,575		$1,654		$1,736		$1,823		$1,914		$2,010		$2,111		$2,216		$2,327		$2,443
18	**Technology**		$105,000		$110,250		$115,763		$121,551		$127,628		$134,010		$140,710		$147,746		$155,133		$162,889
19	**Super Stops**																				
	* Dunlawton Square (FY 2008)		$131,250																		
	* Marktet Place (FY 2009)				$137,813																
	* Volusia Mall (fy 2010)						$144,703														
	* Northgate (FY 2011)								$151,938												
27	**Captitalize Preventative Maintenance Activities**		$2,520,000		$2,646,000		$2,778,300		$2,917,215		$3,063,076		$3,216,230		$3,377,041		$2,400,000		$2,520,000		$2,646,000
							$0														
28	**Bus Replacement Program**																				
	* 35-Foot Fixed Route Buses	***4***	$1,470,000			***10***	4,051,688					***16***	$7,504,538					***3***	$1,628,894		
	* 30-Foot Fixed Route Buses																	***8***	$4,095,506		
	* 28-Foot Fixed Route Buses	***2***	$336,000													***2***	$472,786				
	* 35-Foot Fixed Route Trolleys															***4***	$1,743,397				
	* 22-Foot Paratransit Cutaway	***3***	$252,000			***1***	$92,610	***4***	$388,962	***1***	$102,103	***3***	$297,623			***1***	$118,196	***4***	$496,425	***1***	$130,312
	* 25-Foot Paratransit Cutaway							***8***	$875,164	***10***	$1,148,654										
29	**Replace and Purchase Equipment & Shop Tools**		$21,000		$22,050		$23,153		$24,310		$25,526		$26,802		$28,142		$29,549		$31,027		$32,578
30	**Replace and Purchase Office Equipment**		$68,250		$71,663		$75,246		$79,008		$82,958		$87,106		$91,462		$96,035		$100,836		$105,878
31	**Replace and Purchase Computer Software**		$78,750		$82,688		$86,822		$91,163		$95,721		$100,507		$105,533		$110,809		$116,350		$122,167
32	**Replace and Purchase Items for Facility Renovation**		$68,250		$71,663		$75,246		$79,008		$82,958		$87,106		$91,462		$96,035		$100,836		$105,878
33	**Replace Service Vehicles**	***3***	$157,500			***1***	$57,881	***4***	$243,101	***1***	$63,814	***3***	$20,101			***1***	$221,618	***4***	$310,266	***1***	$81,445
34	**Replace and Expand Vans for Vanpool Program**	***5***	$173,250	***6***	$218,295	***5***	$191,008	***7***	$280,782	***11***	$463,290	***5***	$221,116	***6***	$278,606	***5***	$243,780	***3***	$153,581	***11***	$591,289
	TOTALS	**$0**	**$5,605,950**	**$0**	**$3,596,355**	**$196,144**	**$8,854,674**	**$606,208**	**$5,329,995**	**$624,394**	**$5,337,410**	**$643,126**	**$11,780,905**	**$662,420**	**$4,203,009**	**$682,293**	**$5,774,507**	**$702,761**	**$9,808,139**	**$723,844**	**$4,082,685**

Table 9-4
Un-Funded Recommendations by Fiscal Year
Estimated Costs (assumes 3% operating and 5% capital annual inflation factors)

Project #	Project Description	FY 2007		FY 2008		FY 2009		FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016	
		Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital	Operating	Capital
4	**West Side COA Recommendations**																				
	* DeLand ITF Route Modification (buses unfunded)						$405,169														
	* Commuter Rail Route Modification (buses unfunded)								$850,854												
5	**Commuter Rail Bus Feeder Support**																				
	* East Side Express Connector											$107,465	$469,034	$110,689		$114,009		$117,430		$120,952	
7	**Increased Service Frequency US 1 Corridor**																				
	* Route #3			$285,631	$578,813	$294,200		$303,026		$312,117		$321,481		$331,125		$341,059		$351,291		$361,829	
	* Route #4			$285,631	$578,813	$294,200		$303,026		$312,117		$321,481		$331,125		$341,059		$351,291		$361,829	
8	**Increase East-West Service Frequency**																				
	* Route #60							$404,170	$850,854	$416,295		$428,784		$441,648		$454,897		$468,544		$482,600	
9	**Beach Service Area Improvements**																				
	" Additional Beach Trolleys					$295,036		$303,887		$313,004		$322,394		$332,066		$342,028		$352,289		$362,857	
	* Other Improvments											$107,465		$110,689		$114,009		$117,430		$120,952	
10	**Increased Service Frequency**																				
	* Routes TDB in COA											$857,329	$1,876,134	$883,049		$909,541		$936,827		$964,932	
11	**Sunday, Evening & Saturday Service**																				
	* Additional Service Hours TBD in COA											$386,873		$398,479		$410,433		$422,746		$435,429	
12	**Express Bus Routes**																				
	* Addition of Express Buses TBD in COA											$268,662		$276,722		$285,023		$293,574		$302,381	
35	**Maintain and Provide Facilities & Infrastructure**																				
	* West Side Facility						$5,788,125		$6,077,530												
	* East Side Big Tree Complex										$1,914,423		$2,010,144								
	* Main Transfer Plaza												$670,048								
36	**Regional Transit Training Center**																				
	* Second Phase: Mobile Dirver Simulator Unit						$439,898														
	TOTALS	**$0**	**$0**	**$571,263**	**$1,157,625**	**$883,437**	**$6,633,192**	**$1,314,110**	**$7,779,238**	**$1,353,534**	**$1,914,423**	**$3,121,933**	**$5,025,360**	**$3,215,591**	**$0**	**$3,312,059**	**$0**	**$3,411,420**	**$0**	**$3,513,763**	**$0**

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APPENDICES

APPENDIX 1
VOTRAN FY 2004 Fixed Route Peers

VOTRAN FY 2004 Fixed Route Peers

OPERATIONAL MEASURES	Daytona Beach, FL VOTRAN	Ft. Myers, FL LeeTran	Tallahassee, FL StarMetro	Cocoa, FL Space Coast Area Transit	Florida Peer Group Mean	VOTRAN % from Mean	Chattanooga, TN CARTA	N. Little Rock, AR Central Arkansas TA	Baton Rouge, LA Capital Transp. Corporation	Santa Rosa, CA Sonoma County Transit	Canton, OH Stark Area RTA	Raleigh, NC Capital Area Transit	Savannah, GA Chatham Area Transit	Non Florida Peer Group Mean	VOTRAN % from Mean	Total Peer Group Mean	VOTRAN % from Mean
SERVICE																	
Service Area Population (000)	**468.66**	321.89	146.70	334.36	267.65	75%	343.51	181.20	354.16	458.60	378.10	311.05	232.05	322.67	45%	306.16	53%
Service Area (sq. miles)	**1,207.00**	289.00	71.00	242.00	200.67	501%	289.00	112.00	296.00	390.00	567.00	125.00	438.00	316.71	281%	281.90	328%
Service Area Density (pop. per sq. mile)	**388.29**	1,113.81	2,066.25	1,381.66	1,520.57	-74%	1,188.61	1,617.88	1,196.49	1,175.90	666.84	2,488.42	529.79	1,266.28	-69%	1,342.56	-71%
Passenger Trips (000)	**2,908.05**	2,512.89	4,459.37	781.63	2,584.63	13%	1,914.20	1,954.39	4,805.00	1,313.34	1,862.98	3,409.92	3,438.22	2,671.15	9%	2,645.19	10%
Passenger Miles (000)	**16,170.01**	10,780.28	10,256.55	4,744.51	8,593.78	88%	10,508.57	7,284.20	15,748.78	10,523.70	7,340.13	10,943.05	11,693.21	10,577.38	53%	9,982.30	62%
Average Passenger Trip Length	**5.56**	4.29	2.30	6.07	4.22	32%	5.49	3.73	3.28	8.01	3.94	3.21	3.40	4.44	25%	4.37	27%
Vehicle Miles (000)	**2,786.07**	2,994.15	1,805.60	1,041.79	1,947.18	43%	2,039.46	2,375.95	3,179.81	2,066.13	2,738.74	2,132.75	2,515.33	2,435.45	14%	2,288.97	22%
Revenue Miles (000)	**2,601.92**	2,806.65	1,720.09	993.77	1,840.17	41%	1,846.61	2,242.99	3,172.44	1,581.44	2,566.45	1,953.18	2,413.60	2,253.82	15%	2,129.72	22%
Revenue Hours (000)	**162.27**	168.88	129.06	50.23	116.06	40%	128.72	157.29	158.99	89.63	172.62	149.16	178.12	147.79	10%	138.27	17%
Route Miles	**620.30**	417.70	201.00	427.50	348.73	78%	198.00	311.00	200.00	428.00	296.30	350.00	226.00	287.04	116%	305.55	103%
VEHICLE																	
Vehicles Available	**56.00**	57.00	67.00	31.00	51.67	8%	54.00	70.00	82.00	53.00	47.00	60.00	52.00	59.71	-6%	57.30	-2%
Vehicles Operated in Maximum Service	**48.00**	44.00	49.00	20.00	37.67	27%	49.00	45.00	71.00	39.00	40.00	46.00	52.00	48.86	-2%	45.50	5%
Revenue Miles per Vehicles in Max. Service (000)	**54.21**	63.79	35.10	49.69	49.53	9%	37.69	49.84	44.68	40.55	64.16	42.46	46.42	46.54	16%	47.44	14%
Average Age of Fleet (in years)	**5.00**	5.60	10.30	7.10	7.67	-35%	8.50	4.90	8.20	6.10	4.00	6.60	4.50	6.11	-18%	6.58	-24%
EMPLOYEE																	
Total Employee FTEs	**139.61**	145.98	121.00	40.54	102.51	36%	130.29	140.30	160.07	n/a	159.82	143.73	149.72	147.32	-5%	132.38	5%
Revenue Hours per Employee FTE	**1,162.30**	1,156.92	1,066.64	1,239.05	1,154.21	1%	987.94	1,121.13	993.27	n/a	1,080.07	1,037.82	1,189.68	1,068.32	9%	1,096.95	6%
Passenger Trips per Employee FTE	**20,829.84**	17,214.38	36,854.31	19,280.54	24,449.74	-15%	14,691.85	13,930.11	30,018.29	n/a	11,656.46	23,724.83	22,963.98	19,497.59	7%	21,148.30	-2%
EFFECTIVENESS																	
Vehicle Miles per Capita	**5.94**	9.30	12.31	3.12	8.24	-28%	5.94	13.11	8.98	4.51	7.24	6.86	10.84	8.21	-28%	8.22	-28%
Passenger Trips per Capita	**6.21**	7.81	30.40	2.34	13.51	-54%	5.57	10.79	13.57	2.86	4.93	15.63	5.51	8.41	-26%	9.94	-38%
Passenger Trips per Vehicles in Max. Service (000)	**60.58**	57.11	91.01	39.08	62.40	-3%	39.07	43.43	67.68	33.68	46.57	74.13	66.12	52.95	14%	55.79	9%
Passenger Trips per Revenue Mile	**1.12**	0.90	2.59	0.79	1.42	-22%	1.04	0.87	1.51	0.83	0.73	1.75	1.42	1.16	-4%	1.24	-10%
Passenger Trips per Revenue Hour	**17.92**	14.88	34.55	15.56	21.66	-17%	14.87	12.43	30.22	14.65	10.79	22.86	19.30	17.88	0%	19.01	-6%

FINANCIAL MEASURES	Daytona Beach, FL VOTRAN	Ft. Myers, FL LeeTran	Tallahassee, FL StarMetro	Cocoa, FL Space Coast Area Transit	Florida Peer Group Mean	VOTRAN % from Mean	Chattanooga, TN CARTA	N. Little Rock, AR Central Arkansas TA	Baton Rouge, LA Capital Transp. Corporation	Santa Rosa, CA Sonoma County Transit	Canton, OH Stark Area RTA	Raleigh, NC Capital Area Transit	Savannah, GA Chatham Area Transit	Non Florida Peer Group Mean	VOTRAN % from Mean	Total Peer Group Mean	VOTRAN % from Mean
EXPENSE AND REVENUE																	
Total Operating Expense (000)	**$8,872.42**	$10,457.23	$9,474.98	$3,620.50	$7,850.90	13%	$9,904.62	$8,917.04	$10,120.03	$8,864.86	$9,774.38	$9,538.47	$10,275.14	$9,627.79	-8%	$9,094.72	-2%
Total Maintenance Expense (000)	**$1,743.85**	$1,941.37	$2,209.26	$1,013.15	$1,721.26	1%	$2,328.31	$1,790.01	$2,747.46	$1,977.69	$2,136.74	$1,956.74	$2,365.20	$2,186.02	-20%	$2,046.59	-15%
Total Local Revenue (000)	**$8,391.08**	$8,077.37	$4,472.43	$10,601.17	$7,716.99	9%	$4,226.95	$6,544.75	$2,691.52	$7,363.76	$11,430.90	$6,728.76	$6,408.09	$6,484.96	29%	$6,854.57	22%
Passenger Fare Revenue (000)	$2,033.66	$1,554.75	$3,061.92	$273.28	$1,629.98	25%	$1,287.35	$1,420.66	$3,375.10	$1,515.05	$746.15	$1,565.11	$3,041.17	$1,850.09	10%	$1,784.05	14%
Local Contribution (000)	$5,952.36	$7,475.07	$4,183.28	$10,563.71	$7,407.35	-20%	$3,216.38	$6,488.52	$2,126.39	$7,282.02	$11,430.90	$6,556.71	$6,308.90	$6,201.40	-4%	$6,563.19	-9%
Other Non-Fare Rev (000)	$405.05	$602.30	$289.16	$37.45	$309.64	31%	$1,010.57	$56.23	$565.13	$81.74	$0.00	$172.05	$99.19	$283.56	43%	$291.38	39%
Average Fare	**$0.70**	$0.62	$0.69	$0.35	$0.55	27%	$0.67	$0.73	$0.70	$1.15	$0.40	$0.46	$0.88	$0.71	-2%	$0.67	5%
EFFICIENCY																	
Operating Expense per Capita	**$18.93**	$32.49	$64.59	$10.83	$35.97	-47%	$28.83	$49.21	$28.57	$19.33	$25.85	$30.67	$44.28	$32.39	-42%	$33.46	-43%
Operating Expense per Passenger Trip	**$3.05**	$4.16	$2.12	$4.63	$3.64	-16%	$5.17	$4.56	$2.11	$6.75	$5.25	$2.80	$2.99	$4.23	-28%	$4.05	-25%
Operating Expense per Revenue Mile	**$3.41**	$3.73	$5.51	$3.64	$4.29	-21%	$5.36	$3.98	$3.19	$5.61	$3.81	$4.88	$4.26	$4.44	-23%	$4.40	-22%
Operating Expense per Revenue Hour	**$54.68**	$61.92	$73.41	$72.08	$69.14	-21%	$76.95	$56.69	$63.65	$98.91	$56.62	$63.95	$57.69	$67.78	-19%	$68.19	-20%
Farebox Recovery	**22.92%**	14.87%	32.32%	7.55%	18.24%	26%	13.00%	15.93%	33.35%	17.09%	7.63%	16.41%	29.60%	19.00%	21%	18.77%	22%

APPENDIX 2
VOTRAN FY 2004 Demand Response Peers

VOTRAN FY 2004 Demand Response Peers

OPERATIONAL MEASURES	Daytona Beach, FL VOTRAN	Cocoa, FL Space Coast Area Transit	Sarasota, FL SCAT	Bradenton, FL MCAT	Florida Peer Group Mean	VOTRAN % from Mean	Worcester, MA Worcester RTA	Lancaster, PA Red Rose TA	Memphis, TN Memphis Area TA	Corpus Christi, TX Corpus Christi RTA	Bremerton, WA Kitsap Transit	Grand River, OH LakeTran	Charlotte, NC Charlotte Transit System	Non Florida Peer Group Mean	VOTRAN % from Mean	Total Peer Group Mean	VOTRAN % from Mean
SERVICE																	
Service Area Population (000)	**468.66**	499.36	310.71	231.45	347.17	35%	524.73	420.92	888.63	317.02	237.00	227.51	681.31	471.015	0%	433.86	8%
Service Area (sq. miles)	**1,207.00**	432.00	159.00	316.00	302.33	299%	869.00	952.00	288.00	838.00	396.00	295.00	445.00	583.286	107%	499.00	142%
Service Area Density (pop. per sq. mile)	**388.29**	1,155.93	1,954.18	732.44	1,280.85	-70%	603.83	442.14	3,085.51	378.30	598.48	771.22	1,531.03	1,058.646	-63%	1,125.31	-65%
Passenger Trips (000)	**315.65**	520.06	191.58	89.75	267.13	18%	269.63	360.40	244.67	172.25	463.07	366.94	206.19	297.591	6%	288.45	9%
Passenger Miles (000)	**3,097.19**	9,184.36	2,020.99	584.87	3,930.07	-21%	1,680.96	3,259.06	2,761.65	1,541.62	3,102.76	3,505.34	1,831.68	2,526.153	23%	2,947.33	5%
Average Passenger Trip Length	**9.81**	17.66	10.55	6.52	11.58	-15%	6.23	9.04	11.29	8.95	6.70	9.55	8.88	8.665	13%	9.54	3%
Vehicle Miles (000)	**2,622.31**	2,275.40	2,047.98	627.77	1,650.38	59%	1,653.09	2,061.98	2,169.99	1,395.27	2,282.69	2,939.93	2,025.99	2,075.563	26%	1,948.01	35%
Revenue Miles (000)	**2,436.91**	2,024.74	1,651.26	584.87	1,420.29	72%	1,502.25	1,644.15	1,807.19	1,256.95	2,044.02	2,530.63	1,607.90	1,770.441	38%	1,665.40	46%
Revenue Hours (000)	**170.08**	129.05	99.08	39.18	89.10	91%	107.20	109.78	115.52	61.46	124.10	137.62	123.21	111.270	53%	104.62	63%
VEHICLE																	
Vehicles Available	**95.00**	129.00	40.00	28.00	65.67	45%	144.00	73.00	68.00	50.00	104.00	90.00	83.00	87.429	9%	80.90	17%
Vehicles Operated in Maximum Service	**75.00**	114.00	26.00	22.00	54.00	39%	80.00	55.00	47.00	31.00	83.00	82.00	60.00	62.571	20%	60.00	25%
Revenue Miles per Vehicles in Max. Service (000)	**32.49**	17.76	63.51	26.59	35.95	-10%	18.78	29.89	38.45	40.55	24.63	30.86	26.80	29.994	8%	31.78	2%
Average Age of Fleet (in years)	**4.60**	5.30	5.50	4.20	5.00	-8%	6.60	3.50	2.30	3.00	11.40	2.20	2.60	4.514	2%	4.66	-1%
EFFECTIVENESS																	
Vehicle Miles per Capita	**5.60**	4.56	6.59	2.71	4.62	21%	3.15	4.90	2.44	4.40	9.63	12.92	2.97	5.774	-3%	5.43	3%
Passenger Trips per Capita	**0.67**	1.04	0.62	0.39	0.68	-1%	0.51	0.86	0.28	0.54	1.95	1.61	0.30	0.865	-22%	0.81	-17%
Passenger Trips per Vehicles in Max. Service (000)	**4.21**	4.56	7.37	4.08	5.34	-21%	3.37	6.55	5.21	5.56	5.58	4.47	3.44	4.882	-14%	5.02	-16%
Passenger Trips per Revenue Mile	**0.13**	0.26	0.12	0.15	0.18	-26%	0.18	0.22	0.14	0.14	0.23	0.15	0.13	0.167	-23%	0.17	-24%
Passenger Trips per Revenue Hour	**1.86**	4.03	1.93	2.29	2.75	-33%	2.52	3.28	2.12	2.80	3.73	2.67	1.67	2.684	-31%	2.70	-31%

FINANCIAL MEASURES	Daytona Beach, FL VOTRAN	Cocoa, FL Space Coast Area Transit	Sarasota, FL SCAT	Bradenton, FL MCAT	Florida Peer Group Mean	VOTRAN % from Mean	Worcester, MA Worcester RTA	Lancaster, PA Red Rose TA	Memphis, TN Memphis Area TA	Corpus Christi, TX Corpus Christi RTA	Bremerton, WA Kitsap Transit	Grand River, OH LakeTran	Charlotte, NC Charlotte Transit System	Non Florida Peer Group Mean	VOTRAN % from Mean	Total Peer Group Mean	VOTRAN % from Mean
EXPENSE AND REVENUE																	
Total Operating Expense (000)	**$5,786.96**	$4,535.46	$5,871.55	$1,915.82	$4,107.61	41%	$5,241.19	$4,006.48	$3,825.89	$2,883.10	$8,067.52	$6,925.28	$5,796.44	$5,249.41	10%	$4,906.87	18%
Total Maintenance Expense (000)	**$903.30**	$885.90	$885.66	$477.64	$749.73	20%	$853.89	$382.36	$387.05	$349.44	$1,382.44	$696.75	$603.30	$665.03	36%	$690.44	31%
EFFICIENCY																	
Operating Expense per Capita	**$12.35**	$9.08	$18.90	$8.28	$12.09	2%	$9.99	$9.52	$4.31	$9.09	$34.04	$30.44	$8.51	$15.13	-18%	$14.22	-13%
Operating Expense per Passenger Trip	**$18.33**	$8.72	$30.65	$21.35	$20.24	-9%	$19.44	$11.12	$15.64	$16.74	$17.42	$18.87	$28.11	$18.19	1%	$18.81	-3%
Operating Expense per Revenue Mile	**$2.37**	$2.24	$3.56	$3.28	$3.02	-21%	$3.49	$2.44	$2.12	$2.29	$3.95	$2.74	$3.60	$2.95	-19%	$2.97	-20%
Operating Expense per Revenue Hour	**$34.03**	$35.15	$59.26	$48.90	$47.77	-29%	$48.89	$36.49	$33.12	$46.91	$65.01	$50.32	$47.04	$46.83	-27%	$47.11	-28%

APPENDIX 3
Fixed Route Passenger Survey Instrument

VOTRAN ON SURVEY -BOARD

DEAR VALUED *VOTRAN* RIDER: VOTRAN would like your input to help improve its transit service. PLEASE take a few minutes to complete the following survey. Please check (✓) the correct box, write out, or circle your answers. Even if you do not complete the entire survey, please return it to the surveyor, bus driver, customer service representative at the transfer plaza, or VOTRAN office**.** Your participation in this survey is completely voluntary. ***THANK YOU FOR HELPING TO IMPROVE VOTRAN!***

> ***Please complete this survey EVERY time you board a bus that is being surveyed.*** *Over the next several days we will be collecting information about VOTRAN's riders and all of the trips they make on VOTRAN, including <u>each</u> of your trips. Thanks again!*

- Please provide the route number for the VOTRAN route you are riding. _____

2. Where did you come from before you got on the bus for **<u>THIS</u>** trip?

1 ___ Home
2 ___ Work
3 ___ School (K-12)
4 ___ College
5 ___ Doctor/Dentist
6 ___ Shopping/Errands
7 ___ Visiting/Recreation
8 ___ Church
9 ___ Other _____(specify)

3. Using the street location of your bus stop, a shopping center, or other landmark, could you give the location of where you started your trip (your origin) and where your trip will end (your destination)?

_____ _____
(Location where my trip began) **(Location where my trip will end)**

4. How did you get to the bus stop for **<u>THIS</u>** trip? (**please ✓ only ONE**)

1 ___ Walked 1 block or less
2 ___ Walked 2-4 blocks
3 ___ Walked more than 4 blocks
4 ___ Drove
5 ___ Was dropped off
6 ___ Bicycle
7 ___ Taxi
8 ___ Rode with someone who parked
9 ___ Other_____(specify)

5. Where are you going on **<u>THIS</u>** trip? (**please ✓ only your FINAL destination for this bus trip**)

1 ___ Home
2 ___ Work
3 ___ School (K-12)
4 ___ College
5 ___ Doctor/Dentist
6 ___ Shopping/Errands
7 ___ Visiting/Recreation
8 ___ Church
9 ___ Other _____(specify)

6. Do you need to transfer to complete **<u>THIS</u>** trip? 1 ___ Yes 2 ___ No

IF YES → Transferring from bus route # _____ to route # _____ to route # _____

7. After you finish your bus travel, how will you get to your final destination? (**please ✓ only ONE**)

1 ___ Walk 1 block or less
2 ___ Walk 2-4 blocks
3 ___ Walk more than 4 blocks
4 ___ Drive
5 ___ Get picked up
6 ___ Bicycle
7 ___ Taxi
8 ___ Ride with someone who parked
9 ___ Other_____(specify)

8. What type of fare do you <u>usually</u> pay when you ride the bus?

1 ___ Adult Fare ($1.00)
2 ___ Senior Citizens Fare (50¢)
3 ___ Disabled Fare (50¢)
4 ___ Youth Fare (50¢)
5 ___ Monthly Value Pass (Regular--$35.00)
6 ___ Monthly Value Pass (Discount--$17.50)
7 ___ 10-Ride Coupon ($9.00)

9. How often do you ride the bus? (**please ✓ only ONE**)

1 ___ 7 days per week
2 ___ 6 days per week
3 ___ 5 days per week
4 ___ 4 days per week
5 ___ 3 days per week
6 ___ 2 days per week
7 ___ 1 day per week
8 ___ Once per month or less
9 ___ First time riding

10. What is the most important reason you ride the bus? (**please ✓ only ONE**)

1 ___ I don't drive
2 ___ Car is not available
3 ___ Bus is more economical
4 ___ Bus is more convenient
5 ___ Traffic is too bad
6 ___ Parking is difficult/expensive
7 ___ I don't have a valid driver's license
8 ___ Other _____(specify)

11. How would you make this trip if not by bus? (**please ✓ only ONE**)

1 ___ Drive
2 ___ Walk
3 ___ Bicycle
4 ___ Taxi
5 ___ VOTRAN Gold Services
6 ___ Ride with someone who lives with you
7 ___ Ride with someone who does not live with you
8 ___ Other _____(specify)
9 ___ Wouldn't make trip

12. How long have you been using VOTRAN bus service?

1 ___ This is the first day
2 ___ Less than 1 month
3 ___ 1 month to 6 months
4 ___ 7 months to 12 months
5 ___ 1 year to 2 years
6 ___ 2 years to 4 years
7 ___ More than 4 years

13. How do you usually get information on the bus service? (**please ✓ only ONE**)

1 ___ Bus schedules
2 ___ Bus driver
3 ___ Call VOTRAN
4 ___ Transfer Plaza
5 ___ Notices on buses
6 ___ Bus signs/shelters
7 ___ Newspaper
8 ___ VOTRAN website
9 ___ Other _____(specify)
10 ___ Radio
11 ___ TV

14. Do you find it difficult to use VOTRAN's bus route and schedule information to plan your trips?

1 ___ Yes
2 ___ No

IF YES → How might VOTRAN make its route maps and schedules easier to use? _____

_____

15. Please tell us the **one thing** you like **most** about riding the bus. _____

_____

16. Please tell us the **one thing** you like least about riding the bus. _____

_____

17. Your age is...

1 ___ Under 15 years
2 ___ 15 to 18
3 ___ 19 to 24
4 ___ 25 to 34
5 ___ 35 to 44
6 ___ 45 to 49
7 ___ 50 to 54
8 ___ 55 to 59
9 ___ 60 to 64
10 ___ 65 to 74
11 ___ 75 to 84
12 ___ 85 or older

(PLEASE COMPLETE OTHER SIDE OF SURVEY)

18. You are: 1 ___ Male 2 ___ Female

19. What is your ethnic heritage? (**please ✓ only ONE**)

1 ___ White 3 ___ Hispanic 5 ___Native American
2 ___ Black 4 ___ Asian 6 ___Other_____(specify)

20. What was the range of **your total household** income for 2005?

1 ___ Less than $5,000 5 ___ $20,000 to $24,999 9 ___ $50,000 to $59,999

2 ___ $5,000 to $9,999 6 ___ $25,000 to $29,999 10 ___ $60,000 to $79,999
3 ___ $10,000 to $14,999 7 ___ $30,000 to $39,999 11 ___ $80,000 or greater
4 ___ $15,000 to $19,999 8 ___ $40,000 to $49,999

21. Do you have access to a car or other personal vehicle that you could have used to make **THIS** trip?

1 ___ Yes 2 ___ No

22. How many working automobiles are available in your household?

1 ___ Zero 2 ___ One 3 ___ Two 4 ___ Three or more

23. How many months out of the year do you reside in Volusia County?

1 ___ 12 months (full-time resident) 3 ___ 6 to 9 months 5 ___2 months or less
2 ___ 10 to 11 months 4 ___ 3 to 5 months 6 ___Tourist/Visitor

24. What is the zip code of your residence? _____

Additional Comments:

_____

_____

_____

_____

25. How satisfied are you with the each of the following aspects of VOTRAN service?

		Very Satisfied		Neutral		Very Unsatisfied
	*Please **circle** the number that best reflects your opinion*	☺				☹
a.	Your overall satisfaction with VOTRAN	5	4	3	2	1
b.	Frequency of service (how often buses run)	5	4	3	2	1
c.	Your ability to get where you want to go using the bus	5	4	3	2	1
d.	Number of times you need to transfer	5	4	3	2	1
e.	How easy it is to transfer between buses	5	4	3	2	1
f.	How regularly buses arrive on time	5	4	3	2	1
g.	The time it takes to make a trip by bus	5	4	3	2	1
h.	Value of bus fare (service you get for your money)	5	4	3	2	1
i.	How easy it is to **get** bus route & schedule information	5	4	3	2	1
j.	How easy it is to **use** bus route & schedule information	5	4	3	2	1
k.	Time of day the *earliest* buses run on **weekdays**	5	4	3	2	1
l.	Time of day the *latest* buses run on **weekdays**	5	4	3	2	1
m	Time of day the *earliest* buses run on **weekends**	5	4	3	2	1
n.	Time of day the *latest* buses run on **weekends**	5	4	3	2	1
o.	How clean the buses and bus stops are	5	4	3	2	1
p.	Safety/Security at the bus stop	5	4	3	2	1
q.	Safety/Security while riding the bus	5	4	3	2	1
r.	Safety/Security after getting off the bus	5	4	3	2	1
s.	Temperature inside the buses	5	4	3	2	1
t.	Availability of seats on the buses	5	4	3	2	1
u.	The bus driver's ability to drive the bus	5	4	3	2	1
v.	The bus driver's courtesy	5	4	3	2	1

26. Considering Question 25 above, parts "b" through "v", list the three areas that are most important to you when riding the bus:

_____, _____, and _____

THANK YOU FOR COMPLETING THE SURVEY!

PLEASE RETURN THE SURVEY TO THE SURVEYOR, DRIVER, CUSTOMER SERVICE REPRESENTATIVE AT THE TRANSFER PLAZA, OR VOTRAN OFFICE

APPENDIX 4
Paratransit Passenger Survey Instrument

VOTRAN GOLD PASSENGER SURVEY

Dear VOTRAN Gold Door-To-Door System Customer:

The Center for Urban Transportation Research (CUTR) at the University of South Florida is assisting Volusia County Transit (VOTRAN) with the preparation of its Ten Year Transit Development Plan (TDP). The TDP helps determine future transit improvements over the next 10 years and provides insight on the role of transit in making Volusia County a great place to work and live. As part of this effort, the VOTRAN Gold door-to-door system would like to collect information about your travel experiences and to solicit your opinions to help improve its transit service. Please take a few minutes to complete the following survey.

Your participation in this survey is completely voluntary and your responses will be kept anonymous and will be combined with the responses of other respondents.

Please check (√) the correct box, write in, or circle your answers. Whether you complete the entire survey or not, please return it to us using the enclosed stamped return envelope.

THANK YOU IN ADVANCE FOR YOUR COOPERATION!

1. How often do you use the VOTRAN Gold door-to-door services?
    1. _____ Daily
    2. _____ 2 to 4 times per week
    3. _____ Once per week
    4. _____ A few times per month
    5. _____ Only occasionally

2. Do you use a wheelchair or electric scooter for your travels on the VOTRAN Gold door-to-door system?
    1. _____ Yes 2. _____ No

3. What is the amount of the fare you usually pay to ride one-way on the VOTRAN Gold service?
    1. _____ $2.00
    2. _____ Other – *please write in amount:* _____
    3. _____ Did not pay any fare
    4. _____ Don't know

4. How long have you been using VOTRAN Gold door-to-door service?
    1. _____ Less then six months
    2. _____ Six months to a year
    3. _____ 1 to 2 years

4. _____ More than 2 years

As you are aware, the VOTRAN Gold door-to-door services are provided by both VOTRAN vehicles as well as several transportation providers under contract with VOTRAN.

5. Which VOTRAN contractors have you ridden with in the past year? (check all that apply)
   1. _____ Trans Med
   2. _____ Little Wagon
   3. _____ Med One
   4. _____ All Volusia
   5. _____ Southern Comfort Taxi
   6. _____ Flagler County
   7. _____ Transportation Services
   8. _____ Florida Glider
   9. _____ Medic Quick
   10. _____ AJ Special Transportation
   11. _____ Yellow Cab
   12. _____ None

The next five questions relate to your experiences while riding VOTRAN Gold vehicles (those rides provided directly by VOTRAN):

6. How would you rate the overall quality of the VOTRAN provided VOTRAN Gold door-to-door system?
   1. _____ Excellent
   2. _____ Good
   3. _____ Average
   4. _____ Fair
   5. _____ Poor

7. How would you rate the comfort of the VOTRAN provided door-to-door system vehicles?
   1. _____ Excellent
   2. _____ Good
   3. _____ Average
   4. _____ Fair
   5. _____ Poor

8. How would you rate the cleanliness of the VOTRAN provided door-to-door system vehicles?
   1. _____ Excellent
   2. _____ Good
   3. _____ Average
   4. _____ Fair
   5. _____ Poor

9. How often do you arrive at your appointments on time when using the VOTRAN provided system?
   1. _____ Always
   2. _____ Most of the time
   3. _____ Sometimes
   4. _____ Never

10. How would you rate the courtesy and helpfulness of the drivers when riding the VOTRAN provided VOTRAN Gold door-to-door service?
   1. _____ Excellent
   2. _____ Good
   3. _____ Average
   4. _____ Fair
   5. _____ Poor

The next five questions relate to your experiences while any of the Contracted VOTRAN Gold vehicles (those rides provided contracted by VOTRAN to private providers):

11. How would you rate the overall quality of the contractor provided VOTRAN Gold door-to-door system?
    1. _____ Excellent
    2. _____ Good
    3. _____ Average
    4. _____ Fair
    5. _____ Poor

12. How would you rate the comfort of the contractor provided door-to-door system vehicles?
    1. _____ Excellent
    2. _____ Good
    3. _____ Average
    4. _____ Fair
    5. _____ Poor

13. How would you rate the cleanliness of the contractor provided door-to-door system vehicles?
    1. _____ Excellent
    2. _____ Good
    3. _____ Average
    4. _____ Fair
    5. _____ Poor

14. How often do you arrive at your appointments on time when using the contractor provided service?
    1. _____ Always
    2. _____ Most of the time
    3. _____ Sometimes
    4. _____ Never

15. How would you rate the courtesy and helpfulness of the drivers when riding contractor provided VOTRAN Gold door-to-door service?
    1. _____ Excellent
    2. _____ Good
    3. _____ Average
    4. _____ Fair
    5. _____ Poor

The remainder of the questions are related to the overall VOTRAN Gold door-to-door services (both those provided by VOTRAN and those contracted to other service providers).

16. How would you rate the courtesy and helpfulness of the telephone reservationists when you call VOTRAN Gold door-to-door system?
    1. _____ Excellent
    2. _____ Good
    3. _____ Average
    4. _____ Fair
    5. _____ Poor

17. How did you become aware of the VOTRAN Gold door-to-door service?

_____
_____

_____

18. How would you get to your **destination** if the VOTRAN Gold door-to-door service was not available?

1. _____ Drive
2. _____ Ride with family or friend who lives with me
3._____ Ride with family or friend who does not live with me
4. _____ Move to a place that provides transportation
5. _____ Bicycle
6. _____ Walk
7. _____ Taxi
8. _____ Would not make the trip

19. How would you get to **medical appointments** if the VOTRAN Gold door-to-door service was not available?

1. _____ Drive
2. _____ Ride with family or friend who lives with me
3._____ Ride with family or friend who does not live with me
4. _____ Move to a place that provides transportation
5. _____ Bicycle
6. _____ Walk
7. _____ Taxi
8. _____ Would not make the trip

20. What is your **primary purpose** for using the VOTRAN Gold door-to-door system service?

1. _____ Home
2. _____ Work
3. _____ School
4. _____ Workshop
5. _____ Senior Center
6. _____ Doctor/Dentist
7 _____ Shopping
8. _____ Recreation/Visiting
9 _____ Other Professional Appointments (e.g., bank, attorney, etc.)

21. **Check all the purposes** for which you use the VOTRAN Gold door-to-door service:

1. _____ Home
2. _____ Work
3. _____ School
4. _____ Workshop
5. _____ Senior Center
6. _____ Doctor/Dentist
7 _____ Shopping
8. _____ Recreation/Visiting
9_____ Other Professional Appointments (e.g., bank, attorney, etc.)

22. Your age is…

1. _____ 24 years or less
2. _____ 25 to 34 years
3. _____ 35 to 44 years
4. _____ 45 to 54 years
5. _____ 55 to 64 years
6. _____ 65 to 74 years
7. _____ 75 to 84 years
8. _____ 85 years or more

23. You are… 1. _____ Male 2. _____ Female

24. Your race is… (**please check only ONE**)
    1. _____ White 2. _____ Black 3. _____ Hispanic 4. _____ Other

25. Your **total annual household income** is…
    1. _____ Less than $10,000
    2. _____ $10,000 to $19,999
    3. _____ $20,000 to $29,999
    4. _____ $30,000 to $39,999
    5. _____ $40,000 to $49,999
    6. _____ $50,000 to $59,999
    7. _____ $60,000 to $69,999
    8. _____ $70,000 and over

26. How many vehicles are available in your **household**?
    1. _____ Zero
    2. _____ One
    3. _____ Two
    4. _____ Three or more

27. Do **you** have a valid driver's license?
    1. _____ Yes 2. _____ No

28. If yes, is your driver's license a **Florida** issued license?
    1. _____ Yes 2. _____ No 3. _____ Not Applicable

Your opinion matters to us...

29. Please tell us the one thing that you most like about riding VOTRAN Gold door-to-door system?

_____
_____
_____
_____
_____

30. Please tell us one thing you like the least about riding VOTRAN Gold door-to-door system?

_____
_____
_____
_____
_____

31. Please tell us how you feel VOTRAN Gold could improve the quality of its service or serve your transportation needs better:

_____
_____
_____
_____
_____
_____

32. Do you have any other thoughts you'd like to share with us?

_____
_____
_____
_____
_____

THANK YOU FOR YOUR COOPERATION & ASSISTANCE

PLEASE RETURN THE COMPLETED SURVEY USING THE ENCLOSED STAMPED RETURN ENVELOPE

If have any questions related to this survey, please feel free to contact either Jay Goodwill (813-974-8755) or Holly Carapella (813-974-0032) at the USF Center for Urban Transportation Research

APPENDIX 5
Employee Survey Instrument

VOTRAN Employee Survey

The Center for Urban Transportation Research (CUTR) at the University of South Florida is assisting VOTRAN with the preparation of its Ten Year Transit Development Plan (TDP). As a VOTRAN Bus Operator or Customer Service employee, we believe you can offer valuable insight regarding existing services and improvements desired by Volusia County transit customers. Your input will be incorporated in the TDP in an effort to develop future plans consistent with the public's vision for transportation services.

Your participation in this survey is strictly voluntary. Your responses will remain anonymous and will be combined with the responses of all VOTRAN Operators and Customer Service employees and summarized in the TDP.

Your participation will be limited to the approximate ten minutes that it will take to complete this survey, but your cooperation will help determine future transit improvements for Volusia County for the next 10 years. Thank you for your participation!

1. Which best describes your position within VOTRAN:
   _____ Driver
   _____ Customer Service Representative
   _____ Other -- *please describe*: _____

2. The following is a list of complaints customers may have expressed to you. Please rank the five (5) complaints that you hear most frequently from VOTRAN customers. Rank in priority order from 1 to 5 (with 1 being the one heard most frequently; and so forth).

_____ hard to make trip reservations	_____ eating/drinking on vehicle
_____ bus fare is too high	_____ smoking on transit vehicle
_____ bus service is not on time	_____ buses are not clean
_____ need more evening service	_____ rude and unfriendly drivers
_____ service doesn't go where I want	_____ route information is unclear
_____ bus is not comfortable	_____ not enough Sunday service
_____ poor out-of-county connections	_____ no shelters/benches
_____ bus service seems unsafe	_____ need earlier morning service
_____ air conditioning problems	_____ rude or dirty passengers
_____ Other Complaints (*please describe):*	

_____

3. What is your opinion of these complaints? Are any of them valid? If so, which ones?

_____

_____

_____

_____

_____

4. The following is a list of potential improvements to VOTRAN service. Please pick suggestions for the top five (5) improvements in priority order (i.e., 1 = most needed; 2 = second priority; etc. to 5 = fifth priority).

   _____ operate additional daily service to help meet demand
   _____ operate additional evening services
   _____ operate additional Sunday services
   _____ improve the maintenance of the buses
   _____ improve scheduling system of customer pick-ups
   _____ reduce the headways, more frequent bus service
   _____ improve bus stops with shelters, benches, etc.
   _____ lower the bus fares
   _____ provide better route and schedule information
   _____ improve reservation system
   _____ provide more time within the schedules
   _____ Other Improvements– *please describe:*

   _____

5. Rate the following candidate projects for additional bus service in priority order from 1 to 7, with 1 being the most important to 7 being the lowest in priority.

   _____ Expansion of the routes with night service
   _____ Expansion of the routes with Sunday service
   _____ Improve the frequency of selected routes in East/Southeast Volusia
   _____ Improve the frequency of selected routes in West Volusia
   _____ Expand the areas served in East/Southeast Volusia
   _____ Expand the areas served in West Volusia
   _____ Expand the amount of VOTRAN Gold services

6. Do you know of any safety problems on bus routes? Please describe,

   _____

   _____

   _____

   _____

7. Are there any VOTRAN routes or services that should be modified? If so, why and how?

   _____

   _____

   _____

8. In your opinion, is additional early morning and later evening service necessary?

_____ yes _____ no

9. In your opinion, is additional Saturday service necessary?

_____ yes _____ no

If yes, where: _____

10. In your opinion, is additional Sunday service necessary?

_____ yes _____ no

If yes, where: _____

11. ***If money were no object……***

a. To what parts of the county not adequately served by the VOTRAN should service be added?

_____

_____

b. What is the most important (where and what type) passenger amenity or service improvement that should be provided?

_____

_____

c. What is the most important (vehicle, technology, facility or maintenance) improvement that should be made?

_____

_____

d. What single process or tool would you recommend to improve your ability to be more involved in decision-making related to schedule and policy changes?

_____

_____

12. Please tell us, in your words, what you think the **greatest strength** is of the transit services provided by VOTRAN?

_____

_____

_____

13. Please tell us what you think the **greatest shortcoming** of the VOTRAN is?

_____

_____

_____

14. Can you think of any **other service recommendations** that have not been addressed in the previous questions?

_____

_____

_____

_____

PLEASE RETURN THIS SURVEY TO THE BOX LOCATED IN THE DISPATCH AREA NO LATER THAN WEDNESDAY, MAY 31ST

_____

THANK YOU FOR YOUR PARTICIPATION!

APPENDIX 6
Comprehensive Plan Summaries

SUMMARY OF TRANSIT RELATED ELEMENTS OF COMPREHENSIVE PLANS

The comprehensive plans for Volusia County and several other municipalities within the county were reviewed to identify existing local policies that support or relate to transit.

The policies presented in this section were compiled from eight key elements of the various comprehensive plans. These are:

- Future Land Use Element
- Transportation Element
- Capital Improvements Element
- Economic Development Element
- Housing Element
- Urban Design Element
- Redevelopment Element
- Intergovernmental Coordination Element

Local governments included in this summary include:

- Volusia County
- City Of Debary
- City Of Deltona
- City Of Daytona Beach
- City Of Ormond Beach

VOLUSIA COUNTY COMPREHENSIVE PLAN

Source: *Volusia County Comprehensive Plan*, 2005

Future Land Use Element

GOAL 1.1: Ensure that future growth is timed and located to maximize efficient use of public infrastructure.

OBJECTIVE 1.1.1: Growth management criteria will be established to ensure that future land use patterns will maintain vital natural functions and in conjunction with the availability of public facilities and services to support that development at the appropriate level of service.

POLICY 1.1.1.7: All neighborhood, community and regional shopping centers shall include bicycle parking areas, and where appropriate, bus bays or shelters to encourage alternative transportation modes.

POLICY 1.1.1.8: Regional shopping centers should be served by mass transportation routes and designed to accommodate mass transit riders, vehicles and amenities.

POLICY 1.1.1.9: Sites for industrial development shall be accessible to the following essential public facilities and services at the levels of service adopted in this Comprehensive Plan: fire services, transportation, potable water, an appropriate wastewater treatment facility, solid waste and stormwater management.

OBJECTIVE 1.1.2: New development shall be coordinated with the Volusia County Comprehensive Emergency Plan to help ensure new development will not be endangered by hurricanes.

POLICY 1.1.2.1: New development in the coastal area shall be managed so that public facility and service needs required to maintain existing hurricane evacuation times do not exceed the ability of Volusia County to provide them.

OBJECTIVE 1.1.3: Volusia County shall limit urban sprawl by directing urban growth to those areas where public facilities and services are available inside designated service areas.

POLICY 1.1.3.5: High intensity areas shall be located inside an urban area where a full range of urban services exist or are planned and with direct access to arterials and mass transit routes sufficient to handle future development.

GOAL 1.3: Provide a variety of land uses sufficient to meet future needs while minimizing adverse impacts and disruption of existing neighborhoods.

Future Land Use Element (Highridge Neighborhood Plan)

GOAL HR 1.5: Preserve the overall low density character of the Highridge neighborhood, while providing a sufficient mixture of uses to encourage an economically viable community.

OBJECTIVE HR 1.5.3: The Plan should take advantage of the public facilities available to the neighborhood, thereby reducing the need to provide for development elsewhere that does not have the public facilities available.

POLICY HR 1.5.3.1: Mass transit connections between the neighborhood and the Halifax area should be maintained and enhanced as the area grows.

Future Land Use Element (Halifax Activity Center)

GOAL HAL 1.6: Achieve an integrated and well-planned mixture of urban land uses within the Halifax Activity Center.

OBJECTIVE HAL 1.6.2: Individual developments within the Activity Center shall be designated to provide visual compatibility and functional continuity with other adjacent developments within the Activity Center.

POLICY HAL 1.6.2.1: New development (includes redevelopment) shall, at a minimum, be required to:

- promote vehicular, pedestrian and non-vehicular movement throughout the Activity Center;
- use shared or joint facilities such as stormwater, bus stops, and utility easements.

OBJECTIVE HAL 1.6.7: Promote development and programs which are designed to alleviate traffic congestion.

POLICY HAL 1.6.7.1: Volusia County shall, in cooperation with the appropriate agencies, seek to promote mass transit service to the Activity Center.

POLICY HAL 1.6.7.4: Site planning/design for proposed projects shall, as a condition of approval by the County; facilitate and encourage the internal movement of mass transit vehicles (only where the size/intensity of the proposed development warrants such considerations), and provide preferential off-street parking locations for carpool and vanpool usage.

Future Land Use Element (Southeast Activity Center)

GOAL SE 1.7: Achieve an integrated and well-planned mixture of urban land uses within the Southeast Activity Center.

OBJECTIVE SE 1.7.2: Individual developments within the Activity Center shall be designed to provide visual compatibility and functional continuity with other adjacent developments within the Activity Center.

POLICY SE 1.7.2.1: New development (includes redevelopment) shall, at a minimum, be required to:

- promote vehicular, pedestrian, and non-vehicular movement throughout the Activity Center;
- use shared or joint facilities, such as stormwater, bus stops, and utility easements.

OBJECTIVE: SE 1.7.5: Promote development and programs which are designed to alleviate traffic congestion.

POLICY SE 1.7.5.1: Volusia County shall, in cooperation with the appropriate agencies, seek to promote mass transit service to the Activity Center.

Future Land Use Element (Southwest Activity Center)

GOAL SW 1.8: Achieve an integrated and well-planned mixture of urban land uses within the Southwest Activity Center that encourages the creation of an employment center.

OBJECTIVE SW 1.8.2: Individual developments within the Activity Center shall be designed to provide visual compatibility and functional continuity with other adjacent developments within the Activity Center.

POLICY SW 1.8.2.1: New development (includes redevelopment) may, at a minimum, be required to:

- require interconnected vehicular, transit and non-vehicular movement throughout the Activity Center;
- use shared or joint facilities such as stormwater, bus stops, and utility easements.

OBJECTIVE SW 1.8.7: Promote development and programs which are designed to alleviate traffic congestion.

POLICY SW 1.8.7.1: Volusia County shall, in cooperation with the appropriate agencies, seek to promote mass transit service to the Activity Center.

POLICY SW 1.8.7.4: Site planning/design for proposed projects shall, as a condition of approval by the County, facilitate and encourage the internal movement of mass transit vehicles (only where the size/intensity of the proposed development warrants such considerations), and provide preferential off-street parking locations for carpool and vanpool usage.

POLICY SW 1.8.7.6: Volusia County shall work with FDOT to identify appropriate sites and establish an area inside the Actiity Center for a multi-model transportation facility such as a high occupancy vehicle facility that may be developed along I-4 and/or to serve other regional mass transit uses pursuant to the adopted DRI development order.

Transportation Element

GOAL 2.1: Volusia County shall provide a coordinated multimodal transportation system to serve current and future land uses and population needs.

OBJECTIVE 2.1.1: Volusia County shall implement programs to provide a safe, convenient, and energy-efficient multimodal transportation system.

POLICY 2.1.1.6: Volusia County shall consider multimodal terminals and access to multimodal facilities, where applicable, in its assessment of future transportation needs.

POLICY 2.1.1.8: Volusia County shall coordinate and cooperate with the FDOT, the Volusia County MPO, MetroPlan Orlando, VOTRAN, LYNX, and other agencies, to support state-wide high-speed, regional commuter, and/or light rail in Volusia County.

POLICY 2.1.1.9: Volusia County shall expend County transportation funds in a manner which encourages compact urban development.

POLICY 2.1.1.10: Volusia County shall coordinate with the Volusia County MPO to ensure that the provision of public transportation is considered in lieu of or part of major transportation construction projects.

POLICY 2.1.1.11: Volusia County shall work cooperatively with the Volusia County MPO in their efforts at developing efficient and effective public transportation and other ride sharing programs.

POLICY 2.1.1.12: Volusia County will continue to work with VOTRAN in providing public transportation service to passengers to and from the Daytona Beach International Airport.

POLICY 2.1.1.16: Volusia County shall discourage the use of dead-end streets, loop streets, and oversized blocks in favor of through-streets (collectors) and shorter blocks; provide cut-throughs for pedestrian access to public transportation; and promote landscaping of rights-of-way.

POLICY 2.1.1.24: Volusia County shall work with the Volusia County MPO and VOTRAN to establish transportation system management strategies as appropriate to improve system efficiency and enhance public safety.

POLICY 2.1.1.25: Volusia County shall work with the Volusia County MPO and VOTRAN to develop transportation demand management programs to modify peak hour travel demand and to reduce the number of vehicle miles traveled per capita within the community and region.

POLICY 2.1.1.26: Volusia County shall work with the Volusia County MPO and VOTRAN to develop numerical indicators against which the achievement of the mobility goals of the community can be measured, such as: modal split, annual transit trips per capita, or an automobile occupancy rate.

POLICY 2.1.1.28: Volusia County shall continue to work with the City of Daytona Beach to implement the Ocean Center/Peabody Auditorium Transportation Parking Plan.

OBJECTIVE 2.1.2: Volusia County shall coordinate the transportation system with the Future Land Use Element to ensure compatibility between land use and the thoroughfare system necessary to support it.

POLICY 2.1.2.3: The Transportation Element shall be coordinated with the Future Land Use Element to ensure that future high intensity areas are served by public transportation.
POLICY 2.1.2.6: Volusia County shall coordinate with the FDOT, the Volusia County MPO, and VOTRAN in the placement of Park-n-Ride lots along I-4.

OBJECTIVE 2.1.4: Volusia County shall coordinate the transportation system with the plans and programs of the Volusia County MPO, the Florida Transportation Plan, and the FDOT's Adopted Work Program.

POLICY 2.1.4.1: Volusia County shall establish strategies, agreements, and other mechanisms with applicable local governments and regional and state agencies that demonstrate the area

wide coordination necessary to implement transportation, land use, parking and other provisions of the Transportation Element.

POLICY 2.1.4.2: Volusia County shall coordinate the County's transportation system with the FDOT, the Volusia County MPO, and all appropriate Volusia County municipalities to provide a coordinated system of arterials, collectors, local streets, public transportation, and air service.

POLICY 2.1.4.3: Volusia County shall coordinate major transportation system improvements with the FDOT, the Volusia County MPO, VOTRAN, and with all appropriate Volusia County municipalities.

POLICY 2.1.4.5: Volusia County has funded the construction of the Howland Boulevard extension from Forest Edge Drive to I-4 to connect up with State Road 472. In conjunction with this effort, Volusia County, through their representation on the Volusia County MPO, shall continue to pursue the reconstruction of the I-4 interchange at State Road 472/Howland Boulevard consistent with the "Interstate-4 Multi-Modal Master Plan/Major Investment Study."

POLICY 2.1.4.6: Volusia County shall coordinate all major transportation system improvements with the Volusia County MPO, the FDOT, the East Central Florida Regional Planning Council (ECFRPC), the St. Johns River Water Management District (SJRWMD), the U.S. Army Corps of Engineers, the Federal Aviation Administration (FAA), VOTRAN, Volusia County municipalities, and all other affected agencies in Volusia County.

OBJECTIVE 2.1.5: Volusia County shall coordinate with and assist the Volusia County MPO, VOTRAN, and the Daytona Beach International Airport to provide efficient public transportation services based upon existing and proposed major trip generators and attractors, safe and convenient public transportation terminals, land uses, passenger amenities, and accommodation of the special needs of the transportation disadvantaged.

POLICY 2.1.5.1: Volusia County shall work to develop a coordinated and consistent policy with the Future Land Use Element to encourage land uses which promote public transportation in designated public transportation corridors.

POLICY 2.1.5.2: Volusia County shall work to develop strategies to address intermodal terminals and access to aviation, rail, and seaport facilities.

POLICY 2.1.5.3: Volusia County shall work to establish land use, site, and building design guidelines for development in exclusive public transportation corridors to assure the accessibility of new development to public transportation.

POLICY 2.1.5.4: Volusia County shall coordinate with the Volusia County MPO, VOTRAN, and all affected local municipalities to establish criteria for the provision of passenger amenities along major public transportation corridors.

POLICY 2.1.5.5: Volusia County shall coordinate with the Volusia County MPO, VOTRAN, and all affected local municipalities to provide passenger amenities along major public transportation corridors based upon the established criteria.

POLICY 2.1.5.6: Volusia County shall coordinate with the Volusia County MPO, VOTRAN, and all affected local municipalities to establish programs directed toward financing public

transportation passenger amenities to enhance the attractiveness of public transportation usage.

POLICY 2.1.5.7: Volusia County shall coordinate with the Volusia County MPO and VOTRAN on all roadway and public transportation needs of the Daytona Beach International Airport and other related public transportation facilities.

POLICY 2.1.5.8: Volusia County shall coordinate and cooperate with the Volusia County MPO, VOTRAN, and the Orange and Seminole County's public transportation provider (LYNX) to provide public transportation services between Volusia, Seminole, and Orange Counties.

POLICY 2.1.5.9: Volusia County shall coordinate with the Volusia County MPO and VOTRAN to ensure the transportation disadvantage population is adequately served.

OBJECTIVE 2.1.6: Volusia County shall coordinate with the Volusia County Metropolitan Planning Organization (MPO) and other related agencies to achieve and maintain levels of service on the thoroughfare system as well as for mass transit services.

POLICY 2.1.6.1: Volusia County shall evaluate the transportation system based upon a professionally acceptable methodology at the time of said evaluations.

POLICY 2.1.6.5: Volusia County shall establish and maintain level of service standards for fixed route public transportation as shown on the Public Transportation System Map. Fixed route public transportation shall be provided when the minimum residential and non-residential floor space areas are exceeded.

Fixed Route Transit Level of Service Thresholds

Type of Service	Headway[1] (minutes)	Minimum Residential Density (dwelling units/acre)	Minimum Downtown[2] Non-Res Floor Space (millions of sq. ft.)
Minimum Local Bus	60	4	3.5
Intermediate Local Bus	30	17	7
Frequent Local Bus	10	15	17
Express Bus- Walk Access	30	15 (avg. over 2 sq. mi.)	50
Express Bus- Drive Access	20	3 (avg. over 20 sq. mi.)	20

[1] "Headway" is defined as the time between transit vehicle arrivals.
[2] "Downtown" is defined as a "contiguous cluster of non-residential use" and is larger than the more narrowly-defined CBD.
Source: Volusia County Transit Development Plan 1996-2001

POLICY 2.1.6.11: For those roadway and public transportation facilities which indicate a lower level of service than the adopted standard, based on the most recent FDOT Generalized Daily Level of Service Tables used by Volusia County and are not scheduled in either the FDOT or Volusia County 5 Year Work programs, Volusia County shall perform an evaluation at the

request and expense of the developer to provide evidence that the roadway is operating at an acceptable peak hour level of service and that the proposed use would not lower the level of service below the acceptable standard.

OBJECTIVE 2.1.9: Volusia County shall consider the need for future traffic operation measures in the design of all major transportation system improvements.

POLICY 2.1.9.5: Implement, where appropriate and beneficial, Intelligent Transportation Systems (ITS), such as computerized signal systems, travel information resources, traffic monitoring devices, real-time transit dispatching, and incident management programs to improve safety and reduce delay, optimize the capacity of the transportation system, and achieve greater operating efficiency.

OBJECTIVE 2.1.10: Encourage bicycle use and pedestrian activity throughout Volusia County.

POLICY 2.1.10.2: Volusia County shall develop pedestrian and bicycle ways to connect public uses such as schools, libraries, parks, and intermodal transit nodes where feasible.

POLICY 2.1.10.5: Volusia County shall integrate bicycle (i.e., bicycle racks on buses, secure bicycle storage lockers, and park and ride lots), and pedestrian features into transit planning.

Capital Improvements Element

GOAL 15.2: Volusia County shall provide and maintain the necessary capital improvements to eliminate existing deficiencies, support new development orders, and repair, renovate or replace its worn out capital stock.

OBJECTIVE 15.2.6: The County shall develop and implement programs that will reduce the demand for new capital facilities and thus delay the need to construct and operate such facilities.

POLICY 15.2.6.1: The County shall implement programs to meet Objective 15.2.6. These programs shall include, but not be limited to, the following:

a. increased operational support for all forms of mass transit;

b. van/car pooling programs;

GOAL 15.3: Volusia County shall adopt and maintain levels of service for a full range of public facilities in order to protect the health, safety and welfare of its citizens and enhance the quality of life in the County.

OBJECTIVE 15.3.1: The County shall establish standards for levels of service for Class A, B and C of public facilities and shall apply the standards based on the policies specified under this project. [The following categories comprise the three classes of facilities.] The following order of facility categories shall be considered as the order of importance and priority among the various facility categories. This is a general priority list. It is mandatory to spend restricted revenues for the facilities which they are restricted to. Therefore, expenditures may be made on lower priority categories if higher priority categories have not been completed.

Class A Facilities (Concurrency):

1. TRANSPORTATION - ROADS
2. POTABLE WATER
3. WASTEWATER TREATMENT/SANITARY SEWER SYSTEMS
4. SOLID WASTE SYSTEM
5. STORMWATER/WATER QUALITY
6. PARKS-LAND-PARKS-RECREATION FACILITIES
7. PUBLIC TRANSPORTATION

POLICY 15.3.1.1: The standards for levels of service of each type of public facility in Class A (concurrency facility) shall apply to development orders issued by the County on or after October 1, 1990. This date marks the beginning of the fiscal year 1990-91 for Volusia County and is the date specified by Rule 9J-5 for the completion of implementing Land Development Regulations and coincides with the start of the County's Five Year Schedule of Improvements as required by 9J-5. Such levels of service shall apply to the capital and annual budget and Land Development Regulation on and after October 1, 1990.

POLICY 15.3.1.4: The following service standards shall apply to Class A facilities:

The County shall adopt the Level of Service (LOS) standards by reference for all
Class A facilities: The LOS standards for Roads and Public Transportation as listed in Chapter 2 of the Transportation Element of the Volusia County Comprehensive Plan. The LOS standards for Potable Water as listed in Chapter 6 of the Volusia County Comprehensive Plan. The Level of Service Standards for Sanitary Sewer as listed in Chapter 7 of the Volusia County Comprehensive Plan. Level of Service standards for Solid Waste as listed in Chapter 8 of the Volusia County Comprehensive Plan. The Level of Service standards for Stormwater Management (Drainage) as listed in Chapter 9 of the Volusia County Comprehensive Plan and the Level of Service standards as listed for Parks, Recreation and Open Space land and facilities as listed in Chapter 13 of the Volusia County Comprehensive Plan.

GOAL 15.5: Volusia County shall maintain clear and understandable policies that will define concurrency and a management system that will assist the public in ascertaining whether specific land development projects meet the concurrency criteria.

OBJECTIVE 15.5.1: The County shall adopt specific definitions and criteria as to what will satisfy the concurrency requirement. By incorporating such definitions and criteria as part of this Capital Improvement Element such criteria has become effective October 1, 1990. Additional definitions and criteria shall be established in a Concurrency Management Ordinance which was adopted prior to October 1, 1990.

POLICY 15.5.1.1: The following facilities shall be the facilities subject to the concurrency determination:

- parks and recreation (land and recreation facilities)
- transportation (roads or thoroughfare system)
- stormwater
- potable water
- wastewater treatment/sanitary sewer
- solid waste

- public transportation

These facilities shall be designated as Class A facilities

POLICY 15.5.1.6: New developments may meet the test for capacity and concurrency if they can be supported by the construction of specific facilities and the expansion of facility capacity by specific projects contained in the first year of the Capital Improvements five year schedule of programmed improvements (Capital Budget), following the issuance of a final development order. This policy shall pertain to the following facility categories: roads, parks, and recreation and mass transit. Specific conditions for the timing of private development and completion of the above facility categories shall be part of an enforceable development agreement and shall be part of the County's development review process when land uses and their densities/intensities are first proposed. Specific timing and phasing of these facilities in relationship to the issuance of building permits and other final development orders consistent with the revised Land Development Regulations, Article XIV of the Land Development Code.

OBJECTIVE 15.5.2: The County shall adopt criteria as to the timing for the availability of capital improvements by facility type.

POLICIES 15.5.2.2: The following facilities shall be available to coincide with approval of building permits for developments that are to be built during a single phase: roads, recreation and open space facilities, drainage/water quality facilities and mass transit, urban bus system. It shall be the intent of this policy to ensure that the above-mentioned facilities and services needed to support such development are available concurrent with impacts created by such developments. The impacts to the facilities specified in this policy occur over time as such developments receive their certificate of occupancy and as residents and businesses start impacting such facilities. Specific timing and phasing conditions related to the above concurrency facilities shall be consistent with the provisions of the revised Land Development Regulations, Article XIV of the Land Development Code.

CITY OF DEBARY COMPREHENSIVE PLAN

Source: *City of DeBary Comprehensive Plan – Volume II*, effective November 5, 1997

Economic Development Element

GOAL 3: To facilitate the stable, on-going development of the economy of the City and of the community within which it lies, making wise use of resources, including man-made resources, natural resources, and human resources.

OBJECTIVE 3.2: By 1997, the City will prepare and maintain an inventory of good land (including finished sites) appropriate for development of employment uses, as well as an inventory of finished building space.

POLICY 3.203: The City will continue to monitor and participate in discussions regarding the extension of transportation facilities and services to the community, including rail transit services, and will maintain this Plan to support the development of such facilities and services.

POLICY 3.207: The City will facilitate the preparation and implementation of a redevelopment plan for the downtown area (i.e.: along Charles Richard Beall Boulevard (US 17/92) generally between Plantation Road and Highbanks Road). This plan will address land uses, transportation (including transit), parking, infrastructure, aesthetics, financing, and other issues.

Future Land Use Element

GOAL 5: To facilitate the development and use of land, including permanent open space, in an organized arrangement which supports the appropriate development of the overall community, including its businesses and services, and the activities of its people.

OBJECTIVE 5.4: The City will base land use and development decisions on a Future Land Use Map, which is incorporated herein by reference, and which designates areas for the following land use classifications:

POLICY 5.403: The following COMMERCIAL LAND USE CLASSIFICATIONS are hereby established:

A. Commercial Village Overlay (CV)- This classification provides for development of the downtown commercial area along Charles Beall Boulevard (US 17/92) between Highbanks Road and Plantation Road. This area is recommended for a specific redevelopment plan (see Policy 5.301 and Policy 5.406 e). Once a plan for the future development and redevelopment the downtown area is prepared, this Classification may be converted (through a plan amendment) to a conventional classification rather than an overlay. In the meantime, the overlay will be used in combination with conventional land use classifications.

The Village Center area shown on the proposed Future Land Use Map includes an expansion of the overlay into nearby areas. This does not, however, imply that these areas will be converted from their existing use to commercial or other nonresidential uses. Initially, the purpose for designating the overlay is to define the study area for the redevelopment/development planning process. While some of this area will be eventually shown for redevelopment, some portions of

the area will be part of the transition from the higher intensity uses along US 17/92 to the existing residential areas lying east and west of the road.

While the long term development pattern for the Village Center area will be determined through the redevelopment planning process, individual development and redevelopment proposals may be received and considered in advance. Where these proposals vary from the arrangement of conventional land use classifications shown within the overlay, they should be reviewed under the planned unit development procedures.

Generally, the arrangement of land uses will be based on the following interim policies:

5) Higher density residential uses may also be permitted within the corridor outside of the designated retail nodes. In the interim, pending adoption of the redevelopment plan, the following standards will apply to such development:

    b) The individual design of housing projects must reflect consideration of the functional environment within which the project is located. This includes the provision of landscaping and buffers to protect adjacent lower density areas as well as to protect the residents of the project from the consequences of nearby non-residential development. The design of the project should include consideration of pedestrian circulation, access to the transit system, and vehicular circulation and parking. Where possible, parking needs should be fulfilled in coordination with nearby uses.

In addition, the eventual development/redevelopment plan may encourage higher density housing as part of the infill mix, and may allow for an expansion of the area into existing residential areas.

C. Commercial/Retail (CR) -This classification provides for commercial retail and service uses, as well as the uses and activities permitted in the CO classification.

1) Development should be in well integrated commercial centers which function efficiently. These areas will be served by coordinated (in some cases common) parking areas and traffic circulation systems, will be well designed from the perspective of pedestrians and bicyclists, and will be easily accessible by transit.

Transportation Element

GOAL 6: To facilitate the development of a cost-effective, coordinated, multi-modal transportation system for the movement of people and goods so as to benefit the social, economic, and physical development of the City.

OBJECTIVE 6.1: The City will carry out a program of activities to facilitate the provision of a cost-effective, safe, convenient, and energy efficient multi-modal transportation system.

POLICY 6.101: The Future Transportation Map (2015) is hereby incorporated as a part of this Plan, and depicts the character and extent of transportation facilities to be provided by the target year (2015). The Map specifically shows the general or approximate location and character of:

A. The street and highway network, including the Florida Intrastate Highway System (FIHS), the County road system, and local streets. The Map also shows the number of lanes, the maintenance responsibility, and the functional classification for each facility.

B. Those parking facilities deemed necessary to support the City's transportation goals.

C. The public transportation system, including specific trip generators and areas to be served, stations and terminals, and public transportation rights-of-way.

D. Bicycle and pedestrian facilities deemed necessary to support the City's transportation goals.

E. Railroads and railroad facilities.

F. Terminals and other facilities specifically designed to support the interchange between different transportation modes.

POLICY 6.103: Pursuant to "concurrency" requirements, the following regulatory level of service (LOS) standards will be used to determine whether facilities are adequate to serve new development:

A. Road facilities:

1) Florida Intrastate Highway System (FIHS): as established by FDOT

2) Balance of State Road System: as established by FDOT

3) County Road System: D

4) (4)Local Street System: D (Amended by Ordinance No. 03-97, March 5, 1997)

B. Public Transportation facilities:

1) Votran/Lynx Systems: no adopted standard

2) Rail Transit System: no adopted standard

See also Section 10 Capital Improvements

POLICY 6.104: In order to meet regulatory level of service standards and to meet the objectives of this Plan, the following improvements shall be made to the transportation network during the planning period (1995-2015):

D. I-4- improve interchanges, add lanes, and consider additional capacity through “high occupancy vehicle” (HOV) lanes and/or transit facilities (FDOT responsibility).

E. CSX Railroad- provide rail transit service connecting DeLand, Orange City, DeBary, Sanford, and points south with downtown Orlando, continuing south to Haines City (FDOT responsibility).

POLICY 6.107: Not later than 1997, the City will adopt land development regulations to implement the following standards for construction or modification of transportation facilities:

D. On-site parking will be provided adequate to serve the needs of the uses and activities on the property. Where special conditions exist (such as in a redevelopment area, in a transit station area, or in an area of intensive mixed uses) parking will be provided on an overall basis, rather than on a site by site basis, and provisions will be required to assure legal access for joint use.

E. Provisions will be made to facilitate pedestrian circulation and use of bicycles and transit. Such provisions will include a comprehensive system of sidewalks, separate secure bicycle parking areas, transit bus shelters and bus pullouts, and (where appropriate) design of the on-site circulation to facilitate through movement by bus traffic.

OBJECTIVE 6.2: The City will carry out a program of activities to coordinate the transportation system with the future land uses policies on this Plan, and to ensure that population densities, housing and employment patterns, land use patterns, and the management of important natural features are consistent with transportation modes and services proposed to serve these areas.

POLICY 6.201: In making zoning changes and plan amendments, the City will consider the need for new transportation facilities necessitated by the potential development, as well as the resources which can be reasonably expected to support new facilities not previously contemplated.

POLICY 6.202: In reviewing concepts for new transportation facilities, the City will give consideration to the potential impacts of new facilities on land uses (including future land use patterns) and on natural resources.

OBJECTIVE 6.3: The City will carry out a program of activities to provide for the protection of future rights-of-way for roads and mass transit facilities (including exclusive mass transit corridors)

OBJECTIVE 6.5: The City will carry out a program of activities to address the provision of efficient public transportation (including paratransit) services based on existing and proposed major trip generators, safe and convenient public transit terminals, and accommodation of the special needs of the transportation disadvantaged

POLICY 6.501: The City will maintain communication with providers of public transportation and providers of services to groups with special needs. This will include providing information on activities (particularly development activities) within the City as well as input on operational issues, such as routing, schedules, and fares. This will be accomplished largely by maintaining an active role in the MPO process.

Housing Element

GOAL 9: To cooperate with the public and private sectors to ensure an adequate supply of affordable housing to support the appropriate future development of the City.

OBJECTIVE 9.2: The City will carry out a program of activities to ensure that there are adequate sites, properly distributed, for housing for very-low income, low-income, and moderate

income housing, and for mobile homes and manufactured homes. The City will carry out a program of activities to ensure that there are adequate sites in residential areas for group homes and foster care facilities licensed or funded by HRS.

POLICY 9.201: The City will provide specific standards in its land development regulations for the location and density of housing of different types. Unless specific policies are adopted to the contrary, these standards will apply equally to the location of market housing and affordable housing units of the same density and general type. The following general principles will apply:

C. Areas for multi-family housing should be located in close proximity to transit services and within one mile of neighborhood shopping areas.

POLICY 9.202: The following principals and criteria will be used to guide the location of housing for very-low-income, low-income, and moderate-income households, mobile homes, manufactured homes, group homes and foster care facilities, and households with special needs:

A. Housing provided specifically for very-low-income, low-income and moderate-income households should be located in close proximity to transit services, shopping, and other community services directly benefiting these households.

CITY OF DELTONA COMPREHENSIVE PLAN

Source: *City of Deltona Comprehensive Plan* – Adopted November 1, 1999; Revised March 24, 2003

Future Land Use Element

GOAL 1: Ensure that future growth is timed and located to maximize efficient and cost effective use of public infrastructure.
9J-5.006(3)(a)

OBJECTIVE A: Consistent with Section 163.3202(1) growth management criteria will be established to ensure that future land use patterns will be based on the Generalized Development Suitability Map in order to maintain vital natural functions and in conjunction with the availability of public facilities and services to support that development at the appropriate level of service.
9J-5.006(3)(b)(1)

POLICY 5A: All neighborhood, community and regional shopping centers shall include bicycle parking areas, and where appropriate, bus bays or shelters to encourage alternative transportation modes.
9J-5.006(3)(c)(4)

POLICY 6A: Regional shopping centers should be served by mass transportation routes and designed to accommodate mass transit riders, vehicles and amenities. 9J-5.006(3)(c)(4)

POLICY 7A: Sites for industrial development shall be accessible to the following essential public facilities and services at the levels of service adopted in this Comprehensive Plan: fire services, transportation, potable water, an appropriate wastewater treatment facility, solid waste and stormwater management.
9J-5.006(3)(c)(3)

OBJECTIVE I: Appropriate land use guidelines shall be utilized to direct the placement of future land uses and to ensure compatibility between land uses. The Land Use Location Guidelines are declared to be a part of the adopted Future Land Use Policies.

LAND USE LOCATION GUIDELINES:

Policy 2I:

GENERAL COMMERCIAL

General Commercial Uses should:

10. Provide appropriate pedestrian linkages (i.e. sidewalks, bicycling, etc.) and mass transit improvements.

Future Land Use Element

GOAL 2: Development within The Deltona Activity Center shall be consistent with the goals, objectives, and policies enumerated below. These goals, objectives, and policies shall not be interpreted, either individually or collectively, as relieving compliance with other elements of the Comprehensive Plan and/or other City land development regulations. Rather, it is the purpose of these goals, objectives, and policies to supplement, not substitute or supersede, the Comprehensive Plan and other land development regulations.

Policy 12j: The Deltona Activity Center is providing a key portion of the retail market for Deltona and West Volusia; therefore transit commercial may be located near the I-4 interstate interchange.
9J-5.006(3)(c)(4)

Policy 16j:
New development (including redevelopment) should, at a minimum, be required to:

- promote pedestrian, vehicular (including mass transit) and non-vehicular movement throughout The Activity Center;
- use shared or joint facilities such as stormwater, bus stops, and utility easements.

Objective K: Promote development and programs which are designed to alleviate traffic congestion.
9J-5.006(3)(b)(4)

Policy 1K: The City shall, in cooperation with the appropriate agencies, seek to promote mass transit service and pedestrian access to The Activity Center.
9J-5.006(3)(c)(4)

Policy 4K: Site planning/design for proposed projects shall, as a condition of approval by the City, facilitate and encourage the internal movement of mass transit vehicles (only where the size/intensity of the proposed development warrants such considerations), and provide preferential off-street parking locations for carpool and vanpool usage.
9J-5.006(3)(c)(4)

Policy 6K: The City shall coordinate with FDOT and Votran (Lynx as appropriate) to identify appropriate sites and establish an area inside the Activity Center for a multi-modal transportation facility such as a high occupancy vehicle facility that may be developed along I-4 and/or to serve other regional mass transit uses.
9J-5.006(3)(c)(4)

Transportation Element

GOAL: The City of Deltona shall develop programs to ensure that current and future land uses are served by an adequate thoroughfare system.
9J-5.019(4)(a)

Objective A: From the time of plan adoption the City of Deltona shall continue to coordinate with the Florida Department of Transportation, Volusia County, VOTRAN and implement

programs as appropriate to provide a safe, convenient, and efficient motorized and non-motorized transportation system.
9J-5.019(4)(b)(1)

POLICY 8A: The City of Deltona shall work cooperatively with the MPO in their efforts at developing efficient and cost effective mass transit and other ride sharing programs.
9J-5.019(4)(c)

Objective E: The City of Deltona shall consider the need for future traffic operation measures in the design of all major thoroughfare system improvements.
9J-5.019(4)(b)(3)

POLICY 6E: The City of Deltona shall coordinate with the MPO to ensure that the provision of mass transit is considered in lieu of or as part of major highway construction projects.
9J-5.019(4)(c)(8,9,10,11&12)

Objective G: The City of Deltona shall coordinate with the transportation and related plans and programs of the MPO, the FDOT, the ECFRPC, the St. Johns River Water Management District (SJRWMD), the U.S. Army Corps of Engineers, the Federal Aviation Administration, VOTRAN, Volusia County, local municipalities and all other affected agencies.
9J-5.019(4)(b)(3)

POLICY 3G: The City of Deltona shall coordinate with the MPO, the FDOT, the ECFRPC, the SJRWMD, the U.S. Army Corps of Engineers, the Federal Aviation Administration, VOTRAN, local municipalities and affected agencies in the City for comments on all major thoroughfare system improvements.
9J-5.019(4)(c)(11)

POLICY 4G: Deltona shall strive towards the coordination of a public transit system to help meet the City's transportation needs and at an acceptable level of service.
9J-5.019(4)(b)(1,6,8,9,10&12)

Objective H: The City of Deltona shall coordinate with and assist the Volusia County Metropolitan Planning Organization (MPO), the Volusia County Council, the Florida Department of Transportation, and other transit related agencies in their efforts to provide efficient and cost effective mass transit, semi-public, para-transit, and passenger amenities services within the City.
9J-5.019(4)(b)(4)

POLICY 1H: By 2003, Deltona shall coordinate with the Volusia County MPO, Volusia Transit Authority (VOTRAN), and the Florida Department of Transportation to ensure efficient mass transit availability to residents of Deltona.
9J-5.019(4)(c)(6,8,9,10,11,12&13)

POLICY 2H: Deltona shall coordinate with the Volusia County MPO and VOTRAN to ensure the transportation disadvantaged population is adequately served by transit.
9J-5.019(4)(c)(9)

POLICY 3H: Where appropriate City transportation projects, new or expanded, shall include: bicycle facilities, sidewalks (except in controlled access facilities), parking bays for buses, and passenger shelters for both public and private bus or ride sharing programs.
9J-5.019(4)(c)(9)

POLICY 4H: The City as a non-mass transit service provider shall adopt a mass transit level of service consistent with VOTRAN and Volusia County MPO based upon their ability to provide mass transit.
9J-5.019(4)(c)(9)

Capital Improvements Element

GOAL: Public facilities shall be provided efficiently, safely, and cost effectively to promote timely, compact development, which is compatible with existing and designated land uses, and with the natural environment.
9J-5.016(3)(a)

Objective 1: Deltona shall concentrate public facilities and services to areas that are delineated on the Future Land Use Map to provide, compact, efficient and cost-effective provision of services as a means necessary to meet existing deficiencies, accommodate future growth and replace obsolete or worn out facilities.
9J-5.016(3)(b)(1)

Policy 1D: The determination of concurrency for backlogged facilities, included in the Thoroughfare System segments shall be consistent with the revised Land Development Regulations and established in the following manner:
9J-5.016(3)(c)(1,3,4&6)

e. Cumulative Thresholds Twenty, Fifteen and Ten Percent: The City shall not approve any additional final development orders, (excluding vested properties) including building permits, once the percent threshold for projects that would generate trips in excess of ten/fifteen/twenty percent on a peak hour basis, unless a final development order is subject to the adoption and implementation of an Area-wide Traffic Action Mitigation Plan. An Area-wide Traffic Action Mitigation Plan shall include, but not be limited to, the following activities:

- additional or modified turn lanes
- additional or modified signalization
- incentives for mass transit use where available
- incentives for van/car pooling programs
- promote staggered work hours

Objective 3: The City shall require future development to pay a proportionate cost of facility improvements in order to adequately maintain adopted levels of service standards. The City shall modify, revise or add service level standards based on changing circumstances and needs.
9J-5.016(3)(b)(4)

Policy 3N: The City Commission shall be the ultimate and final authority for the establishment and maintenance of all transportation trust funds for all transportation related revenues and expenditures.

9J-5.016(3)(c)(1&2)

Objective 4: The City shall establish standards for levels of service for public facilities and shall apply the standards based on the policies specified within the Comprehensive Plan. The following order of facility categories shall be considered as the order of importance and priority among the various facility categories. This is a general priority list. It is mandatory to spend restricted revenues for the facilities which they are restricted to, therefore expenditures may be made on lower priority categories if higher priority categories have not been completed. 9J-5.016(3)(b)(5)
Facilities (Concurrency):

1. Roads
2. Potable Water*
3. Wastewater Treatment/Sanitary Sewer Systems *
4. Solid Waste System *
5. Stormwater/Water Quality
6. Parks-Land
7. Parks-Recreation Facilities

Policy 4W: The required public services and facilities will be available at the time of certificate of occupancy or as consistent with Rule 9J-5.0055(3)(a-c). The following summarizes when services and facilities will be available: water, sewer, solid waste, mass transit and drainage shall be available at the time of certificate of occupancy; parks shall be available within one year of certificate of occupancy; roads shall be programmed for completion within three years of the certificate of occupancy.

Urban Design Element

GOAL: To further establish and enhance Deltona as a sustainable community with an identifiable aesthetic character.

Objective 1: Within one year of adoption of the Plan, enact Land Development Regulations that implement the concepts contained in the Urban Design Element.

Measure: Adoption of Land Development Regulations that enact Urban Design Element concepts.

Policy 1.3: The Deltona Activity Center (I-4 / Howland Boulevard interchange) shall be encouraged to be a coordinated mixed use development organized in cooperation with private property owners, developers and the City of Deltona. Specific development issues to be addressed in project review should include, but not be limited to:

• Strong pedestrian and public transportation orientations
• traffic control
• pedestrian and bicycle circulation

Policy 1.4: During plat and site plan review, transit-oriented design concepts will be considered and encouraged for new construction, redevelopment, and infill development.

Policy 1.5: Commercial cluster areas shall be designed to include tropical landscaping and safe and convenient access by all modes of transportation, including bus service, bicycles and pedestrians. New commercial clusters shall be well buffered, including walls and/or berms from residential neighborhoods.

CITY OF DAYTONA BEACH COMPREHENSIVE PLAN

Source: *2004 City of Daytona Beach Comprehensive Plan*

Transportation Element

The purpose of the Transportation Element shall be to plan for a multimodal transportation system that places emphasis on public transportation systems. The Transportation Element is divided into three sections. The Traffic Section provides for vehicular, pedestrian, and bicycle mobility. The Mass Transit Section provides for bus service and the Aviation Section provides for air service. There are rail facilities for freight service, but not for passenger service. This Transportation Element is based on the Volusia County MPO 2020 Transportation Plan and the Volusia County Comprehensive Plan.

Mass Transit Section

GOAL 1: The City shall encourage VOTRAN to continue to provide a coordinated mass transit system to the citizens of Daytona Beach at an acceptable level of service.

Objective 1.1: Beachside Trolley Service

The City shall encourage VOTRAN to increase its trolley service along A-1-A to in part to serve as a parking shuttle for off-beach parking and provide trolley service to the Halifax Harbor of downtown area by 2000.

Policy 1.1.1: The city will continually monitor Volusia County's expansion of the VOTRAN trolley service to ensure it keeps pace with demand.

Policy 1.1.2: Through the MPO, the City shall encourage VOTRAN to develop a comprehensive approach to providing benches where needed.

Objective 1.2: Bus Service

The City shall assist the Volusia County Metropolitan Planning Organization (MPO) in their efforts to achieve O reduction in VOTRAN'S mass transit and para- transit service within Daytona Beach.

Policy 1.2.1: The City representatives shall regularly attend the MPO and related Technical Coordinating Committee meetings, and use this forum to see that VOTRAN reviews and considers the feasibility of extending its routes in response to proposed new "attractor" development and "transit dependent" residential development.

Objective 1.3: Bus Transfer Facility / Bus Stop Amenities

The City shall assist Volusia County in keeping the VOTRAN bus passenger transfer terminal downtown and making improvement of its bus stop inventory a priority.

Policy 1.3.1: The City through its representatives on the Volusia County MPO shall support the planning and programming of upgrades to the Downtown Transfer Terminal and the inventory of

bus stops throughout the city. VOTRAN's inventory of major trip generators and the conditions of associated bus stop facilities shall be updated by 2000.

Objective 1.4: Level-of-Service Standards

The City shall periodically monitor VOTRAN bus service to identify when there is a decline in level-of-service sufficient to require improvements.

Policy 1.4.1: The City shall support the following level-of-service standards for fixed-route public transportation. Fixed route public transportation shall be provided when the minimum residential and nonresidential floor space areas are exceeded. This policy is intended to be consistent with that contained in the Volusia County Comprehensive Plan. Volusia County is the government in Volusia County that provides such transit service.

Fixed Route Transit Level of Service Thresholds			
Type of Service	**Headway[1] (minutes)**	**Minimum Residential Density (dwelling units/acre)**	**Minimum Downtown[2] Non-Res Floor Space (millions of sq. ft.)**
Minimum Local Bus	60	4	3.5
Intermediate Local Bus	30	17	7
Frequent Local Bus	10	15	17
Express Bus- Walk Access	30	15 (avg. over 2 sq. mi.)	50
Express Bus- Drive Access	20	3 (avg. over 20 sq. mi.)	20

[1] "Headway" is defined as the time between transit vehicle arrivals.
[2] "Downtown" is defined as a "contiguous cluster of non-residential use" and is larger than the more narrowly-defined CBD.
Source: Volusia County Transit Development Plan 1996-2001

Policy 1.4.2: Daytona Beach shall recommend that VOTRAN provide additional mass transit services during special events and peak tourist seasons through regular attendance at MPO and related Technical Coordinating Committee meetings.

GOAL 2: Retain and expand transit services for the elderly, handicapped and other transportation disadvantaged groups with both regular and specialized service.

Objective 2.1: Buses with Wheel Chair Lifts

The City will continue to support the expansion of bus service to accommodate the handicapped as the population expands.

Policy 2.1.1: The City will continue to support expansion of para-transit services provided by VOTRAN.

Redevelopment Element

GOAL 1: To encourage public and private cooperative efforts that result in: the creation of environmentally and economically sound and aesthetically pleasing new development and rehabilitated projects; the stimulation and attraction of private investment in redevelopment areas; increased employment opportunities, better service to residents and tourists; and improvements in the tax base consistent with the adopted Redevelopment Area Plans.

Policy 1.5.2: The City will work with the County the MPO and the FDOT to expand public transportation in the TCEA. Increasing public transportation in the area will reduce the demand on the transportation network by reducing the number of trips on the roadways. The City will work with the County (VOTRAN) to expand the public transit serving the Beach Street and Ballough Road redevelopment areas by 1999. An intermodal Transportation Center will be established in the TCEA by 2000. The center will be composed of a multistory parking garage that will accommodate expanded trolley service, local bus access, a new tram system, space for charter bus parking, space for taxi service and bicycle parking. In addition the city will continue to assist Votran with maintaining a high level of bus service throughout the TCEA (see Mass Transit Section of the Transportation Element, policy 1.1.1 for Level of service)

Policy 1.5.3: The Main Street Redevelopment Area/TCEA and the Downtown Redevelopment Area will become more pedestrian-oriented. This will be achieved through the provision of mixed land uses, parking controls, increased public transportation and increased pedestrian-oriented public spaces (such as parks and plazas).

Economic Element

Goal 6: The City will have ready transportation, communication, utility, and infrastructure improvements needed to ensure quality of life and economic growth.

Policy 6.1.4: Encourage the establishment by Votran of a joint city-county-private sector task force that is charged with developing a feasible plan to expand the present park and ride program.

Policy 6.1.5: Through public/private partnerships incrementally develop a people mover system to connect the Beach, parking, beachside commercial areas, the Bandshell, Downtown, the Speedway, the airport, and the west side of the City.

Policy 6.1.6: Support efforts to obtain a station for an I-4 passenger rail system.

Capital Improvement Element

GOAL 1: To undertake capital improvements necessary to keep its present public facilities in good condition and to accommodate new development, within sound fiscal practices.

Objective 1.2: Level of Service
The City's concurrency management system shall be utilized to determine current levels of service and to identify capital facility needs.

Policy 1.2.7: Mass Transit

The City shall support the following level-of-service standards for fixed-route public transportation. Fixed route public transportation shall be provided when the minimum residential and non-residential floor space areas are exceeded. This policy is intended to be consistent with that contained in the Volusia County Comprehensive Plan. Volusia County is the government in Volusia County that provides such transit service.

Fixed Route Transit Level of Service Thresholds			
Type of Service	**Headway[1] (minutes)**	**Minimum Residential Density (dwelling units/acre)**	**Minimum Downtown[2] Non-Res Floor Space (millions of sq. ft.)**
Minimum Local Bus	60	4	3.5
Intermediate Local Bus	30	17	7
Frequent Local Bus	10	15	17
Express Bus- Walk Access	30	15 (avg. over 2 sq. mi.)	50
Express Bus- Drive Access	20	3 (avg. over 20 sq. mi.)	20

[1] "Headway" is defined as the time between transit vehicle arrivals.

[2] "Downtown" is defined as a "contiguous cluster of non-residential use" and is larger than the more narrowly-defined CBD.

Source: Volusia County Transit Development Plan 1996-2001

CITY OF ORMOND BEACH COMPREHENSIVE PLAN

Source: *City of Ormond Beach 2010 Comprehensive Plan* – updated April 1, 2004

Future Land Use Element

GOAL 1: LAND USE DISTRIBUTION

There are several factors that need to be considered when defining the future land use distribution pattern: acreage needed to accommodate expansion and revitatlization to meet the demands of the future population: land use location suitability, based on compatibility with existing uses and neighborhoods; environmental constraints; availability of infrastructure and emerging social, economic and technological changes. In addition, there are the common goals and preferred patterns of the community.

As the city evolves, the proportion of the various land use categories change to meet the needs of the population. As observed in table 1 (flue), which compares land use distribution for 1980, 1988 and 1995 in ormond beach and national and selected communities averages, ormond beach has been a predominantly residential community with a relatively high percentage of commercial uses, limited industrial activity and with a great amount of lands devoted to open space/recreational uses. This pattern of land distribution has remained fairly constant between 1980 and 1988 with only some increases in industrial and open space uses, primarily as a result of the development of the airport business park and the acquisition of environmentally sensitive lands for open space preservation. A minor shift of land distribution occurred between 1988 and 1995. The slight increase in commercial lands is due to the annexation of highway tourist commercial areas at the 1-95 state road interchange. The increase of residential lands can also be attributed to annexation. The decrease in recreation/open space lands was anticipated by this plan as described later in this document.

The 2010 land use pattern should reflect similar proportions to the current land use distribution, with the exception of commercial uses which, as explained below, are slightly higher than what is required by the current population. Annexation is a wildcard that could cause the 2010 land use pattern to be dissimilar to the current land use distribution. As illustrated by table 1 (flue), the land use pattern did not change substantially between 1988 and 1995 despite annexations. However, the city should take steps to ensure that future annexations meet the intent of this plan.

Future development and redevelopment activities should be directed in appropriate areas as depicted on the future land use map to meet the land use needs of the anticipated population, in a manner consistent with sound planning principles, the goals, objectives and policies contained in the plan, and the desired community character.

Overall, the land use plan should limit commercial expansion, promote industrial use, maintain current residential densities in the core area while establishing lower densities in the perimeter areas, and provide for a continued high level of open space. Specific goals and policies are listed below for each type of land use.

A. Residential

The development potential and trends chapter discussed the availability of vacant lands in the city. It was determined that under current zoning regulations, and assuming that all lands will be developed, the city would be able to provide residences for up to approximately 54,500 persons. Population projections, on the other hand, show that the local population demand for the year 2010 will include a total population of 39,042 persons. (see table 2, flue.) The city will be able to provide for an adequate supply of lands to meet the future residential needs of the community. (see table 2, flue)

OBJECTIVE 1.1: RESIDENTIAL LAND USE

Ensure that adequate lands are available to meet the residential land use needs of the community.

POLICY 1.1.10: Medium and high density multi-family residential development shall be encouraged near employment centers with convenient access to public recreational facilities, the thoroughfare system and mass transit routes.

POLICY 1.1.11: Provide opportunities for housing geared to lower income families and the elderly in close proximity to shopping areas, mass transit facilities, convenient shopping, hospitals and recreational opportunities by designating these "opportunity" areas as Medium Density Residential on the Future Land Use Map.

Transportation Element

GOAL 1: TO PROVIDE A SAFE, COST-EFFECTIVE, EFFICIENT AND REASONABLY CONVENIENT TRANSPORTATION SYSTEM UTILIZING MOTORIZED AND NONMOTORIZED MODES OF TRAVEL AVAILABLE TO ALL RESIDENTS OF ORMOND BEACH AS WELL AS VISITORS.

OBJECTIVE 1.5: The City shall promote alternate modes of transportation through the construction of bikepaths and pedestrian facilities, and the use of mass transit, and shall promote pedestrian safety. The City shall strive to attain a five (5%) percent modal split for transit, bicycle and pedestrian traffic, and reduce pedestrian fatalities as much as possible.

POLICY 1.5.3: New commercial, industrial, and residential developments shall provide bus stop improvements if located on an existing or proposed bus route and shall provide transit information to employees and/or residents.

Measure: Percentage of applicable projects providing bus stop improvements and transit information.

POLICY 1.5.6: The City shall request that VOTRAN establish a new bus route along US 1 from north of Ormond Beach to Port Orange with short headways and low fares to serve the shopping, employment centers, governmental offices, and other major trip generators located along US 1, and to provide an alternative to the automobile for trips in the corridor.

Measure: Whether or not route is established in VOTRAN.

POLICY 1.5.8: Coordinating with the mass transit provider (VOTRAN), the City will help facilitate the additional bus bays to all non-limited access arterial roads in the City at VOTRAN bus stop locations when the roads are constructed or widened.

Measure: Number of bus bays added.

OBJECTIVE 1.9: The City shall coordinate its transportation planning with the Volusia Coastal Area Transportation Study (VCATS), Metropolitan Planning Organization (MPO), Volusia County, FDOT, VOTRAN, and other transportation agencies to the maximum extent feasible.

Housing Element

GOAL 1:

A. To achieve an adequate and varied supply of decent, safe, sanitary and affordable housing opportunities to meet the existing and future needs of all residents, especially those of lower income.

B. To initiate a citywide program that is designed to promote awareness of the problems of housing deterioration, to identify the problem areas and closely monitor these areas in order to deter deterioration.

C. To ensure and promote the maintenance and enhancement of residential neighborhoods as living environments.

Objective 1.10: group homes and foster care facilities

The City shall continue to ensure that there are adequate sites in residential areas or areas of residential character for group homes and foster care facilities licensed or funded by the Department of Children and Family Services.

POLICY 1.10.1: The City shall maintain site selection criteria for group houses and foster care facilities, including housing for the elderly, which will include accessibility to public transportation routes, malls, shopping centers, hospitals, and recreation areas.

Capital Improvements Element

GOAL 1: public facilities shall be provided in a timely and efficient manner as necessary to correct existing deficiencies in the level-of-service for potable water, sanitary sewer, solid waste, traffic circulation, and parks and recreation and to meet future demands generated from new development through the use of sound fiscal practices.

OBJECTIVE 1.6: The City shall require that necessary local and regional facilities and services be available concurrent with the impacts of development through the adoption of a concurrency management system as implement by the Land Development Code.

POLICY 1.6.2: The City shall continue to implement a concurrency management system to:

b. Update annually existing level-of-service, committed capacity as defined in the Land Development Code, and facility needs prior to and in conjunction with the annual update of the

Capital Improvements Element, except that a shorter time frame, daily, monthly, or semi-annually, will be used as appropriate where the level-of-service is near capacity. The City plat approval process will require that necessary regional and local facilities and services be available concurrent with the impacts of development after the adoption of the concurrency management system through any of the following situations:

The necessary road facilities as listed in the first three (3) years of the FDOT Five-Year Work Program have been included in the Volusia County or City of Ormond Beach annual budget at the time a plat approval is issued. A plan amendment is required to eliminate, defer or delay construction of any road or mass transit facility or service which is needed to maintain the adopted level-of-service standards and which is listed in the five- (5-) year schedule of capital improvements. For those parcels that do not require platting, the above steps will be considered at the time of site plan and review. In such cases the words “site plan” will replace “plat approval” wherever it appears above.

Intergovernmental Coordination Element

GOAL 1: The city shall establish and maintain effective coordination to address multi-jurisdictional issues of concern and to implement the city’s comprehensive plan.

OBJECTIVE 1.8: TRAFFIC CIRCULATION

The City shall continue to coordinate its transportation plans with Federal, State, regional, and local agencies in order to maintain the adopted level-of-service.

POLICY 1.8.3: The City shall coordinate its transportation planning with Volusia Coastal Area Transportation Study (VCATS), The Metropolitan Planning Organization (MPO), Volusia County, FDOT, VOTRAN, VCOG, and other appropriate agencies to the maximum extent feasible.

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