FINAL REPORT

Prepared for:

CITY OF KEY WEST
Key West Department of Transportation (KWDoT)

TRANSIT DEVELOPMENT PLAN – MAJOR UPDATE 2005-2010

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CHAPTER ONE:
DEMOGRAPHIC, ECONOMIC & TRAVEL CHARACTERISTICS

INTRODUCTION

The primary objective of Chapter One is to present a description and analysis of the current demographic characteristics of Key West. This effort is particularly important to the Transit Development Plan process in that it will provide the foundation for, as well as inform, all subsequent activities in this planning process. To better identify needs and plan for the continuing development, improvement, and/or expansion of a public transportation system, it is necessary to gain an understanding of the environment within which the system operates. To further this process, this chapter is devoted to an analysis of the demographic and economic conditions of Key West and its population.

The analysis contained in the following pages is derived from the most recent demographic and economic data available. In order to maintain consistency, a majority of the analysis presented in the following sections is based on 2000 Census Bureau data. These data are analyzed on a census block group level. However, many data points have been updated using demographic projections for Key West as estimated by the 2003 Florida Statistical Abstract. The census block groups included in this analysis are depicted graphically in Map 1-1. Whenever possible, the socioeconomic analysis is also supplemented with and compared to more recent data collected from various sources in Key West, Monroe County, and the State of Florida. These data are included in the analysis to enhance the accuracy of the 2000 Census information.

KEY WEST DEMOGRAPHICS AND ECONOMIC DATA

STUDY AREA SETTING

Key West is the southernmost city in the United States and serves as a gateway to the Caribbean, between the Atlantic Ocean and the Gulf of Mexico. It is 150 miles southwest of Miami and 90 miles north of Cuba. The City is the seat of government for Monroe County. It has a total area of 4.2 square miles, and its northern counterpart Stock Island has a total area of 5.8 square miles. U.S. 1 provides the only land access (via 42 bridges) to Key West from mainland Florida.

The name Key West is actually the English interpretation of the Spanish term **Cayo Hueso** (Isles of Bones), the name given to the island by Ponce de Leon. Ponce de Leon coined this name for Key West in 1513 as a result of the presence of remains from an Indian Battlefield.

Due to the strategic location of Key West, the island had an important naval presence since 1823, when the East Indian Anti-Piracy Squadron established its base on the island. Key West was incorporated as a town in 1828. During the 19th century, fishing, sponging, and cigar manufacturing were major industries in the island community. Today, tourism is the major industry in Key West.

Key West provides a rich diversity of activities that attract a large number of visitors year-round and seasonal residents, with peak visitor levels during the winter months. Residents and visitors enjoy spending time at area beaches such as Higgs Beach, Rest Beach, and Smathers Beach. In addition, fishing, snorkeling, and scuba diving are favorite pastimes. Furthermore, the island offers attractions such as the Old Town area, which is a historical relic known for its cluster of wooden buildings that represent the building tradition of Key West from 1838.

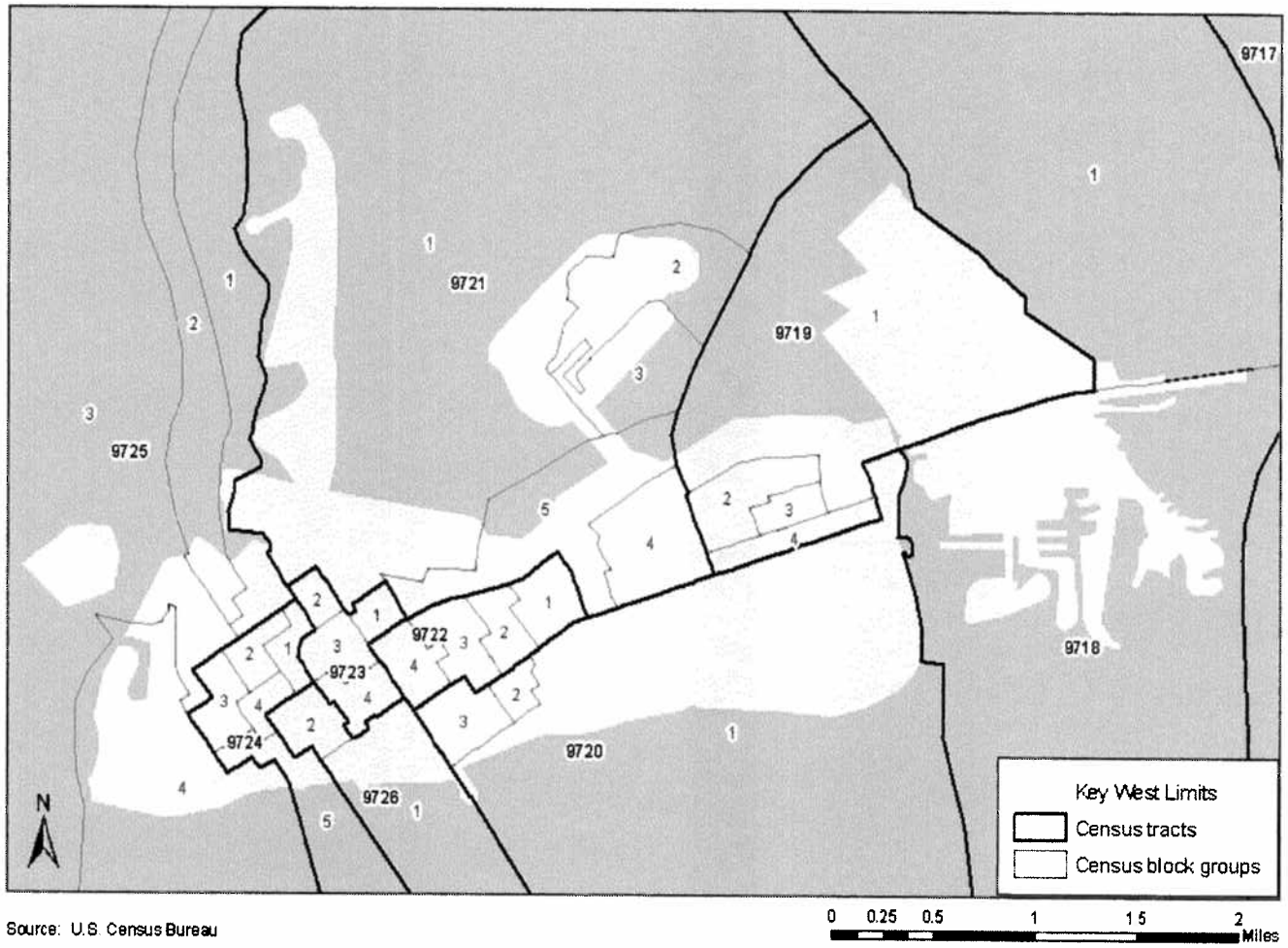
DEMOGRAPHIC AND ECONOMIC DATA

This section summarizes demographic and economic data specific to Key West and relevant to the issue of public transportation. Where appropriate, maps of Key West are included to illustrate these data. It should be noted that for statistical purposes, Stock Island demographics are included in the totals for data presented. While not within the jurisdictional city limits of Key West, it was necessary to include the information because the transit system provides trips to and from Stock Island.

Population Characteristics

As illustrated in Table 1-1, Key West has experienced modest population growth over the past decade. According to the 2000 U.S. Census population data Key West's 2000 population was 30,885. This represents a 5.3 percent increase in population since 1990 (29,328).

Map 1-1 Key West Census Tracts and Block Groups, Key West, Florida, 2000



Source: U.S. Census Bureau

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Table 1-1
Key West Population

	1990	2000	1990-2000 % Change
Key West Population*	29,328	30,885	5.3%

*It should be noted that for statistical purposes, Stock Island demographics are included in the totals for data presented throughout this Chapter. While not within the jurisdictional city limits of Key West, it was necessary to include the information because the transit system provides trips to and from Stock Island.

Population Densities

Table 1-2 compares Key West's population and population density with the state of Florida. According to Census 2000 data, the City of Key West had a much higher population density of 2,693 persons per square mile than the Florida state average of 309 persons per square mile.

Table 1-3 shows the population, land area, and population density for the census block groups in Key West. According to the data, the highest population density is found on Stock Island. The next highest population density was found in southern areas of the island of Key West. Several of the other high population density tracts are located in the Old Town area as well as those representing Sigsbee Naval Housing. The population densities for Key West census block groups are also depicted in Map 1-2, with the darkest shades representing the densest block groups.

Table 1-2
Population Density (2000)

	Permanent Population	Density (Persons Per Square Mile)
Florida (2000)	16,674,608	309
Key West (2000)	30,885	2,693

Map 1-2 Population Density Per Square Mile, Key West, Florida, 2000

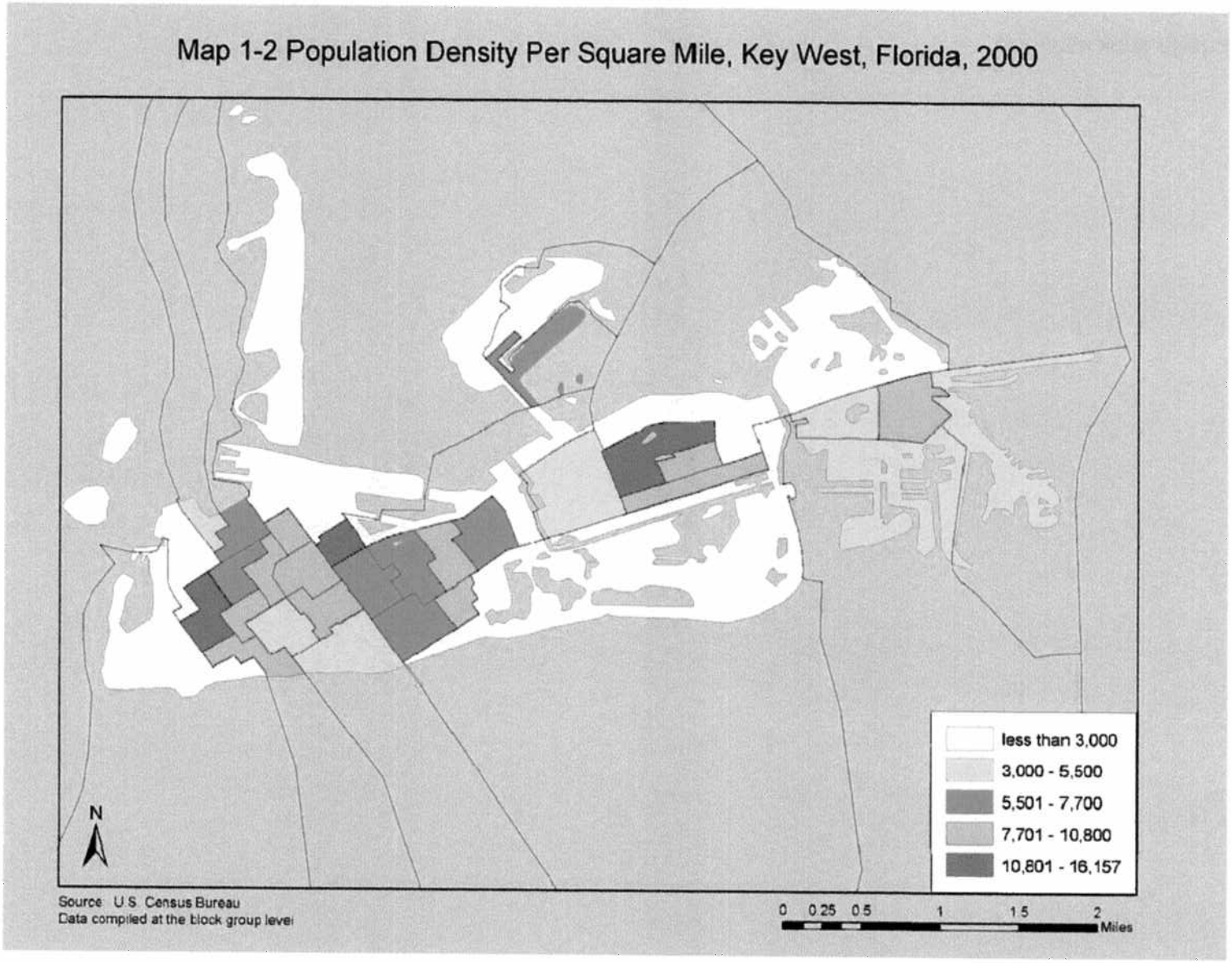

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Table 1-3
Population Density by Census Block Group (2000)

Census Block Group	2000 Population	Land Area (Square mile)	Persons/ Square Mile
Tract 9719.00 BG 1 (Stock Island)	1,663	0.309	5,370
Tract 9720.00 BG 1 (South Key West)	2,766	0.757	3,655
Tract 9718.00 BG 5 (Stock Island)	1,726	0.534	3,230
Tract 9719.00 BG 2 (NE Key West - New Town)	2,519	0.802	3,141
Tract 9718.00 BG 1 (Stock Island)	971	0.361	2,686
Tract 9720.00 BG 3 (South Key West)	828	0.312	2,654
Tract 9724.00 BG 5 (SW Key West - Old Town)	821	0.324	2,530
Tract 9719.00 BG 4 (NE Key West - New Town)	962	0.409	2,349
Tract 9721.00 BG 5 (NE Key West – New Town)	589	0.253	2,328
Tract 9718.00 BG 3 (Stock Island)	1,284	0.683	1,879
Tract 9723.00 BG 1 (SW Key West-Old Town)	594	0.325	1,825
Tract 9721.00 BG 1 (Sigsbee Park & Naval Housing)	1,738	0.991	1,754

Age Distribution

As illustrated in Table 1-4, the population in Key West sees far fewer younger residents than the State population. According to the 2000 Census, approximately 23 percent of the population in Florida were age 0 to 17 years and 22 percent were aged 60 years and over. Similarly, in 2000, Key West had significantly fewer residents in the under 18 category (16 percent) and the 60 years and older age category than the State (16 percent).

Table 1-4
Population Age Distribution (2000)

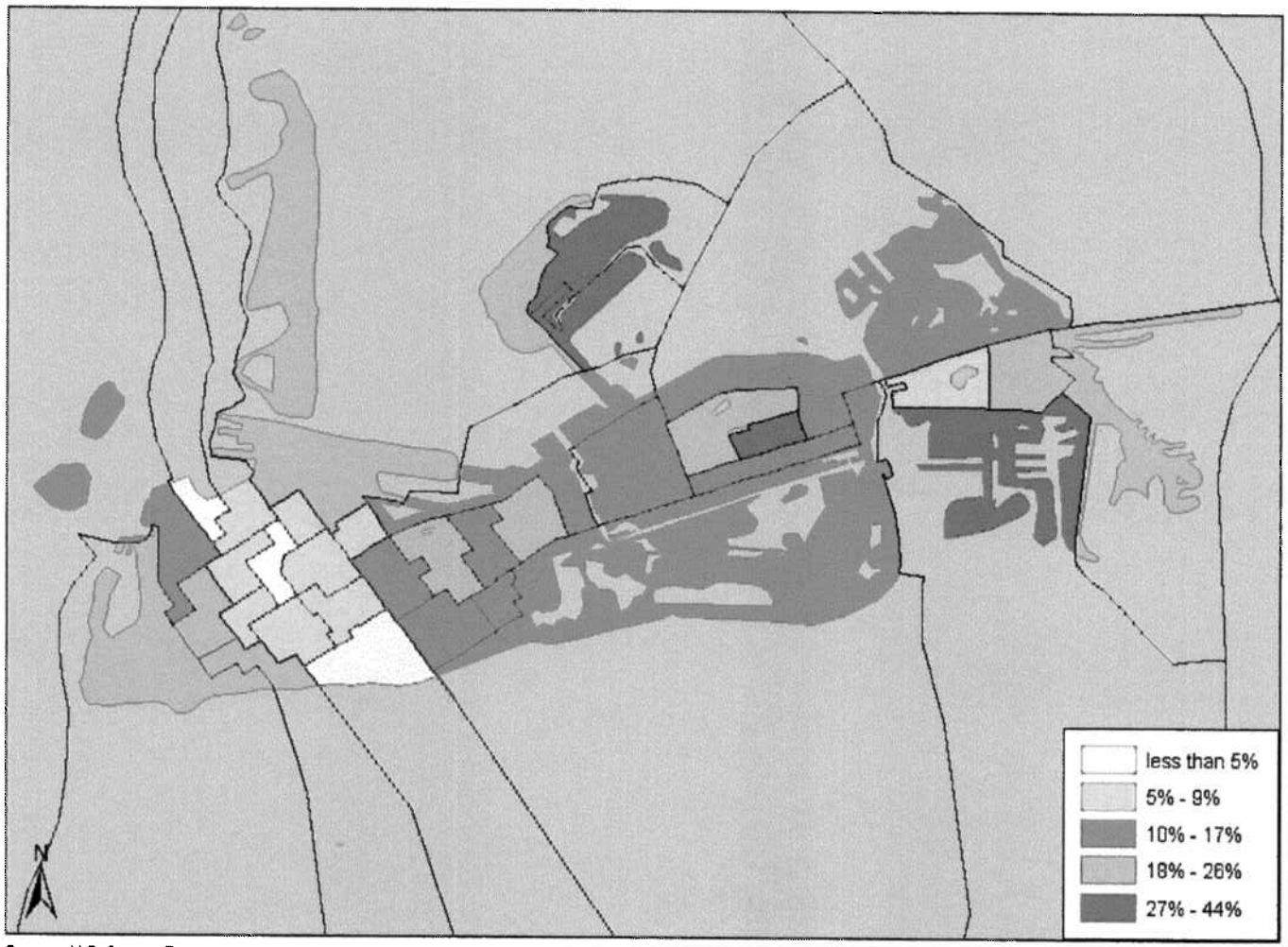
	0-17	18-24	25-44	45-54	55-59	60+
Florida (2000)	23%	8%	29%	13%	5%	22%
Key West (2000)	16%	8%	37%	17%	6%	16%

Table 1-5 shows the 2000 Census block groups with 20 percent or greater concentration of aged 17 and younger residents in Key West. The percentage of the population younger than 18 years is also depicted in Map 1-3. These data show that, according to 2000 Census data, eleven block groups within Key West had populations where persons under the age of 18 consist of at least 20 percent of the total block group population. The two block groups with the highest percentage of persons under the age of 18 are 9721.00 BG 3 (44 percent) and 9721.00 BG 2 (43 percent), both of which encompass Sigsbee Naval Housing. Block groups found on Stock Island also have a fairly significant population under the age of 18.

Table 1-5
Distribution of Persons Age 0-17 by Census Block Group (2000)

Census Block Group	Percentage Age 0-17
Tract 9721.00 BG 3 (N Key West - Sigsbee Naval Housing)	44%
Tract 9721.00 BG 2 (N Key West – Sigsbee Naval Housing)	43%
Tract 9719.00 BG 3 (NE Key West – New Town)	35%
Tract 9718.00 BG 5 (Stock Island)	31%
Tract 9718.00 BG 3 (Stock Island)	26%
Tract 9722.00 BG 1 (Central Key West – New Town)	25%
Tract 9725.00 BG 4 (Key West Truman Annex)	23%
Tract 9718.00 BG 2 (Stock Island)	23%
Tract 9721.00 BG 1 (N Key West – Sigsbee Naval Housing)	21%
Tract 9724.00 BG 5 (SW Key West - Old Town)	21%
Tract 9722.00 BG 3 (Central Key West – New Town)	20%

Map 1-3 Percent of Population Under 18, Key West, Florida, 2000



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

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Table 1-6 and Map 1-4 illustrate the concentration of people aged 60 and older in Key West. These data indicate that the most densely populated area of seniors is located in tract 9718.00 BG 4 on Stock Island (37 percent). Other areas with high concentrations of seniors include northeast Key West (New Town), northwest Key West in the Truman Annex area, and the southern portion of the island.

Age groups at both ends of the scale (under age 18 and age 60 and older) are of significant interest with regard to potential transportation needs and transit use. The young and the elderly often do not have adequate access to automobiles and, therefore, commonly are more dependent on public transportation and alternative forms of transportation (such as walking and biking) than persons in the middle age groups.

Table 1-6
Distribution of Persons Age 60 and Over by Census Block Group (2000)

Census Block Group	Percentage Age 60 And Older
Tract 9718.00 BG 4 (Stock Island)	37%
Tract 9721.00 BG 4 (NE Key West – New Town)	34%
Tract 9724.00 BG 4 (SW Key West – Old Town)	26%
Tract 9719.00 BG 1 (Stock Island)	23%
Tract 9726.00 BG 1 (SW Key West)	23%
Tract 9724.00 BG 5 (SW Key West – Old Town)	22%
Tract 9720.00 BG 1 (S Key West)	21%
Tract 9720.00 BG 3 (S Key West)	21%
Tract 9725.00 BG 2 (NW Key West - Old Town)	20%
Tract 9725.00 BG 1 (NW Key West – Old Town)	20%
Tract 9724.00 BG 2 (NW Key West - Old Town)	20%

Housing Densities

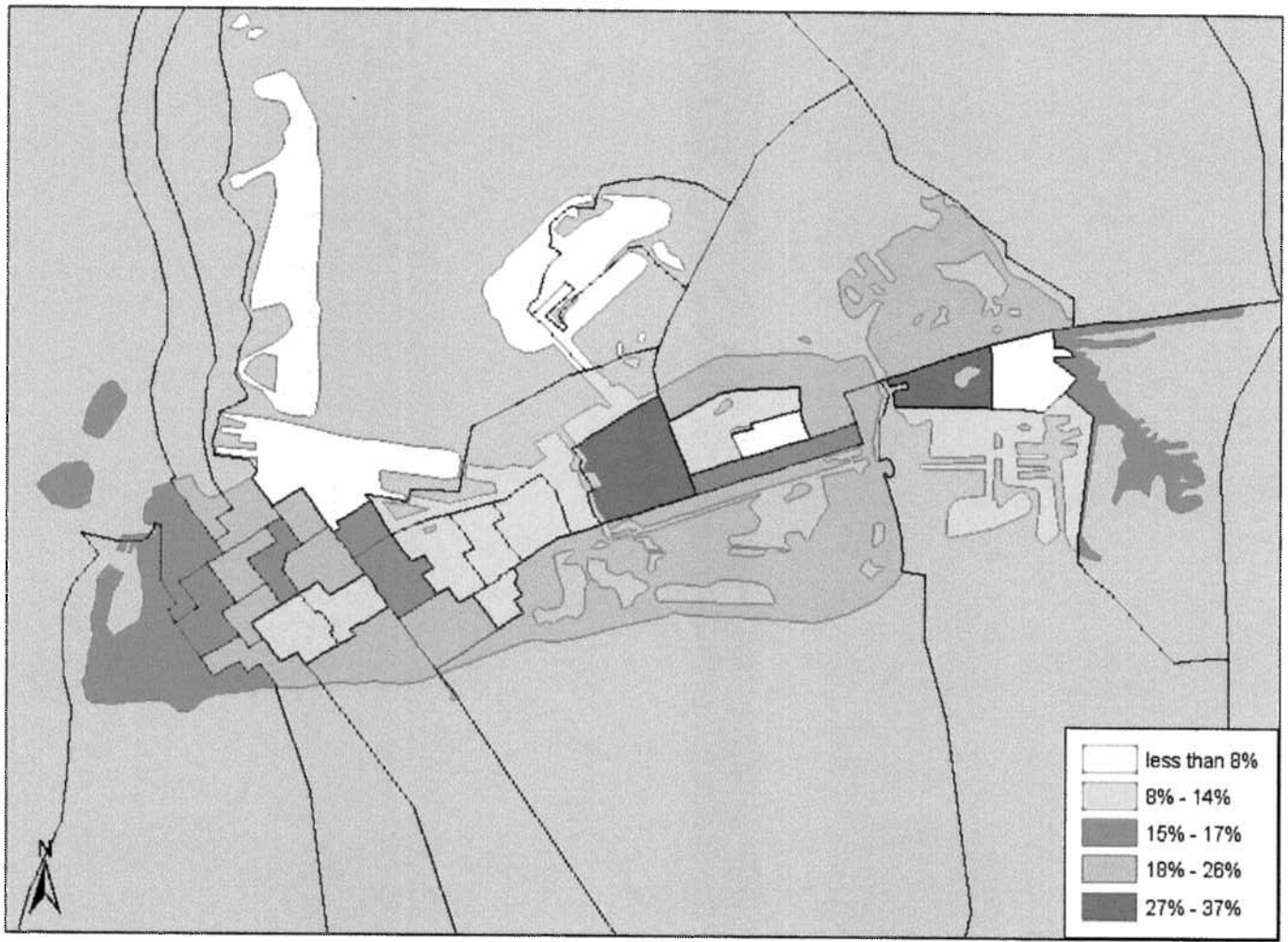
The distribution of housing is measured in terms of occupied dwelling units. According to the 2000 Census, Key West had a total of 13,103 occupied dwelling units. Table 1-7 lists the census block groups in Key West with the most dense concentration of housing units. Housing densities among all census block groups in Key West are also illustrated in Map 1-5. As the

island is currently near "build-out" status, it is unlikely that housing densities will increase significantly over the next few years.

Table 1-7
Household Density by Census Block Group (2000)

Census Block Group	2000 Households	Land Area (Square mile)	Households/ Square Mile
Tract 9720.00 BG 1 (S Key West)	1,223	0.757	1,616
Tract 9719.00 BG 1 (Stock Island)	471	0.310	1,521
Tract 9719.00 BG 2 (NE Key West - New Town)	1,016	0.802	1,267
Tract 9724.00 BG 5 (SW Key West – Old Town)	410	0.324	1,264
Tract 9721.00 BG 5 (NE Key West – New Town)	317	0.253	1,253
Tract 9720.00 BG 3 (S Key West)	371	0.312	1,189
Tract 9718.00 BG 5 (Stock Island)	594	0.534	1,112
Tract 9718.00 BG 1 (Stock Island)	383	0.361	1,060
Tract 9723.00 BG 3 (SW Key West - Old Town)	442	0.442	1,001

Map 1-4 Percent of Population Over Age 60, Key West, Florida, 2000



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

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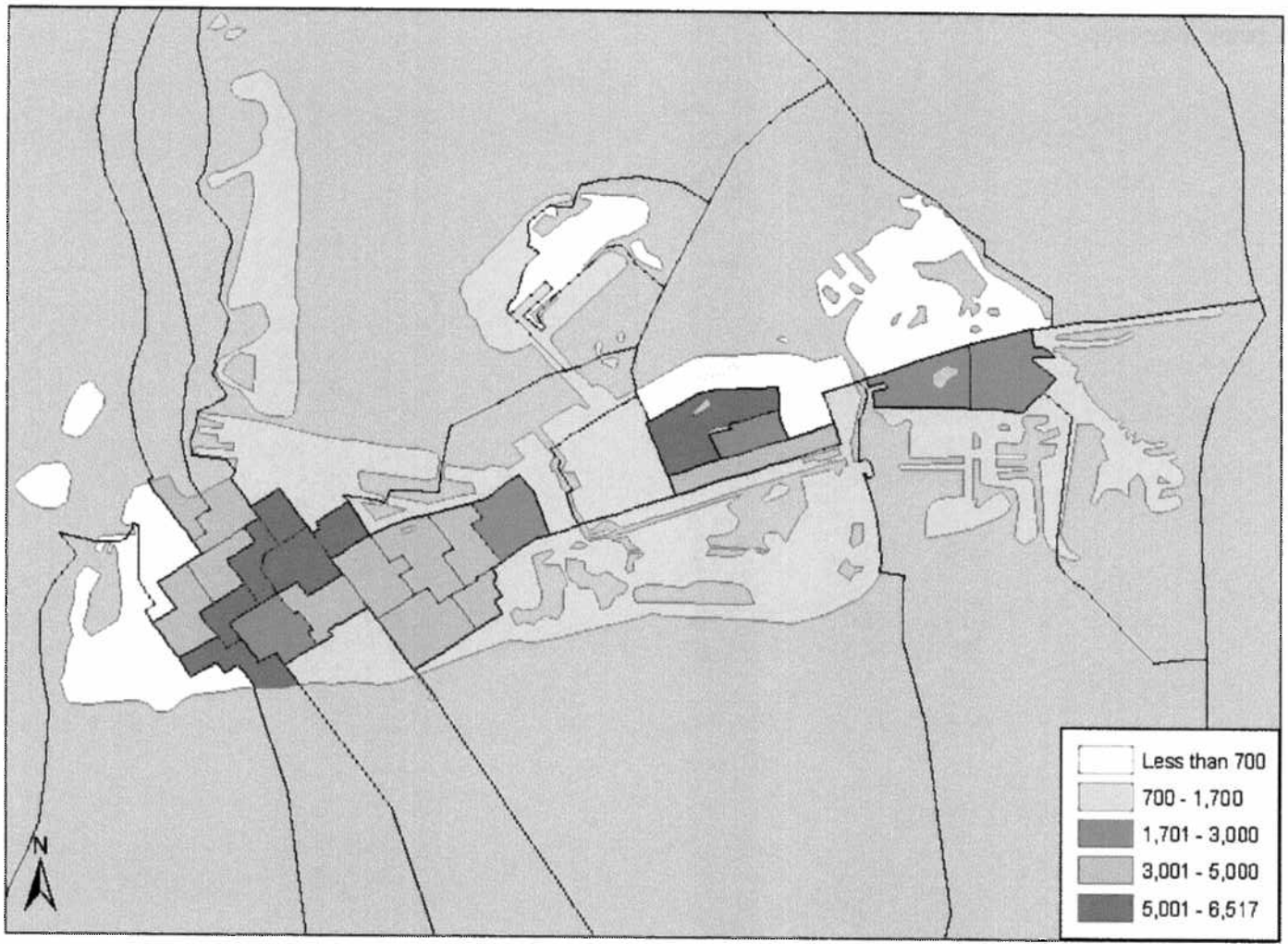
Map 1-5 Household Density Per Square Mile, Key West, Florida, 2000



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

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Income Characteristics

Income is an important factor in assessing transportation needs and use of conventional public transit systems. In general, low-income persons are more likely to rely on public transportation for mobility and access to jobs, shopping, medical services, and recreational activities.

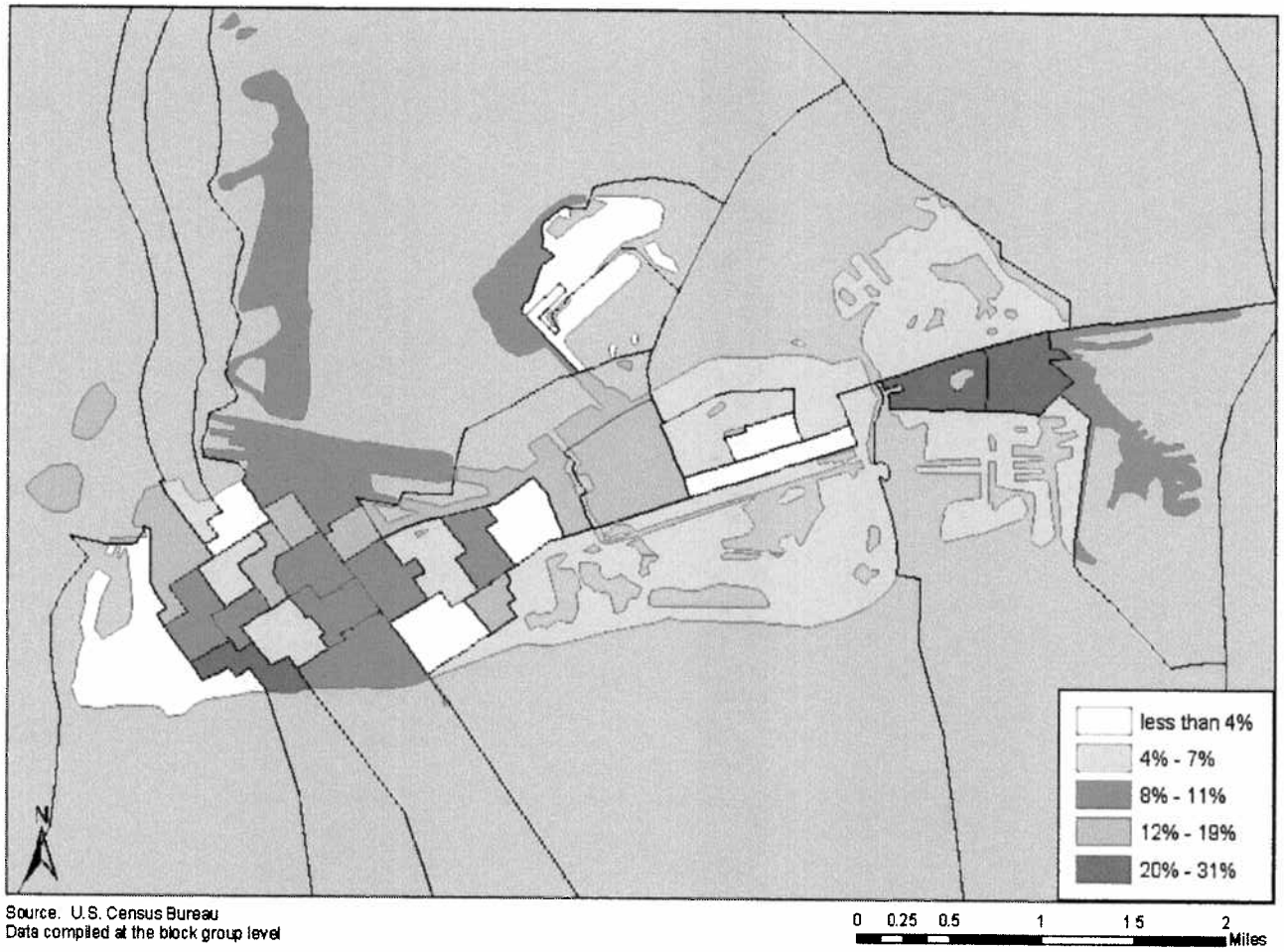
Table 1-8 shows the distribution of household income in Florida compared to Key West for 2000. In Florida, the highest number of households (24 percent) reported income of $30,000 to $50,000 and 10 percent of households in the state had an income of less than $10,000. In comparison to Florida, Key West has a slightly lower percentage of households with incomes less than $10,000 (10 percent versus 9 percent, respectively). Similarly, while 13 percent of Key West households had incomes between $20,000 and $30,000 compared to 15 percent of households in Florida, Key West had slightly more households than the State with annual incomes of over $30,000 (25 percent versus 24 percent).

Table 1-8
Household Income Distribution (2000)

Household Income	Less than $10,000	$10,000-$19,999	$20,000-$29,999	$30,000-$49,999	$50,000 - $59,000	$60,000+
Florida (2000)	10%	14%	15%	24%	10%	27%
Key West (2000)	9%	10%	13%	25%	10%	33%

Table 1-9 provides 2000 Census data on the block groups with the highest percentages of households with an annual income of less than $10,000. Map 1-6 graphically illustrates the percentage of households with annual income less than $10,000 by census block group. Block groups with a high concentration of low-income households are shown in darker shades on the map. The census block group in Key West with the highest percentage of the population with annual incomes of less than $10,000 is tract 9724.00 BG 5 (31 percent). This block group is located in the southwest section of Old Town. Other densely concentrated areas of households with incomes less than $10,000 are located on Stock Island and in the New Town area west of Fourteenth Street.

Map 1-6 Percent of Households With Annual Income Below $10,000
Key West, Florida, 2000



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

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Table 1-9
Distribution of Households with Incomes Less than $10,000 (2000)

Census Block Group	Percentage with Incomes under $10,000
Tract 9724.00 BG 5 (SW Key West – Old Town)	31%
Tract 9718.00 BG 3 (Stock Island)	24%
Tract 9718.00 BG 4 (Stock Island)	22%
Tract 9721.00 BG 5 (NE Key West - New Town)	19%
Tract 9721.00 BG 4 (NE Key West – New Town)	17%
Tract 9720.00 BG 2 (S Key West)	17%
Tract 9723.00 BG 2 (NW Key West - Old Town)	17%
Tract 9725.00 BG 3 (NW Key West - Old Town)	16%
Tract 9723.00 BG 1 (NW Key West - Old Town)	14%
Tract 9724.00 BG 1 (NW Key West - Old Town)	13%
Tract 9721.00 BG 1 (Central Key West – New Town)	11%
Tract 9726.00 BG 1 (N Key West – Sigsbee Park/Naval Housing)	11%

Automobile Ownership and Availability

Table 1-10 shows the distribution of vehicle availability among households in Key West and Florida, according to results of the 2000 Census. As of 2000, a full 16 percent of households in Key West did not have a vehicle available for use. Surprisingly, this figure is just slightly higher than the 2000 average for Florida (15 percent).

Table 1-10
Household Vehicle Availability (2000)

	Number of Vehicles Available	
	None	One or More
Key West	16%	84%
Florida	15%	85%

Table 1-11 lists the block groups in Key West where more than 30 percent of households did not have a vehicle available. Map 1-7 also shows the distribution of households in Key West without access to a vehicle. As illustrated in Table 1-11, the block group with the highest concentration of households without access to a vehicle is tract 9721.00 BG 4. Forty-two percent of households in this block group do not have access to a vehicle. The areas in Key West with the largest percentage of households without access to a personal vehicle are located primarily in New Town, Old Town, and on Stock Island.

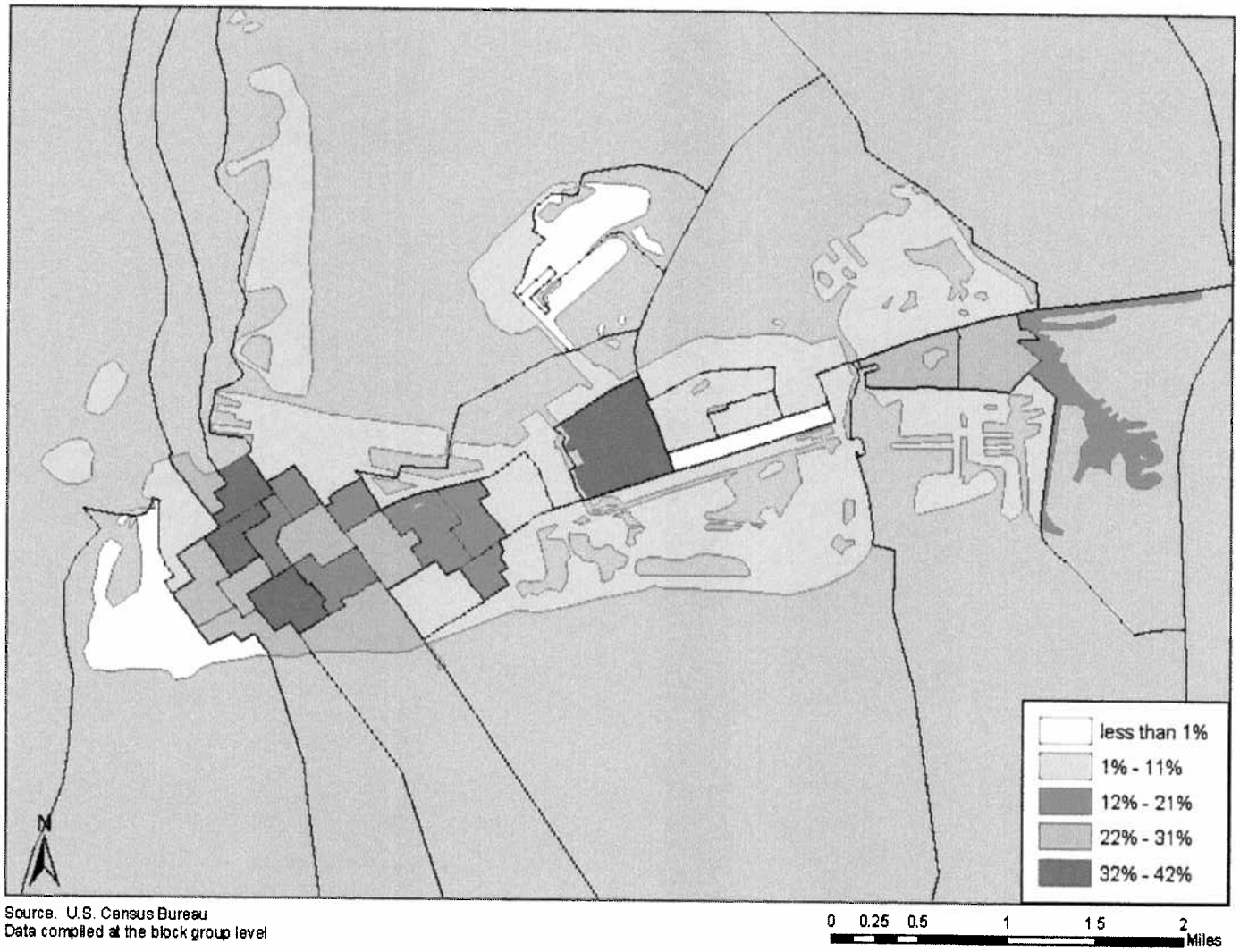
Table 1-11
Auto Ownership (2000)

Census Block Group	Percentage of Households Without a Vehicle
Tract 9721.00 BG 4 (NE Key West - New Town)	42%
Tract 9726.00 BG 2 (SW Key West - Old Town)	33%
Tract 9724.00 BG 2 (NW Key West – Old Town)	32%
Tract 9725.00 BG 1 (NW Key West – Old Town)	32%
Tract 9718.00 BG 4 (Stock Island)	31%

Employment Characteristics

Table 1-12 contains the distribution of employment in Key West by type of work. As expected, the highest concentration of jobs is in the retail sector (26 percent), followed by the food services (14 percent) and management positions (14 percent).

Map 1-7 Percent of Households With Zero Vehicles, Key West, Florida, 2000



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

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Table 1-12
Key West Employment by Type of Work (2000)

Type of Employment	Percentage of all Employment
Sales (Including Retail)	26%
Food Services	14%
Management	14%
Professional	12%
Construction	9%
Production & Transportation	6%
Healthcare	4%
Other	15%

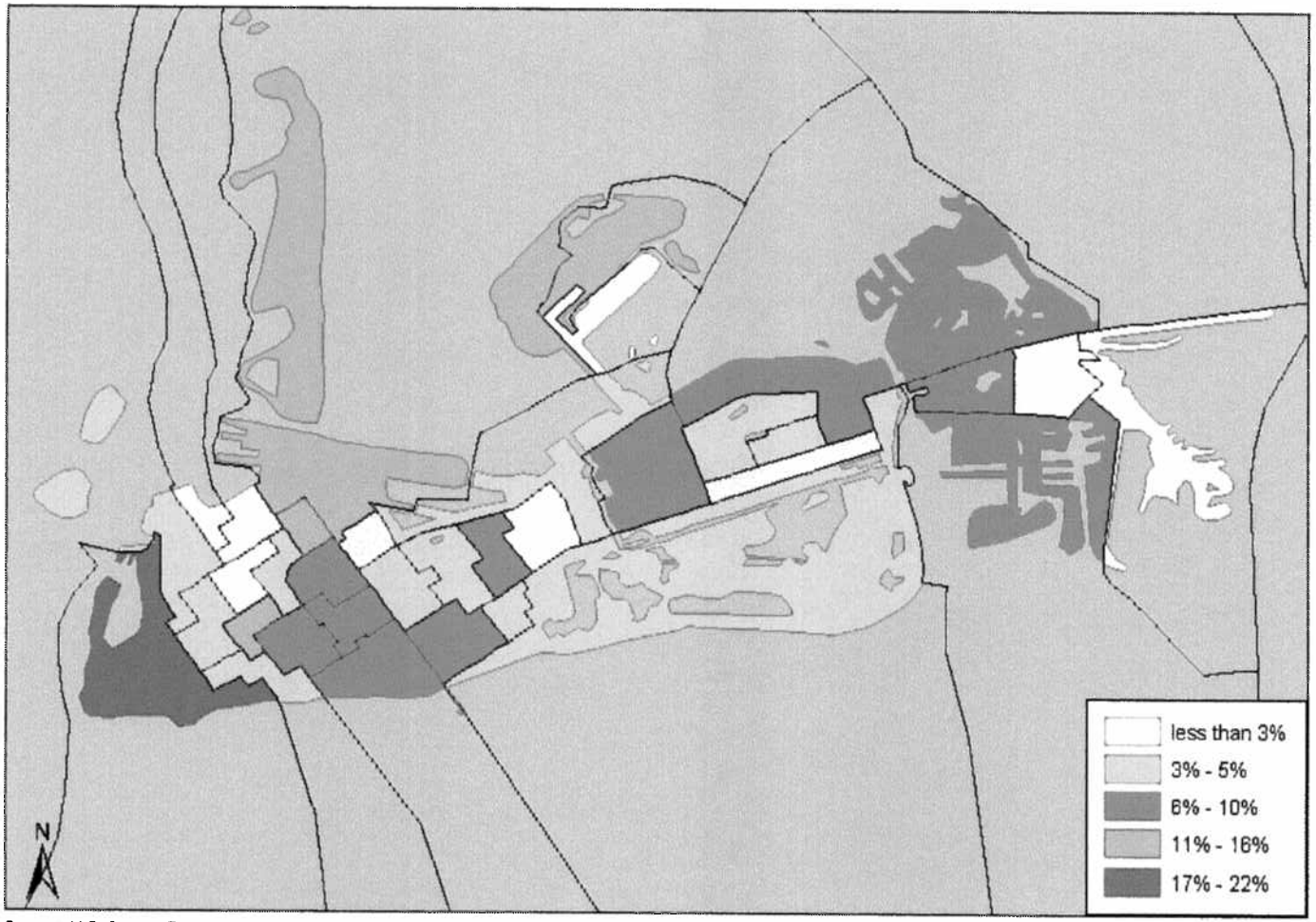
Work Commuting Patterns

Table 1-13 shows the 2000 work commute patterns in Key West. As illustrated in Table 1-13, four census block groups in Key West had concentrations of 10 percent or more workers who commuted 30 minutes or more to work in 2000. The census block groups with the highest concentration of workers with 30 minute or more commute times are located in the Old Town area and Sigsbee Park Naval Housing. Map 1-8 shows the distribution of census block groups where employees traveled 30 minutes or more to work in 2000.

Table 1-13
Work Commuting Patterns (2000)

Census Block Group	Percentage with Travel Times > 30 minutes
Tract 9725.00 BG 4 (SW Key West – Old Town)	14%
Tract 9723.00 BG 2 (SW Key West – Old Town)	13%
Tract 9724.00 BG 4 (SW Key West – Old Town)	12%
Tract 9721.00 BG 1 (N Key West – Sigsbee Naval Housing)	11%

Map 1-8 Percent of Workers With Commute Greater Than 30 Minutes, Key West, Florida, 2000



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

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Major Trip Attractors

When analyzing a public transit system, it is important to look at the spatial distribution of major trip attractors and generators in comparison to the existing route network. These areas usually attract a large number of people, resulting in a concentration of trips, which is more conducive to public transit use. Eight categories of trip generators and attractors were identified in Key West. These categories and the locations under each category are contained in Table 1-14. The locations are also identified in Map 1-9.

As illustrated in Map 1-9, the majority of the identified trip generators and attractors are either directly on a Key West Transit route or are within a short walking distance to the route.

Tourist and Visitor Levels

Key West experiences a huge influx of visitors annually. Traditionally, the visitor season for Key West is in the winter and spring months, however, the island is host to more and more visitors during other months of the year. According to the Key West Chamber of Commerce website, Key West received over 2.3 million visitors in 2003. That is up significantly from the 1.4 million visitors arriving on the island in 1996. Table 1-15 contains this information. Of the 2.2 million visitors to Key West, approximately 900,000 arrive by auto, and over 1 million visitors to Key West arrive as part of a cruise excursion.

Roadway and Traffic Conditions

Over the past decade the City of Key West has witnessed increased traffic volumes and parking demands. This growth has been particularly problematic in the community, as the island has limited access and tremendous historical significance. The major traffic corridor in Key West is U.S. 1, traveling along North Roosevelt Boulevard, Truman Avenue and Whitehead Street. The roadway narrows from four lanes to two lanes at the transition from North Roosevelt Boulevard to Truman Avenue as U.S. 1 enters the Old Town section of Key West. Travel in Key West is heavily oriented toward the northwest portion of the downtown area in the morning peak hour and away from downtown in the afternoon. Traffic is impacted significantly by residents who live on the eastern side of the island, as well as the increasing numbers of employees who live on other keys. In addition, many tourist vehicle trips to the Old Town area originate east of Key West. Level of service (LOS) deficiencies have been noted along the major traffic corridors and are described in Table 1-16.

Table 1-14
Key West Major Generators and Attractors

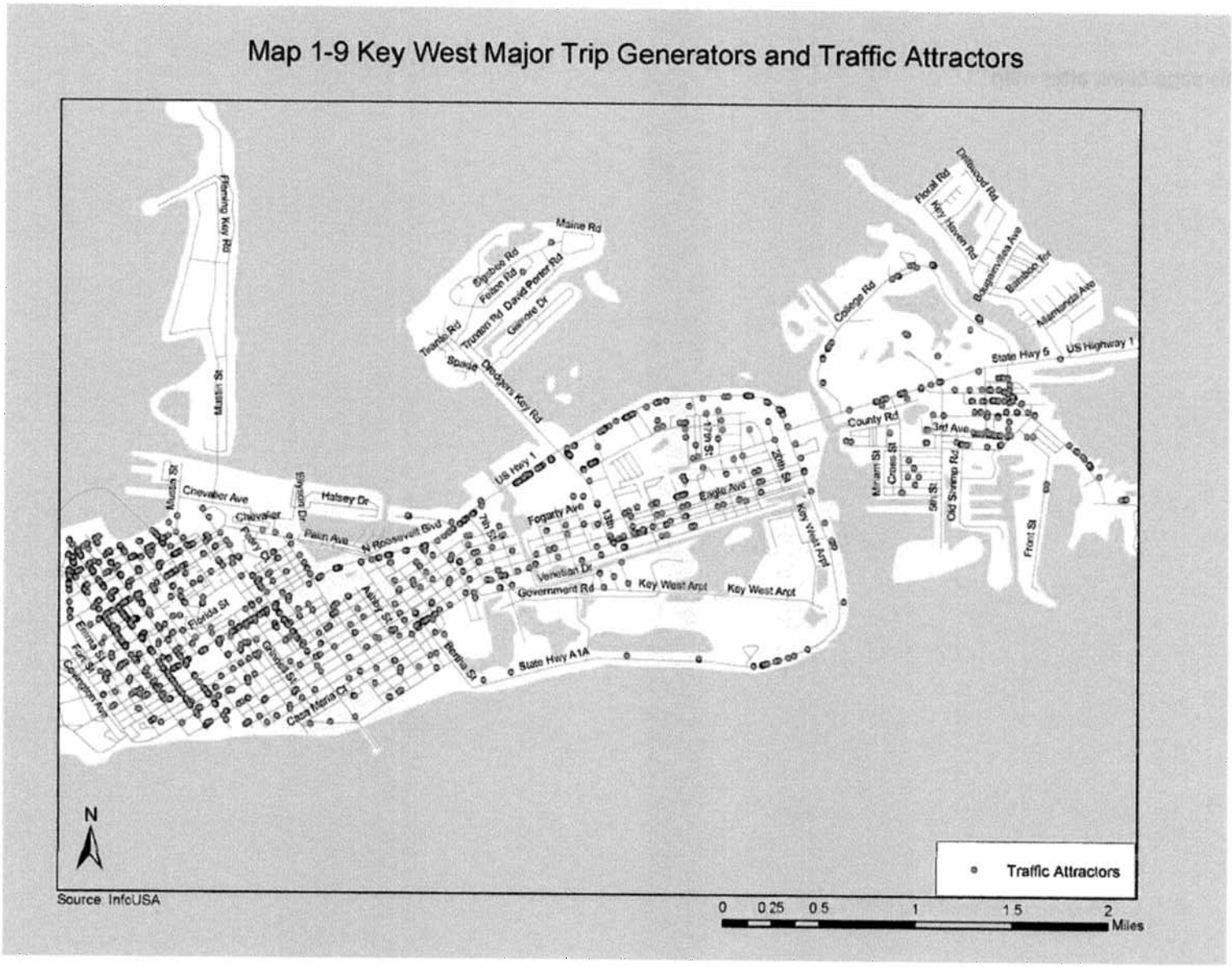
Schools	
Gerald Adams Elementary	Poinciana Elementary
Glynn Archer Elementary	Sigsbee School
Horace O'Bryant School	Florida Keys Community College
Key West High School	
Shopping Areas	
Searstown Mall	
Duval Street	Duval Square Shopping Center
Overseas Market	Laud's End Village
Visitor/Recreation Areas	
Mallory Square	Little White House Museum
Higgs Beach	Historic West Martello Tower
Smathers Beach	Historic East Martello Tower & Museum
Tennessee Williams Fine Arts Center	Ripley's Believe it or Not
Hemingway House	Clayton Sterling Baseball
Lighthouse & Military Museum	City Marina & Charter Boat Docks
Key West Aquarium	
Transportation	
Greyhound Bus Depot	Key West International Airport
Government & Facilities	
Truman Annex	Monroe County Courthouse
Children & Families Department Offices	Key West City Hall
Senior Citizen Plaza	Monroe County School Board Offices
Hospital	
Lower Keys Medical Center	
Housing Areas	
Bahama Village	Sigsbee Park
Porter Place	Poinciana Plaza
Peary Court	Ocean Walk
Visitor Accommodation Areas	
Hotel Row, N. Roosevelt Blvd	Hotel Row, S. Roosevelt Blvd
Hotel/Motel Area, Old Town	

Table 1-15
Key West Annual Visitor Characteristics (2003)

Method of Travel	Total Visitors
Cruise Ship Passengers	1,067,222
Key West Passenger Arrivals (Airport)	286,833
Arrival by Automobile (estimated)	900,000
Total Annual Visitors	**2,254,055**

Source: Key West Chamber of Commerce Website, 2004.

Map 1-9 Key West Major Trip Generators and Traffic Attractors



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The *1993 City of Key West Comprehensive Plan* contains information on state and federal roadway segments with existing and projected level of service (LOS) deficiencies. Table 1-16 contains information derived from the *Key West Comprehensive Plan's Traffic Circulation Element, updated in 2000.* Deficient roadway segments are identified in the table, noting existing LOS and notes whether transit service currently operates along each roadway segment.

Table 1-16
Roadway Deficiencies in Key West (2000)

Roadway Segment	2000 LOS	KW Transit Operating on Segment
Palm Ave, N. Roosevelt Blvd to White Street	E	YES
US 1, Cow Key Bridge to N. Roosevelt Blvd	D	YES
N. Roosevelt Blvd, US 1 to Kennedy Drive	D	YES
N. Roosevelt Blvd, Kennedy Blvd to Palm Ave	D	YES
S. Roosevelt Blvd, Bertha to US 1	D	YES
Duval St, Front St to South St	D	PARTIAL
Whitehead St, Front St to South St	D	PARTIAL
Flagler Ave, White St to Roosevelt Blvd	D	PARTIAL
United St, George St to Whitehead St	D	NO
Truman Ave, Palm Ave to Whitehead St	D	YES
Southard St, White St to Whitehead St	D	NO
Source: *1993 City of Key West Comprehensive Plan Traffic Circulation Element, updated 2000*		

PUBLIC INVOLVEMENT AND INPUT

An important part of the transportation planning process is identifying the opinions and perceptions of local officials, community leaders and the general public. The community's view of needs and the public transportation system provide insight into determining the goals and focus of the transit agency.

This TDP included an effort was made to interview and assess the perception of transit service in Key West. The following section summarizes the input received from local officials and community leaders in Key West. The discussion guide used for the interviews can be found in Appendix B.

On the issue of interest and support for transit in Key West, the interviewees agreed that there is not very much, and certainly not enough support for transit service in the City. While most agreed that getting people out of their cars and onto alternative transportation is one way to increase support for the system, all indicated they thought that would be difficult.

Many indicated that traffic continues to worsen, but it is especially difficult during the peak visitor periods, and special events. A few of those interviewed indicated that the transit system works well in providing special event transportation during the major events that occur on an annual basis in Key West.

The consensus of the interviewees was that the reliability of service was a detriment to gaining public support for the system. Most agreed that in order to improve the perception of transit service, the buses need to run on time and consistently when providing service. They also indicated that this wasn't the case to date. They felt that many people wait for buses that arrive late or not at all. They felt there should be an easier way to inform people about when a bus would arrive, be it by signage or other means.

Most agreed that the future role for transit service in Key West would be to provide service to the Lower and Middle Keys. There is a great need for this type of service, especially for getting service workers to jobs in the City.

Regarding funding, most of those interviewed suggested that it would be difficult to increase or dedicate funding for the system until the service becomes more reliable and consistent.

The consensus of the interviewees felt that it would be hard to get people out of their cars and bicycles/mopeds to utilize transit. Some of those interviewed felt that working with some of the larger local employers to provide incentives for service workers to use the transit offerings would be beneficial. All seemed to feel that the Lower Keys Shuttle service would be beneficial

in getting people out of their cars to travel to work in Key West. The short term goal to provide service to the middle and lower keys was identified as a good role for the future of Key West Transit.

There also was great input on the issue of competing transportation alternatives. The tourism industry provides shuttle service (Bone Shuttle and Old Town Trolley) to tourists in the downtown area. The overlap of service was discussed by a few interviewees. Many thought, however, that these competing services do provide very different and needed types of service, and do not currently impede upon one another's core service users.

Work Force Board Activities

This TDP update also outlined participation and input gathering efforts from the South Florida Work Force Board, which are summarized herein. No additional input was received other than that detailed in this section. In November 2002, the City of Key West and Monroe County formed a Transportation Study Committee consisting of members of the City, County, and other agencies that would meet at least once per month (or more often) to discuss and make recommendations on the needs of coordination and improvements in the area of transportation. This effort included outreach to members who already served on transportation coordination boards such as the required Local Coordinating Board/Community Transportation Coordinator (LCB/CTC), which is the Guidance Clinic of the Middle Keys, members of the City, including a member of the City Commission, staff members of Monroe County, including a County Commissioner, and a representative of the South Florida Work Force Board, Mr. James Malloch, Division Director/Social Services, Monroe County.

Members of the City of Key West DoT met with these other organizational representatives in locations including Marathon, Big Pine, and Key West for two years on a regular basis, resulting in a successful draft and eventual formal approval of a tri-party interlocal agreement with the City of Marathon, Monroe County, and the City of Key West to provide a Lower Keys Shuttle Bus Route. With the Work Force Board meetings held in Miami, the City of Key West depended on Mr. Malloch to serve as the liaison representative to all agencies, which he did well.

In addition, the City of Key West has maintained an active rapport with the local Work Force office in Key West and provides a monthly bus pass voucher billing program for clients and transportation services for those clients. The Work Force office directs their clients to Key West DoT with a form letter to receive monthly discounted bus passes for which the Work Force is billed on a monthly invoice program. This has served both agencies well for more than three years to date.

CHAPTER TWO:
KEY WEST TRANSIT GOALS AND OBJECTIVES

INTRODUCTION

One of the most important steps in the preparation of a TDP is the identification of goals and objectives for the transit system. Chapter Two summarizes policy issues identified in formal discussion and interviews CUTR held with community leaders, the TDP review committee and City staff. The issues highlighted during these activities form the basis for the proposed goals for the Key West transit system. Initiatives that could be implemented to help the transit agency reach these goals will later appear as recommendations in the final Chapter of the TDP.

Goal 1: Provide safe, secure comfortable public transit option to the public.

To maintain ridership and have the ability to increase the potential pool of discretionary (choice) transit users, transit systems must provide amenities which increase riders' ease of utilizing the system as well as their level of comfort. These amenities include bus shelters and benches, information kiosks and community outreach/education programs. Another component of this goal involves continuing marketing efforts to increase the visibility of the Key West Transit System. Additional community awareness of the services available may be able to foster a significant increase in ridership.

To better serve the tourism industry in Key West, the transit system should explore the establishment of operational schedules rather than published route timetables. This would best coincide with a significant increase in frequency for the current system. If all routes had frequencies of 15 or 20 minutes, printed schedules would not be necessary, as all bus stops signs would read, "Bus arrives every 15 (or 20) minutes." Based on traffic conditions and congestion, established routes may require 3 buses for a 20 minute frequency in November, while in March, a peak tourist period, the same route may require 6 buses to provide the 20 minute frequency.

Also, alternative fuel vehicles are still an improving technology and should be followed for possible use in the system. It can be a more pleasant experience for the riding public and also addresses issues of environmental pollution.

Goal 2: Provide service options to help reduce vehicular traffic and congestion in Key West.

Key West experiences traffic congestion in the morning and afternoon peak periods. Much of this congestion is attributed to workers who must drive in to Key West from the homes in the Lower and Middle Keys. The high cost of living in the City of Key West causes many workers to live in places north of the City. Establishing partnerships which can lead to joint transportation ventures would play a major role in alleviating the City's considerable traffic congestion issues. Providing park and ride facilities in the Middle/Lower Keys with service to the City would also work towards achieving this goal.

Exploring contracting opportunities with private sector transportation services could assist in the delivery of later evening service, intensive levels of service during major tourism events, and even with employer transportation services – providing opportunities to contract with City employers to provide transit service to their homes in the lower/middle keys.

To further increase use of transit in the City of Key West, an increase in frequency to 15 to 30 minutes would greatly benefit the riding public. To address this, additional buses should be purchased and added into service.

Goal 3: Secure long term funding assistance for public transit system.

This goal emphasizes the long-term financial feasibility of the Key West Transit System. Securing a dedicated funding source and developing programs to boost revenue are important activities that need to be addressed for the long-term health of the transit system. Possible long term funding sources include gas taxes, property tax assessments, dedicating a portion of local sales tax, and tourist (hotel) taxes. Opportunities to forge public/private partnerships as well as contracting activities may also boost the long term health of the transit system. Also investigate working with the Monroe County and neighboring jurisdictions in the provision of service, especially when working to implement the Lower Keys Shuttle service.

Goal 4: Provide transit service emphasizing intermodal connections.

Key West Transit should coordinate closely with both the cruise ship industry/ferry service and airport to provide connecting services to those tourists arriving via these methods. Seamless transportation connections can dramatically boost ridership at the same time eliminating the need for tourist to choose taxi service, car rental service and even bike and moped service. A key component in providing this seamless service would be close coordination with the transportation providers in adapting the transit bus schedules and services. Providing transit

services within 10 to 15 minutes of arrival at these facilities would provide a tremendous service to arriving tourists.

Providing cruise/ferry facilities, the airport and all highly visited tourist locations (hotels, points of interest) access to current transit marketing materials is critical in making tourists aware of the services available in the City of Key West. Working with the Chamber of Commerce can help the transit agency ensure marketing materials are located in and around the high traffic tourist locations.

Goal 5: Implement innovative solutions to solve congestion and funding issues.

Key West Transit now offers unlimited ride passes for daily, weekly and monthly travel of the system. Consideration of a fare reduction to $0.50 may further attract ridership. Emphasis should be provided on increasing the number of outlets where these passes can be purchased, in addition to the bus driver where it currently occurs. Also, marketing the 31-day passes to employers for employee use can increase the revenue received by the farebox. To further address funding issues, staff should study options for alternate funding sources. Also, it is important for Key West Transit to review the actual running times of service to ensure customer satisfaction. Staff should seek ways to conduct time checks on all routes at least on a quarterly basis. Changing congestion conditions can affect the delivery of scheduled service.

Table 2-1
Key West Transit Goals & Objectives

Goal 1	**Provide safe, secure, reliable and comfortable public transit option to the public.**
	• Improve customer information systems for schedule and system information. • Seek to increase service reliability for passengers. • Provide adequate lighting and comfort (benches/shelters) at major transit stops. • Address ADA issues – providing amenities for bus stops. • Consider complementary services for residents versus tourist visitors. • Investigate use of alternative fuel vehicles.
Goal 2	**Provide service options to help reduce vehicular traffic and congestion in Key West.**
	• Seek to establish fixed route service to the Lower Keys. • Seek to establish park and ride facilities in the Lower/Middle Keys and provide shuttle services to City core. • Explore private sector contracting opportunities for delivery of services. • Increase service frequency.
Goal 3	**Secure long term funding assistance for public transit system.**
	• Strive to establish a cost-feasible transit system by securing long-term dedicated funding sources for the transit system. • Work with neighboring jurisdictions in the delivery of transit service.
Goal 4	**Provide transit services emphasizing intermodal connections.**
	• Coordinate with other transportation providers (cruise/ferry terminals, airport) to offer compatible scheduling for passenger convenience. • Provide marketing materials in highly visited tourist locations.
Goal 5	**Implement innovative solutions to solve congestion and funding issues.**
	• Revamp pricing and fare structure. • Study alternate funding sources. • Establish an ongoing service planning process.

CHAPTER THREE:
KEY WEST TRANSIT PERFORMANCE REVIEW

INTRODUCTION

This chapter summarizes a fundamental task in the development of the TDP, which is the performance evaluation of Key West Department of Transportation's (KWDoT) existing fixed-route transit services, which is known as Key West Transit. This performance evaluation was conducted using two separate methods. First, a trend analysis was conducted, which involves an examination of the system's performance over a five-year time period (fiscal years 1999 through 2003). The second method of analysis is the peer review, which compares the performance of Key West with that of other selected Florida and non-Florida peer transit systems that share similar vehicle fleet sizes, service characteristics, and operating environments.

The Purpose of Performance Review

Because performance analysis is only one method of evaluating performance and is limited to those aspects included in the analysis, one should exercise considerable caution in interpreting the results. These analyses are particularly strong in reviewing cost effectiveness and efficiency; however, they do not report on the extent to which other objectives of the transit system are being fulfilled. For example, the performance evaluation will not directly measure several relevant considerations such as passenger satisfaction with regard to levels of service, taxpayer and public attitudes toward the agency, employee morale, success in attaining minority hiring or contracting goals, quality of planning, contributions to economic development, air quality improvements, or other goals that may be important to the agency. Also, several aspects of quality of service are not measured in performance reviews. These include vehicle cleanliness and comfort, operator courtesy, on-time performance, quality of marketing and passenger information support, and level of satisfaction with hours of operations, frequency of service, and geographic coverage of the service.

In addition to understanding the limits of this analysis, one should use caution in interpreting the meaning of the various measures. The performance review does not necessarily provide information regarding which aspects of performance are within control of the agency and which measures are not.

Factors affecting transit performance include:

Management/Staff
- Skills and experience
- Training
- Leadership
- Morale
- Service design
- Service quality

Local Policy Decisions
- Land use
- Urban design
- Parking
- Zoning
- Service levels
- Fare policy

Operating Environment
- Density
- Land use patterns
- Congestion
- Geography
- Transit dependency

Performance reviews are a useful and important tool in monitoring and improving transit system performance. However, it should be recognized that the results of trend and peer analyses are only a starting point for fully understanding the performance of transit systems. The issues identified as a result of the analyses provide the basis for a series of questions that can lead to an enhanced understanding of the "hows" and "whys" of system performance.

Performance Review Database

To receive federal funds, transit properties are required to report a variety of data in a standardized format, resulting in what is known as a National Transit Database (NTD) report. 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. The data are for the fiscal year used by each transit system. For most Florida properties, the fiscal year runs from October 1 through September 30. For other properties, especially those outside the state, the fiscal year may be different.

Data Reliability - All NTD data submitted to the Federal Transit Administration (FTA) are subject to considerable review and validation through manual and automated methods. Each report is thoroughly examined to identify errors, questions, and inconsistencies. FTA identifies problems and requires each reporting agency to respond to these problems before the final report is accepted.

For this evaluation, data were taken from the NTD online database and reporting system, the Florida Transit Information System (FTIS) software, and directly from Key West staff. Fiscal year (FY) 2003 NTD data are presented for the system in the trend analysis sections; however, FY 2002 data are the most recent available for transit systems outside Florida. With the exception of data on the inflation rate, all information was provided by the transit systems.

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 by the FTA. 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 to work and a second passenger trip to return home. Likewise, a person transferring from one bus to another is considered to make two passenger trips to get to his or her destination. Despite 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. One example includes how employees are categorized among administrative, transportation, and maintenance tasks within different agencies. Other discrepancies can result from differences in the organizational structure of the agency and the allocation of responsibilities among the various governmental entities within the service area. For example, street sweeping and garbage pickup at park-and-ride and other transit facilities may be provided at no cost by a given jurisdiction or may be a contract or in-house cost of the transit system. Legal services, computer services, engineering and design support, administrative support, and other costs are often shared costs that may or may not be accurately allocated between the transit system and a parent governmental body.

The national inflation rate, as defined by the percentage change in the Consumer Price Index (CPI) for all items (including commodities and services) from year to year, was used to deflate cost indicators so that they could be presented in real terms. In general, service and labor costs tend to increase at a faster rate than commodity prices. Therefore, transit operating expenses, which are predominantly composed of service and labor costs, are expected to increase somewhat faster than inflation even if the amount of service provided is not increased.

Performance Indicators and Measures - The evaluation measures that are used throughout the performance review are divided into three major categories: performance indicators, effectiveness measures, and efficiency measures. Performance indicators report absolute data in the selected categories that are required by NTD reporting. These tend to be key indicators of overall transit system performance. Effectiveness measures typically refine the data further and indicate the extent to which various service-related goals are being attained. For example,

passenger trips per capita is an indicator of the effectiveness of the agency in meeting transportation needs. Efficiency measures involve reviewing the level of resources (labor or cost) required to achieve a given level of output. It is possible to have very efficient service that is not effective or to have highly effective service that is not efficient.

The substantial amount of data available through NTD reporting provides an opportunity to develop a large number of measures. Sets of performance indicators, effectiveness measures, and efficiency measures that are believed to provide a good representation of overall transit system performance have been selected for this evaluation. Table 3-1 lists the selected indicators and measures included in this report for fixed-route transit services and also provides subcategories, where appropriate.

Table 3-1
Selected Performance Review Indicators and Measures

Performance Indicators	Effectiveness Measures	Efficiency Measures
Service Area Population Service Area Size (square miles) Passenger Trips Vehicle Miles Revenue Miles Revenue Hours Total Operating Expense Total Operating Expense (1999 $) Operating Revenue Vehicles Available for Maximum Service Vehicles Operated in Maximum Service Fuel Consumption	**Service Supply** Vehicle Miles Per Capita **Service Consumption** Passenger Trips Per Capita Passenger Trips Per Revenue Mile Passenger Trips Per Revenue Hour **Safety and Reliability** Revenue Miles Between Service Interruptions **Quality of Service** Average Age of Fleet (in years)	**Cost Efficiency** Operating Expense Per Capita Operating Expense Per Passenger Trip Operating Expense Per Revenue Mile Operating Expense Per Revenue Hour **Operating Ratios** Farebox Recovery Ratio **Vehicle Utilization** Revenue Miles Per Vehicle Mile Revenue Miles Per Peak Vehicle **Fuel Efficiency** Vehicle Miles Per Gallon **Fare** Average Fare

OVERVIEW OF SYSTEM

Key West's transit system was originally established in 1972 as the Key West Port and Transit Authority. The system, now known as Key West Transit, is a department of the City of Key West. It is managed by the Manager of Transportation, who reports to the Utilities Director. The Utilities Director reports to the City Manager who, in turn, reports to the Key West City Commission, which serves as an advisory board to the transit system. The City Commission is comprised of seven members: representatives from six voting districts and the Mayor, elected at-large. An organizational chart appears in Figure 3-1 on the following page.

Key West provides fixed-route motorbus service to the City of Key West and to Stock Island, which is outside the Key West city limits but in Monroe County. Monroe County provides demand-response services throughout the county, including the City of Key West. The system also operates a 250-space park-and-ride facility. The current fixed-route network includes six fixed routes that operate seven days per week starting as early as 6:00 a.m. and ending as late as 11:30 p.m. The routes operate as one-way loops on Key West and Stock Island.

To present a basic overview of the transit system, the selected performance indicators, effectiveness measures, and efficiency measures are reported for the system in Table 3-2, on the following page. The source of the data is Key West's FY 2001, 2002 and 2003 NTD reports, compiled directly from Key West staff and from FTIS software.

Table 3-2 shows that ridership declined approximately 15 percent between FY 2001 and FY 2003. This variation in ridership is at least partially attributable to the implementation of new farebox equipment that is believed to provide more accurate accounting of ridership. As Table 3-2 indicates, the numbers of vehicle miles and revenue miles were both equal to 279,790 in FY 2002 and 278,425 in FY 2003. Key West attributes this to the fact that the vehicles are available to pick up passengers immediately upon leaving the lot, and drivers do not post a "not in service" sign when returning to the lot. Total operating expenses spiked in FY 2002, and then decreased in FY 2003 for an overall change of less than one percent between FY 2001 and FY 2003. Another indicator in Table 3-2 is operating revenue, which grew more than 84 percent between FY 2001 and FY 2003, with the most significant increase from $186,113 in FY 2002 to $265,892 in FY 2003 (the result of a fare increase). Between FYs 2001 and 2003, Key West decreased its vehicles available for maximum service, but increased its number of peak vehicles from five to six (Key West began operating an additional route). Another item of note from Table 3-2 is significant increase in the farebox recovery ratio, which was 17.24 percent in FY 2003. This increase is largely due to the fare increase ($0.75 to $1.00) implemented in April 2003. The fare increase is also reflected in the increase in the average fare, to $0.79 in FY 2003, as shown in Table 3-2.

Figure 3-1
Key West Transit – Organizational Chart

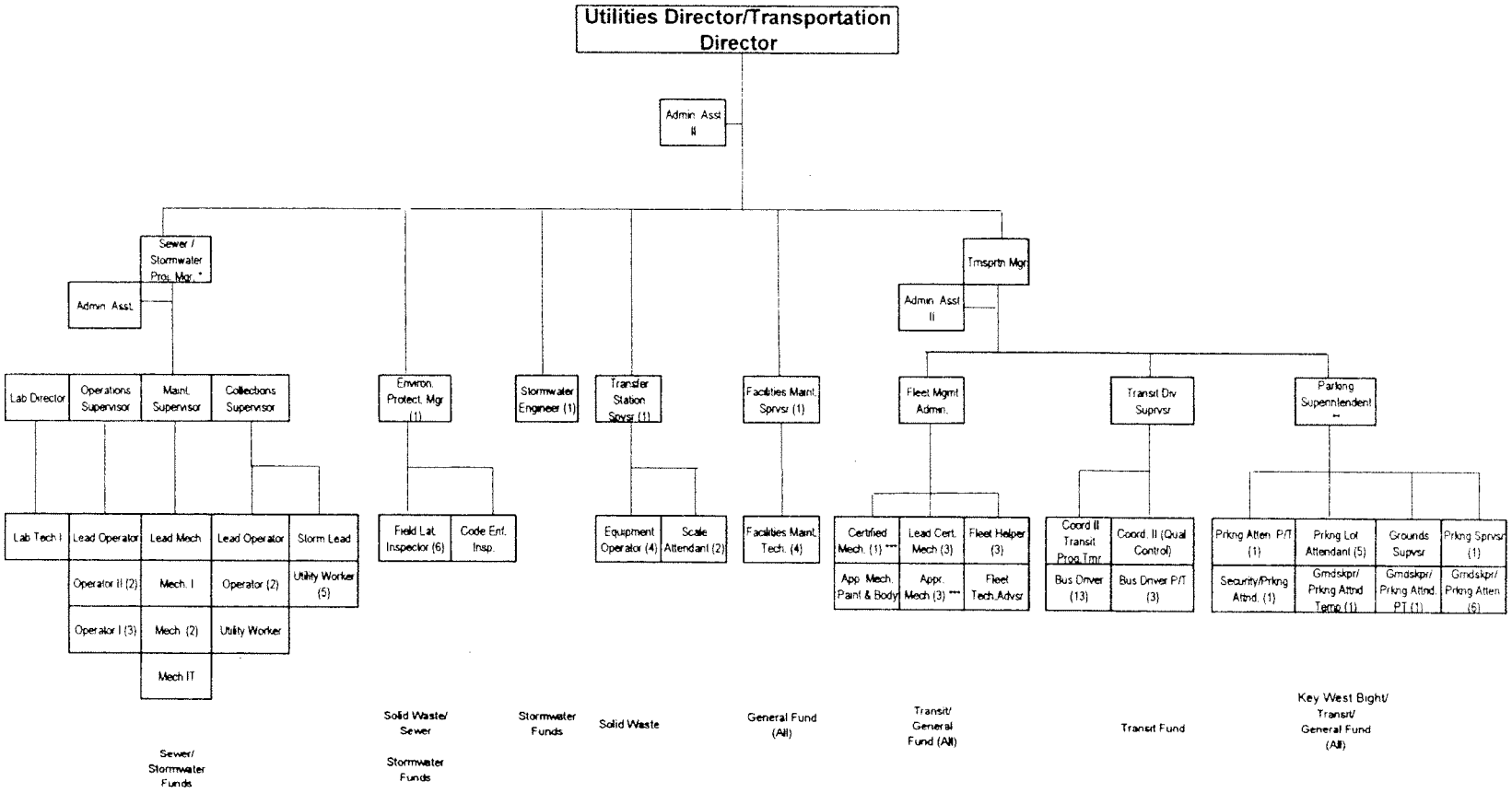


Table 3-2
Overview of Key West Transit – FYs 2001 – 2003

Selected Indicators and Measures	FY 2001	FY 2002	FY 2003	% Change FYs 2001-2003
Performance Indicators				
Service Area Population	32,480	32,480	32,480	0.0%
Service Area Size (square miles)	4.83	6.06	6.06	25.5%
Passenger Trips	362,479	318,670	309,889	-14.5%
Vehicle Miles	269,677	274,790	278,425	3.2%
Revenue Miles	227,164	274,790	278,425	22.6%
Revenue Hours	15,176	22,896	30,784	102.8%
Total Operating Expense	$1,293,756	$1,713,321	$1,292,182	-0.1%
Operating Revenue	$144,435	$186,113	$265,892	84.1%
Vehicles Available in Maximum Service	10	10	8	-20.0%
Vehicles Operated in Maximum Service	5	6	6	20.0%
Gallons of Fuel Consumed	18,290	86,405	79,550	334.9%
Effectiveness Measures				
Vehicle Miles Per Capita	8.30	8.46	8.57	3.2%
Passenger Trips Per Capita	11.16	9.81	9.54	-14.5%
Passenger Trips Per Revenue Mile	1.60	1.16	1.11	-30.4%
Passenger Trips Per Revenue Hour	23.89	13.92	10.07	-57.8%
Revenue Miles Between Interruptions	2,611	4,362	2,078	-20.4%
Average Age of Fleet (in years)	0.40	2.40	1.60	300.0%
Efficiency Measures				
Operating Expense Per Capita	$39.83	$52.75	$39.78	-0.1%
Operating Expense Per Passenger Trip	$3.57	$5.38	$4.17	16.8%
Operating Expense Per Revenue Mile	$5.70	$6.24	$4.64	-18.5%
Farebox Recovery Ratio	9.14%	9.85%	17.24%	88.6%
Revenue Miles Per Vehicle Mile	0.84	1.00	1.00	18.7%
Revenue Miles Per Peak Vehicle	45,433	45,798	46,404	2.1%
Vehicle Miles Per Gallon	14.74	3.18	3.50	-76.3%
Average Fare	$0.33	$0.53	$0.79	139.4%

KEY WEST TRANSIT -- TREND ANALYSIS

A fixed-route trend analysis for the fiscal years 1999 through 2003 was conducted to follow the performance of Key West's fixed-route motorbus service over a five-year time period. Data used in this analysis are from the system's NTD reports as well as the FTIS software. Performance indicators and measures are grouped into categories and presented in tabular form (Tables 3-3 through 3-5), along with a brief discussion of the data. The percent change over the five-year trend period in each indicator and measure is also shown in the tables. The trends are also illustrated graphically (Figures 3-3 to 3-25).

Table 3-3
Key West Transit Performance Indicators

Indicator	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	% Change 2002 - 2003	% Change 1999 - 2003
Passenger Trips	343,354	350,222	362,479	318,670	281,717	-11.6%	-18.0%
Vehicle Miles	264,390	269,677	269,677	279,790	278,425	-0.5%	5.3%
Revenue Miles	216,224	220,548	227,165	274,790	278,425	1.3%	28.8%
Revenue Hours	14,445	14,737	15,176	22,896	30,784	34.5%	113.1%
Total Operating Expense	$1,045,485	$1,212,935	$1,293,756	$1,713,321	$1,292,182	-24.6%	23.6%
Total Operating Expense (99$)	$1,045,485	$1,173,051	$1,232,149	$1,586,408	$1,170,455	-26.2%	12.0%
Operating Revenue	$122,568	$145,490	$144,435	$186,113	$265,892	42.9%	116.9%
Vehicles Available for Maximum Service	12	12	10	10	8	-20.0%	-33.3%
Vehicles Operated in Maximum Service	5	5	5	6	6	0.0%	20.0%
Gallons of Fuel Consumed	53,670	54,622	18,290	109,500	79,550	-27.4%	48.2%

Ridership on the system grew slightly between FY 1999 and FY 2001, as shown in Table 3-3. The number of passenger trips then began to decline over the trend period, falling to 281,717 trips in 2003. Key West acquired new farebox equipment which is believed to provide more accurate ridership counts than in previous years, and it is likely that this explains the ridership trend. As the table also shows, the numbers of vehicle miles and revenue miles were both equal to 279,790 in FY 2002 and 278,425 in FY 2003. As discussed previously, this is attributed to the fact that the vehicles are available to pick up passengers immediately upon leaving the lot, and drivers do not officially go out of service when returning to the lot.

Table 3-3 also includes information on the system's expenses and revenues. According to the table, total operating expense increased 24 percent in nominal terms between FYs 1999 and 2003; when adjusted for inflation, the increase was only 12 percent. Total operating expense increased sharply in FY 2002, and then decreased in FY 2003 to $1,292,182. Operating revenue includes passenger fare revenues and, in Key West's case, auxiliary transportation revenues. The objective in presenting operating revenue is to show the amount of revenue directly generated by the transit system, without subsidies. Key West's operating revenue more than doubled over the five-year period, increasing 117 percent, primarily the result of a fare increase ($0.75 to $1.00) implemented in April 2003.

After several years of providing its service with five vehicles in peak service, Key West increased the number of peak vehicles to six in FY 2002, as shown in Table 3-3. During the trend period, Key West added one route to its network, and now operates six total routes. The number of vehicles available for maximum service declined over the trend period, from 12 in FY 1999 to 8 in FY 2003. The gallons of fuel consumed by the fleet is also noted in Table 3-3. Reported fuel consumption was volatile over the trend period, possibly the result of some measurement error in FY 2002, ultimately increasing approximately 48 percent from FY 1999 to FY 2003. The trends for the performance indicators are shown in Figures 3-3 to 3-10.

Key West Transit -- Trend Graphics

Figure 3-3
Passenger Trips

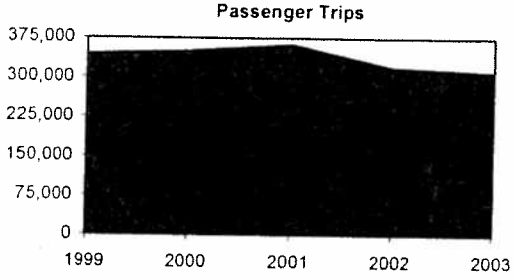


Figure 3-4
Vehicle Miles

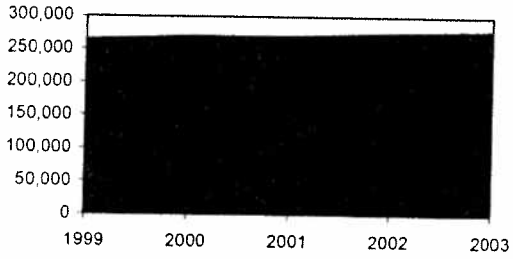


Figure 3-5
Revenue Miles

Figure 3-6
Revenue Hours

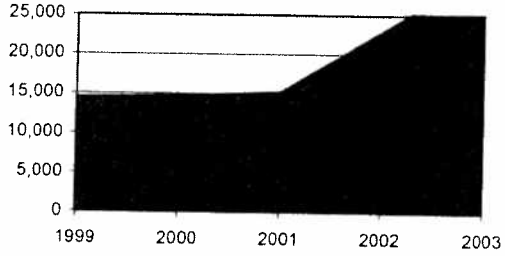


Figure 3-7
Total Operating Expense

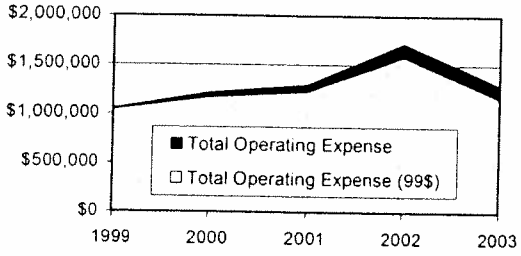


Figure 3-8
Operating Revenue

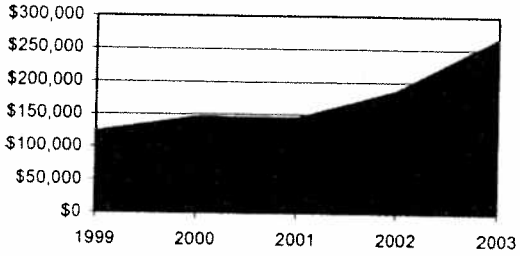


Figure 3-9
Vehicles in Service

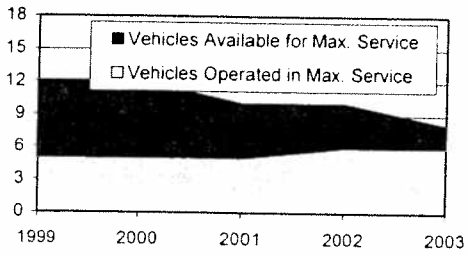


Figure 3-10
Gallons of Fuel Consumed

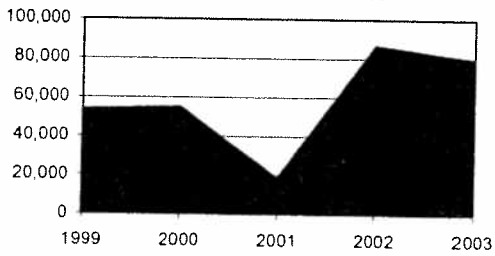


Table 3-4
Key West Transit Effectiveness Measures

Measure	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	% Change 2002 - 2003	% Change 1999 - 2003
Vehicle Miles Per Capita	8.14	8.31	8.30	8.46	8.57	1.3%	5.3%
Passenger Trips Per Capita	10.57	10.79	11.16	9.81	8.67	-11.6%	-18.0%
Passenger Trips Per Revenue Mile	1.59	1.59	1.60	1.16	1.11	-4.3%	-30.2%
Passenger Trips Per Revenue Hour	23.77	23.77	23.88	13.92	10.07	-27.7%	-57.6%
Revenue Miles Between Interruptions	2,485	2,424	2,611	4,362	2,078	-52.4%	-16.4%
Average Age of Fleet (in years)	6.25	7.25	0.40	2.4	1.6	-33.3%	-74.4%

As shown in Table 3-4, vehicle miles per capita, a measure of service supply, increased approximately five percent over the period from FY 1999 to FY 2003. Three measures of service consumption have been included in Table 3-4: passenger trips per capita, passenger trips per revenue mile, and passenger trips per revenue hour. Passenger trips per capita declined 18 percent between FY 1999 and FY 2003. During this time, Key West's service area population remained constant, while ridership fell 18 percent. Passenger trips per revenue mile declined 30 percent from FY 1999 to FY 2003, and passenger trips per revenue hour declined more than 57 percent during this same time period. As discussed previously, the ridership decline may not be as large as these numbers show—Key West's new fareboxes provide more accurate ridership information than in the past.

The number of revenue miles between service interruptions (presently known in the NTD as "revenue vehicle system failures") is an overall measure of reliability. A relatively large value for this measure indicates a relatively small number of service interruptions, which translates to a higher level of reliability. As shown in Table 3-4, this measure remained relatively stable over the trend period from FY 1999 to FY 2003, but with an increase in FY 2002. Key West's number of service interruptions decreased from 87 in FY 2001 to 63 in FY 2002, but then increased again to 134 in FY 2003.

The average age of Key West's vehicle fleet decreased more than 74 percent from FY 1999 to FY 2003, as noted in Table 3-4. In 2003, Key West received seven new Gillig vehicles. Trends for each of the effectiveness measures are also be exhibited in Figures 3-11 to 3-16.

Key West Transit -- Trend Graphics

Figure 3-11
Vehicle Miles Per Capita

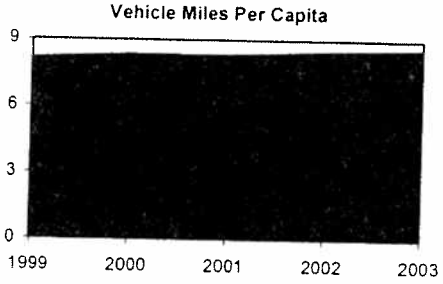


Figure 3-12
Passenger Trips Per Capita

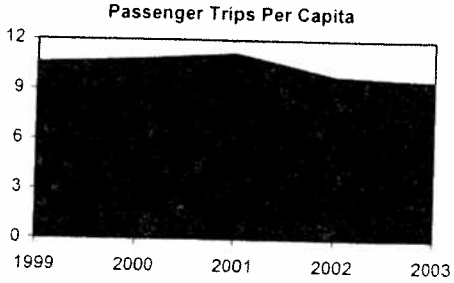


Figure 3-13
Passenger Trips Per Revenue Mile

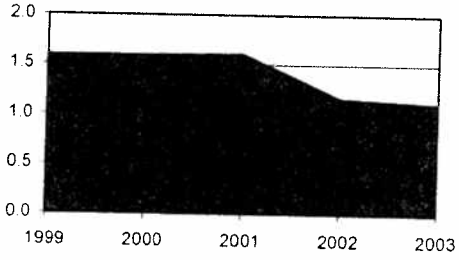


Figure 3-14
Passenger Trips Per Revenue Hour

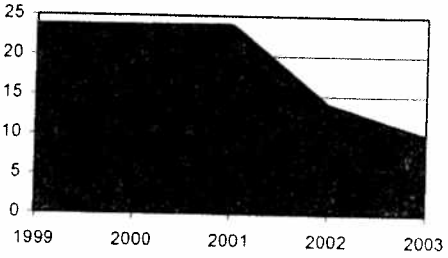


Figure 3-15
Revenue Miles Between Interruptions

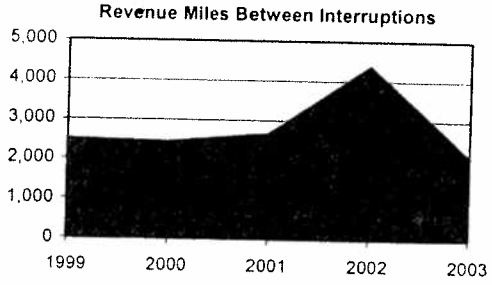


Figure 3-16
Average Age of Fleet (in years)

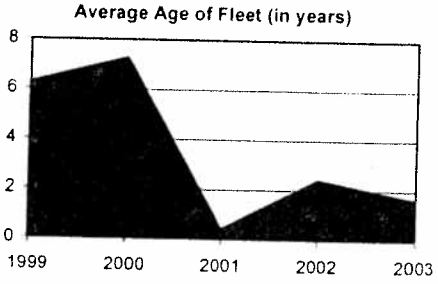


Table 3-5
Key West Efficiency Measures

Measure	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	% Change 2002 - 2003	% Change 1999 - 2003
Operating Expense Per Capita	$32.20	$37.35	$39.83	$52.75	$39.78	-24.6%	23.5%
Operating Expense Per Passenger Trip	$3.04	$3.46	$3.57	$5.38	$4.59	-14.7%	51.0%
Operating Expense Per Revenue Mile	$4.84	$5.50	$5.70	$6.24	$4.64	-25.6%	-4.1%
Operating Expense Per Revenue Hour	$72.38	$82.32	$85.25	$74.83	$41.98	-43.9%	-42.0%
Farebox Recovery Ratio	11.66%	9.27%	9.14%	9.85%	17.24%	75.0%	47.9%
Revenue Miles Per Vehicle Mile	0.82	0.82	0.84	1.00	1.00	0.0%	22.0%
Revenue Miles Per Peak Vehicle	43,245	44,110	45,433	45,798	46,404	1.3%	7.3%
Vehicle Miles Per Gallon	4.93	4.94	14.74	2.51	3.50	39.4%	-29.0%
Average Fare	$0.36	$0.32	$0.33	$0.53	$0.79	49.1%	119.4%

Table 3-5 indicates that, between FYs 1999 and 2003, operating expense per capita increased nearly 24 percent, reflecting the increase in operating expense over the trend period (service area population remained constant during this time). Operating expense per passenger trip increased 51 percent between FYs 1999 and 2003, reflecting the decline in ridership and increase in operating expenses. The two remaining operating ratios, operating expense per revenue mile and operating expense per revenue hour, decreased 4 percent and 42 percent, respectively, over the period FY 1999 to FY 2003, as shown in Table 3-5.

Key West's farebox recovery ratio, which measures the ratio of passenger fare revenues to operating expenses, declined in the earlier part of the trend period, but then increased significantly between FY 2002 and FY 2003, as evidenced in Table 3-5. This ratio increased to more than 17 percent mainly due to the fare increase (from $0.75 to $1.00) in April 2003.

One measure of vehicle utilization is revenue miles per vehicle mile, which gives an indication of deadhead mileage, and another is revenue miles per peak vehicle. Values for the measure of revenue miles per vehicle mile generally fall between 0.90 and 1.00. Table 3-5 shows that Key West value for this measure was quite stable in the early part of the trend period, but equaled 1.00 in FY 2002 and FY 2003, indicating that Key West reported the same value for vehicle miles and revenue miles. As mentioned previously, Key West attributes this to the fact that the vehicles are available to pick up riders immediately upon leaving the lot, and drivers do not post a "not in service" sign during the return trip to the lot. Revenue miles per peak vehicle increased more than seven percent during the trend period.

Fuel efficiency was examined in terms of vehicle miles per gallon of fuel consumed. Table 3-5 indicates that this measure has exhibited volatility over the trend period, decreasing significantly in FY 2002 (possibly the result of measurement error). The average fare per passenger trip increased significantly over the trend period due to the fare increase that was implemented in April 2003. Figures 3-17 to 3-25 graphically display the trends for the efficiency measures listed in Table 3-5.

Key West Transit -- Trend Graphics

Figure 3-17
Operating Expense Per Capita

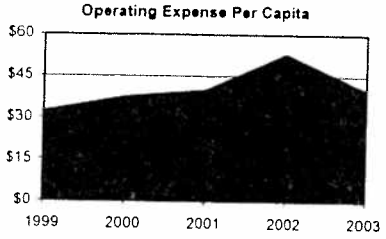


Figure 3-18
Operating Expense Per Passenger Trip

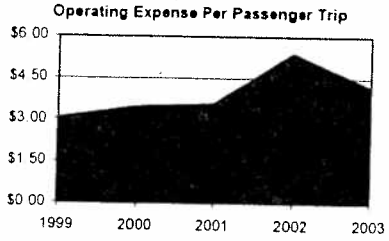


Figure 3-19
Operating Expense Per Revenue Mile

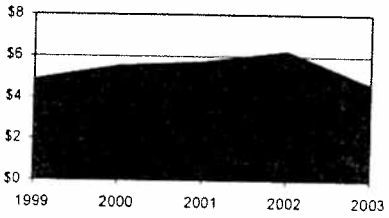


Figure 3-20
Operating Expense Per Revenue Hour

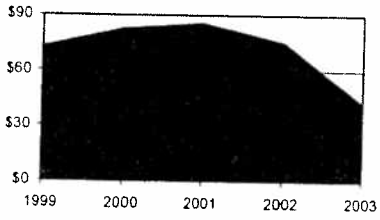


Figure 3-21
Farebox Recovery Ratio

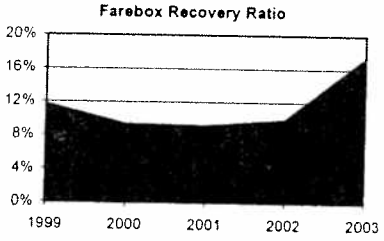


Figure 3-22
Revenue Miles Per Vehicle Mile

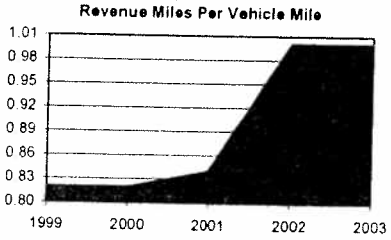


Figure 3-23
Revenue Miles Per Peak Vechicle

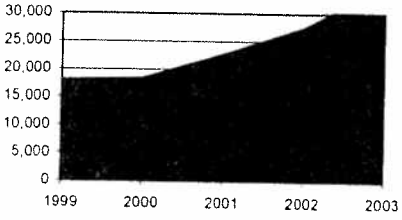


Figure 3-24
Vehicle Miles Per Gallon

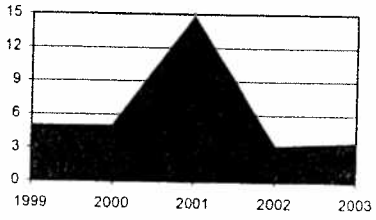
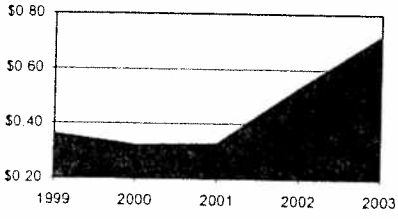


Figure 3-25
Average Fare



KEY WEST TRANSIT -- PEER REVIEW ANALYSIS

A fixed-route peer review analysis was conducted to compare Key West's performance with other similar transit systems in Florida and the United States. This analysis consists of an evaluation based on the peer selection process used in *2000 Performance Evaluation of Florida's Transit Systems* prepared by CUTR for FDOT. The actual peer group used is a derivation of the 1-to-9 and 10-to-49 vehicle groups from the *Performance Evaluation* study. The final peer group consists of systems operating between 3 and 11 fixed-route motorbus vehicles in maximum service (as of FY 2002). Data presented for Key West and its peer systems represent FY 2002, the last fiscal year for which validated NTD data are available for all the systems included in the analysis. The source of the data used in this section is the Florida Transit Information System (FTIS) software, which includes a comprehensive NTD database, and Key West's NTD reports obtained directly from Key West staff. This analysis is presented in Tables 3-7 through 3-9. Figures 3-25 through 3-50 illustrate the data from the analysis in graphical form.

The procedure to choose peer systems for CUTR's annual *Performance Evaluation of Florida's Transit Systems* study is based on both operating characteristics (number of vehicles operated in maximum service, amount of service supplied, operating budget, and average speed) and exogenous factors (geographic location, service area population, and service area population density). The two primary decision variables for selecting potential peer candidates, however, are geographic location and number of vehicles operated in maximum service.

The specified geographic region for this study included the southeastern part of the United States because transit systems that operate in a similar geographic area are typically subjected to many of the same exogenous factors such as weather, labor cost, historical transit ridership trends, and density. The final peer group contains 12 systems, including Key West. Four of the peers are Florida systems, and the remaining seven systems are from outside Florida. Table 3-6 shows the transit systems included in the final peer group.

Table 3-6
Key West's Peer Systems – FY 2002

Florida Peer Systems	Non-Florida Peer Systems
Winter Haven Area Transit (Polk) Bay Town Trolley (Panama City) SunTran (Ocala) Key West Transit Indian River – Community Coach	City of San Angelo (TX) Terrebonne Parish Consolidated Gov't (LA) Port Arthur Transit (TX) Johnson City Transit System (TN) City of Alexandria (LA) Brazos Transit District (TX) Spartanburg Transit System (SC)

Tables 3-7 through 3-9 present Key West's value and the peer group minimum, maximum, and mean for each indicator and measure included in this analysis. Additionally, Key West's deviation from the mean is also reported as a percentage of the mean value.

Table 3-7
Key West Peer Analysis – Performance Indicators, FY 2002

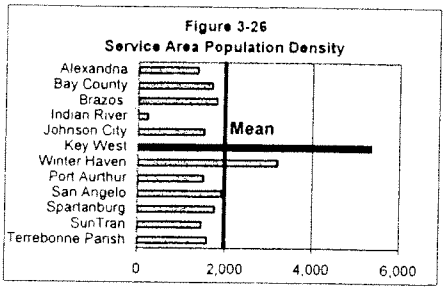
Indicator	Key West	Peer Group Minimum	Peer Group Maximum	Peer Group Mean	Key West: % From Mean
Service Area Population Density	5,360	223	5,360	1,938	+176.5%
Passenger Trips	318,670	87,630	670,622	274,942	+15.9%
Vehicle Miles	274,790	224,170	502,664	305,288	-10.0%
Revenue Miles	274,790	197,866	483,525	293,027	-6.2%
Revenue Hours	22,896	11,430	29,294	19,395	18.1%
Total Operating Expense	$1,713,321	$262,428	$1,768,766	$968,386	76.9%
Operating Revenue	$186,113	$3,810	$247,722	$139,500	33.4%
Vehicles Available for Max. Service	10	4	13	9	6.2%
Vehicles Operated in Max. Service	6	3	11	7	-7.7%
Gallons of Fuel Consumed	86,405	28,523	103,967	62,613	38.0%

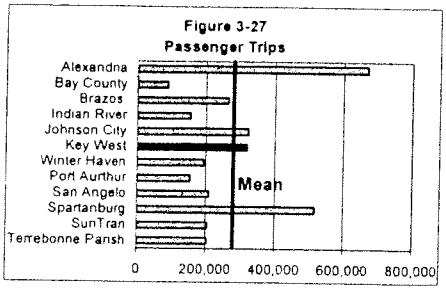
Key West's service area population density is the highest of the peer group, as shown in Table 3-7. This is expected because Key West has the smallest service area. The lowest density of the peer group, 223 persons per square mile, belongs to the Indian River Community Coach. Indian River, like many transit systems in Florida (not including Key West), acts as their county's Community Transportation Coordinator (CTC). Such systems tend to report their county populations as their service area populations. Clearly, caution should be used when interpreting service area population and population-based measures because not every system reports this particular indicator the same way. NTD guidelines indicate that service area size and population should be based on a ¾-mile boundary around all fixed routes. However, not all systems do this because of other modes operated or, in some cases, do not calculate the boundary correctly.

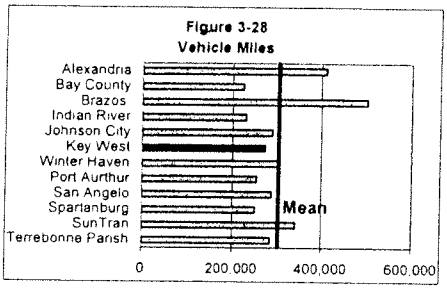
Table 3-7 further indicates that Key West is above the peer group means in terms of ridership, but is below the mean for vehicle miles and revenue miles. Interestingly, Key West's number of revenue hours is 18 percent greater than the peer group average. While Key West is providing about 6 percent fewer revenue miles than the peer average, its total operating expenses are significantly higher (77 percent higher) than the peer average, as shown in Table 3-7. Regarding operating revenue, Key West's 2002 value is significantly higher (by approximately one-third) than the group average.

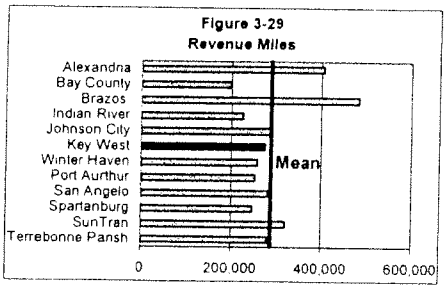
Key West's relative size within this peer group is also evidenced by the fact that, according to Table 3-7, the system has one more vehicle available for maximum service than the peer average, and one fewer peak vehicle operated than the peer average. Finally, Key West's fuel consumption is the second-highest of the peer group for FY 2002, at 38 percent above the mean. Gallons of fuel are not reported for Winter Haven and SunTran; such data are not required in the NTD for purchased transportation services. Figures 3-26 through 3-35 show the peer systems' values for each of the indicators in Table 3-7. More meaningful comparisons can be made among Key West and its peers in the examination of the effectiveness and efficiency measures in this analysis.

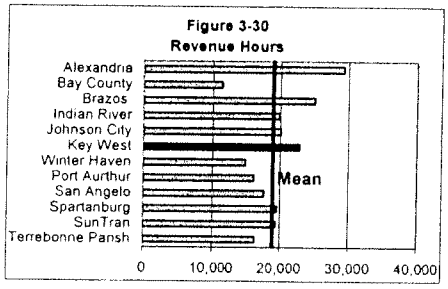
Key West Transit -- Peer Graphics (FY 2002)

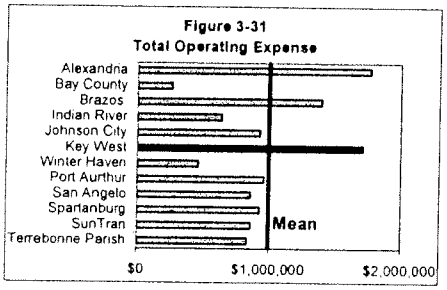


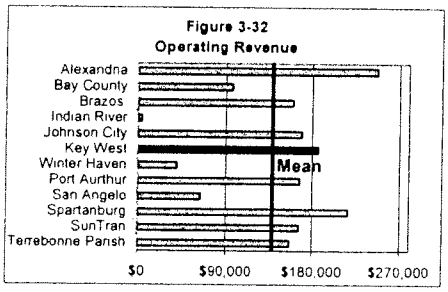


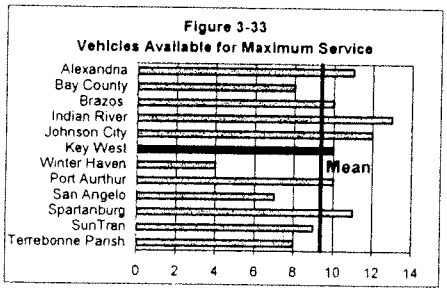


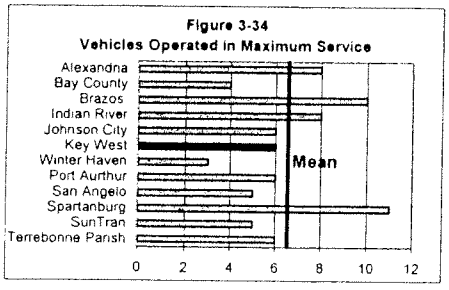












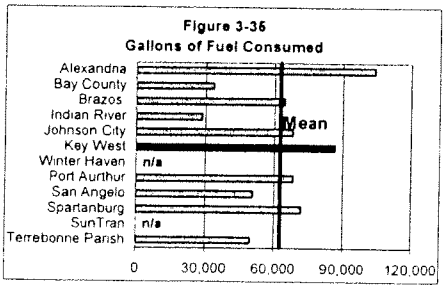


Table 3-8
Key West Peer Analysis – Effectiveness Measures, FY 2002

Effectiveness Measure	Key West	Peer Group Minimum	Peer Group Maximum	Peer Group Mean	Key West: % From Mean
Vehicle Miles Per Capita	8.46	1.69	8.46	4.32	+95.6%
Passenger Trips Per Capita	9.81	0.66	9.81	4.17	+135.1%
Passenger Trips Per Revenue Mile	1.16	0.44	2.09	0.93	+24.7%
Passenger Trips Per Revenue Hour	13.92	7.67	26.42	13.54	+2.8%
Revenue Miles Between Failures	4,362	1,577	112,965	27,362	-84.1%
Average Age of Fleet (in years)	2.40	2.00	10.50	5.96	-59.7%

Key West's service supply, as measured by the number of vehicle miles per capita, is the highest of the peer group, as reported in Table 3-8. Similarly, one measure of service consumption for Key West, passenger trips per capita, is also the highest in the peer group, at 9.81 trips per capita. Regarding the remaining two measures of service consumption, the common performance measures of passenger trips per revenue mile and per revenue hour, Key West is above the peer group average. Key West's value for passenger trips per revenue mile is nearly 25 percent greater than the peer mean, and its value for passenger trips per revenue hour is approximately 3 percent greater than the mean, as shown in Table 3-8.

Table 3-8 also shows that Key West is performing below the peers in terms of reliability, as measured by revenue miles between vehicle system failures. The measure of revenue miles between interruptions indicates that Key West has an above average occurrence of failures (or service interruptions). While the peer analysis shows Key West performing below average in this area, it should be noted that the system exhibited improvement in this measure between FYs 2002 and 2003, as shown in the trend analysis earlier in this report. It should also be noted that failure data were not available for two of the peer systems (SunTran and Winter Haven Area Transit) that operate purchased motorbus service.

Finally, Table 3-8 shows Key West's average fleet age along with the peer group minimum, maximum, and mean for FY 2002. Key West's average fleet age of 2.40 years is well below the peer group mean of 5.96 years. Figures 3-36 to 3-41 show the peer systems' data for these effectiveness measures.

Key West Transit -- Peer Graphics (FY 2002)

Figure 3-36
Vehicle Miles Per Capita

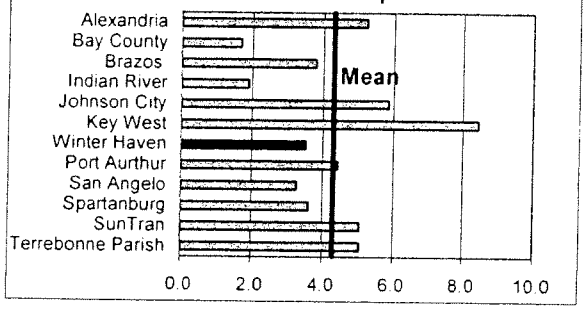


Figure 3-37
Passenger Trips Per Capita

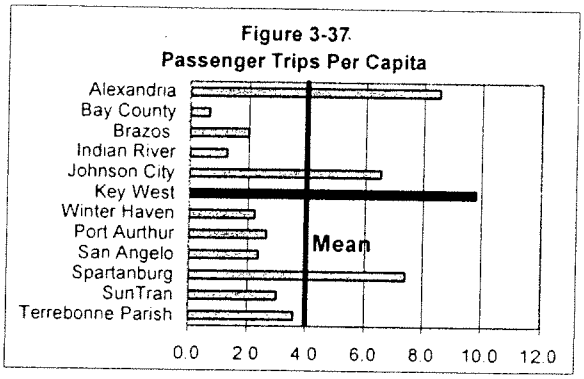


Figure 3-38
Passenger Trips Per Revenue Mile

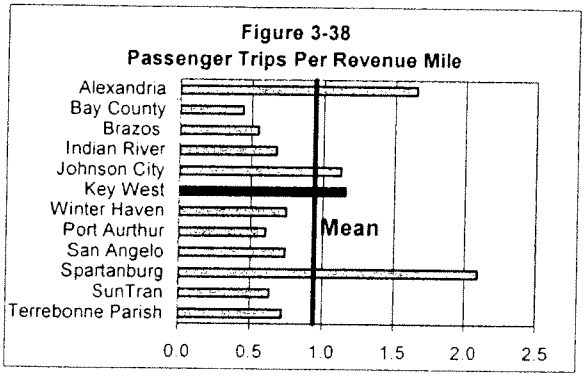


Figure 3-39
Passenger Trips Per Revenue Hour

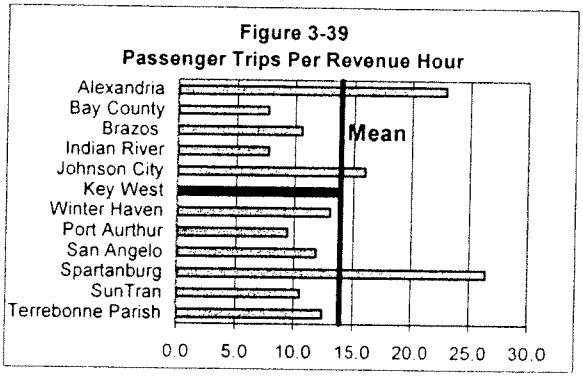


Figure 3-40
Revenue Miles Between Failures

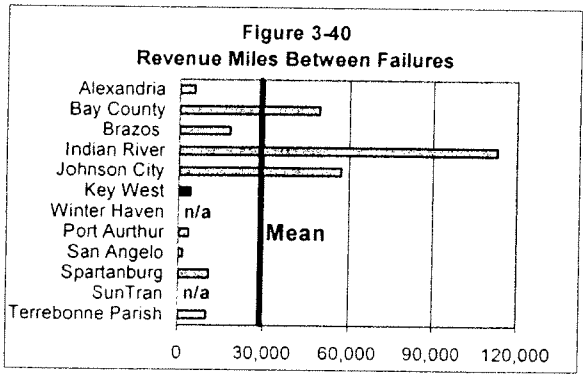


Figure 3-41
Average Age of Fleet (in years)

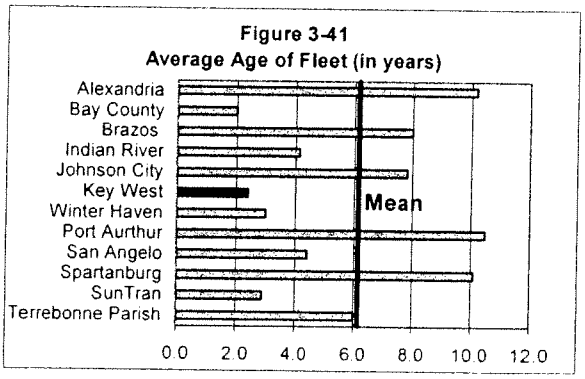


Table 3-9
Key West Peer Analysis – Efficiency Measures, FY 2002

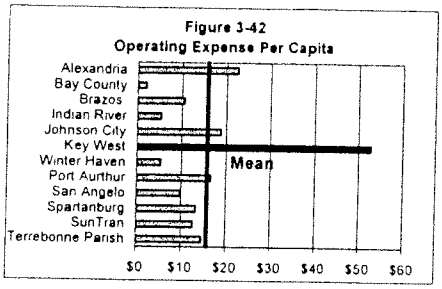
Efficiency Measure	Key West	Peer Group Minimum	Peer Group Maximum	Peer Group Mean	Key West: % From Mean
Operating Expense Per Capita	$52.75	$1.98	$52.75	$15.37	+243.3%
Operating Expense Per Passenger Trip	$5.38	$1.80	$6.29	$3.85	+39.6%
Operating Expense Per Revenue Mile	$6.24	$1.33	$6.24	$3.25	+92.1%
Operating Expense Per Revenue Hour	$74.83	$22.96	$74.83	$47.86	+56.4%
Farebox Recovery Ratio	9.85%	0.60%	19.94%	12.00%	-16.9%
Revenue Miles Per Vehicle Mile	1.00	0.85	1.00	0.96	+4.3%
Revenue Miles Per Peak Vehicle	45,798	22,467	86,179	49,040	-6.6%
Vehicle Miles Per Gallon	3.18	3.18	8.10	5.26	-39.5%
Average Fare	$0.53	$0.02	$1.02	$0.45	+18.4%

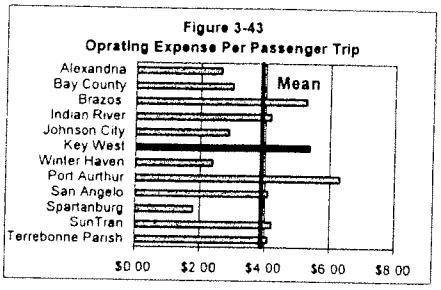
According to the data presented in Table 3-9, Key West's cost efficiency is below that of the peers. Key West has the highest value of the peers for three of the four operating expense ratios: operating expense per capita, per revenue mile, and per revenue hour. Key West's farebox recovery ratio has been increasing due to the fare increase that was implemented in 2003; however, as of FY 2002, the farebox recovery was 17 percent below the average of the peer group, as shown in Table 3-9.

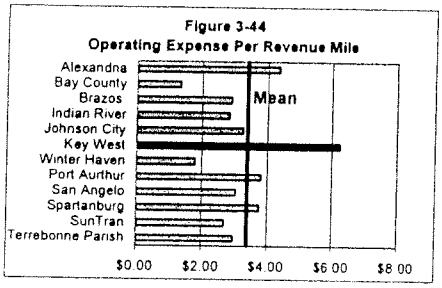
Regarding vehicle utilization, Key West has a value of 1.00 for the measure of revenue miles per vehicle mile (a measure of deadhead mileage), indicating that it reported the same number of revenue miles and vehicle miles in its FY 2002 NTD report. As discussed earlier, Key West's vehicles do not go out of service upon leaving and returning to the lot; therefore, no deadhead mileage is indicated. The maximum value for this measure is 1.00, and Table 3-9 shows that Key West has the highest value of the peer group for this measure. Also, Table 3-9 indicates that Key West's value for revenue miles per peak vehicle is nearly seven percent below the mean of the peer group.

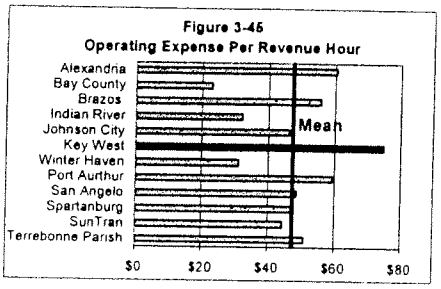
Key West's fuel efficiency, as measured by vehicle miles per gallon, is significantly below the peer group mean, as exhibited in Table 3-9. The trend analysis for fuel consumption and fuel efficiency showed that Key West had widely varying values for these measures over the time frame of this analysis. Finally, Key West's FY 2002 average fare of $0.53 is more than 18 percent above the group mean of $0.45 (as noted previously, Key West experienced a fare increase in April 2003). These efficiency measures are illustrated in Figures 3-42 through 3-50.

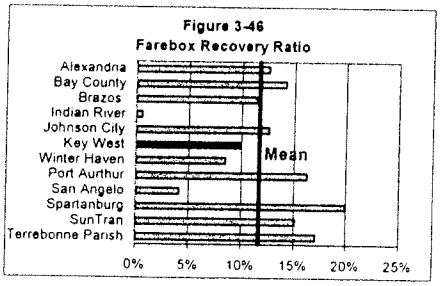
Key West Transit -- Peer Graphics (FY 2002)

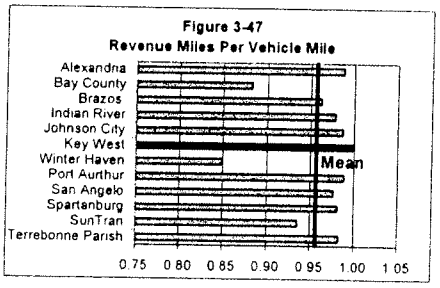


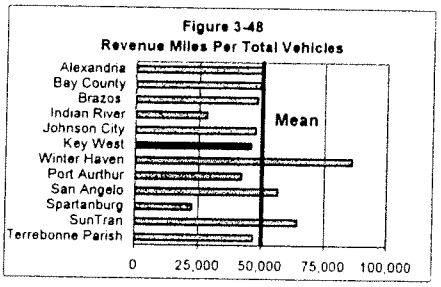


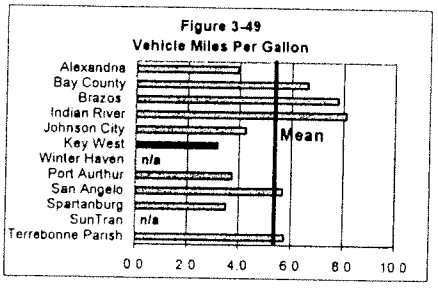


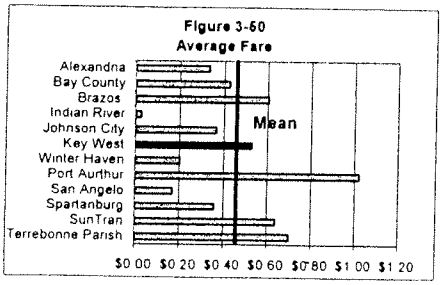












CONCLUSIONS – KEY WEST TRANSIT EVALUATION

A summary of Key West's relative performance strengths and areas for improvement based on the trend analysis is provided in Table 3-10. The intent of this table is not to suggest the extent of the strength or area for improvement but to identify those performance areas where the trend has improved or worsened from 1999 to 2003. A performance strength is defined as any performance area that improved or was maintained over the trend analysis time period. An area for improvement is defined as a trend that declined over the trend analysis time period.

Table 3-10
Key West Performance Strengths and Areas for Improvement, Trend Analysis

Performance Strengths	Areas for Improvement
Service Supply	Service Consumption
Quality of Service (average fleet age)	Quality of Service (revenue miles between interruptions)
Cost Efficiency (service consumption)	Cost Efficiency (service supply)
Farebox Recovery	Fuel Efficiency
Vehicle Utilization	

A summary of the relative performance strengths and areas for improvement based on the peer review analysis is provided in Table 3-11. A performance strength is defined as a performance area that is more than 10 percent better than the peer group average, while an area for improvement is defined as a performance area that is more than 10 percent worse than the peer group average. A performance area that is within 10 percent of the peer group average is considered neither a strength nor an area for improvement in this analysis.

Table 3-11
Key West Performance Strengths and Areas for Improvement, Peer Review Analysis

Performance Strengths	Areas for Improvement
Service Supply	Quality of Service (reliability)
Service Consumption	Cost Efficiency
Quality of Service (average fleet age)	Farebox Recovery
	Fuel Efficiency

Results from both the trend analysis and peer review analysis are somewhat mixed. Consistent strengths for Key West include service supply and average fleet age (Key West received seven new Gillig vehicles in 2003). In the trend analysis, Key West showed significant improvement in farebox recovery (due to a fare increase). However, the farebox recovery did not compare as well to the peer group and, as such, is considered an area for improvement in Table 3-11. Key West's vehicle utilization was a strength in the trend analysis, but was considered neither a

strength nor an area for improvement in the peer review (both measures in this area, revenue miles per vehicle mile and revenue miles per peak vehicle, were within 10 percent of the peer group means). Consistent areas for improvement include cost efficiency and fuel efficiency.

Overall, the wide array of data presented in this evaluation indicates that Key West is doing relatively well given its resources. It is important, though, that Key West continues to monitor the performance of these and other related measures using subsequent NTD and other data to see if and how they change as the system and its services continue to evolve over time.

SUMMARY

This Chapter of the TDP presented separate trend and peer review analyses for Key West's fixed-route services, using data available from the National Transit Database (NTD). Trend and peer review analyses can be useful in developing a better understanding of transit system performance and in identifying target areas for additional attention and improvement. It is important to remember, however, that the performance evaluation methodology utilized in this evaluation is merely one tool for examining system performance and that the measures included are not able to comprehensively cover all of the objectives of a transit system. Many objectives cannot be measured with this mechanism and require additional information or more subjective evaluation. However, these results provide a useful starting point for a full understanding of Key West's overall performance and complement the other elements of this TDP.

CHAPTER FOUR:
KEY WEST TRANSIT DEMAND ESTIMATION AND NEEDS ASSESSMENT

One particular task in the development of a TDP includes the preparation of estimates of demand for public transit over the five-year planning period, the assessment of mobility needs in Key West, and a brief evaluation of alternate methods for increasing mobility through transit system improvements. This chapter summarizes the results of this effort and leads into the final task of the TDP, which will identify and evaluate alternatives and recommendations.

There are a variety of methods of estimating demand for transit service and assessing unmet mobility need and they are presented and discussed in this chapter. The techniques utilize data and findings from all previous tasks as well as operating data collected from other sources. The proposed goals and objectives developed for this TDP and the existing levels and perceptions of service must also be considered in assessing the need for improved service.

A needs assessment is also included which summarizes relevant information concerning unmet demand, the service area, service span and frequency, type of service, and multimodal linkages that may contribute to improved pubic transit service and mobility for residents and visitors of Key West. Possible transit service alternatives are identified through interviews with local officials, other forms of public participation, and through CUTR's experience in other areas similar to Key West.

CURRENT AND FUTURE DEMAND FOR TRANSIT SERVICE

There are several different methodologies available to estimate the level of demand for transit service in Key West. Demand may be estimated through the use of trend analysis, peer review comparisons among similar Florida and non-Florida transit systems, fare and service elasticities and census tract analysis. The following sections provide estimates for fixed-route transit demand in Key West.

Fixed-Route Demand Estimates

Ridership Trends

Since 1987 (the earliest year for which NTD data is available for fixed-route bus service in Key West), the system's ridership has increased approximately eight percent, from 260,386 passenger trips in fiscal year 1987 to 281,717 passenger trips in fiscal year 2003. Historically, Key West ridership has fluctuated over time, reaching a peak of 362,479 reported trips in FY 2001.

One way to estimate future annual ridership is to use linear trend analysis. Because Key West has recently acquired new farebox equipment that is believed to provide more accurate accounting of ridership than in the past, the trend will necessarily begin in FY 2003.

Table 4-1 shows the existing level of ridership (FY 2003) for Key West and the estimated future ridership derived from the linear trend analysis for fiscal years 2004 through 2010. Based on monthly ridership reports provided by Key West staff for fiscal years 2003 and 2004, it was determined that Key West's FY 2004 ridership grew by 3.5 percent. Examining other periods of Key West ridership historical trends revealed a similar growth pattern. As such, the projected ridership shown in Table 4-1 reflects a 3.5 percent increase for each year, and assumes service levels and the fare to be constant. The table projects a 23 percent increase in ridership in FY 2010 over the FY 2004 level.

Table 4-1
Projected Fixed-Route Ridership for Key West Transit

	FY 2003 (Actual)	2004 (Actual)	2005	2006	2007	2008	2009	2010
Ridership	281,717	291,626	301,830	312,400	323,330	334,650	346,360	358,480

Peer Group Comparison

An alternate approach in determining the extent of transit demand is to compare per capita ridership, service, and spending levels at Key West with those at similar systems in Florida and the southeastern United States. The peer review analysis contained in Chapter Three presented a wide array of data for several transit systems (including Key West) that operate between 3

and 11 vehicles in maximum service. The final peer group contained 12 systems, including Key West. Of these systems, five are in Florida and the remaining seven are in other southeastern states. By taking the averages of ridership per capita and other measures and then applying them to Key West's service area population, it would be possible to estimate the level of demand for transit service in systems of this size, all other things being equal. Fiscal year 2002 data were used in this analysis and were obtained by the Florida Transit Information System (FTIS) software.

Because Key West's service area population is significantly greater than the average of the peer group, this analysis does not have meaning to Key West. Key West's service area population density is 5,360 persons per square mile of service area, while the peer group average is 1,938. The system is already providing above-average levels of per-capita service, as evidenced in Chapter Three (see Tables 3-8 and 3-9). Key West's service area characteristics are unique, and potential peer transit systems with similar population densities often have other service characteristics that make them incomparable to Key West.

One major factor to consider in this type of peer analysis is that not all transit systems measure their respective service area populations the same way. Transit systems often utilize different methods in determination of actual service area boundaries and the number of persons that reside within those boundaries. Some Florida systems use county population as a proxy estimate of service area population; while demand-response service may be available throughout the county, fixed-route service may not. Typically, systems use calculated service area populations that are derived using either U.S. Census data in conjunction with some defined geographic unit (e.g., census tracts) or more precise GIS-based methods.

Fare and Service Elasticities

Another means of estimating future demand for transit is through the use of fare and service elasticities. An elasticity is a measure of the sensitivity of a dependent variable, such as passenger trips, to changes in an independent variable, such as fare or level of service. It is also represented by the percent change in a dependent variable divided by the percent change in an independent variable. While considerable variations can occur, especially for changes at the level of individual routes, fare and service elasticities have been shown to remain relatively consistent across transit systems of all sizes at the aggregate system level.

The American Public Transit Association (APTA) has published a value of -0.43 for the elasticity of ridership with respect to fare (for systems serving areas with populations of less than one

million).[1] According to an Ecosometrics, Inc., report, the elasticity of ridership with respect to level of service as measured by vehicle miles is +0.61.[2] The elasticity measures are interpreted as follows: a 10 percent increase in the transit fare would result in a 4.3 percent decrease in ridership, while a 10 percent increase in the level of service would generate a 6.1 percent increase in ridership. These elasticities show that, generally, transit riders are more sensitive to service levels than to the fare.

Table 4-2 outlines the results of two fare pricing scenarios as well as a scenario involving an increase in the level of service. The first scenario predicts how ridership will be affected if the current base fare of $1.00 were to increase an additional 10 percent to $1.10. According to the elasticity measure, with a fare of $1.10, the system can expect a decline in ridership (as measured by the number of passenger trips) of 12,114 trips, all other things being equal. However, since the demand for ridership is considered inelastic with respect to fare (indicating a lesser degree of sensitivity to fare changes), the increase in revenue from passengers paying the higher fare will more than offset the loss from fewer trips, resulting in an annual net positive financial impact of $31,824 (based on Key West's average passenger fare revenue per passenger trip, i.e., average fare).

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1 American Public Transit Association, *Effects of Fare Changes On Bus Ridership* (Washington: American Public Transit Association, May 1991), 7.

2 Ecosometrics, Inc., *Patronage Impacts of Changes in Transit Fares and Services*, report prepared for the U.S. Department of Transportation (Washington: Government Printing Office, September 1980), 65.

Table 4-2
Impacts of Fare and Service Scenarios

Measure	Existing (FY 2003)	Scenario 1 10-cent fare increase	Scenario 2 25-cent fare decrease	Scenario 3[1] 10% increase in service
Fare	$1.00	$1.10	$0.75	$1.00
Average Fare	$0.79	$0.87	$0.59	$0.79
Fare Revenue	$202,461	$234,285	$184,861	$236,132
Vehicle Miles	278,425	278,425	278,425	302,268
Passenger Trips	281,717	269,603	312,002	298,902
Operating Expense	$1,292,182	$1,292,182	$1,292,182	$1,421,400
Change in Ridership	--	-12,114	+30,285	+17,185
Change in Revenue	--	+$31,824	-$17,600	+$33,671
Change in Operating Expense	--	--	--	+$129,218
Net Financial Impact	**--**	**+$31,824**	**-$17,600**	**-$95,547**

[1]Scenario 3 utilizes fully-allocated costs per vehicle mile to generate the estimated annual expense.

In the second pricing scenario, the effects of a fare decrease from $1.00 to $0.75 are reported. As indicated in Table 4-2, the 25-cent drop in the fare would lead to a predicted increase in ridership of 30,285 passenger trips, holding all other factors constant. Due to the inelasticity of transit demand with respect to fares, the increase in riders will not generate enough revenue to counter the loss from the lower fare, and an annual net financial impact of -$17,600 will be realized.

The last scenario in Table 4-2 exhibits the results of an increase in Key West's level of service, as measured by vehicle miles. As with the elasticity of transit demand with respect to fare, demand with respect to level of service is also considered to be inelastic. Therefore, a 10 percent increase in vehicle miles would be expected to produce 17,185 additional passenger trips, which would generate additional fare revenues of $33,671, all else being equal. However, a 10 percent increase in the level of service provided is presumed to require a 10 percent increase in operating expense. Despite the additional revenues that are generated, this increase in operating expense to provide the additional service would result in an annual net financial impact of -$95,547, holding all other factors constant.

The results of the elasticity calculations indicate that increasing service levels does not necessarily achieve the anticipated results, since the cost involved in service expansion is significant. A 10 percent increase in vehicle miles would represent a major challenge for many transit agencies. These results imply that proposed service improvements must be closely scrutinized for impacts on cost as well as ridership. Also important, however, is the fact that all

service extensions are not equal; an improvement targeted at a specific corridor or location where there is significant demand can perform much better than aggregate averages.

Finally, it is important to remember that these elasticity calculations represent examples of how Key West could utilize this method to gauge the ridership and financial impacts of changing the fare or level of service. In these scenarios, all other factors that might affect ridership, expenses, and revenues are held constant.

Table 4-3 contains the original fixed-route ridership projections from Table 4-1 as well as estimates assuming that an annual 10 percent increase in service would result in a 6.1 percent increase in ridership. This increase would be in addition to the annual ridership increases predicted by the ridership demand estimation, which holds all exogenous factors, including service changes, constant. The resulting enhanced estimate is 505,460 trips by FY 2010, compared to the original estimate in Table 4-1 of 358,480. Given that the actual level of change in fixed-route service is likely to be somewhere between zero and 10 percent annually, it is estimated that Key West will generate approximately 430,000 trips per year by FY 2010.

Table 4-3
Base and Enhanced Fixed-Route Ridership Projections for Key West

Ridership	FY 2003 (Actual)	FY 2004 (Actual)	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Base (no service increase)	281,717	291,626	301,830	312,400	323,330	334,650	346,360	358,480
Enhanced (10% annual service increase)	281,717	291,626	319,620	350,310	383,930	420,800	461,190	505,460

NEEDS ASSESSMENT

In an effort to assess any unmet transit needs in Key West, the estimates of demand for transit services, which were calculated in the previous section, have been compared with existing transit service. In addition, existing perceptions of Key West and the goals and objectives developed were also indicative of the unmet transit needs. In general, service elasticities show that a 6.1 percent increase in ridership can result from a 10 percent expansion in transit service, although ridership increases might be optimized if routes and areas for expansion or new service are carefully selected. Given that additional sources of funding have not been secured to support an annual system wide service expansion of this magnitude, the transit system should consider more realistic options of incremental impact. Further, achieving the optimal annual service expansion should be the driving force or incentive behind aggressively searching for additional funding sources directed to transit service.

The concept of "unmet demand" can refer to those persons who currently use transit but are unable to do so for all of their travel needs and to those persons currently not using the transit system but who might do so if system modifications were made to make it more convenient. Although it is important to address the needs of the discretionary riders since they comprise the most promising market for future transit growth, this needs assessment also addresses the needs of the "transit-captive" ridership or those that currently rely on transit for part or most of their travel. For this group of riders, mobility is a more pronounced issue and the pre-established relationship between the transit system and the rider may be strengthened.

Based upon the sources described above, the following mobility needs have been identified (these are not listed in priority order).

Work Trips

Traffic and parking congestion continue to be two of the most pressing community issues in Key West. Compounding these issues are the large numbers of workers traveling to workplaces in Key West from their residences in Key West, Stock Island, and other Keys. The issues related to work trips were identified throughout the TDP process from input by the TDP review committee and interviews with local officials. If steps are taken to meet these demands for transportation, the market for employment will be enhanced for employees to compete for higher paying jobs and for employers to gain the most competent employees. In addition to unmet needs, there is the possibility of enticing commuters to utilize alternative means of transportation even if they currently have other transportation options.

Below are descriptions of mobility needs for two different types of workers in Key West: residents of Key West that work in Key West and workers that travel to Key West from other Islands up the Keys.

Resident Work Trip Needs

A large percentage of current riders on Key West's transit system are traveling to work. A resident of either Key West or Stock Island has a high probability of living within walking distance of a transit route. However, the frequency, reliability, and hours of service limit the typical worker's use of the transit system, as identified in the public input process of the TDP. In addition, the circuitous routes increase the ride time on the bus for the average transit patron. With this in mind many of the transit needs identified for resident work trip needs center around an improved quality and quantity of transit service. These needs include increasing the frequency of service, a realignment of the route network, and improving service reliability.

Commuter Work Trip Needs

Key West Transit should address the mobility needs of workers commuting to Key West from other Keys. As evidenced by the traffic congestion in the early morning and late afternoon getting on and off of Key West, there is a large number of commuters traveling to Key West every working day. By providing an alternative to driving and parking alone on this daily commute, traffic and parking congestion could be reduced on Key West. In addition, potential workers on other Keys who do not have a vehicle available for the commute would be able to work in Key West if a public transportation option was available. In the next section of this report a number of alternatives are suggested that could help meet the needs of commuters to Key West.

Persons With Disabilities

For a vast majority of people, personal mobility is something taken for granted. Most never realize that it is a luxury, and a potentially fleeting luxury at that. For millions of Americans, daily lives are governed and structured by the simple act of getting from Point A to Point B. Often, persons with disabilities do not have at their disposal the level of personal mobility that is afforded by the personal automobile. Rather, many persons with mobility impairments must rely on the availability and/ or provision of accessible transportation services to meet their daily living needs, including the need for social interaction. Friends or family, private sector transportation services, accessible fixed-route services, or paratransit services may provide these services. Without these services, persons with disabilities may find themselves socially and physically isolated from the larger community. Two types of potential transportation needs

for persons with disabilities in Key West were identified in the TDP process and are presented below.

ADA Complementary Paratransit Transportation

Currently, ADA complementary paratransit service in Key West is provided through Monroe County Social Services Transportation. These services are also available for visitors who have been certified ADA paratransit eligible in their locality of residence. However, the availability of these services does not appear to be widely advertised. Therefore, it is likely that many residents with disabilities and most ADA paratransit eligible visitors are not aware of the services available to them.

Accessibility of Private Sector Transportation

Through the public input process, accessibility of private sector transportation was identified as an unmet need for persons with disabilities. Currently, when an individual who uses a wheelchair wants to hire a taxi there are no wheelchair accessible vehicles available in Key West. This situation is of particular concern for short-term visitors to Key West who have mobility impairments.

Children/Youth Market

The economic boom of the late 20th century has brought with it a cost to the millions of working parents across the nation. Employers are asking more of employees in order to keep the business of America growing and prospering. Whether single or dual parent households, the enormous pressures parents face regarding the welfare of their children is something that affects everyone, whether they have children or not. There is no greater stress for working parents in modern times than coordinating the daily lives of their children prior to, during, and after school. It has to be a source of frustration for all community resources serving youth and youth-related activities, not to mention parents, that the investments in children's programs yield many wonderful opportunities for participation until the challenge of transportation inevitably enters into the mix.

From intramural sports to church programs to music lessons to activities at public parks, the opportunities to enrich and develop young minds are vast. However, transportation takes center stage in determining the level of access to these opportunities. The youth market has traditionally been a challenging market for fixed-route transit to serve based on the location of homes, schools, and activity centers to which youth may want to travel. This challenge also can be seen as an opportunity to explore creative means of maximizing youth mobility in safe and secure environments.

Low-Income Persons

Low-income persons have long been a staple, as well as stable, transit market. In American society, social mobility is in many ways directly or intimately linked with physical mobility. When a person lacks physical mobility, they also can be socially, economically, and culturally disaffected from all the activities that comprise "American life." This includes purchasing power. Everything that people purchase is influenced by the ratio of cost to personal income. For instance, a rule of thumb for homeowners is that their monthly mortgage payment should not exceed 25 percent of gross monthly income. However, for lower income persons, the rent or mortgage they pay for housing may exceed 50 percent of their income. Therefore, public transportation is a logical transportation purchase for low-income persons given its fractional cost compared to owning and operating a vehicle and relatively low percentage of income. Low-income persons also constitute many of the market segments discussed in this section, including (but not in all instances) persons with disabilities and youth.

The public transportation mobility needs of low-income persons in Key West mirrors the needs of workers in Key West with needs for improved quality and quantity of transit service.

Visitor Needs

Visitors to Key West have available many transportation alternatives to driving their automobile. These options include private shuttle services, taxis, bicycles, rental scooters and electric cars, walking, and public transit. However, lack of awareness of these options may lead to reliance on their automobile to make trips to and around the Island. Therefore, communicating to visitors the transportation options available to them is a Key West mobility need.

Communications and Marketing

Encompassing all of the markets touched on in this section is the need to communicate and market transit services more effectively. Transit's image is a major factor in fostering public support for public transportation investments. The success of all future transit improvements and enhancements will depend, in large part, on how effectively Key West Transit communicates progress and achievements to the community at-large.

CHAPTER FIVE:
TDP RECOMMENDATIONS
&
CAPITAL/OPERATING PLAN

INTRODUCTION

This final chapter of the Key West Transit Development Plan (TDP) assimilates public involvement, needs, opportunities, and alternatives and creates mechanisms whereby information is translated to action. The projects and services recommended for implementation are those determined most likely to make transportation enhancement a reality in Key West while also positively impacting the quality of life for all persons who live, work, or play in the island community.

This chapter is divided into two parts:

- Five Year Transit Services Plan and Strategic Initiatives; and
- Capital and Operating Plan

The first section deals with those service enhancements and initiatives that are geared specifically to existing public transportation systems in the community. As part of this TDP update, the initiatives developed as part of the 2000 TDP have been evaluated for level of completeness. Whereas initiatives from the 2000 TDP have been met, it will be recommended to remove them from the capital operating plan. Whereas initiatives from the 2000 TDP have not been met (or need to be continued), it will be recommended as such to be included in the capital and operating plan.

FIVE-YEAR TRANSIT SERVICES PLAN AND STRATEGIC INITIATIVES

In this section, we will review the initiatives developed as part of the 2000 TDP. We will evaluate whether the initiatives have been implemented and/or if they should be retained in the five year capital plan. The recommended projects and policies described in the following sections include projects specifically defined for Key West and represent major investments on the part of this agency toward the development of a comprehensive mobility network in Key West. Each project or policy has been designed to specifically contribute to a network that attempts to address the unmet needs and market segments identified through the TDP process.

It should be noted, however, that the dates associated with each recommendation are targets only. These dates are designed to be flexible and allow for the phasing in of recommendations

over multiple years. The target implementation dates should be reassessed annually and adjusted, as necessary, based on changing operating conditions, community goals, and organizational priorities.

Transit Strategic Initiatives

In the 2000 TDP, a series of initiatives were recommended for implementation. The following section will summarize those initiatives and provide an update on the status of those initiatives. After the status of the initiatives is provided, a five-year capital and operating plan is presented.

The following section describes the recommended strategic initiatives for the transit program in Key West. These strategies have been developed to facilitate the development of a comprehensive mobility network in Key West.

1. **Pursue the establishment of a long-term dedicated funding source for community transportation enhancements.** The funding structure for the City of Key West includes federal, state, and local sources. For fiscal year 2004, federal funding included Federal Transit Administration (FTA) Section 5311 funds, while state funding included Florida Department of Transportation (FDOT) Block Grant and Service Development funds and other state grants. Revenue was also generated by the transit system (which includes passenger fare revenues, special transit fares, charter service fares, auxiliary transportation funds, fare revenue retained by seller, and other non-transportation funds). At the local level the City of Key West, through their general revenue fund, provided financial assistance to the transit system. The availability of these funds is limited with all City services competing for allocations. According to Key West financial projections for the next fiscal year, all available revenues are allocated for services designed to maintain the current level of fixed-route services. Therefore, it is recommended that Key West work toward securing a dedicated funding source for public transportation enhancements in Key West. Several potential funding sources are described below, as well as the current status of these funds in Key West.

Available Transit Assistance Funding Sources

This section describes current sources of transportation funding for systems operating in Florida. The sources of the three types of funding: federal, state, and local, are listed and briefly discussed. Much of the presented information is from the *Florida Five-Year Statewide Transit Development Concepts* prepared by CUTR; *Innovative Financing Techniques for America's Transit Systems*, Federal Transit Administration, 1998; and the

1999 Local Government Financial Information Handbook prepared for the Florida Legislative Committee on Intergovernmental Relations, September 1999.

Federal Funding Sources

Transportation Equity Act for the 21st Century (TEA-21) - On June 9, 1998, the United State Congress passed TEA-21, replacing the Intermodal Surface Transportation Efficiency Act (ISTEA). The basic structure for transit programs remained relatively unchanged. TEA-21 provides $41 billion in spending authority for transit projects over the six-year life of the Act (through FY 2003). The TEA-21 Program has been extended by Congress several times since 2003, although a new multi-year program has yet to be approved by the federal government. The following transit programs were included in the Act:

Formula Grants

Formula grants administered by the Federal Transit Administration are authorized at $19.97 billion for FYs 1998-2003. After set asides for a Rural Transportation Accessibility Incentive Program, a Clean Fuels Program, and the Alaska Railroad, 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.

Urbanized Area Formula Grant Program, (49 U.S.C. Chapter 5307) - TEA-21 authorizes $18.03 billion for the 6-years of the Act (through Fiscal Year 2003). Under this program, urbanized areas with populations of greater than 200,000 can only use their apportionments for capital. However, the definition of "capital" now includes preventative maintenance expenses. In addition, up to 10 percent of formula funds may now be used to provide non-fixed route paratransit transportation services in accordance with the American's With Disabilities Act (ADA). Currently, the City of Key West is not an eligible recipient for the Urbanized Area Formula Grant Program.

Formula Grant Program for Other Than Urbanized Areas (49 U.S.C. Chapter 5311) - This program receives 6.37 percent ($1.18 billion over 6 years) of the funding available for apportionment in proportion to each State's non-urbanized population. Funding may be used for capital and operating. However, the state may limit the use of these funds for either capital or operating costs. In FY 2000, the State of Florida received $5,774,183 in Chapter 5311 funds that was distributed to the non-urbanized areas within the state by formula to each of the Department's seven district offices.

Formula Grant Program and Loans for Special Needs of Elderly Individuals and Individuals with Disabilities (49 U.S.C. Chapter 5310) - This program receives 2.4 percent ($456 million over 6 years) of formula funding available and is apportioned to each state based on the state's share of the population for these groups of people. Section 5310 funds may only be awarded to private non-profit organizations providing transportation to elderly persons and persons with disabilities and to public bodies approved by the state to coordinate services for the elderly and persons with disabilities (local Community Transportation Coordinators (CTC)). The City is currently not eligible to receive these funds. If the City were to become the local community transportation coordinator (CTC) for the Monroe County Transportation Disadvantaged (TD) program, it would be an eligible recipient for these funds.

Discretionary Capital Investment Grants and Loans (49 U.S.C. Section 5309)

TEA-21 continued the major capital investment program structure defined in ISTEA with the following three programs: New Starts, Fixed Guideway Modernization, and Bus and Bus Related Facilities. Of these programs, the Bus and Bus Related Facilities Program may continue to be a source of capital revenue for the City of Key West. Please see the program summary below.

Bus Program

A total of $3.55 billion was authorized by TEA-21 for bus and bus-related facilities. The bus category is a discretionary program; that is, the Federal Transit Administrator has the authority to select among meritorious projects. In making project selections, FTA tries both to address urgent needs and to 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 talk with the FTA Region 4 Office to assess the availability of funds and the possibility of receiving funds. The City of Key West has received funds from this program in the past and it may be a potential source of additional capital funds in the future. Historically, discretionary Bus Program funding has been somewhat limited in the state. On average, annual apportionments for bus and bus related purchases have been around $1.2 to $1.3 million. In FY 1999, apportionments ranged from $992,500 to $2.2 million for bus purchases. A slightly higher amount of funds was made available for the construction of intermodal and/or multimodal facilities.

Job Access and Reverse Commute Grant Program

TEA-21 creates a new program for Job Access and Reverse Commute Grants. The program requires a 50 percent non-U.S.DOT match. The program provides funding to

local areas to develop transportation services designed to transport welfare recipients and other low-income individuals to and from jobs, and to develop transportation services for residents of urban centers and rural and suburban areas to suburban employment opportunities.

The City has identified using JARC funds to operate the Lower Keys Shuttle, and an assumption of three years of funding, for a total of $1 million, has been identified in the Five-year Capital Plan in order to fund the start-up of the shuttle service.

Flexible Funding Opportunities

Flexible funding programs authorized by ISTEA have been maintained in TEA-21. 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), Congestion Mitigation, and Air Quality Improvement (CMAQ) programs. For the purposes of this discussion, only the STP program is discussed below.

Flexible funds, such as STP funds, can be transferred from the FHWA to 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) - TEA-21 authorizes $33.3 billion for STP over the life of the Act. STP funds are distributed among the states based on each state's lane-miles of federal-aid highways, 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, suballocations are developed for each local area.

In the Five-year Capital Plan, it is suggested that STP funds be sought for the provision of shelters and a passenger amenities program.

State Funding Sources

State Transportation Trust Fund (STTF)

The two major contributors to this fund are state fuel sales tax revenue (of which about 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, 15 percent of all revenues distributed to the STTF are to be dedicated annually by FDOT for public transit and capital rail projects.

Public Transit Block Grant Program

From the STTF, block grants are issued to the state's 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 Sections 5307 and 5311 programs and to Community Transportation Coordinators (CTCs). The FDOT distributes 85 percent of the funds allocated to the program to Section 5307 providers and to Section 18 providers who are not Community Transportation Coordinators. The Florida Commission for the Transportation Disadvantaged distributes 15 percent of the funds to the CTCs according to their 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 with 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. Table 5-1 provides a schedule for the distribution of block grant funds to the City through FY 2010, as provided by FDOT District Six. It should be noted that the FY 2005 amount listed in Table 5-1 is higher than the subsequent years because it included FY 2004 dollars as well as partial funding for the third-year major TDP update.

Table 5-1
Projected FDOT Distribution of Block Grant Funds
(By State Fiscal Year)

	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
Projected Block Grant Distributions for Key West	$328,801	$162,031	$164,629	$169,260	$170,271	$177,048

Source: FDOT District Six

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, or vehicle frequencies; the purchase of special transportation services, and other such techniques for increasing service to the riding public as are applicable to specific localities and user groups. Up to three years for system operations and maintenance procedures and two years for marketing and technology projects are provided under this program.

Intermodal Program

The FDOT's Intermodal Program is provided under F.S. 341.053 and supports projects which provide improved access to intermodal or multimodal transportation facilities and terminals. Projects funded under this program include rail access to airports and seaports, interchanges and highways which provide access to airports, seaports and other multimodal facilities.

Local Funding Sources

Additional study by Key West may reveal additional local funding options not listed here.

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. Monroe County currently levies $0.06 per gallon, the maximum allowable by law. The County shares the proceeds from the fuel tax with local municipalities through established interlocal agreements. The County receives approximately 60.5 percent of the total proceeds and the City of Key West receives 36.5 percent of the total proceeds.

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, Monroe County does not levy the second local option. Under the same arrangement identified above, Monroe County would share any proceeds collected from this tax with each of the municipalities. Again, any capital improvement for the public transportation system identified in the local government comprehensive plan would be an eligible expenditure.

Ninth-Cent Fuel Tax - The Ninth-Cent Fuel Tax is a tax of 1 cent on every net gallon of motor and diesel fuel sold within a county. The tax may be authorized by an ordinance adopted by an extraordinary vote of the governing body 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. Monroe County does not levy the Ninth-Cent Fuel Tax. However, a future levy may provide funding opportunities for the Key West Department of Transportation.

Dedicated Millage Rates

Currently, four counties in Florida dedicate millage to their transit system. The systems receiving revenue from dedicated millage rates are HARTline in Hillsborough County, PSTA in Pinellas County, VOTRAN in Volusia County and Lakeland Area Mass Transit District in Polk County. These ad valorem taxes have been a major source of revenue for the systems.

Sales Tax

As of FY 2003, two Florida transit systems received sales tax revenues, which is another potential source of local revenue. The systems are Jacksonville Transportation Authority and Sarasota County Area Transit.

Municipalities

Individual municipalities receive transportation funding primarily from the state-initiated municipal gas tax (revenues from which may be used for any legitimate transportation purpose within the municipality) and the local option gas tax, which was discussed previously.

2. **Develop "Transit Centers" in Old Town and New Town activity centers.** As discussed in the presentation of alternatives, safe and convenient locations are needed for patrons to wait for and transfer between vehicles in the fixed route system. As additional routes are added to the Key West network, transfer centers in Old Town and at SearsTown in the New Town area will facilitate passenger travel, reduce overall travel time, and allow for timed bus transfers in both areas. These facilities also would allow for operator reliefs, ticket sales and passenger safety, as well as protection from the elements. Finally, these facilities may also serve as transfer points from Key West vehicles to private-sector sightseeing trams and buses, providing a seamless transportation experience for visitors to Key West.

This initiative was not achieved since the 2000 TDP report and is being retained for recommendation.

3. **Hire a Transit Planner.**
4. **Establish a Community Outreach Program at Key West**
5. **Increase investment in marketing and develop a communications program.**
6. **Establish a Commuter Assistance Program (CAP) at Key West responsible for carrying out ridesharing programs (commuter carpools, commuter vanpools).**

Key West should establish a formal Community Outreach Program and proactively seek any and all opportunities to give presentations out in the community. Examples include the Chamber of Commerce, the Hotel/Motel Association, the Innkeepers Association, and other club gatherings.

It is recommended that Key West increase investments in the marketing of services and develop a communications program designed to improve image and build public support for continued expansion of mobility services.

It is recommended that Key West, along with participation from Monroe County, establish, organize and administer a commuter assistance program for Monroe County. This program would include commuter carpool ridematching assistance for commuters and commuter vanpool organization assistance. Both programs have the potential to relieve some mobility problems related to employment transportation for workers who commute to jobs in Key West from the nearby Keys. It would also involve marketing with employers and commuters to utilize the Lower Keys Shuttle, should it be implemented. The City could also consider establishing a Transportation Management Association (TMA) with the private sector.

These four initiatives appeared in the 2000 TDP. For this update, the four initiatives are being combined into one recommendation for an additional staff position and duties. An additional transit planner position is being recommended to address the issues identified above. Although the recommendation appeared in the 2000 TDP, it was not achieved to date.

7. **Establish and implement an integrated passenger amenities program.** A major piece of the transit experience is safe, accessible, attractive, and comfortable waiting areas for customers. This applies to bus stops, transfer centers, and at major points of origin/destination such as shopping malls. Passenger amenities include passenger shelters, information kiosks, street furniture, trash cans, telephones, water fountains, and in some cases, restrooms.

This initiative was not achieved since the 2000 TDP report and is being retained for recommendation.

8. **Install bicycle racks on Key West buses.**

This initiative was achieved since the 2000 TDP report, and all buses now have a two-bike rack available for riders. However, input from the public and city officials suggest that research into expanding the racks to include three or four bikes be undertaken, as many more patrons utilize bus service and there is not enough bike rack capacity for current riders.

9. **Develop a "Transportation in Key West" Brochure.** This recommendation is to develop a brochure, in conjunction with the private sector, that highlights all of the

transportation options available in Key West. This brochure would be sent to all prospective tourists prior to their arrival in Key West to encourage them to leave their cars at home or park their vehicles once in Key West and use alternative means of transportation while on the island.

This initiative was not achieved since the 2000 TDP and is being retained for recommendation.

10. **Provide customer service-oriented vehicle operator training.** This recommendation is to provide additional training to vehicle operators that focuses on providing superior customer service.

An operating training program is provided to all bus operators on an annual basis. This initiative has been met.

11. **Establish a Key West "All-Day Fare Pass."** It is recommended that Key West institute an All-Day bus pass once GFI fareboxes have been acquired and installed.

This initiative has been met and Key West now offers an all-day bus pass.

12. **Implement travel training program for individuals with disabilities and seniors.** Many individuals with disabilities and seniors could use fixed-route transportation services if they were trained to do so. It is recommended that a travel training program be implemented that focuses on how to access Key West buses, use and understand route maps and route schedules, and how to transfer from one bus to another.

Key West continues to work with the Monroe County CTC on a regular basis in order to provide information and training to eligible users.

13. **Examine the feasibility of establishing a City-sponsored commuter vanpool program.**
14. **Work through the CAP program coordinator to identify potential participants in a commuter vanpool program.**
15. **Establish a Guaranteed Ride Home (GRH) program available through the CAP program.**

These three initiatives appeared in the 2000 TDP. For this update, these initiatives are being combined in efforts to market and establish ridership for Lower Keys Shuttle. Key West is also working with MDT to market Lower

Keys Shuttle with service provided by MDT to enable patrons to travel from Key West to Miami using the Lower Keys Shuttle and the bus service provided by MDT terminating in Marathon.

16. **Establish a School Pool to be coordinated by the designated CAP.**

This initiative is recommended to be removed, although a new transit planner position could work with the local school board in providing transit information to the local schools.

17. **Study the need for implementation of fixed-route transit service to Lower Keys based on the demand for carpool/vanpool services.**

A study has been completed and was endorsed by the City early in 2005. Federal and State funding to implement the program is in place.

18. **Work through the CAP program to promote employer-provided commute subsidies available.**

This initiative has not been met since the 2000 TDP, however, it could be combined into the duties of a new transit planner position as noted above.

19. **Explore options for off-island parking for employees and visitors traveling to Key West from other areas.** Traffic congestion and limited parking continue to pose a significant problem for residents, visitors, and commuters in Key West. As a long-term strategy for managing mobility on the island, Key West should explore all potential options for providing off-island parking that is supplemented by intensive shuttle service.

This initiative has not been met, however, Key West has identified possible locations for park and ride facilities (5309 funding) and appears in the recommendations.

20. **Explore the option of designating Duval Street as a Dedicated Alternative-mode Corridor.** Key West should continue to explore the possibility of closing Duval Street to all personal automobile traffic. The corridor would be open only to transit vehicles, taxis, shuttles, sightseeing tours, bicycles, and pedestrians.

This initiative has not been pursued, however it is a recommendation that will retained for future implementation.

21. **Explore other avenues of providing special event transportation.**

This initiative has been met since the 2000 TDP, as Key West offers transportation options (shuttle buses) during many of the major special events held throughout the year.

22. **Continue Community Service Program.** Key West currently provides complimentary transportation services for community groups. This service adds value to the community and provides excellent opportunities for Key West to demonstrate the value of the system to the community. Therefore, it is recommended that the community service program be continued.

This initiative has been met and continues to be met through the transit department's involvement with the Local Coordinating Board, which meets on a quarterly basis throughout the year.

FIVE-YEAR OPERATING AND CAPITAL IMPROVEMENT PROGRAM

Table 5-2 presents the Five-Year Operating and Capital Improvement Program to implement the Transit Services Plan and Strategic Initiatives for Key West. The following descriptions provide a brief explanation of each project in the FY 2005-2010 Operating and Capital Improvement Program of the TDP.

1. **Lower Keys Shuttle Service** – This line item details the federal, state, and local funding (funded and unfunded) that will need to be devoted to fixed-route operations for Key West to operate the Lower Keys Shuttle (FY 2006 and future).

2. **Flexible/Adjusted Schedule** – Because traffic conditions can change drastically in Key West based on time of day and time of year, a line item dedicated to operating funds for flexible/adjusted schedules was added. This could also provide further services for special events, including shuttle type service to park and ride facilities under development.

3. **Key West Current Building and Plant Capital Expenses** – This line item represents the current building and capital expenses necessary for operating and maintaining the Key West system.

4. **Old Town and Sears Town "Transit Centers"** – This line item implements Initiative #2 and provides funding for the construction of two transit centers, one in the New Town area at Sears Town, and one in Old Town at the intersection of Emma and Olivia. A State Capital Work Program Grant is in place for this project.

5. **Transit Planner/Commuter Assistance Program Administrator** - This line item relates to the establishment of a commuter assistance program by Key West. The expense represents the labor cost of creating a staff position responsible for administering and coordinating the program. This line item relates to the following Strategic Initiatives: 3, 4, 5, 6, 13, 14, 15, 16. This item includes transit planning functions as well.

6. **Passenger Amenities Program** – This line item implements Strategic Initiative 7 by providing funding for five new shelters and corresponding amenities per year for the last four years of the planning period. These shelters will be first targeted at transfer points between the routes. The cost of each of the shelters and corresponding amenities is estimated at $5,000 each. It should be noted that for budgeting purposes it is assumed that the City of Key West would pay the local share. However, private sources of funding (advertising) are likely to be used.

7. **"Transportation on Key West" Brochure/Marketing Materials Development** – This line item addresses the identified need of creating a unified transit theme for Key West. The line item includes the cost of outsourcing the production of marketing materials to accomplish this goal. It also relates to the public cost of producing the brochure that is outlined in Strategic Initiative #9. CUTR recommends that Key West pursue local funding for this initiative.

8. **Vehicle Operator Training** – This improvement, calls for the continuation of a customer service training program and includes the operating expense of training bus operators. CUTR recommends that Key West seek local funding to help defray the cost of implementing this program.

Table 5-2
Five-Year Capital and Operating Plan

Project	Project Description		FY2005	FY2006	FY 2007	FY 2008	FY 2009	FY 2010	TOTAL	Funding Source
1	Lower Keys Shuttle Service		$990,671	$431,145					$1,421,816	JARC Award
			$125,000	$309,075	$309,075				$ 743,150	State DOT Match*
			$150,000	$150,000	$150,000				$ 450,000	Local Match**
						$706,145	$706,145	$706,145	$2,118,435	Other Local***
		Total	$1,265,671	$890,220	$459,075	$706,145	$706,145	$706,145	$4,733,401	
2	Flexible/Adjusted Schedule			$187,500	$187,500	$187,500	$187,500	$187,500	$937,500	FDOT Service Development Candidate
		Total		$187,500	$187,500	$187,500	$187,500	$187,500	$937,500	
3	Building and Plant Capital Expenses		$27,000	$47,740	$47,740	$47,740	$47,740	$47,740	$265,700	Local Funded
			$27,000							
		Total		$47,740	$47,740	$47,740	$47,740	$47,740	$265,700	
4	Old Town and SearsTown "Transit Centers"				$75,000				$75,000	State Capital Work Pgm
					$75,000				$75,000	Local
		Total			$150,000				$150,000	
5	Transit Planner/Commuter Assistance Program Administrator (New Position $33,000) (CAP costs: $25,000)			$30,500	$30,500	$30,500	$30,500	$30,500	$152,500	FDOT CAP Fund Candidate
				$30,500	$30,500	$30,500	$30,500	$30,500	$152,500	Local Unfunded
		Total		$61,000	$61,000	$61,000	$61,000	$61,000	$305,000	
6	Passenger Amenities Program (5 shelters & amenities each year for $5000 each)			$22,500	$22,500	$22,500	$22,500	$22,500	$112,500	STP (Flex Funds) Candidate
				$2,500	$2,500	$2,500	$2,500	$2,500	$12,500	Local Unfunded
		Total		$25,000	$25,000	$25,000	$25,000	$25,000	$125,000	
7	Production of Marketing Resources/Key West Brochure			$60,000		$10,000		$10,000	$80,000	Local Unfunded
		Total		$60,000		$10,000		$10,000	$80,000	
8	Vehicle Operator Training			$10,000	$5,000	$5,000	$5,000	$5,000	$30,000	Local Unfunded
		Total		$10,000	$5,000	$5,000	$5,000	$5,000	$30,000	

*State match includes additional $618,150 for FY 2006.

**Local match is an Interlocal Agreement among the City of Marathon, the City of Key West, and Monroe County, with each contributing $50,000 per fiscal year which will require amending after initial 3-year demonstration / funding assistance period by FDOT and FTA.

***Other Local funding includes sources such as those described in the section of this TDP beginning on page 75, and/or other local funding.

Table 5-3 presents all of the operating and capital expenses in Table 5-2. These operating and capital expenses are compared against existing revenue sources to determine the unfunded operating and capital expenses. (Note: In developing existing revenues it was assumed that the City of Key West would maintain the same level of commitment over the five-year planning period.) Finally, potential operating and capital revenue sources are listed in Table 5-3 including the expected additional commitment by the City of Key West if all of the recommendations in this plan are implemented. The goal of a Transit Development Plan is to establish a vision and direction for public transportation over a five-year period.

Table 5-3: Five-Year Capital and Operating Plan

CATEGORIES	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010
OPERATING EXPENSES*	$2,950,958	$3,018,179	$2,534,644	$2,842,723	$2,891,855	$2,958,558
OPERATING REVENUES						
- Federal Section 5311	$222,390	$235,755	$201,821	$211,912	$222,508	$233,633
- JARC Award	$990,671	$431,145	$0	$0	$0	$0
- FDOT Block Grant	$328,801	$162,031	$164,629	$169,260	$170,271	$177,048
- FDOT Service Develop.	$68,800	$28,638	$0	$0	$0	$0
- FDOT Match (JARC)	$125,000	$309,075	$309,075	$0	$0	$0
- Bus Fares**	$270,000	$434,135	$447,159	$460,574	$474,391	$488,623
- Bus Bench/Shelter Advert.	$67,000	$67,000	$67,000	$67,000	$67,000	$67,000
- Internal Improvements** (Local Funds)	$707,336	$902,000	$929,060	$956,932	$985,640	$1,015,209
- Other Local (Lower Keys)	$150,000	$150,000	$150,000	$0	$0	$0
- Transit Other – Directly Generated	$9,000	$3,300	$3,300	$3,300	$3,300	$3,300
- Misc – Rental Revenue	$11,600	$11,600	$11,600	$11,600	$11,600	$11,600
Total	$2,950,958	$2,734,679	$2,283,644	$1,880,578	$1,934,710	$1,996,413
UNFUNDED OPERATING	$0	$283,500	$251,000	$962,145	$957,145	$962,145
POTENTIAL OPERATING REVENUE SOURCES						
- FDOT Service Development Grants	$0	$187,500	$187,500	$187,500	$187,500	$187,500
- City of Key West	$0	$65,500	$33,000	$38,000	$33,000	$38,000
- FDOT Commuter Assistance Program	$0	$30,500	$30,500	$30,500	$30,500	$30,500
- Other Funding***	$0	$0	$0	$706,145	$706,145	$706,145
Total	$0	$283,500	$251,000	$962,145	$957,145	$962,145
CAPITAL EXPENSES*						
- Misc. Construction	$1,125,000	$25,000	$150,000	$25,000	$25,500	$25,500
- Machinery/Equipment	$27,000	$47,740	$47,740	$47,740	$47,740	$47,740
Total	$1,152,000	$72,740	$197,740	$72,740	$73,240	$73,240
CAPITAL REVENUES						
-State Capital Building Grant (STP Flexible Funds)	$1,125,000	$0	$0	$0	$0	$0
-State Capital Work Program	$0	$0	$75,000	$0	$0	$0
-Internal Improvements	$27,000	$47,740	$47,740	$47,740	$47,740	$47,740
Total	$1,152,000	$47,740	$122,740	$47,740	$47,740	$47,740
UNFUNDED CAPITAL	$0	$25,000	$75,000	$25,000	$25,500	$25,500
POTENTIAL CAPITAL REVENUE SOURCES						
- STP Flexible Funds	$0	$22,500	$0	$22,500	$22,500	$22,500
- City of Key West	$0	$2,500	$75,000	$2,500	$2,500	$2,500
Total	$0	$25,000	$75,000	$25,000	$25,500	$25,500
TOTAL ALL EXPENSES*	$4,102,958	$3,090,919	$2,732,384	$2,915,463	$2,965,095	$3,031,798
TOTAL FUNDED	$4,102,958	$2,782,419	$2,406,384	$1,928,318	$1,982,450	$2,044,153
TOTAL UNFUNDED	$0	$308,500	$326,000	$987,145	$982,645	$987,645
TOTAL CITY OF KEY WEST UNFUNDED	$0	$68,000	$108,000	$40,500	$35,500	$40,500

* Includes unfunded recommendations from Table 5-2.

** Beginning in 2007, these figures are inflated at 3% per year.

*** Other funding includes sources such as JARC, TANF, and others as described in the section of this TDP beginning on page 75, and/or other local funding.