

**PALM BEACH COUNTY TRANSPORTATION AGENCY
TRANSIT DEVELOPMENT PLAN ANNUAL UPDATE
FY 2001**

Final Report

Prepared by:



Planning Staff

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**PALM BEACH COUNTY SURFACE
TRANSPORTATION DEPARTMENT**

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Chapter One Introduction

I. Purpose

The Florida Department of Transportation requires each recipient of the Public Transit Block Grant Program to prepare and submit a five-year Transit Development Plan (TDP) and yearly TDP updates. The TDP is a short range planning tool used to predict future needs for transit service, create a community “vision” for that service, define and establish the community’s goals and objectives, and develop a program of improvements and refinements crafted to meet those established goals and objectives.

The TDP should consistently complement and be consistent with both federal and state multi-modal policy goals, the approved local government comprehensive plan of the community, and the Metropolitan Planning Organization long range transportation plan. This TDP update references and revises the goals, policies, objectives, and other relevant data of the September, 1999, FY 2000-2004 five-year TDP to reflect current conditions for FY 2001.

II. Palm Beach County Demographics and Other Data

Palm Beach County is located along the southeastern coast of Florida and shares its boundaries with Broward County to the south, Martin County to the north, and Lake Okeechobee and Hendry County to the west and southwest, respectively. The county encompasses approximately 2,023 square miles. The county’s urbanized area population, representing 96 percent of the total population of Palm Beach County, is concentrated along the Atlantic Ocean coastline. On the western border of the county the population is concentrated around the Belle Glade/Pahokee area along Lake Okeechobee, providing a dramatic contrast to the urbanized areas along the coastline. There are approximately 53 miles between the county’s eastern and western boundaries, connected by a single significant transportation corridor. Between the western edge of the urbanized area and the eastern limits of the county’s western area lies an area of intense agricultural production.

In the 1990 U.S. Census of Population, the population of Palm Beach County was 863,503. The most current population estimate (2000) for the County is 1,067,901 provided by the Bureau of Economic and Business Research (BEBR) at the University of Florida and the Palm Beach County Population Disaggregation Model. Palm Beach County has 37 separately incorporated

entities. The largest of these cities is West Palm Beach with 82,715 persons or 7.7 percent of the total population for the county, followed by Boca Raton with 69,727 persons or 6.5 percent of the total. Table I-1 below summarizes the population estimates for the census designated places and the unincorporated areas of the county.

**TABLE I-1
POPULATION - PALM BEACH COUNTY
AND CENSUS DESIGNATED PLACES**

	1990 Census	2000 Estimates	% Change
Atlantis	1,653	1,804	9.1%
Belle Glade	16,177	17,140	6.0%
Boca Raton	61,486	69,727	13.4%
Boynton Beach	46,284	52,389	13.2%
Briny Breezes	400	395	-1.3%
Cloud Lake	121	124	2.5%
Delray Beach	47,184	52,682	11.7%
Glen Ridge	207	225	8.7%
Golf Village	184	211	14.7%
Golf View	153	151	-1.3%
Greenacres City	18,683	24,628	31.8%
Gulf Stream	690	722	4.6%
Haverhill	1,058	1,261	19.2%
Highland Beach	3,209	3,279	2.2%
Hypoluxo	807	1,655	105.1%
Juno Beach	2,172	2,750	26.6%
Jupiter	24,907	33,528	34.6%
Jupiter Inlet Colony	405	406	0.2%
Lake Clarke Shores	3,364	3,675	9.2%
Lake Park	6,704	6,977	4.1%
Lake Worth	28,564	29,795	4.3%
Lantana	8,392	8,580	2.2%

Manalapan	312	344	10.3%
Mangonia Park	1,453	1,438	-1.0%
North Palm Beach	11,343	12,348	8.9%
Ocean Ridge	1,570	1,691	7.7%
Pahokee	6,822	7,004	2.7%
Palm Beach	9,814	10,174	3.7%
Palm Beach Gardens	22,990	44,045	91.6%
Palm Beach Shores	1,035	1,037	0.2%
Palm Springs	9,763	9,835	0.7%
Riviera Beach	27,646	29,713	7.5%
Royal Palm Beach	15,532	20,367	31.1%
South Bay	3,558	4,080	14.7%
South Palm Beach	1,480	1,495	1.0%
Tequesta Village	4,499	4,658	3.5%
Wellington	0	29,163	0.0%
West Palm Beach	67,764	82,715	22.1%
Unincorporated	405,118	495,690	22.4%
TOTAL POPULATION	863,503	1,067,901	23.7%

Source: University of Florida, Bureau of Economic and Business Research, *1997 Florida Estimates of Population and PBC 11/96 Population Disaggregation Model*.

III. Traditional and Unique Transit Markets

Transit Dependents

To investigate the transportation needs of a given area, certain distinct segments of the population must be examined. One step in the development of a TDP requires the analysis of segments of the study area's population that consist of persons who are defined as being dependent on public transportation for their mobility requirements. In Florida, these persons are referred to as either "transit dependent" or "transportation disadvantaged," as defined in Chapter 427, Florida Statutes. These groups are commonly referred to as "TD." Examination of the transportation disadvantaged population is especially important in developing the

TDP for Palm Beach County due to the county's large concentration of elderly residents. The categories that comprise the transportation dependent segments of the county include:

- Youth (persons under the age of 18);
- Elderly (persons 60 years of age and older);
- Low-income (households with annual incomes below \$10,000); and
- Zero-car

Transportation Disadvantaged Population

Chapter 427, Florida Statutes defines transportation disadvantaged (TD) persons to include:

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

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

The second population group, referred to as the Transportation Disadvantaged (TD) population (also known as Category II), is a subset of the Potential TD population. The TD population includes those persons who are transportation disadvantaged as defined in Chapter 427, Florida Statutes (i.e., they are unable to transport themselves or to purchase transportation). These persons are eligible to receive the same transportation subsidies as those persons in the Potential TD group and they are eligible to receive trips subsidized by moneys allocated to the local CTCs from the Transportation Disadvantaged Trust Fund, as funding permits.

Table I-2 presents the 2000 estimates of persons who are included in both the Potential TD and total TD population. The Potential TD population figure of 432,372 represents approximately 40.4 percent of the county's estimated year 2000 population. Approximately 79,565 persons or 7.4 percent of the county's population are estimated to be included in the TD population and, therefore,

would meet the criteria for being considered transportation disadvantaged making them eligible to receive trips subsidized by the TD Trust Fund.

**Table I-2
2000 Palm Beach County
Transportation Disadvantaged Population**

Population Segments	Population Estimates	Percent of County Population
Potential TD Population	432,372	40.4%
TD Population	79,565	7.4%

Source: *Florida Statewide Transportation Disadvantaged Plan: Population and Demand Forecasts 1996-2015*, July 1996.

Table I-3 contains a detailed breakdown of the different transportation disadvantaged population categories within Palm Beach County. The largest segment is the transportation disabled, elderly, non-low income population group comprising approximately 59.0% of the 2000 TD population.

**Table I-3
2000 Palm Beach County
Transportation Disadvantaged (TD) Population
By Population Segment**

Population Segments	Population Estimates	% of TD Population
Transportation Disabled, Non-Elderly, Low Income	1,896	2.4%
Transportation Disabled, Non-Elderly, Non-Low Income	16,507	20.7%
Transportation Disabled, Elderly, Low Income	3,536	4.5%
Transportation Disabled, Elderly, Non-Low Income	46,975	59.0%
Non-Transportation Disabled, Low Income, No Auto, No Fixed-Route Transit	10,651	13.4%
Total Transportation Disadvantaged	79,565	100.0%

Source: *FL Statewide Trans. Disadvn. Plan: Population and Demand Forecasts 1996-2015*, July 1996.

Table I-4 contains annual projections for the TD population of Palm Beach County through the year 2005. Projections of TD population are separated into the same subgroups as shown in Table I-3. From 1999 to 2005, the TD population is estimated to grow 14.0% or from 77,883 persons in 1999 to 88,820 persons in 2005.

**Table I-4
Palm Beach County Transportation Disadvantaged (TD)
Population Projections, 1999-2005
By Population Segment**

Population Segments	1999	2000	2001	2002	2003	2004	2005
Transportation Disabled, Non-Elderly, Low Income	1,852	1,896	1,929	1,963	1,998	2,034	2,070
Transportation Disabled, Non-Elderly, Non-Low Income	16,127	16,507	16,800	17,098	17,401	17,709	18,023
Transportation Disabled, Elderly, Low Income	3,465	3,536	3,623	3,712	3,803	3,897	3,993
Transportation Disabled, Elderly, Non-Low Income	46,029	46,975	48,131	49,315	50,528	51,771	53,044
Non-Transportation Disabled, Low Income, No Auto, No Fixed-Route Transit	10,410	10,651	10,851	11,055	11,263	11,475	11,690
Total Transportation Disadvantaged	77,883	79,565	81,334	83,143	84,993	86,886	88,820

Source: Estimates prepared using the *Florida Statewide Transportation Disadvantaged Plan: Population and Demand Forecasts 1996-2015*, July 1996.

Student Transportation

Palm Tran and the Metropolitan Planning Organization are working with the Palm Beach County School Board to develop a marketing plan to attract school age children who live within 2 miles of their school and who are not receiving school bus transportation to use Palm Tran buses for their transportation.

In a rider survey conducted in April 1999, it was determined that over 25 percent of Palm Tran riders are students.

Florida's WAGES Program

In May 1996, the Florida Legislature passed the Work and Gain Economic Self Sufficiency Act (WAGES). The WAGES program is implemented through 24 local WAGES coalitions with oversight from the WAGES State Board of

Directors. The WAGES program provides for time-limited cash assistance and requires that participants work and be financially responsible for their families. The program limits most families to receiving cash assistance for no more than 24 consecutive months, with a lifetime limit of 48 months. WAGES provides vocational education and training, assistance with childcare and transportation, and other support activities to transition welfare recipients from public assistance to independence.

One of the primary barriers to the effective implementation of a welfare to work program, such as WAGES, is the issue of transportation. Access to reliable transportation is a key factor in a person's ability to obtain and maintain their employment status.

The Florida Department of Transportation was given an expanded role in the WAGES program through statutory changes made through the 1998 Legislative Session. Those changes impacting Florida's public transit systems included an amendment to Chapter 341, Florida Statutes requiring the Department to assist local entities and other transit operators in the planning, development and coordination of transit services for WAGES program participants and an amendment to ss. 341.052(1), Florida Statutes adding that in developing transit development plans, transit agencies must solicit comments from local WAGES coalitions, address how they will work with the local coalitions to provide services to WAGES participants, and review program and financial plans developed by the coalitions and provide information to them on the availability of transportation services.

The local WAGES coalition in Palm Beach County has created a transportation subcommittee that is chaired by the Metropolitan Planning Organization. The membership includes MPO staff members, as well as staff from Palm Tran. In March 1999, the State WAGES Board's "Flash Report" identified 9,394 persons in the WAGES program in Palm Beach County or 3,719 families. At least 30% of these families are located within the Glades region in western Palm Beach County. The local WAGES coalition currently purchases Palm Tran bus passes and tokens for distribution to WAGES recipients, they are providing money to participants for car repair and maintenance, and they are distributing gas vouchers. The Transportation Subcommittee is developing an instructional video on transportation services in the community. This video, as well as Palm Tran brochures and route maps will be made available at each of the five one-stop centers located in the county.

In addition, in 1999, Palm Tran received approval for a Job Access and Reverse Commute Competitive Grant Program proposal from the Federal Transit Administration. The transportation plan provided in that proposal resulted in the implementation of later night service on routes 47 and 48 in the Belle Glade area in 2000.

The total project cost identified for the project is \$1,000,000 is supported by \$500,000 in federal funds and \$500,000 in matching funds provided by the local WAGES coalition.

V. Other Palm Beach County Characteristics

Land Use and Transportation Mobility

Land use and the land development patterns of a community have a significant impact on the transportation networks within that community and in many ways dictate how a transportation system will evolve over time. Palm Beach County is experiencing rapid commercial and residential growth in northern communities such as Palm Beach Gardens, Jupiter, and the Acreage. Significant growth is also occurring in the Agricultural Reserve area west of Boynton and Delray Beaches. Primarily this growth is characterized by low density residential development with occasional activity centers dotting the landscape. This pattern is not particularly conducive to transit usage.

Most of the commercial development is occurring in the central areas of the county such as the urban centers of Boynton Beach, West Palm Beach, and Riviera Beach. These intensive development areas are developing in a manner more conducive to transit usage by those who are employed by these developments or by those served. The areas where development is most intense include the following north/south corridors: I-95, US 1, Military Trail, and Congress Avenue and the following east/west corridors: 45th Street, Okeechobee Road, Southern Boulevard, and Yamato Road.

Since the adoption of the 1989 Palm Beach County Comprehensive Plan, the County's growth rate of 2.3 percent per year has exceeded the state's average. The County continues to absorb approximately 20,000 new residents each year. At the current rate of growth, based on past trends and future projections, the County is expected to accommodate in excess of 1,373,800 residents by the year 2015. The eastern third of the County, east of the Conservation Areas and Twenty Mile Bend, is expected to accommodate 96 percent of the population. The areas west of Florida's Turnpike will experience a 37 percent increase in population; between the Turnpike and I - 95, the population will increase 46 percent; and in areas east of I - 95, the population will increase by 15 percent.

To protect the quality of life for present and future residents of the county, the Palm Beach County Board of County Commissioners has identified a framework to provide the basis for land use decision in the County. The update to the Future Land Use Element of the Comprehensive Plan identifies specific growth management strategies for distinct geographic areas in a system known as the

“Managed Growth Tier System.” This system is based on the following five broad principles that guide sustainable land use planning and development in the County:

- Conserve and protect natural and man-made resources, and restore and maintain key ecosystems, to provide adequate supplies of clean and safe water for natural, human and economic systems.
- Limit urban sprawl through the establishment of urban development areas and encourage urban revitalization and redevelopment.
- Provide for sufficient open space to protect wildlife, and provide natural and recreational areas for public use.
- Create quality livable communities by balancing and distributing land uses to meet the needs of the diverse communities, and associated lifestyle choices, including jobs through education and economic development, and improve the quality of life through better housing, recreational, and cultural opportunities for all residents.
- Manage the development of land and service delivery, so that its use is appropriate, orderly, timely, and cost effective.

Even with the comprehensive managed growth program in the county, the planning for a development sometimes overlooks the need for public transportation. Site planning for that development usually does not consider access to existing public transportation services. A more comprehensive approach to site planning will become more critical when parking problems and congestion along surrounding streets become constricted and when employers require access to a suitable labor market. These factors are already in place in many areas of the county. It is imperative that developers and local government agencies work closely with Palm Tran to ensure effective public transit access for the future.

VI. Palm Tran

Palm Tran provides fixed-route bus service in Palm Beach County. Service is provided seven days a week in most areas. Palm Tran currently operates 35 routes in Palm Beach County with a fleet of 123 buses during peak hours from Boca Raton north to Jupiter and west to Belle Glade. Most headways are thirty minutes during peak hours and one hour during off-peak hours. The major north-

south spine routes operate on thirty minute headways every weekday. Route 1, which operates on the U.S. 1 corridor, operates on twenty minute headways during peak hours.

Palm Tran also operates the Palm Tran shuttle in downtown West Palm Beach. Coordination with Tri-County Commuter Rail Authority (Tri-Rail) is provided by linking fixed route bus service to the Tri-Rail stations located within Palm Beach County (Mangonia Park, West Palm Beach, Lake Worth, Boynton Beach, Delray Beach, and Boca Raton).

ADA Complementary Paratransit Services

The main goal of the transportation provisions of the Americans with Disabilities Act of 1990 is access to mainline, fixed-route transportation service for individuals with disabilities. However, the regulations recognize that some persons with disabilities will not, under some or all conditions, be able to use fully accessible fixed-route services. Therefore, the ADA requires public agencies that operate fixed-route transportation service to provide complementary paratransit service that "shadows" the existing fixed-route service. The ADA complementary paratransit service area is defined as at least 3/4 of a mile on either side of a fixed route. Currently, the ADA paratransit service in Palm Beach County is available anywhere within 3/4 of a mile of a Palm Tran bus route and anywhere in Palm Beach County south of PGA Boulevard and east of Military Trail (core ADA service area).

ADA complementary paratransit service must be designed to provide a comparable level of transportation service (as compared to fixed-route service) to persons who are unable to use the fixed-route service because of the nature and/or extent of their disability. This means that ADA paratransit eligible individuals must be provided unconstrained paratransit service. The application of trip priorities and trip caps is not permissible under the federal ADA regulations. The regulations specifically define service criteria that must be met when implementing complementary paratransit service. The six service criteria, described in Section 37.31 of the federal regulations (49 CFR Part 37), are:

- Service area
- Response time
- Fares
- Trip purpose
- Hours and days of service
- Capacity constraints

The regulations also specifically state that only individuals who are certified as ADA paratransit eligible may use the complementary paratransit service and require that public entities establish a process for certifying individuals as ADA paratransit eligible. ADA paratransit eligibility is related to the ability of a person with a disability to use the existing fixed-route system. A person may be unable to use fixed-route service some or all of the time because the system is not fully accessible, the nature

of the person's disability prevents them from using fixed-route transportation, or because they are unable to get to or from a transit station or stop. Eligibility for ADA complementary paratransit is not related to where an applicant lives. Individuals who live outside of the ADA service area may still be certified as ADA paratransit eligible; however, eligible individuals who reside outside of the ADA service area are responsible for finding their own transportation to and from the ADA service area. Transit agencies are only required to provide trips that have origins and destinations within the ADA service area.

Currently, Palm Tran's Paratransit Division oversees the delivery of ADA paratransit. Individuals needing ADA paratransit are certified through an in-person process which includes a face-to-face interview with a member of Palm Tran's staff and (in some instances) an additional functional physical or cognitive assessment by an independent third party contractor (currently Gulfstream Goodwill Industries). Eligible riders contact a private paratransit management firm (currently ATC/Intelitran) to reserve trips and to file complaints and commendations about service. ATC/Intelitran also schedules service on dedicated vehicles and undedicated vehicles, operated by other contractors; updates data within the paratransit scheduling software, based on completed vehicle manifests; and prepares as submitted by the transportation contractors. There are three firms, who contract with Palm Beach County to provide dispatch facilities, vehicles and personnel. They include: AAA and Wagon Services (doing business as "Ambulette of the Palm Beaches"), Two-Wheels Transportation and Palm Beach Transportation. Riders are currently charged a fare of \$1.50 for ADA complementary paratransit service; however, riders with a combined household income which is at or below the federal poverty level may apply for a 100% fare subsidy for all paratransit trips.

IX. Palm Tran Rider Survey

In April 1999, a rider survey was conducted on the Palm Tran system. Various statistics gathered by that effort have been incorporated in this chapter and will be referenced throughout the later chapters of this TDP update. A number of significant findings of that effort include:

- 41.2 percent of Palm Tran riders are new system riders having used the system for less than one year (including first time riders).
- 70.6 percent of riders use the system 4 or more days per week, yet only 14.5 percent of riders use multi-ride fare media.
- 25.8 percent of riders are students.
- More night and weekend service, more frequent service, covered shelters, and suburb-to-suburb routes received the highest priorities for system improvements by Palm Tran riders.
- Only 6.1 percent of Palm Tran riders are 65 years of age and above.
- Almost 53 percent of riders are under the age of 35.

- Over 34 percent of riders have annual household incomes of less than \$10,000; while 7.6 percent have incomes of \$50,000 per year or greater.
- Over 44 percent of riders have zero working vehicles in their household.
- Work accounted for 33.6 percent of Palm Tran rider destinations.
- Over 42 percent of riders indicated their residential zip codes were in the City of West Palm Beach.

Chapter Two Goals, Objectives and Policies

I. Introduction

The identification of goals and objectives for a public transportation system is a fundamental step in the development of a Transit Development Plan. This chapter summarizes the policy issues that have been identified.

The first section of the chapter identifies and updates the five-year goals and objectives that were developed for Palm Tran's five-year TDP, completed in the fall of 1999. The second section discusses the goals and objectives identified in *Transit 2020: Florida's Strategic Plan for Public Transportation*, published by the Florida Department of Transportation in September, 1998 and the consistency of Palm Tran's goals and objectives with those of the statewide plan. The third section of this chapter identifies the transit related goals and objectives that are contained in other Palm Beach County documents including the Palm Beach County Comprehensive Plan, as revised in December 1999.

II. Palm Tran's Mission Statement

Palm Tran's mission statement currently reads:

"The mission of Palm Tran is to provide the citizens of Palm Beach County with a safe, convenient, and affordable mode of transportation.

Palm Tran employees pledge to provide the highest quality of transit service available by successfully accomplishing each of their assigned roles including not only meeting customer's needs by exceeding their expectations.

The management of Palm Tran is committed to the highest quality of customer and employee satisfaction and promises to do whatever it takes to achieve their satisfaction. This includes short and long term plans for system development, marketing, and employee training which will foster a sense of pride in our employees and customers.

*We encourage all Palm Tran employees to fully embrace our slogan, **'We Take Pride in Your Ride.'**"*

Palm Tran's mission statement will be supported by goals and objectives established for Palm Tran through the TDP process. The following section identifies those goals and objectives.

III. TDP Goals, Objectives, and Policies

Palm Tran has taken many steps to improve the level and quality of services offered to the residents of Palm Beach County. The effort began with a complete revision to Palm Tran routes and continues to evolve through continued expansion of the services provided, including capital and personnel expansions. Palm Tran will continue to play an important and active role in addressing the issues of traffic congestion, air pollution, providing expanded services to the poor, elderly and student populations in the county, while also becoming a more attractive alternative mode of travel for residents and visitors within all income, age and socio-economic sectors.

The following goals will chart the direction for Palm Tran to improve its system, making it both more effective in meeting the need for services and more efficient in the way those services are provided.

GOAL 1

To consistently provide effective, safe, and reliable public transit services to the residents and visitors of Palm Beach County.

Objective 1.1

Increase the frequency of service and reduce travel times on highly utilized routes and along significant corridors, including, but not limited to: Okeechobee Boulevard, Military Trail, Congress Avenue, and US 1.

Policy 1.1.1

Provide later evening services on routes that can support it.

Policy 1.1.2

Decrease headways on Routes 1, 2 and 3.

Policy 1.1.3

Establish express bus and/or limited stop services in the I-95/U.S. 1 corridor, and/or Yamato Road corridor.

Policy 1.1.4

Coordinate with the Florida Department of Transportation to establish a park and ride lot in northern Palm Beach County to be served by I-95 express or limited stop

buses.

Policy 1.1.5

In coordination with the Florida Department of Transportation, and Palm Beach County Engineering and Public Works Department, consider the establishment of dedicated bus lanes on I-95, Southern Boulevard, U.S. 1., and/or Yamato Road.

Policy 1.1.6

To assist in maintaining schedules along those dedicated bus lanes, coordinate with the Palm Beach County Engineering and Public Works Department to determine the feasibility of utilizing signal preemption systems for use within these corridors.

Policy 1.1.7

Adhere to vehicle manufacturer guidelines and System Safety Program Plan procedures in the maintenance of transit vehicles to limit revenue service interruptions.

Policy 1.1.8

Palm Tran shall continually monitor schedule adherence and on-time performance to identify areas for improvement.

Policy 1.1.9

Adopt transit service standards or guidelines that will establish objective methods for determining when service should be expanded or reduced.

Policy 1.1.8

The Palm Tran Route Review Committee shall continue to meet on a regular basis to review the performance of each route and to share the information they receive from passengers, operators, and the public on how various route configurations can be improved.

Objective 1.2

Implement a system safety and passenger security program to increase the personal safety of existing patrons and attract potential patrons to the system.

Policy 1.2.1

At a minimum, continue to monitor vehicles on a daily basis to ensure vehicles are free of defects that could endanger passengers, other vehicles, or pedestrians, consistent with Palm Tran's System Safety Program Plan.

Policy 1.2.2

At a minimum, include the following curriculum in Palm Tran driver training: emergency response procedures, customer service and sensitivity training, use of on-board equipment (including wheelchair lift deployment), environmental awareness (includes hazardous materials), defensive driving/accident prevention, and others consistent with Palm Tran's System Safety Program Plan.

Policy 1.2.3

Consider the installation of security cameras and a pay phone station at each of Palm Tran's major transfer locations.

Policy 1.2.4

Equip the entire fleet of transit vehicles with on-board security cameras.

Policy 1.2.5

Ensure the safety of Palm Tran patrons in the placement, design and construction of bus stop shelters.

Policy 1.2.6

Install 400 bus shelters by 2005. Ensure that newly constructed or placed bus stop shelters are fully accessible to those with mobility limitations. Pedestrian pathways, free of barriers, leading to and away from bus stops and shelters will be essential. (Barriers would include curbs, pot holes, muddy pathways, drainage ditches, piles of refuse, broken pavement or sidewalks, or grates with openings so large they catch wheelchair wheels or canes).

Policy 1.2.7

In areas where paved pedestrian ways are either costly or physical conditions prevent their construction, unpaved pedestrian ways should be smooth and clear of debris and vegetation and adequately constructed with stable soil mixtures to ensure proper drainage and structural integrity.

Policy 1.2.8

Post a current system map and schedule information in each newly constructed or placed bus stop shelter.

Policy 1.2.9

Ensure that all bus stops and shelters are free of debris and that grassed areas immediately adjacent to stops and shelters are maintained.

GOAL 2

To increase the efficiency of the Palm Tran fixed-route system.

Objective 2.1

Palm Tran shall employ cost saving and revenue generating strategies to increase the operating efficiency of the system.

Policy 2.1.1

To increase overall system revenues, Palm Tran shall initiate innovative strategies, such as a new fare structure, to increase farebox recovery to 25 percent by FY 2003.

Policy 2.1.2

In an effort to increase revenue and ridership, institute a discount transit pass program for county employees.

Policy 2.1.3

Pursue the use of summer youth employees, college interns, and volunteers to provide valuable services to Palm Tran, such as data entry, research, schedule distribution, etc.

Policy 2.1.4

Reduce maintenance costs through the continued use of low-tech solutions that save labor and/or parts costs. Examples would include, but not be limited to: new brake lathes, metal bus benches rather than wood, and portable shelter cleaning equipment.

Policy 2.1.5

Review and consider for implementation vehicle maintenance techniques that

extend to life of vehicle systems and associated parts. These would include, but not be limited to: using synthetic oil to reduce labor costs associated with oil changes; performing frequent oil analysis and opacity testing; and installing transmission brake retarders to extend the life of the brakes.

Policy 2.1.6

Consider contracting with other county departments or non-profit agencies to maintain the vehicles for these departments and agencies at Palm Tran maintenance facilities.

Policy 2.1.7

Pursue the acquisition of property for the expansion of the main operations facility in West Palm Beach and the south county facility in Delray Beach.

GOAL 3

To identify and pursue additional fiscal and human resources to implement this transit development plan.

Objective 3.1

Pursue additional resources needed to procure needed capital assets and increase operating revenue.

Policy 3.1.1

Palm Tran shall request the Palm Beach County Metropolitan Planning Organization (MPO) to develop and adopt a resolution establishing a policy to direct, on an annual basis, a minimum percentage of all Surface Transportation Program (STP) funds allocated to the County to priority transit projects. In addition, Palm Tran shall cooperate with the MPO in developing a request to the Florida Department of Transportation to transfer the required state match of those funds set aside for transit programs to the transit projects for Palm Beach County identified in the FDOT Five-Year Work Program.

Policy 3.1.3

Work with local municipalities to divert gas tax revenue or other forms of municipal revenue to support the continuation of services in areas with low ridership or to expand services.

Objective 3.2

Aggressively pursue the expansion of private sector participation and public/private partnerships in public transportation programs and projects.

Policy 3.2.1

Pursue additional private support for Palm Tran through the expanded sell of advertising rights on buses and shelters.

Policy 3.2.3

Engage the private sector and large employers in the development of premium services and/or support facilities, including joint development of major transit terminals and stations.

Policy 3.2.4

Pursue additional private sector support through the expanded use of vinyl wrapped bus advertising.

Policy 3.2.5

Work with local chambers of commerce to pursue private financial support for routes created or continued that serve major employers.

Policy 3.2.7

Begin working with the developers of the Wellington Mall to ensure adequate access to the facility and to pursue special service arrangements or transit benefits for their employees.

Policy 3.2.8

Pursue private sector support to turn federal demonstration grants into permanently funded, continuing programs.

GOAL 4

To improve Palm Tran's Image as a Viable Transportation Alternative for the Community.

Objective 4.1

Support and encourage land development regulations, policies and initiatives that support transit usage and make Palm Tran a viable transportation alternative for the

community.

Policy 4.1.1

Work with the municipalities to establish policies requiring developers to address access to public transportation facilities in the site plans for their developments.

Policy 4.1.2

Work with the county to amend land development regulations to provide support for transit-oriented developments.

Policy 4.1.3

Work with the county to establish incentives for developers to encourage infill development maximizing existing public infrastructure and reducing additional public investment.

Objective 4.2

To provide a convenient and effective alternative to the automobile and a convenient link to intermodal travel, reducing traffic congestion and contributing to air quality goals.

Policy 4.2.1

Coordinate with the Florida Department of Transportation (FDOT), the South Florida Regional Transportation Organization, Tri-County Commuter Rail Authority, Broward County Transit, and the FDOT Turnpike District to establish seamless intermodal and cross-jurisdictional transfers through the expanded use of electronic fare media or “smart cards.”

Policy 4.2.3

Coordinate with and assist Tri-Rail in gaining support for extending commuter rail services to northern Palm Beach County.

Objective 4.3

Expand Palm Tran marketing and outreach efforts.

Policy 4.3.1

Establish a “Transit Coalition” in the county to help build grass-roots support for additional local, state and federal funds for transit, and help promote the use of

transit in the county.

Policy 4.3.3

Work with local radio and/or television stations to provide free advertising space on vehicles or on shelters in exchange for promotional advertisements for Palm Tran on those stations.

Policy 4.3.4

Solicit private enterprise assistance to “sell” the transit message to other private entities.

GOAL 5

To pursue the most cost effective means of providing ADA Complementary Paratransit services to eligible patrons in the community.

Objective 5.1

Review current service characteristics to identify areas where cost saving practices can be implemented.

Policy 5.1.1

Monitor the effectiveness of the ADA eligibility certification process in ensuring that only those needing that level of service have it available to them.

Policy 5.1.2

Improve the accessibility of bus stops and transfer facilities for persons with mobility limitations.

IV. Consistency Statement - *Transit 2020: Florida’s Strategic Plan for Public Transportation*

Transit 2020 is a statewide strategic plan that was developed by the Florida Department of Transportation in collaboration with state and local government agencies, transit providers, community leaders, and the general public. Through an analysis of the strengths, weaknesses, opportunities, and threats to Florida’s transit industry, it defines the industry’s values, mission, and vision. *Transit 2020* is the transit element of the *Florida Transportation Plan*, the document that guides FDOT

decision making through the development and adoption of their annual budget and the five-year work program.

Transit 2020 focuses on three issue areas for public transportation in the state: transit service, funding, and planning/policy. For each of these issues, *Transit 2020* establishes a goal and set of objectives, strategies, and tasks that have been identified to provide direction in the evolution of transit in Florida as we move into the new millennium.

The following section identifies the statewide goals, objectives, and strategies for transit in Florida. The goals, objectives, and policies for Palm Tran, as identified in the previous section, are consistent with those provided below, to the maximum extent feasible.

Transit 2020 Goal 1: Transit Service

Implement a transit system that improves and expands travel choices for Floridians and visitors.

Objective 1.1 - Improved Core Service

Achieve the quantity and quality of local transit (core) service sufficient to increase transit ridership in Florida at twice the average rate of population growth through 2020.

Strategies:

- 1.1.1 Increase the frequency of transit service in transit supportive areas.
- 1.1.2 Increase the number of hours per day and days per week that transit service is available to Floridians and visitors.
- 1.1.3 Improve overall service quality, including reducing the amount of time it takes to complete a trip, creating pleasant waiting areas, staying on schedule, increasing comfort, maintaining safety, and improving customer information.

Objective 1.2 - Regional Service

Develop and expand regional transportation service in corridors where the number of inter-county trips exceeds established thresholds.

Strategies:

- 1.2.1 Encourage the development of regional transit services where there is a high level of travel between population centers.

- 1.2.2 Coordinate regional and local transit planning processes.
- 1.2.3 Involve private sector transportation operators as regional service providers and/or as local feeder service providers.

Objective 1.3 - Market Expansion

Expand the transit market to include a greater percentage of riders who have a choice between transit and auto for their trips.

Strategies:

- 1.3.1 Provide and aggressively promote premium services, such as express bus or rail to attract more riders who have a choice.
- 1.3.2 Provide incentives for transit use, such as service that can compare reasonably well with the auto in terms of cost, comfort, and convenience.
- 1.3.3 Engage the private sector and large employers in the development of premium services and support facilities, including joint development of major transit terminals and stations, and employee transportation programs.

Objective 1.4 - Mix of Modes

Provide an effective and efficient mix of transit modes and transfer facilities to achieve seamless intermodal travel.

Strategies:

- 1.4.1 Encourage local transit agencies to consider all types of transit service (shuttle buses, vanpools, local bus, express bus, rail transit, people movers, commuter rail, water ferry) when planning new, restructured, or expanded transit services.
- 1.4.2 Make it easier to transfer from one type of service to another via service and facility design and with simplified fare payment methods.
- 1.4.3 Provide funding and design guidelines for stations and terminals used by more than one type of transportation service, i.e., a facility used by buses, trains, airplanes or passenger ships.

Goal 2: Transit Funding

Sustain and expand investment in public transportation from all existing and

potential public and private funding sources.

Objective 2.1 - Adequate Funding

Achieve adequate and stable funding levels to meet transit needs for service preservation, operating and capital expansion, and technological innovation.

Strategies:

- 2.1.1 Establish a statewide hierarchy of transit service types to help various levels of government to better focus their resources.
- 2.1.2 Explore local and statewide dedicated funding for transit.
- 2.1.3 Use state financial incentives to promote the adoption of available local government revenue options for transit.

Objective 2.2 - Flexible Funding

Utilize flexible funding opportunities for transit.

Strategies:

- 2.2.1 Ensure that FDOT Work Program flexible funding categories accurately reflect eligible uses, and deter preassignment by mode.
- 2.2.2 Develop better long term (5 to 10 year) assessments of priorities and needs to improve transit's effectiveness in the state and local planning and resource allocation processes.
- 2.2.3 Allocate transportation funds based on needs and priorities identified through the Department and MPO planning process.

Objective 2.3 - Creative Funding

Use creative and innovative funding strategies.

Strategies:

- 2.3.1 Attract private investment in support of transit.

- 2.3.2 Increase directly generated transit funds by improving revenue collection and the use of innovative financing techniques.
- 2.3.3 Promote developer contributions to transit as a means of achieving local government transportation concurrency.

Goal 3 - Transit Planning and Policy

Develop, promote and encourage transit supportive policies, institutional arrangements and practices.

Objective 3.1 - Transit-Oriented Development

Promote land use planning and urban design practices that facilitate transit service and access.

Strategies:

- 3.1.1 Incorporate transit-supportive strategies and standards in state and local plans, and proactively promote implementation of these standards.
- 3.1.2 Strengthen the ability of transit agencies to effectively review and influence the transit accessibility of proposed developments.
- 3.1.3 Use transit as a land development tool to focus development and enhance the environment.
- 3.1.4 Revise state and local transportation design guidelines and manuals to incorporate transit and pedestrian oriented design standards.
- 3.1.5 Incorporate easements for future transit projects into the FDOT and local right-of-way acquisition processes.

Objective 3.2 - Improved Institutional Performance

Foster institutional arrangements, practices and cultures that establish clearly defined roles, promote staff teamwork, encourage partnership with transit providers, and support a results-oriented management approach.

Strategies:

- 3.2.1 Evaluate and redefine, where appropriate, the responsibilities and structures

of all agencies involved in transit.

- 3.2.2 Use fiscal and other incentives to promote the development of transit-supportive institutional arrangements.
- 3.2.3 Coordinate FDOT planning with other transportation related initiatives, such as ongoing efforts to better integrate land use and transportation planning, economic development, and the transportation aspects of welfare reform.

Objective 3.3 - Better Multi-Modal Planning

Develop a multi-modal transportation planning process that addresses the wide range of policy issues involved in making sound, long-range transportation investment decisions, including technological innovation and the environmental and economic benefits of transit.

Strategies:

- 3.3.1 Develop a comprehensive and reliable planning model for short-term transit demand analysis.
- 3.3.2 Research, identify and support opportunities to apply advanced technology to help improve transit performance.
- 3.3.3 Organize programs to share knowledge on multi-modal planning and assist transit providers and local governments in the development of effective strategies for implementing multi-modal systems.
- 3.3.4 Develop strategies and standards to better integrate transit, pedestrian and bike modes into the state and local multi-modal planning processes.

Objective 3.4 - Improved Transit Image

Establish a broad-based public and political support of transit as a mobility choice and enhancement to Floridian's quality of life.

Strategies:

- 3.4.1 Provide a wide range of public information services designed to make transit more accessible and easier to use.
- 3.4.2 Implement a broad-based public awareness campaign designed to capture public attention, inform them of the benefits of transit, improve transit's image, and generate public support.

3.4.3 Involve specialized groups, such as environmental advocacy organizations, in public awareness efforts to broaden public and political support for transit.

V. Transit-Related Goals and Objectives from Other Sources

Section 341.052 Florida Statutes (F.S.) requires eligible recipients of Public Transit Block Grant funds to “...*establish public transportation development plans consistent, to the maximum extent feasible, with approved local government comprehensive plans of the units of local government in which the provider is located.*” The transit-related goals contained in the Palm Beach County Comprehensive Plan, Mass Transit, Land Use, and Traffic Circulation elements and the Transportation Element of the recently updated Comprehensive Plan are identified in the following section.

Palm Beach County Comprehensive Plan Transportation Element (from revised plan dated 12/21/99)

GOAL 1:

It is the goal of Palm Beach County to provide an interconnected multimodal transportation system which moves people, goods, and services in a safe, efficient, convenient and economical manner with minimal adverse impact to the environment.

Objective 1.1 Level of Service Standards:

By 2015, the Countywide transportation system shall operated at the adopted Level of Service (LOS) standard (as defined below):

Policy 1.1-h:

The County shall maintain a level of service, for the purpose of concurrency management, that requires mass transit services be available to accommodate a minimum of 1/2% of the total trip demands.

Policy 1.1-i:

The County (through the MPO) shall maintain a level of service (LOS) performance standard to regularly monitor and evaluate each mass transit bus route by assessing peak hour headways. For each individual route, a minimum LOS shall be established which would dictate that no individual route shall exceed 1.5 hour peak hour headway.

Objective 1.3 Management of Transportation Systems:

The County shall emphasize the safe and efficient management of the transportation system.

Policy 1.3-c:

The county shall coordinate transportation demand management strategies with land use strategies. Examples include density and intensity of land uses, parking supply and increasing transit attractiveness.

Policy 1.3-d:

The County shall promote programs which reduce per capita vehicles miles traveled (VMT) and discourage single occupant vehicle trips, recognizing that these programs assist in reducing the overall air quality emissions. This can be accomplished through supporting Tri-Rail, bicycling, alternative fuels, ridesharing, alternative work hour programs, public transit, parking management and other transportation control measures.

Policy 1.3-g:

New access along existing arterials and collectors shall be controlled and limited in order to increase safety margins, traffic capacity, and traffic flow; shall be consistent with existing State and County standards; shall allow for the integration of multimodal considerations, where applicable; and shall consider impacts on adjacent neighborhoods.

Policy 1.3-h:

Palm Beach County shall consider intermodal terminals and access to intermodal facilities, where applicable, in its assessment of future transportation needs within Palm Beach County.

Objective 1.4 Roadway System:

The County shall provide for identification and acquisition of existing and future road rights-of-way consistent with the adopted Thoroughfare Right-Of-Way Identification Map and shall address certain specific corridors in the transportation planning process in Palm Beach County.

Policy 1.4-f:

The County, through the MPO, shall give priority to capacity increases required to complete the Interstate Highway System and to other projects in urban areas that integrate and improve access to multiple modes of transportation.

Policy 1.4-h:

The County shall discourage the use of dead-end streets, loop streets, and oversized blocks in favor of through-streets (collectors) and shorter blocks; provide cut-throughs for pedestrian access to transit; and promote landscaping rights-of-way.

Objective 1.5 Transit System:

The County shall encourage the use of transit within Palm Beach County. The measurement of the success of the Objective shall be through increased usage of transit services within Palm Beach County.

Policy 1.5-a:

Palm Beach County, through Palm Tran (the Palm Beach County Surface Transportation Department), shall increase the transit presence in the County to achieve at least 3/4 of one percent modal split by January, 2000, through modification of the existing route system, or increasing service in areas with high propensity for transit use.

Policy 1.5-b:

Palm Beach County shall construct a downtown West Palm Beach multimodal transit transfer station by January, 2000, with loop shuttle service connecting the major downtown employment centers and which provides for potential future intermodal connections to such destinations as the Palm Beach International Airport and the Port of Palm Beach, as applicable.

Policy 1.5-c:

Palm Tran shall continue to provide and plan for bus service to Tri-Rail stations and to major traffic generators and attractors in the County.

Policy 1.5-d:

The County (through Palm Tran) shall consider increasing the number of park-and-

ride facilities and increasing the number of buses connecting to Tri-Rail as a means to encourage greater use of mass transit.

Policy 1.5-e:

Palm Tran shall continue the existing program of maintaining signage to mark transit stops.

Policy 1.5-f:

The County (through Palm Tran) shall develop guidelines to improve the design and functionality of transit stations/stops by October, 2000. Particular attention shall be devoted to how they relate to the surrounding area and how they promote a pedestrian friendly environment and a sense of place. The County shall also require site design evaluation of transit stops that include such features as passenger loading areas, transit user amenities and sidewalks that link to other nodes within a well-connected system.

Policy 1.5-g:

Palm Tran shall oversee the maintenance of existing bus shelters and install new bus shelters, where appropriate, at selected locations.

Policy 1.5-h:

The MPO shall investigate the use of transit services to promote more efficient urban development through increased services in the coastal communities.

Policy 1.5-i:

The County (through Palm Tran) shall encourage the future coordination of bus routes and the location of new major residential and non-residential developments. Future coordination means that: 1) transit routes and adjacent land uses are concurrently planned and fixed to promote additional complementary development; and 2) western transit route extensions should occur as development is built.

Policy 1.5-k:

Tri-Rail and Palm Beach County (through participation on Tri-Rail's governing board) shall regularly coordinate and analyze all reviews of ridership, revenues, and costs, and user characteristics relative to the operations of Tri-Rail to determine the feasibility of expanding service.

Policy 1.5-l:

Palm Beach County shall seek to achieve consistency and coordination between the South Florida Rail Corridor's Double Track Master Plan and [the] Comprehensive Plan.

Policy 1.5-m:

The County, understanding the importance of commuter rail services as a vital transportation mode, shall support and assist FDOT and Tri-Rail, to the extent possible, in securing Federal, State, and County funds for the continued expansion of the South Florida Rail Corridor.

Policy 1.5-n:

Upon FDOT's submittal of the Corridor Management Report for the South Florida Rail Corridor, the County shall adopt a Corridor Management Ordinance in accordance with subsection 337.273(6), F.S., which shall provide the framework for corridor management including notice to District IV, FDOT, of substantial land use changes or permits that would substantially impair the viability of the corridor for future transportation uses.

Policy 1.5-o:

Development Orders issues by the County shall require conveyance of rights-of-way consistent with the adopted South Florida Rail Corridor's Double Track Master Plan when there is a rational nexus between the required dedication of land and the needs of the community because of the development.

Policy 1.5-p:

The County will promote the designation of land uses and densities which are supportive of mass transit in areas around roadways which have been designated as transportation corridors in the Comprehensive Plan.

Policy 1.5-q:

Palm Tran shall continue to program to shorten headways during peak hours.

Policy 1.5-g:

Palm Tran shall explore providing altered routes to address home-to-work

commutes between neighborhoods and employment centers.

Objective 1.6 Paratransit Services for the Transportation Disadvantaged (Non-ADA Qualifying Individuals)

In order to fulfill the MPO's coordinating responsibilities regarding transportation services for the transportation disadvantaged, Palm Tran shall coordinate public paratransit transportation for eligible individuals who qualify under the Federal American's With Disabilities Act (ADA). Palm Beach County, through Palm Tran, shall provide public paratransit transportation services. These services are to be carried out as part of Palm Tran's obligation to implement the ADA civil rights legislation.

Policy 1.6-a:

Palm Tran, or through a third party contract, shall maintain an adequate fleet of sedans, vans, and mini-buses for individuals who qualify for ADA paratransit.

Policy 1.6-b:

Palm Tran (through Spectran or a third party contract) shall maintain services available for eligible riders with disabilities, who are unable to transport themselves, by providing paratransit services.

Policy 1.6-c:

The MPO shall make services available for individuals qualifying under Chapter 427, F.S. by managing and monitoring a system of transportation operators and by coordinating provider organizations.

Objective 1.7 Airport Facilities

Policy 1.7-d:

Any updates to the PBIA master plan shall evaluate intermodal transportation efficiencies to and from PBIA. Such planning evaluation shall include, at a minimum, the establishment of light rail passenger service to PBIA, improved interstate and ground transportation access to PBIA, improved connections to Port of Palm Beach, and Foreign Trade Zone facilities, and refinement of mass transit alternatives in cooperation with the MPO.

Objective 1.8 Port of Palm Beach

Policy 1.8-d:

The County shall facilitate coordination with applicable local governments and regional and state agencies to ensure that the needs of the Port are consistent with the programming and provision of roadway and transit service improvements.

Objective 1.9 Bicycle, Pedestrian, and Linked Open Space Facilities

The County shall promote the increased use of the bicycle, pedestrian, and linked open space facilities as an alternate means of transportation.

Policy 1.9-b:

The County shall provide for bicycle, pedestrian, and bus transit facilities in the plans for all major roadway construction and reconstruction projects consistent with adopted standards developed by the County and State.

Policy 1.9-j:

As development occurs, the County shall improve pedestrian linkages between residential and non-residential developments as well as connections within neighborhoods by: 1) increasing the number and quality of pedestrian paths or sidewalks; 2) eliminating physical barriers; and 3) locating transit stops within easy walking distance to all residences.

Policy 1.9-k:

The County shall encourage the design of mixed use and multi-use developments and planned developments to be of a pedestrian scale and design by incorporating transit stops and sidewalk connections that follow the accepted general threshold for pedestrian access: 1) approximately five minutes walking time or 2) one quarter mile of distance walked.

Policy 1.9-l:

For new residential developments, the County shall encourage cut-through linkages for pedestrian and bicycle access to transit. The county shall also encourage developers of new master plans to include specific circulation planning for pedestrian and bicycle access.

Policy 1.9-o:

To increase access to linked open space corridors through the use of mass transit public facilities, the County shall use the Pathways Program to ensure that: 1) wheelchair accessible sidewalks are provided in both directions at all Palm Tran bus stop shelters; and 2) appropriate wheelchair street-crossing facilities are located adjacent to bus stop shelters. Appropriate crossings shall be defined on a case-by-case basis and may include mid-block crossings where they are determined to be safer for pedestrians.

Policy 1.9-p:

By January 1, 2000, Palm Tran, the MPO, and the County's Parks & Recreation Department shall establish a process for the joint public/private identification of "park and ride" facilities for individuals using transit to reach County recreation sites. These sites are to be located at commercial parking areas that lie within two (2) miles of County recreational facilities.

Objective 1.10 Transportation Marketing Program

Palm Beach County shall continue to implement a comprehensive marketing strategy to orient and familiarize County residents and visitors about alternative transportation modes. The success of this program shall be measured by continued increased usage and the need for system expansion.

Policy 1.10-a:

The County (through the MPO, Tri-Rail, and Palm Tran) shall provide publicly-distributed information on the use of alternative means of travel. These alternatives include: Palm Tran buses, Spectran, Tri-Rail, ridesharing coordination programs which result in car and van-pooling, High Occupancy Vehicle (HOV) lanes designed for carpooling, park-and-ride lots, and designated bikeways.

Policy 1.10-b:

To reduce overall roadway demand and improve air quality, the County (through the MPO and Palm Tran) shall provide incentives for those who use alternative travel means, and disincentives for single-occupancy automobile users. Alternative modes include, but are not limited to, Palm Tran and Spectran services, Tri-Rail, ridesharing coordination programs which result in car and van-pooling, High Occupancy Vehicle (HOV) lanes designed for carpooling, park-and-ride lots, and designated bikeways.

Policy 1.10-c:

By January, 1999, Palm Tran shall investigate and evaluate the feasibility of

automated marketing tools that continuously display system information at selected shopping center locations, at Palm Beach International Airport, and at Tri-Rail stations, especially the downtown West Palm Beach station and other intermodal transfer locations.

Policy 1.10-d:

Palm Tran shall continue to advertise the routes of the County's public bus service through radio, television, and newspaper. Palm Tran shall continue to provide bus information brochures to the public by placing them at public buildings and other designated locations throughout the County.

Policy 1.10-e:

Palm Tran shall continue to maintain an automated telephone information system to provide route schedules and fares.

Policy 1.10-f:

Palm Tran shall implement, as resources allow, the marketing of transportation services for eligible low-income persons, elderly, disabled children, and children-at-risk, who are unable to transport themselves or afford transportation. This program is to be carried out through pamphlets distributed to: senior citizen centers, organizations providing services for the disabled, low-income neighborhoods, and Palm Tran buses.

Policy 1.10-g:

Palm Tran shall continue to market accessible fixed route services and paratransit services which are mandated by the Americans with Disabilities Act (ADA), to individuals with disabilities, and organizations and agencies which serve the disabled.

Policy 1.10-h:

The County (through Palm Tran) shall institute and maintain a training program to teach individuals who are disabled or transportation disadvantaged how to use the fixed route bus system. The purpose of this program is to: 1) teach the public how to access the transit system; 2) educate the public about their right to accessible public transportation; 3) foster greater independence for individuals with disabilities; and 4) decrease operating and administrative transit system costs associated with paratransit services.

Policy 1.10-i:

Tri-Rail and Palm Beach County (through Palm Tran) shall develop a coordinated inter-agency program of incentives to increase ridership on the Tri-County Commuter Rail and other public transportation systems through the use of promotional material, special events, and parking and price incentives.

Objective 1.12 Transportation Funding

The transportation system required by 2015 to maintain the adopted Level of Service Standards and provide the necessary alternative mode, system expansions shall be financially feasible and shall be funded using designated funding sources. New funding sources shall also be investigated for the funding of transportation system expansions.

Policy 1.12-a:

The County shall consider all available funding sources, including those at the County, State and Federal levels, including but not limited to, automobile registration fees, optional sales tax, ad valorem taxes, State and Federal public transit assistance, user fees, gasoline taxes, public/private initiatives, public transportation corporations, and annual millage to fund future transportation-related needs.

Policy 1.12-e:

The County shall set aside a portion of the gas tax revenues for Palm Tran's capital budget.

Policy 1.12-f:

To increase ridership and overall revenues, Palm Tran shall maintain a farebox recovery rate of 23 to 25 percent based on a strategy of: 1) reducing or eliminating bus routes with very low ridership, where appropriate; 2) adjust fares on remaining routes, where appropriate; and 3) extend new service to transit-attractive areas.

Policy 1.12-g:

To promote alternative modes of transportation, Palm Beach County should through the Development Review Committee process encourage site specific mass transit capital improvements (ex.: bus turn-off lanes adjacent to major thoroughfares, bus shelters and stops, installing signs, and bus turn-arounds) by developers of large, significant planned residential, retail, or employment-based projects, when those developments: 1) are served, or will be served by a transit fixed route; or 2) degrade the traffic levels of service of any adjacent thoroughfare beyond LOS C. When developer provided mass transit capital improvements are not feasible on-site, the

County should consider a second method which transfers those improvements to more appropriate geographic areas.

Policy 1.12-h:

The needs and resources of Palm Tran shall be reviewed on a regular basis. This analysis would evaluate costs, general ridership, and the needs of the transportation disadvantaged and would suggest shifts in resources accordingly. Any change in needs and resources must be reviewed for consistency with the policies of the Comprehensive Plan.

Policy 1.12-i:

When reviewing the effectiveness of mass transit programs, Palm Beach County shall recognize that a mass transit system provides indirect benefits in addition to serving the non-driving public. These include reduced impacts on the environment, decreased traffic congestion on roads, and reduced dependence on the automobile as a dominant mode of transport. The success of any mass transit program should not be evaluated solely on its ability to recoup its cost.

Policy 1.12-j:

Palm Tran shall monitor its paratransit services to ensure that the ADA program is cost effective and complies with Federal requirements.

Policy 1.12-k:

The Community Transportation Committee (CTC) shall monitor its ability to subsidize user fares and administer financial assistance to organizations that provide services to the transportation disadvantaged (Non-ADA-Qualifying). The CTC shall also monitor its services to ensure that they are cost effective and comply with State and local requirements.

Policy 1.12-m:

Palm Tran shall continue to seek grant funding from the U.S. Department of Transportation to provide transportation to assist in welfare-to-work initiatives. Sources of funding may include grants, such as the Transit Capital Improvement Grants and Federal Transit Operating Assistance Formula Grants.

Objective 1.13 General Plan Coordination

The County shall provide for the coordination of transportation plans and programs among the appropriate land use and transportation planning and implementing organizations on a continuing basis.

Policy 1.13-f:

The County shall continue to work with jurisdictions in adjacent counties and municipalities within Palm Beach County to coordinate transportation related issues, such as 1) the locations and dimensions of thoroughfare rights-of-way and to address multi-jurisdictional traffic impacts to assure maintenance of acceptable LOS on the traffic circulation network, 2) the future transit needs and delivery services, and 3) the provisions and operations of non-vehicular modes as they relate to intercounty travel.

Policy 1.13-g:

The County shall continue to coordinate with FDOT, MPO, DCA, Treasure Coast Regional Planning Council, the Governor's Commission for a Sustainable South Florida, and local municipalities to promote sustainable transportation principles within Palm Beach County.

Policy 1.13-i:

The County (through the MPO) shall coordinate the effort to master plan the I-95 transportation corridor with all affected and appropriate State, Regional, and County-level agencies. The master planning would include considerations for alternative modes of transportation including Tri-Rail, High-Occupancy Vehicle (HOV) lanes for car and vanpooling, and park-and-ride lots.

Policy 1.13-m:

By January, 2000, the County shall consider adopting Transit Oriented Development (TOD) guidelines that will be consistent with the County's growth management efforts.

Chapter Three

Evaluation of Existing Transit Service

I. Introduction

Chapter Three begins with a performance evaluation, which consists of a detailed overview of the operating and financial characteristics of Palm Tran. This section is further divided into trend analysis. The trend analysis represents Palm Tran's performance over a eight-year time period (FY 1992 through FY 1999).

II. Performance Evaluation of Existing Palm Tran Service

The following sections outline the performance evaluation methodology and describe the results of the trend analysis. All data used in these sections originate from the National Transit Database (NTD). These analyzes are useful in determining the strengths of Palm Tran as well as those areas that may require an expanded review.

Purpose of the Performance Review

Since a performance evaluation is only one method of analyzing the performance of a given public transportation system and is limited to only those aspects included in the analysis, **the reader should exercise considerable caution in interpreting the results.** These analyzes are particularly helpful in reviewing cost effectiveness and efficiency. However, they do not provide any insight on the extent to which other objectives of the system are being achieved. For example, the performance evaluation will not directly measure several relevant considerations such as passenger satisfaction, taxpayer and public attitudes toward the system, employee morale, success in attaining minority hiring or contracting goals, quality of planning, contributions to community economic development, air quality improvements or other goals that may be important to the public transportation system, the overall transportation system, and the community.

In addition to understanding the limits of this analysis, the reader should take care in interpreting the meaning of the various performance measures. The evaluation does not necessarily provide information concerning which aspects of performance are within the control of the agency and which are not. There are three major factors that affect transit performance, including: management/staff (skills and experience, training, leadership, morale, service design and quality); local policy decisions (such as land use, urban design, parking, zoning, service levels and fare policy); and the operating environment (density of development, land use patterns, congestion, geography, and the level of transit dependency within the service area).

Performance reviews are a useful and important tool in monitoring and improving

transit system performance. The issues identified as a result of this evaluation provide the basis for a greater understanding of the factors that influence system performance.

National Transit Database Reporting System

Section 5335(a) of Title 49, United States Code (U.S.C.) prohibits the United States Secretary of Transportation from making any grants under the Urbanized Area Formula Program (49 U.S.C. 5307) unless the grant applicant and any person to receive benefits directly from that grant are subject to the National Transit Database (NTD) Reporting System and Uniform System of Accounts. All recipients and direct beneficiaries under the Section 5307 Program must maintain and report financial and operating information on an annual basis, as prescribed in Federal Transit Administration (FTA) regulations (49 Code of Federal Regulations (C.F.R. Part 630)). Failure to submit these reports result in a loss of eligibility for assistance under the Section 5307 Program. This system was designed to provide information on which to base planning for public transportation services and public sector investment decisions at all levels of government. The NTD provides standardized measures of reporting that allows a more accurate comparison of peer systems.

Performance Indicators and Measures - The evaluation measures used throughout the performance review are divided into three 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, the number of 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 and other costs) required to achieve a given level of output or service. It is possible to have very efficient service that is not effective or to have highly effective service that is not very 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 efficiencies measures that are believed to provide a good representation of overall transit system performance have been selected for this analysis. Table 3-1 lists the performance measures developed for the Florida Department of Transportation by the Center for Urban Transportation Research (CUTR) in cooperation with the Florida Transit Association and Florida's transit systems.

Table 3-1

Selected Performance Review Indicators and Measures Fixed-Route Transit Services

Performance Indicators	Effectiveness Measures	Efficiency Measures
Service Area Population Passenger Trips Passenger Miles Vehicle Miles Revenue Miles Vehicle Hours Revenue Hours Route Miles Total Operating Expense Total Operating Expense (1992\$) Total Maintenance Expense Total Maintenance Expense (1992\$) Operating Revenues Total Employees Vehicles Available for Maximum Service Vehicles Operated in Maximum Service Total Gallons of Fuel Consumed	Service Supply Vehicle Miles Per Capita Service Consumption Passenger Trips per Capita Passenger Trips per Revenue Mile Passenger Trips per Revenue Hour Quality of Service Average Age of Fleet (years) Revenue Miles Between Incidents Revenue Miles Between Revenue Service Interruptions	Cost Efficiency Operating Expense Per Capita Operating Expense Per Passenger Trip Operating Expense Per Passenger Mile Operating Expense Per Revenue Mile Operating Ratios Farebox Recovery Vehicle Utilization Revenue Miles per Vehicle Mile Vehicle Miles Per Peak Vehicle Labor Productivity Revenue Hours Per Employee Passenger Trips Per Employee Energy Utilization Vehicles Miles Per Gallon Fare Average Fare

Overview of Palm Tran

Mass transit services in Palm Beach County is provided by Palm Tran, Inc., a not-for-profit corporation instrumentality of Palm Beach County government. The Board of County Commissioners is the board of directors for this corporation and the County Administrator is the president of Palm Tran, Inc. The corporation qualifies under the sovereign immunity statutes of Florida law. Palm Tran is currently an enterprise fund of Palm Beach County operating as the Surface Transportation Department. The user fees (fares) collected by Palm Tran are not sufficient for operating the system and therefore depend on supplements to their budget provided by the Federal Transit Administration, the Florida Department of Transportation and a limited amount of funds from the Palm Beach County general fund. The primary county funding for mass transit comes from a local option gas tax.

Palm Tran buses provided varying levels of service to the service area within the county. The system is composed of 35 routes served by 123 buses (number operated in maximum service). Peak headways range from 20 minutes to ninety minutes. Table 3-2 provides a summary of selected operating statistics for Palm Tran for Fiscal Years 1998 and 1999.

**Table 3-2
Summary of Selected Operating Statistics
Palm Tran, 1998-1999**

PERFORMANCE INDICATORS	FY 98	FY 99	% CHANGE
SERVICE AREA POPULATION	1,003,684	956,659	-4.69%
PASSENGER TRIPS	4312442	5477364	27.01%
ACTUAL REVENUE MILES	6,829,872	6,911,838	1.20%
ACTUAL REVENUE HOURS	379226	382,570	0.88%
TOTAL OPERATING EXPENSE	\$23,146,156	\$25,818,758	11.55%
TOTAL MAINTENANCE EXPENSE	\$5,382,291	\$6,133,104	13.95%
TOTAL EMPLOYEES (FTE'S)	393	432.5	10.05%
VEHICLES AVAILABLE IN MAXIMUM SERVICE	143	150	4.90%
VEHICLES OPERATED IN MAXIMUM SERVICE	115	123	6.96%
EFFECTIVENESS MEASURES			
REVENUE VEHICLE MILES PER CAPITA	6.80	7.22	6.17%
PASSENGER TRIPS PER CAPITA	4.30	5.73	33.26%
PASSENGER TRIPS PER REVENUE MILE	0.63	0.79	25.51%
PASSENGER TRIPS PER REVENUE HOUR	11.37	14.32	25.90%
AVERAGE AGE OF FLEET (YEARS)	5.65	5.38	-4.70%
EFFICIENCY MEASURES			
OPERATING EXPENSE PER CAPITA	23.06	26.99	17.03%
OPERATING EXPENSE PER PASSENGER	5.37	4.71	-12.18%
OPERATING EXPENSE PER REVENUE MILE	3.39	3.74	10.22%
FAREBOX RECOVERY RATIO	15%	14%	-5.97%
REVENUE HOURS PER EMPLOYEE	965	885	-8.33%
PASSENGER TRIPS PER EMPLOYEE	10,973	12,664	15.41%
AVERAGE FARE	0.80	0.66	-17.42%
NET OPERATING EXPENSE PER PASSENGER	4.57	4.05	-11.38%

Route Level Trend Comparison December 1998 and December 1999

In order to accurately record Palm Tran's performance it is important to look not only at their systemwide performance since 1992, but to also review the performance of individual routes since the initiation of new Palm Tran services in August 1996. Table 3-3 on the following page presents operating statistics and an evaluation of Palm Tran's weekday bus route performance for December 1999 and further compares the performance of each route since December 1998.

Passenger trips per revenue hour denotes the average number of passengers carried in one revenue hour of service. This measure is a very strong indicator of the effectiveness of service consumption along a given route. Revenue hours are used in this ratio since they are a sound representation of the resources consumed in providing service.

**Table 3-3
Palm Tran Route Statistics:
December 1999 and December 1998 Monthly Totals Based on Average Weekday
Passengers and Revenue Hours By Route
(sorted by rank)**

Route	Ridership Dec 1999	Revenue Hours	Riders Per Hour Dec 1999	Rank Dec 1999	Ridership Dec 1998	Revenue Hours	Riders Per Hour Dec 1998	Rank Dec 1998	Type of Service
47	16,022	561.58	28.53	1	12,011	531.70	22.59	3	circulator
1	95,170	3,442.33	27.65	2	83,091	3,587.69	23.16	2	trunk
79	1,359	55.58	24.45	3	1,347	46.93	28.70	1	rail shuttle
62	15,763	726.42	21.70	4	13,735	694.74	19.77	4	crosstown
46	16,151	781.62	20.66	5	13,812	747.81	18.47	7	trunk
3	49,798	2,443.75	20.38	6	35,690	2,349.57	15.19	11	crosstown
31	16,770	833.75	20.11	7	14,741	797.67	18.48	6	trunk
30	6,606	332.73	19.85	8	6,059	306.94	19.74	5	crosstown
41	4,164	230.00	18.10	9	2,679	219.95	12.18	21	trunk
48	11,590	690.00	16.80	10	9,201	660.04	13.94	12	circulator
91	23,793	1,433.25	16.49	11	24,866	1,380.68	18.01	8	crosstown
2	55,350	3,601.42	15.37	12	42,741	2,672.98	15.99	10	trunk
71	8,058	525.93	15.32	13	6,524	503.01	12.97	18	crosstown
80	8,390	548.17	15.31	14	6,602	524.38	12.59	19	crosstown
81	7,897	516.35	15.29	15	6,607	493.80	13.38	16	crosstown
40	22,808	1,518.00	15.03	16	19,999	1,435.68	13.93	13	trunk
20	10,011	728.33	13.75	17	8,143	766.04	10.63	22	crosstown
70	15,591	1,268.07	12.30	18	12,320	1,212.60	10.16	24	crosstown
43	11,046	900.83	12.26	19	11,878	861.97	13.78	14	trunk
42	3,020	248.40	12.16	20	2,898	237.54	12.20	20	trunk
61	10,165	841.42	12.08	21	10,979	804.91	13.64	15	crosstown
4	5,820	489.13	11.90	22	8,053	467.93	17.21	9	crosstown
32	6,237	533.22	11.70	23	6,808	509.96	13.35	17	trunk
21	5,650	527.08	10.72	24	4,450	503.96	8.83	27	crosstown
63	5,253	498.33	10.54	25	4,562	476.70	9.57	26	crosstown
44	7,175	733.70	9.78	26	7,410	701.70	10.56	23	trunk
92	7,261	778.17	9.33	27	7,530	744.07	10.12	25	crosstown
54	1,165	141.07	8.26	28	901	134.88	6.68	31	rail shuttle
60	4,147	517.50	8.01	29	4,343	495.21	8.77	28	crosstown
72	2,850	379.50	7.51	30	2,488	363.21	6.85	30	crosstown
55	1,454	215.05	6.76	31	1,122	205.87	5.45	33	rail shuttle
52	1,348	203.93	6.61	32	1,567	195.14	8.03	29	circulator
94	4,967	752.87	6.60	33	4,638	720.19	6.44	32	crosstown
101	1,227	210.83	5.82	34	n/a	n/a	n/a	n/a	circulator
53	1,059	207.77	5.10	35	530	243.12	2.18	36	rail shuttle
	465,135	28,426.00	14.06		403,010	26,598.59	14.74		

Care should be taken when using the rankings shown in Table 3-3. These figures are for

comparing routes to one another and may not reflect the specific goals established for a particular route (i.e., geographic coverage versus ridership performance). A route's comparative performance notwithstanding, it is essential to look beyond the statistics and determine if the route is performing in line with the expectations for that route. It is important to ascertain whether a particular route is meeting the purpose for which it was designed. If it is, then the rank of the route overall should be a less significant indicator of performance.

Clearly, there are routes identified above that should be evaluated further. The route evaluation process is particularly useful in highlighting those routes that have declined in performance, and those which continually appear in the lower quartile. These routes should be identified for further analysis, including, but not limited to ridechecks, on-board surveys, and/or increasing marketing efforts to aid in increasing a route's performance. Through the evaluation, a conclusion may also be made that changes be made to the route or that it should be eliminated all together.

As mentioned previously, the resulting ranking of routes above by passenger trips per revenue hour or other selected performance criterion do not and should not determine whether a route should continue to operate. Rather, rankings should serve as diagnostic tools identifying those routes that fall below an established set of minimum guidelines and identifying those routes for which a detailed route analysis should be undertaken. The *Palm Beach County Transportation Agency Service Guidelines* prepared by CUTR for Palm Tran should be used to establish benchmarks for Palm Tran's performance at the route level.

Fixed-Route Trend Analysis

A fixed-route trend analysis for Palm Tran's operating years 1992 through 1999 was conducted to follow the performance of the directly operated motorbus service over a eight-year time period. Data used in this analysis are from Palm Tran's NTD reports. Performance indicators and measures are grouped into categories and presented in tabular form along with brief discussions of the data. The percent change over the eight-year trend period for each indicator and measure is also shown in the tables. **(Please note: Palm Tran undertook a major system change in August 1996.)**

Performance Indicators

Ridership and Route Mileage

As indicated in Table 3-4, ridership on Palm Tran's directly-operated fixed-route service increased 101.9% from FY 1992 to FY 1999, from 2.7 million to almost 5.5 million passenger trips per year. The most significant increase came between FY 1996 and FY 1997 when Palm Tran following a major system expansion on August 5, 1996. The previous Palm Tran system was eliminated on this date and 32 new routes were introduced (there are now 35 routes in place due to changes in the spring of 1999).

Likewise, the number of passenger miles also increased over the period from 17.1 million miles to almost 37.6 million miles, an increase of 118.48%. The most significant increase, however, was in the number of route miles traveled. Route miles increased over 278 percent from FY 1992 to FY 1999, from 434.9 route miles in FY 1992 to over 1,646 route miles in 1999. Again, this is primarily due to the service expansion that began in August, 1996.

**Table 3-4
Ridership and Route Miles
Fixed-Route Trend Analysis**

Fiscal Year	Passenger Trips	Passenger Miles	Route Miles
1992	2,712,880	17,191,100	434.90
1993	2,714,620	17,380,370	457.10
1994	2,714,620	17,380,370	487.70
1995	2,714,620	17,380,370	496.00
1996	2,746,240	15,867,180	1,304.00
1997	3,971,570	19,195,940	1,547.50
1998	4,312,442	23,522,411	1,296.80
1999	5,477,364	37,559,066	1,646.60
% Change 1992-1999	101.90%	118.48%	278.62%

Level of Service

The level of service provided, as measured by vehicle miles and revenue miles, increased over the trend period. Table 3-5 shows that vehicle miles grew by almost 139 percent over the period from FY 1992 to FY 1999 while revenue miles increased by almost 162 percent. The trend continued to increase substantially through FY 1999 except for vehicle miles which decreased in 1999.

Table 3-5 also indicates that the number of vehicle hours and revenue hours increased somewhat proportionately during the trend period. The trend for these measures also continued to increase substantially through FY 1999.

**Table 3-5
Level of Service
Fixed-Route Trend Analysis**

Fiscal Year	Vehicle Miles	Revenue Miles	Vehicle Hours	Revenue Hours
1992	3,170,820	2,645,550	194,140	178,070
1993	3,290,460	2,817,020	205,440	188,700
1994	3,322,480	2,896,670	212,580	19,750
1995	3,459,370	3,054,400	212,890	196,580
1996	5,527,340	4,857,430	316,870	286,470
1997	8,304,560	7,400,510	477,430	414,320
1998	7,578,203	6,829,872	440,959	379,226
1999	7,571,520	6,911,838	444,857	382,570
% Change 1992-1999	138.79%	161.26%	129.14%	114.84%

Operating Expense

Total operating expense rose 204.17 percent between 1992 and 1999, as provided in Table 3-6. Total operating expenses increased modestly from 1992 through 1995 and increased dramatically in 1996 through 1999. The significant increase in FY 1996 through FY 1999 is primarily attributable to the system expansion that began in 1996 and continued through 1999. The next five-year TDP will focus on trends after the expansion in 1996 to garner a more realistic picture of system growth.

Maintenance expenses exhibited a growth trend similar to total operating expense over the period. Overall, maintenance expense increased 231.28 percent over the trend period. A significant portion of the increase is attributable to the increase in service during this period.

**Table 3-6
Operating Expenses
Fixed-Route Trend Analysis**

Fiscal Year	Total Operating Expense	Total Maintenance Expense
1992	\$8,488,070	\$1,851,330
1993	\$9,118,030	\$1,770,170
1994	\$10,126,820	\$1,957,690
1995	\$10,603,320	\$2,084,960
1996	\$17,394,920	\$3,143,300
1997	\$22,407,470	\$5,286,150
1998	\$23,146,156	\$5,382,291
1999	\$25,818,758	\$6,133,104
% Change 1992-1999	204.17%	231.28%

Passenger Fare Revenues

Passenger fare revenue for Palm Tran's fixed-route system gradually increased from 1992 to 1996. In 1997, however, revenue from passenger fares increased significantly from \$1.9 million to over \$2.9 million, an increase of 54.95 percent. Again, this increase is partially attributable to the increase in service during the period. Table 3-7 below illustrates that this indicator increased over 159.88 percent during the 1992 to 1999 trend period.

**Table 3-7
Fare Revenue
Fixed-Route Trend Analysis**

Fiscal Year	Passenger Fare Revenue
1992	\$1,400,580
1993	\$1,376,570
1994	\$1,443,540
1995	\$1,667,010
1996	\$1,930,850
1997	\$2,991,890
1998	\$3,470,322
1999	\$3,639,957
% Change 1992-1999	159.88%

Employees and Vehicles

The total number of employees at Palm Tran is represented by full-time equivalents (FTEs). Table 3-8 indicates that the total employee FTEs increased 174.25 percent from FY 1992 to FY 1999.

The numbers of vehicles available for and operated in maximum service are also provided in Table 3-8, each increasing over 100 percent during the trend period. Since FY 1992, 77 vehicles were added to Palm Tran's fleet and 63 additional vehicles were operated in maximum service. The largest increase in fleet size came during FY 1996 when 53 additional vehicles were made available for maximum service and 64 additional vehicles were actually operated in maximum service.

**Table 3-8
Employees and Vehicles
Fixed-Route Trend Analysis**

Fiscal Year	Total Employees (FTEs)	Vehicles Available for Max. Service	Vehicles Operated in Max. Service
1992	157.70	73	60
1993	161.00	76	57
1994	159.00	71	57
1995	170.00	92	58
1996	261.00	145	122
1997	338.50	146	122
1998	393.00	143	115
1999	432.50	150	123
% Change 1992-1999	174.25%	105.47%	105.00%

Effectiveness Measures

Service Supply and Service Consumption

The number of vehicle miles per capita is one method used to evaluate the level of service supply. Over the trend period, from 1992 through 1999, this measure increased over 76 percent from 4.09 to 7.22 vehicle miles per capita, as provided in Table 3-9.

Passenger trips per capita between 1992 and 1999 increased 63.71 percent. Additional measures of service consumption are the numbers of passenger trips per revenue mile and per revenue hour, measures that are generally influenced by the supply and demand for transit services. Since 1992, passenger trips per revenue mile decreased over 23 percent while passenger trips per revenue hour decreased by 6.04 percent.

**Table 3-9
Service Supply and Service Consumption
Fixed-Route Trend Analysis**

Fiscal Year	Vehicle Miles Per Capita	Passenger Trips Per Capita	Passenger Trips Per Revenue Mile	Passenger Trips Per Revenue Hour
1992	4.09	3.50	1.03	15.23
1993	4.24	3.50	0.96	14.39
1994	3.82	3.12	0.94	13.75
1995	3.98	3.12	0.89	13.81
1996	6.36	3.16	0.57	9.59
1997	8.99	4.30	0.54	9.59
1998	6.80	4.30	0.63	11.37
1999	7.22	5.73	0.79	14.31
% Change 1992-1999	76.52%	63.71%	-23.30%	-6.04%

Quality of Service

Table 3-10 identifies the trend for the average age of Palm Tran's fixed-route vehicle fleet. During the trend period, the average vehicle age decreased from 6.08 to 5.38 years. The maximum value for the trend period occurred in FY 1994 when the average age of the vehicle fleet was 7.27 years. From FY 1995, Palm Tran has continued to purchase buses, replacing many of the older vehicles that were operating in the fleet.

The numbers of revenue miles between incidents and service interruptions help to determine the relative levels of safety and reliability of Palm Tran's service. The table below indicates that revenue miles between incidents grew approximately 149.38 percent between 1992 and 1999.

The number of revenue miles between interruptions (roadcalls) also increased significantly over the trend period. This measure indicates an increasing level of vehicle reliability generally due to the decrease age of the vehicle fleet. Also influencing this measure is the increase in maintenance expenses during the period. Improved maintenance procedures and increased levels of maintenance, coupled with the purchase of newer vehicles have had a significantly positive influence on this measure.

**Table 3-10
Quality of Service, Fixed-Route Trend Analysis**

Fiscal Year	Average Age of Fleet (years)	Revenue Miles Between Incidents	Revenue Miles Between Interruptions
1992	6.08	125,980	3,190
1993	6.63	148,260	3,810
1994	7.27	96,560	3,230
1995	5.15	46,280	2,910
1996	5.66	138,780	3,350
1997	5.00	255,190	7,560
1998	5.65	227,662	6,076
1999	5.38	314,174	8,816
% Change 1992-1999	-11.51%	149.38%	176.36%

Efficiency Measures

Cost Efficiency

Four operating expense ratios, outlined in Table 3-11, help to measure Palm Tran's overall cost efficiency. The table indicates that operating expense per capita increased over 146 percent from 1992 to 1999 from \$10.95 per capita to \$26.99 per capita. Again, the increase for this measure corresponds directly with that period between 1995 and 1997 when Palm Tran's major system expansion took place.

Operating expense per passenger trip and per passenger mile increased 50.47 percent and 38.78 percent, respectively, during the trend period as illustrated in Table 3-11. Both of these measures show modest increases through FY 1995 with significant increases identified in FY 1996. In 1998 and 1999, operating expense per passenger trip and per passenger mile actually decreased from the prior year, indicating that Palm Tran's operating expenses per passenger trip and per passenger mile were more cost-effective than in the prior year.

Operating expense per revenue mile is the final measure analyzed for this evaluation. As summarized in Table 3-11, this measure increased 16.51 percent over the trend period.

**Table 3-11
Cost Efficiency, Fixed-Route
Trend Analysis**

Fiscal Year	Operating Expense Per Capita	Operating Expense Per Passenger Trip	Operating Expense Per Passenger Mile	Operating Expense Per Revenue Mile
1992	\$10.95	\$3.13	\$0.49	\$3.21
1993	\$11.76	\$3.36	\$0.52	\$3.24
1994	\$11.64	\$3.73	\$0.58	\$3.50
1995	\$12.19	\$3.91	\$0.61	\$3.47
1996	\$20.00	\$6.33	\$1.10	\$3.58
1997	\$24.25	\$5.64	\$1.17	\$3.03
1998	\$23.06	\$5.37	\$0.98	\$3.39
1999	\$26.99	\$4.71	\$0.68	\$3.74
% Change 1992-1999	146.48%	50.47%	38.78%	16.51%

Farebox Recovery, Average Fare, and Labor Productivity

The farebox recovery ratio, which represents the amount of operating expenses covered by fare revenue, decreased 14.55 percent from 1992 to 1999, as noted in Table 3-12. In contrast, the average fare per passenger trip increased 26.92 percent from 1992 to 1999.

Palm Tran's labor productivity trends, as measured by the revenue hours per employee and passenger trips per employee, are provided in Table 3-12 below. Revenue hours per employee decreased 21.68 percent over the trend period.

The measure of passenger trips per employee also decreased over the eight-year trend period, from 17,200 trips to 12,664 trips, a decrease of 26.37 percent.

Table 3-12
Farebox Recovery, Average Fare, and Labor Productivity
Fixed-Route Trend Analysis

Fiscal Year	Farebox Recovery	Average Fare	Revenue Hours Per Employee	Passenger Trips Per Employee
1992	16.50%	\$0.52	1,130	17,200
1993	15.10%	\$0.51	1,180	16,910
1994	14.25%	\$0.53	1,250	17,130
1995	15.72%	\$0.61	1,160	15,960
1996	11.10%	\$0.70	1,100	10,530
1997	13.35%	\$0.75	1,220	11,730
1998	15.00%	\$0.80	965	10,973
1999	14.10%	\$0.66	885	12,664
% Change 1992-1999	-14.55%	26.92%	-21.68%	-26.37%

Chapter Four

Demand Estimation and Needs Assessment

I. Introduction

This chapter of the TDP update summarizes the estimates of demand for public transit. A needs assessment is also included which summarizes relevant information concerning unmet demand, the service area, service span and frequency and type of service that may contribute to improved public transit service and mobility for the residents of Palm Beach County.

This chapter leads into the final task of this TDP update, the identification and evaluation of alternatives and recommendations.

II. Current and Future Demand for Transit Service

The following section provides estimates for fixed-route transit demand in Palm Beach County through the use of ridership projections.

Fixed-Route Demand Estimates

Ridership Trends

To provide estimates of future annual ridership levels, annual ridership was projected for future years using historical monthly ridership data from January, 1998 through December, 1999. Ridership levels, as measured by total number of annual passenger trips, were estimated through FY 2005.

Table 4-1 shows the existing level of ridership as reported for years 1998 and 1999 and the estimated ridership level to the year 2005 based on an annual ridership percentage increase projection derived from historical monthly ridership data. The table shows that ridership is projected to increase to approximately 9,192,688 trips by 2005, a 81.79 percent increase.

**Table 4-1
Current and Projected Fixed-Route Ridership
for Palm Tran, FY 1998 - FY 2005**

Fiscal Year	Passenger Trips
FY 1998(actual)	5,056,500
FY 1999(actual)	5,473,031
FY 2000	6,102,201
FY 2001	6,722,065
FY 2002	7,341,930
FY 2003	7,961,794
FY 2004	8,577,241
FY 2005	9,192,688

Demand Responsive Service Ridership Estimates

Americans With Disabilities Act

In addition to requiring transit agencies to provide accessible, fixed-route bus service, the Americans with Disabilities Act (ADA) of 1990 requires these agencies to provide complementary paratransit service. The ADA regulations define the service criteria that must be met when implementing complementary paratransit service. The six service criteria, as described in 49 C.F.R., Part 37, Section 37.31, include the following:

- Service Area
- Response Time
- Fares
- Trip Purpose
- Hours and Days of Service
- Capacity Constraints

Section 37.123 of the ADA regulations describes the eligibility standards for the paratransit service. To be eligible for ADA complementary paratransit services, persons must be unable to use fixed-route service for some or all of their trips because of the nature of their disabilities. A person who is visually impaired or uses a wheelchair, for example, is not automatically eligible for ADA paratransit unless he or she is specifically unable to use the fixed-route service.

Table 4-2 provides Palm Beach County's ADA trip projections through FY 2005. These estimates do not assume any changes in ridership due to the implementation of an ADA eligibility certification process or service changes.

**Table 4-2
ADA Trip Projections**

Fiscal Year	Projected Number of ADA Paratransit Trips
FY 1999	250,000
FY 2000	290,000
FY 2001	333,000
FY 2002	376,000
FY 2003	419,000
FY 2004	462,000
FY 2005	505,000

Fixed-route service improvements such as route extensions, lengthening of the span of service during the day, and provision of Sunday service, have definite implications with regard to ADA requirements. Complementary paratransit service must be provided during the hours of normal fixed-route operation, and must be made available to all eligible persons within three-quarters of one mile of a fixed route. Therefore, such proposals as evening or Sunday service or the introduction of service into new areas will also expand the hours or geographic service coverage that will be required to maintain ADA compliance.

III. Needs Assessment

Information gathered in preparing the previous chapters of this TDP update are used in developing the needs assessment. These sources include Census data, the development of the goals, the evaluation of the existing service, and the demand estimation.

Fixed-Route Service

Based on the system goals and objectives, demand estimates, and the findings from previous tasks, the following needs have been identified (these are not listed in priority order):

- ! Expanded evening service hours;
- ! Increased frequency of service, especially on the busiest routes;
- ! Expanded weekend service;
- ! Improved service in primary travel corridors;
- ! Express bus service on major north/south and/or east/west routes;
- ! Increased integration and cooperation with Tri-Rail;
- ! Increased marketing activities;
- ! Increased utilization of emerging technologies in service delivery, customer service, and customer amenities;
- ! Acquisition of property to expand operations facilities; and
- ! Increased focus on areas with high concentrations of low income individuals, enhancing their access to employment and training opportunities.

Mobility Needs and Transit Demand: Summary

After the complete change of the system in August, 1996, with additional service coverage and expanded hours of service, Palm Tran has done well in providing service to areas where it is needed. The demand estimates suggest that ridership will continue to grow. The erupting growth in the northern and western-most areas of the county will offer additional opportunities to devise operational strategies to meet the growing demand in these areas.

Chapter Five presents and evaluates a series of recommendations to help Palm Tran achieve its goals over the next five years (through FY 2005).

Chapter Five

Identification and Evaluation of Alternatives

I. Introduction

The final chapter of this yearly update to the Palm Tran TDP contains the identification and evaluation of alternatives for improved and expanded transit services in Palm Beach County for the fiscal year 2001.

Fiscal Year 2001 Transit Development Plan Update: Findings and Recommendations

This section summarizes and updates the findings from the five-year TDP with regard to transit service in Palm Beach County for the current fiscal year (FY 2000) and presents recommendations for Palm Tran over the next fiscal year (FY 2001). Most of the recommendations fall within the near-term time frames (within one year and over the next one to two years). The TDP will be updated annually to account for changing conditions in Palm Beach County. The numbering scheme of the recommendations is not strictly in priority order.

Actions That Have Been Implemented Within The Current Year (FY 2000)

- 1. Provide later night services on the following routes: 1,2,3,21,30, 31,43,46,62,70,71, and 91.** The need for later night service continues to be expressed to the Palm Beach County Board of County Commissioners and Palm Tran staff by patrons of the system. Palm Tran was successful in securing a WAGES grant to provide later night service on routes 47 and 48 in Belle Glade.
- 2. Decrease headways on Route 1 to 20 minutes weekdays/30 minutes Saturdays.** This route is by far the heaviest ridership route for Palm Tran. This route experiences standing loads on most trips in the AM/PM peak periods and frequently during mid-day. Palm Tran has responded to this demand by reducing headways to 20 minutes during peak hours. During Fiscal Year 2001, as discussed below, it is planned to further reduce headways to 15 minutes weekdays and 20 minutes Saturdays/30 minutes Sundays.
- 3. Reinstate 30 minute service levels on Route 3 from Delray to Town Center Mall.** In 1998, service levels in this area were decreased from 30 minutes to 60 minutes. Due to overwhelming community support to return service levels to 30 minutes along this corridor, Palm Tran plans to reinstate this level of service during fiscal years 2000 - 2001.
- 4. Continue to purchase transit coaches to replace those that have exceeded the suggested service life values.** Over the past several years, Palm Tran has had an aggressive bus replacement program. Newer vehicles have reduced maintenance and fuel costs and require fewer service interruptions.
- 5. Provide the Palm Tran Marketing Department with the equipment needed to expand marketing efforts within the community.** Palm Tran's Marketing Department continues to make great strides in the community, reaching out to businesses and other major employers and schools. In order to adequately prepare for increased marketing efforts and activities, Palm Tran is purchasing speakers bureau media items that will be

needed by marketing staff.

6. **Seek additional staff resources in the areas of planning/project management, customer service and road supervision.** Palm Tran staff has further identified the need for additional employees in the areas of planning/project management, customer service, and road supervision. Palm Tran added additional road supervisors in FY 2000.
7. **Continue capitalizing preventative maintenance activities.** The use of FTA capital funds to cover expenses related to preventative maintenance was one of the changes to the definition of capital, initially approved in the FY 1998 Department of Transportation Appropriations Act. As defined in the Act, preventative maintenance includes all maintenance costs.
8. **Continue the replacement or purchase of associated capital items as necessary.** Associated capital items would include capital maintenance items such as spare parts, and other capital items, including, but not limited to office furniture and equipment, and computer hardware and software.
9. **On an annual basis, set aside funding for the purchase of rights of way for bus shelter construction or expansion.** The privatization of the bus shelter program is anticipated to begin in FY 2000. The selected contractor will be primarily responsible for the installation and maintenance of the shelters and adjacent amenities. Palm Tran, in conjunction with the MPO, is also working on a non advertising bus shelter program that will leverage \$ 200,000 in Congestion Mitigation and Air Quality (CMAQ) funds on a 50/50 basis to municipalities to construct bus shelters.
10. **Develop and adopt service standards.** The development and adoption of service standards or guidelines establishes an objective method for determining when services should be expanded or cut. This helps the county provide transit service to the most passengers possible, while providing a common set of rules for policy makers and citizens alike. Palm Tran has adopted the service guidelines developed for Palm Tran by CUTR that were approved by the Board of County Commissioners.
11. **Request the Palm Beach County Metropolitan Planning Organization to develop and adopt a resolution establishing a policy to direct, on an annual basis, a minimum percentage of federal flexible funds allocated to the County to priority transit projects.** The Florida Department of Transportation Work Program identifies \$13.6 million in flexible Surface Transportation Program (STP) funds allocated to Palm Beach County for FY 2000. If Palm Tran were allocated 10 percent of those funds annually, it would generate at least \$1.36 million per year for the system. In addition, Palm Tran should continue to pursue annual allocations of Congestion Mitigation and Air Quality program funds.
12. **Pursue a State Infrastructure Bank (SIB) loan from the Florida Department of Transportation to advance bus purchases.** Palm Tran has secured a State Infrastructure Bank (SIB) loan from the State of Florida. The \$13 million package will purchase 50 replacement buses in FYs 2000 and 2001. Utilizing an interest-free loan from the SIB will enable Palm Tran to advance the purchase of essential, severely needed replacement vehicles.
13. **In an effort to increase revenue and ridership, institute a discount transit pass program for county employees.** Currently, county employees receive no discounts when buying monthly passes. A reduced-price pass for county employees would not only encourage ridership, but also set an example for other employers to follow when

considering the benefits provided to their own workforces.

14. ***Pursue additional private support for Palm Tran through the expanded sell of advertising rights on buses and shelters.*** Palm Tran is transitioning the bus shelter advertising program in FY 2000 from the simple sale of advertising rights on shelters placed and maintained by Palm Tran to private ownership of bus shelters.

In addition, Palm Tran is continuing to pursue additional private sector support through the expanded use of vinyl wrapped bus advertising. The current contract for wrapping buses requires eight wrapped buses per year. Once met, Palm Tran will receive 67 percent of the advertising revenue generated by this program.

15. ***Continue to work with the county and local municipalities to establish policies requiring developers to address access to public transportation facilities in the site plans for their developments.*** The effective placement of bus stops/shelters within a community will have little effect on the usage of transit by commuters and others when local developments restrict access to those stops through site designs that foster the dependency on the auto or merely isolates itself from adjacent transportation facilities. (For example, sprawling gated residential developments and large commercial parks generally limit an individual's ability to obtain access to transit facilities.) Continued participation by transit staff on site review committees, particularly large scale developments, and formal policies adopted by local governing boards on this issue are critical to ensuring an effective transit system.

16. ***Work with the county and local municipalities to amend land development regulations to provide support for transit-oriented developments.*** Transit performance is significantly affected by a number of planning and policy related factors including land use decisions, institutional practices, and public perception. The proliferation of land use and urban design patterns that are characterized by sprawling, low density developments hinders the development of efficient and effective transit systems. To better improve transit's performance and make it a more viable transportation alternative for the community, transit must be better integrated into the transportation and land use planning process. The adoption of land development regulations that support the tenets of transit-oriented developments is a step in the right direction for improving transit's overall role in the transportation network of a community.

17. ***Work with the county and local municipalities to establish incentives for developers to encourage infill development maximizing existing public infrastructure and reducing additional public investment.*** Incentives for developers, including tools such as density bonuses or reduced impact fee, should be pursued to encourage infill developments. These developments tend to maximize the use of existing infrastructure, including transit services and are, in general, easily served by existing transit routes. In some instances, infill developments can lead to increases in ridership and overall productivity of a route. Employers within these developments should be approached to discuss transit benefits for their employees.

18. ***Establish a "Transit Coalition" in the county to help build grass-roots support for additional local, state and federal funds for transit, and help promote the use of transit in the county.*** In order to advance the cause for public transportation in a community there must be significant support from that community. The establishment of a "transit coalition" comprised of residents of the community, business leaders, employers, as well as others could serve to better connect a transit system to its community. In addition, these advocates would be well

positioned to lobby federal, state and local agencies and officials for additional funding.

19. **Review and consider for implementation vehicle maintenance techniques that extend the life of vehicle systems and associated parts.** The development and implementation of cost saving measures to reduce maintenance expenses or lessen the severity of the increase over time is critical to ensuring cost efficient service. These could include, but not be limited to: using synthetic oil to reduce labor costs associated with oil changes; performing frequent oil analysis and opacity testing; and installing transmission brake retarders to extend the life of the brakes.

Actions To Be Implemented During FY 2001

20. **Decrease headways on Route 1 to 15 minutes weekdays/20 minutes Saturdays/30 minutes Sundays.** This route is by far the heaviest ridership route for Palm Tran. This route experiences standing loads on most trips in the AM/PM peak periods and frequently during mid-day. Palm Tran has had hundreds of requests to increase the service frequency on this route. Rather than cutting the headways in half, it would be more feasible to reduce the headways on this route in stages. During fiscal year 2000, as discussed above, headways were reduced to 20 minutes weekdays during peak hours and 30 minutes Saturdays. During fiscal year 2001, headways should further be reduced to 15 minutes weekdays and 20 minutes Saturdays/30 minutes Sundays.
21. **Decrease headways on Route 2 to 20 minutes weekdays/30 minutes Saturdays.** This is one of the busiest north/south routes in the system, serving the Congress Avenue corridor. In order to attract additional patrons and provide an increase level of service for existing patrons, it is suggested that the headways on this route be reduced in stages. During fiscal year 2001, it is suggested that the headways be reduced to 20 minutes weekdays and 30 minutes weekends. During the next fiscal year, headways should further be reduced to 15 minutes weekdays and 20 minutes weekends.
22. **Acquire property for the expansion of the main operations facility in West Palm Beach and the south county facility in Delray.** There currently is very little space available to accommodate Palm Tran growth at either the West Palm Beach facility on Electronics Way or the south county facility in Delray. The purchase and paving of adjacent property to each of the existing facilities should provide adequate space for the expansion vehicles identified in this plan, as well as vehicles purchased for future expansion activities.
23. **AVL Equipment/Radio System Upgrade.** This item includes the purchase of an Automated Vehicle Location (AVL) system and corresponding radio system upgrade which will improve the quality and quantity of voice communications between operators and dispatch and provide Palm Tran the ability to better monitor on-time performance, gather data to improve system performance, and react to emergency situations more timely.
24. **Install security cameras at each of Palm Tran's major transfer locations.** Nationwide, while transit crime is increasing for a limited number of transit agencies, overall it appears to be stabilizing and declining (*Improving Transit Security, TCRP Synthesis 21*, Needle and Cobb, 1997). Unfortunately, the perception is still prevalent (particularly among those who do not use the transit system) that transit stops and transfer locations are unsafe, particularly for the elderly and women. The installation of security cameras at each transfer location would relieve many of those fears and may

lead to increased ridership by the elderly and women. Currently, Palm Tran has surveillance cameras on its fleet of buses. The addition of cameras at the major transfer locations (a total of seven locations) would further protect Palm Tran's patrons.

25. ***Pursue the financial participation of the FDOT and Tri-Rail in the establishment of Express Bus Service in the I-95 or U.S. 1 Corridors .*** Actual on-board travel time coupled with infrequent service has been a detractor for choice riders who might utilize Palm Tran services if those services became more attractive for them. Establishing express bus services and/or limited stop services to reduce the on-board travel time in these corridors may serve to attract additional patrons. Any services implemented should be designed to allow for timely connections to Tri-Rail.
26. ***Coordinate with the Florida Department of Transportation (FDOT) and Tri-Rail to identify an area to be used as a park-and-ride lot in northern Palm Beach County to be served by I-95 or U.S. 1 express bus service or limited stop service and an area in west county to assist with Palm Tran's Access to Jobs program.*** Increasing numbers of residents from Martin and Indian River Counties work in Palm Beach County using I-95 or U.S. 1 for their commute. Adding a park-and-ride lot in northern Palm Beach County to be served by well marketed, convenient express bus service or limited stop service would aid in relieving congestion along these corridors.

In addition, Palm Tran will continue in its efforts to obtain a grant from the Federal Transit Administration to implement transportation services to assist low income families obtain access to employment. The primary area that would be served by this program is the Glades area in western Palm Beach County. Included would be vanpool type services designed to pick up workers at a central site and transport them to employment areas in the eastern portion of the county. Another aspect of the project would be the establishment of dedicated bus services running from the Glades with the Lake Worth Tri-Rail station serving as the final destination. A central pick up area, which could also serve as a park and ride lot, would be integral to this program. Palm Tran should work with local jurisdictions and private entities to identify an area that could be used without acquiring property or improving the site.

27. ***Monitor the effectiveness of the ADA eligibility certification process in ensuring that the service is available to those who are truly in need of that service.*** The ADA certification process was established to reduce the rate at which ADA service was increasing within Palm Beach County. The process is meant to move those persons who can use the fixed route service to that service and confirm that only those who are truly in need of paratransit service receive ADA service. This process, and any cost savings generated by the program should be monitored in order to effectively report the impact of the program on Palm Tran and the impacts to current and future Palm Tran ADA riders.

Actions To Be Implemented During FY 2002

28. ***Decrease headways on Route 2 to 15 minutes weekdays/20 minutes Saturdays/30 minutes Sundays.*** Again, this is one of the busiest north/south routes in the system, serving the Congress Avenue corridor. In order to attract additional patrons and provide an increase level of service for existing patrons, it is suggested that the headways on this route be reduced in stages. During Fiscal Year 2001, it is suggested that the headways be reduced to 20 minutes weekdays and 30 minutes Saturdays/60 minutes Sundays. During Fiscal Year 2002, headways should further be reduced to 15 minutes weekdays

and 20 minutes Saturdays/30 minutes Sundays.

29. **Replace 5 supervisory vehicles (lift equipped vans).** Palm Tran staff have identified the need to replace existing service and/or supervisory vehicles in the year 2002. A number of these vehicles are approaching the end of their useful life cycle and should be replaced to reduce associated maintenance costs. This activity ensures that Palm Tran supervisors and other employees have access to reliable vehicles.

Action to be implemented in FY 2003

30. **Decrease headways on Route 3 to 20 minutes weekdays/30 minutes Saturdays.** Route 3 is also a north/south route with heavy ridership, serving the Military Trail corridor. In order to attract additional patrons and provide an increase level of service for existing patrons, it is suggested that the headways on this route be reduced in stages. During Fiscal Year 2002, it is suggested that the headways be reduced to 20 minutes weekdays and 30 minutes Saturdays. During Fiscal Year 2003, headways should further be reduced to 15 minutes weekdays and 20 minutes Saturdays/30 minutes Sundays.

Actions to be implemented in FY 2004

31. **Decrease headways on Route 3 to 15 minutes weekdays/20 minutes Saturdays/30 minutes Sundays.** Again, Route 3 is a major north/south route with heavy ridership, serving the Military Trail corridor. In order to attract additional patrons and provide an increase level of service for existing patrons, it is suggested that the headways on this route be reduced in stages. During Fiscal Year 2003, it is suggested that the headways be reduced to 20 minutes weekdays and 30 minutes Saturdays. During Fiscal Year 2004, headways should further be reduced to 15 minutes weekdays and 20 minutes Saturdays/30 minutes Sundays.
32. **To assist in maintaining schedules and reducing on-board travel times, coordinate with the FDOT and Palm Beach County Engineering and Public Works Department to conduct a study to determine the feasibility of establishing dedicated bus lanes, and coordinating signal pre-emption and/or intersection priority systems on Southern Boulevard and/or U.S. 1.** Actual on-board travel time coupled with infrequent service has been a detractor for choice riders who might utilize Palm Tran services if those services became more attractive for them. If found to be economically feasible, the establishment of dedicated bus lanes on heavily traveled routes could reduce the on-board travel time in these corridors and could serve to attract additional patrons. In Dade County, the South Dade Busway was significantly effective in drawing choice riders to the system. In some instances, time savings in excess of 20 minutes were reported for those riders traveling from the southern most terminus of the Busway to downtown Miami.

The successful use of signal preemption systems or the establishment of intersection priority for transit vehicles can significantly increase the on-time performance of a given route, this may be particularly true if they are used in conjunction with dedicated bus lanes. These systems can be structured to only activate when a vehicle is behind schedule or they can be structured to activate during the approach of any transit vehicle regardless of schedule.

Ongoing Activities

33. ***Coordinate with and assist Tri-Rail in gaining support for extending commuter rail services to northern Palm Beach County.*** During the interviews held during the development of Technical Memorandum Number One, the extension of Tri-Rail services to northern Palm Beach County was identified as critical to the establishment of an efficient multi-modal transportation system in the community. The extension of Tri-Rail coupled with added shuttles or community circulators serving new Tri-Rail stations would continue a beneficial partnership between the Palm Beach County Board of County Commissioners and Palm Tran, and Tri-Rail.
34. ***Engage the private sector and large employers in the development of premium services and/or support facilities, including joint development of major transit terminals and stations, and employee transportation programs.*** Major employers and other private sector entities can jointly develop transportation programs for their employees with Palm Tran. Employers can be approached to actually subsidize the entire cost of the service (such as a vanpool service) or a portion of the cost of providing premium services. The private sector can also be engaged in providing support facilities for Palm Tran. For example, Palm Tran has been working with the new mall coming to Wellington to establish a transfer facility and designate an area on site for a park and ride location. The city of West Palm Beach is taking the lead on initiating a Request for Proposals (RFP) for a public/private joint venture to develop the downtown West Palm Beach Intermodal Center.
35. ***Post a current system map with schedule information in each newly constructed or placed bus stop shelter.*** The availability of a current system map with schedule information will eliminate some of the confusion and disorientation that may exist for some patrons of a transit system. In addition, having a map and schedule available may encourage new patrons to utilize the system. Palm Tran is working on a project to install information kiosks at key transit location in the county.
36. ***Ensure that newly constructed or placed bus stop shelters are fully accessible to those with mobility limitations.*** Pedestrian pathways, free of barriers, leading to and away from bus stops and shelters will be essential. (Barriers would include curbs, pot holes, muddy pathways, drainage ditches, piles of refuse, broken pavement or sidewalks, or grates with openings so large they catch wheelchair wheels or canes). In areas where paved pedestrian ways are either costly or physical conditions prevent their construction, unpaved pedestrian ways should be smooth and clear of debris and vegetation and adequately constructed with stable soil mixtures to ensure proper drainage and structural integrity. In addition, ensure that all bus stops and shelters are free of debris and that grassed areas immediately adjacent to stops and shelters are maintained. The continued maintenance and monitoring of the condition of bus shelters and areas adjacent to those shelters will increase the accessibility of the system for patrons who have mobility limitations and may assist Palm Tran in reducing and/or eliminating liability claims.
37. ***Pursue the use of summer youth employees, college interns, and volunteers to provide valuable services to Palm Tran, such as data entry, research, schedule distribution, etc.*** The use of summer youth employees, college interns and volunteers provide a benefit not only to the transit agencies but to all involved. Through the use of these part-time employees and volunteers, transit agencies are able to undertake projects that have been left on the back-burner without having to hire additional full-time staff. In addition, these individuals can assist in relieving full-time staff from administrative activities enabling them to more proactively meet the demands of their job.

Valuable work experience is a benefit to both summer youths and interns. For volunteers, in particular senior volunteers, sometimes the most important aspect of the work is the interaction they have with other employees and patrons and the feeling of importance, feeling as though they have made a difference and have contributed to the goals of an organization.

38. ***Work with local radio and/or television stations to provide free advertising space on vehicles or on shelters in exchange for promotional advertisements for Palm Tran on those stations.*** Local radio and/or television stations can provide a tremendous service to a local transit system, providing marketing services that reach a significant number of residents and visitors in a community. Partnering with broadcast groups can play a major role in creating community awareness and recognition of a transit system.
39. ***Working with the Florida Department of Transportation, the Regional Transportation Organization (RTO), Tri-County Commuter Rail Authority, Broward County Transit, Miami-Dade Transit, and the FDOT Turnpike District, examine the implementation of a regional consumer information network and the expanded use of electronic fare media or "smart cards" for multi-modal and cross-jurisdictional application.*** The major reasons for transit agencies to consider a multi-purpose program are that the program offers some combination of the following: seamless regional transportation travel; reduced fare costs; additional revenues; improved customer convenience; an expanded market base for transit and increased ridership; improved communication, data collection and reporting capabilities; improved equity and timeliness of the reconciliation and distribution of revenues collected in a multi-operator system; and the improved ability to modify fare policies and structures. Currently, the Regional Transportation Organization (RTO) is looking at the implementation of programs for a regional consumer information network and multi-modal and cross-jurisdictional smart cards for use within Palm Beach, Broward, and Miami-Dade Counties on Tri-Rail, Palm Tran, Broward County Transit, Miami-Dade Transit Agency (and MDTA's light rail and commuter rail systems). FDOT's Turnpike District are also involved in implementing smart card technologies at toll plazas in a number of newly constructed facilities.

II. Financial Plan

The final stage in this transit development plan update process estimates the current costs associated with implementing these recommendations and compares them against current and anticipated financial resources.

Table 5-1 presents the costs associated with the above recommendations and the projected dates of implementation. These costs are based on several assumptions for items, ranging from the unit cost of a bus shelter to the average cost per hour for a new route. These are the most reasonable assumptions available, but cost estimates should be refined at the time the recommendations move into the implementation stage. Table 5-2 presents the capital and operating costs of the recommended projects by the fiscal year of implementation. Table 5-3 summarizes the projected sources of capital and operating revenues. Estimates for capital equipment and related expenses have been inflated to allow for the use of toll revenue credits as a soft match for Federal Transit Administration Section 5307 and 5309 grant programs and Surface Transportation Program funds. It should be noted that Palm Tran is currently projecting

a budget deficit for the next few years, holding all conditions constant. There will be a shortfall in Palm Tran's operating budget which will require the establishment of priorities for these recommendations or the identification of new funding sources. Table 5-4 summarizes the total revenues and expenses (including TDP recommendations) for Palm Tran through the year 2004.

**Table 5-1
Palm Tran Transit Development Plan
Estimated Cost of Recommendations
(in 1999 \$)**

Action	Unit Cost (1999 \$)¹	Number of Units	Annual Operating Cost (1999 \$)	Annual Farebox Revenue (1999 \$)²	Total Capital Cost³	Implementation Year
(1) Later Night Service (12 routes) Operating Cost	\$30/rev. hr.	34,333 rev.hrs.	\$1,030,000	\$104,000	N/A	2000
(2) Decrease Headways on Route 1 to 20 minutes weekdays and 30 minutes Saturdays ⁴ Operating Cost	\$30/rev.hr.	21,200 rev. hrs.	\$636,600	\$108,222	N/A	2000
(3) Reinstate 30 minute service on Route 3 from Delray Square to Town Center Mall	\$30/rev.hr.	3,978 rev. hrs.	\$119,340	\$20,288	N/A	2000-2001
(4) Replacement Buses	\$325,000	90	N/A	N/A	\$29,250,000	2000-2002
(5) Marketing Program Equipment	N/A	N/A	N/A	N/A	\$8,000	2000
(6) Expansion of Administrative and Supervisory Staff				N/A	N/A	2000
Planning/Proj. Management	\$60,000	1	\$60,000			
Customer Service	\$25,000	1	\$25,000			
Road Supervisors	\$40,000	6	\$240,000			
(7) Preventative Maintenance	\$4,500,000	5	N/A	N/A	\$22,500,000	2000-2004
(8) Associated Capital Items	\$250,000/ year	N/A	N/A	N/A	\$1,250,000	2000-2004
(9) Bus Shelters (Rights of Way)	\$31,250	Av. Annual ROW \$	N/A	N/A	\$156,250	2000-2004

¹ Uses fully allocated costs. New service areas include costs associated with the provision of complementary paratransit services.

² In most cases, farebox revenue is based on 10% of route operating costs for the first year of service, 15% for the second, and 20 for subsequent years.

³ Costs associated with capital improvements have been inflated to allow for the use of toll revenue credits as a soft match for Federal capital grant programs.

⁴ There will not be any expansion vehicles identified for this system improvement. Vehicles will be transferred from routes eliminated due to poor ridership

Table 5-1 (continued)

**Palm Tran Transit Development Plan
Estimated Cost of Recommendations
(in 1999 \$)**

Action	Unit Cost (1999 \$)¹	Number of Units	Annual Operating Cost (1999 \$)	Annual Farebox Revenue (1999 \$)²	Total Capital Cost³	Implementation Year
(20) Decrease Headways on Route 1 to 15 minutes weekdays and 20 minutes Saturdays/30 minutes Sundays Operating Cost Expansion Buses	\$30/rev.hr. \$325,000	24,371 rev.hrs 10	\$731,120	\$109,668	\$3,250,000	2001
(21) Decrease Headways on Route 2 to 20 minutes weekdays and 30 minutes Saturdays Operating Cost Expansion Buses	\$30/rev.hr. \$325,000	18,865 rev.hrs 5	\$565,950	\$84,893	\$1,625,000	2001
(22) Acquisition and paving of adjacent property for expansion of operation facilities	\$230,000	5 acres	\$0	\$0	\$1,150,000	2001
(23) AVL Equipment/Radio System Upgrade	\$1,000,000	Systemwide	\$0	N/A	\$1,000,000	2001
(24) Security Cameras at Major Transfer Locations	\$10,000	7	N/A	N/A	\$70,000	2001
(25) Express Bus Service (I-95) Operating Cost Expansion Buses	\$3.00/rev. mi \$260,000 ⁴	30,600 rev.mi. 3	\$91,800	\$13,770	\$780,000	2001
(28) Decrease Headways on Route 2 to 15 minutes weekdays and 20 minutes Saturdays/30 minutes Sundays Operating Cost Expansion Buses	\$30/rev.hr. \$325,000	19,887 rev.hrs 5	\$596,600	\$74,575	\$1,625,000	2002

¹ Uses fully allocated costs. New service areas include costs associated with the provision of complementary paratransit services.

² In most cases, farebox revenue is based on 10% of route operating costs for the first year of service, 15% for the second, and 20 for subsequent years.

³ Costs associated with capital improvements have been inflated to allow for the use of toll revenue credits as a soft match for Federal capital grant programs.

⁴ The unit cost for vehicles for this service has not been inflated to adjust for the use of toll revenue credits. State and local funds will be used for the acquisition of these vehicles.

Table 5-1 (continued)

**Palm Tran Transit Development Plan
Estimated Cost of Recommendations
(in 1999 \$)**

Action	Unit Cost (1999 \$)¹	Number of Units	Annual Operating Cost (1999 \$)	Annual Farebox Revenue (1999 \$)²	Total Capital Cost³	Implementation Year
(29) Replacement of Supervisory Vehicles (lift equipped vans)	\$27,500	5	N/A	N/A	\$125,000	2002
(30) Decrease Headways on Route 3 to 20 minutes weekdays and 30 minutes Saturdays Operating Cost Expansion Buses	\$30/rev.hr. \$325,000	18,750 rev.hrs 5	\$562,500	\$70,313	\$1,625,000	2003
(31) Decrease Headways on Route 3 to 15 minutes weekdays and 20 minutes Saturdays Operating Cost Expansion Buses	\$30/rev.hr. \$325,000	19,519 rev.hrs 5	\$585,580	\$58,558	\$1,625,000	2004
(32) Feasibility Study - Dedicated Bus Lane(s) and Signal Priority	\$50,000	1	N/A	N/A	\$50,000	2004

¹ Uses fully allocated costs. New service areas include costs associated with the provision of complementary paratransit services.

² In most cases, farebox revenue is based on 10% of route operating costs for the first year of service, 15% for the second, and 20 for subsequent years.

³ Costs associated with capital improvements have been inflated to allow for the use of toll revenue credits as a soft match for Federal capital grant programs.

Table 5-2
Palm Tran Transit Development Plan
Estimated Operating and Capital Cost by Fiscal Year
(In program year \$, in 000s)

Action	FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		Total FY 00-04	
	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs
(1) Later Night Service (12 routes) ¹	\$1,030	\$0	\$1,071	\$0	\$1,114	\$0	\$1,159	\$0	\$1,205	\$0	\$5,579	\$0
(2) Decrease Headways - Rt. 1 to 20/30 minutes ¹	\$636	\$0	\$661	\$0	\$687	\$0	\$715	\$0	\$743	\$0	\$3,442	\$0
(3) 30 minute service on Rt. 3 from Delray Square to Town Center Mall	\$119	\$0	\$124	\$0	\$129	\$0	\$134	\$0	\$139	\$0	\$645	\$0
(4) Buses - Replacement	\$0	\$13,650	\$0	\$14,534	\$0	\$1,758	\$0	\$0	\$0	\$0	\$0	\$29,942
(5) Marketing Program Equipment	\$0	\$8	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$8
(6) Expansion of Administrative and Supervisory Staff	\$325	\$0	\$338	\$0	\$352	\$0	\$366	\$0	\$380	\$0	\$1,761	\$0
(7) Preventative Maintenance	\$0	\$4,500	\$0	\$4,747	\$0	\$5,012	\$0	\$5,293	\$0	\$5,558	\$0	\$25,110
(8) Associated Capital Items	\$0	\$250	\$0	\$260	\$0	\$270	\$0	\$281	\$0	\$293	\$0	\$1,354
(9) Bus Shelter (ROW)	\$0	\$31	\$0	\$33	\$0	\$34	\$0	\$35	\$0	\$37	\$0	\$170
(20) Decrease Headways - Rt. 1 to 15/20/30 minutes	\$0	\$0	\$731	\$3,380	\$760	\$0	\$791	\$0	\$823	\$0	\$3,105	\$3,380

¹ Not included in total operating expenses per fiscal year. The costs associated with these improvements are not additional costs to the system. These improvements were added through the elimination and/or reduction of services along other routes.

Table 5-2 (continued)

**Palm Tran Transit Development Plan
Estimated Additional Operating and Capital Cost by Fiscal Year
(In program year \$ 000s)**

Action	FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		Total FY 00-04	
	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs	Operating Costs	Capital Costs
(21) Decrease Headways - Rt. 2 to 20/30 minutes	\$0	\$0	\$566	\$1,690	\$589	\$0	\$612	\$0	\$637	\$0	\$2,404	\$1,690
(22) Acquire and pave property for expansion	\$0	\$0	\$0	\$1,196	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,196
(23) AVL/Radio System	\$0	\$0	\$0	\$1,300	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,300
(24) Security Cameras	\$0	\$0	\$0	\$74	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$74
(25) Express Bus Service	\$0	\$0	\$95	\$811	\$98	\$0	\$102	\$0	\$106	\$0	\$401	\$811
(28) Decrease Headways - Rt. 2 to 15/20/30 minutes	\$0	\$0	\$0	\$0	\$672	\$1,758	\$698	\$0	\$726	\$0	\$2,096	\$1,758
(29) Replacement Supervisory Vehicles	\$0	\$0	\$0	\$0	\$0	\$135	\$0	\$0	\$0	\$0	\$0	\$135
(30) Decrease Headways - Rt. 3 to 20/30 minutes	\$0	\$0	\$0	\$0	\$0	\$0	\$659	\$1,828	\$685	\$0	\$1,344	\$1,828
(31) Decrease Headways - Rt. 3 to 15/20/30 minutes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$713	\$1,902	\$713	\$1,902
(32) Feasibility Study - Dedicated Bus Lanes/Signal Priority	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$58	\$0	\$58
SIB Loan Repayment	\$0	\$0	\$0	\$0	\$0	\$2,000	\$0	\$2,000	\$0	\$0	\$0	\$4,000
Total By Fiscal Year	\$444	\$18,439	\$1,854	\$28,025	\$2,600	\$10,967	\$3,362	\$9,437	\$4,209	\$7,848	\$12,469	\$74,716

**Table 5-3
Palm Tran Transit Development Plan
Anticipated Revenues**

(in 000's)

Source	FY 2000		FY 2001		FY 2002		FY 2003		FY 2004		Total FY 00-04	
	Operating Revenue	Capital Revenue	Operating Revenue	Capital Revenue	Operating Revenue	Capital Revenue	Operating Revenue	Capital Revenue	Operating Revenue	Capital Revenue	Operating Revenue	Capital Revenue
FTA Section 5307 ¹	\$0	\$8,020	\$0	\$9,255	\$0	\$10,483	\$0	\$11,722	\$0	\$11,722	\$0	\$51,202
Section 5307 10% ADA	\$1,453	\$0	\$1,453	\$0	\$1,453	\$0	\$1,453	\$0	\$1,453	\$0	\$7,265	\$0
FTA Section 5309	\$0	\$2,000	\$0	\$1,000	\$0	\$1,000	\$0	\$1,000	\$0	\$1,000	\$0	\$6,000
FDOT Service Development	\$75	\$0	\$117	\$37	\$121	\$0	\$126	\$0	\$125	\$0	\$564	\$37
FDOT Block Grant	\$2,473	\$0	\$2,723	\$0	\$2,940	\$0	\$3,207	\$0	\$3,307	\$0	\$14,650	\$0
FDOT Transit Corridor (@ 50% state/50% local)	\$0	\$0	\$337	\$0	\$350	\$0	\$364	\$0	\$379	\$0	\$1,430	\$0
TEA-21 Flexible Funds ³	\$0	\$1,000	\$0	\$1,000	\$0	\$1,000	\$0	\$1,000	\$0	\$1,000	\$0	\$5,000
State Infrastructure Bank Loan	\$0	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000
Local	\$21,587	\$0	\$23,076	\$37	\$24,021	\$0	\$24,952	\$0	\$26,093	\$0	\$119,729	\$37
Transportation Disadvantaged Grant	\$1,127	\$0	\$1,127	\$0	\$1,205	\$0	\$1,235	\$0	\$1,235	\$0	\$5,929	\$0
Farebox (from expanded service only)	\$12	\$0	\$139	\$0	\$268	\$0	\$424	\$0	\$540	\$0	\$1,383	\$0
Toll Revenue Credits	\$0	\$2,755	\$0	\$2,814	\$0	\$3,121	\$0	\$3,431	\$0	\$3,431	\$0	\$15,552
Total Anticipated Revenues	\$26,727	\$17,775	\$28,972	\$14,143	\$30,358	\$15,604	\$31,761	\$17,153	\$33,132	\$17,153	\$150,950	\$81,828

1. The current federal transportation law, TEA-21, expires in FY 2003. Therefore, funding authorizations for Federal Transit Administration programs are only available through that year. For FY 2004, we will use an amount equal to the projected apportionment for Palm Tran in FY 2003. (Total funds identified in Row 1, "FTA Section 5307," has been reduced by 10% to allow for ADA paratransit allocations).
2. Includes both Congestion Mitigation and Air Quality (CMAQ) Improvement Program and Surface Transportation Program (STP) funding.
3. Local funds include 50% match for Transit Corridor project on Rt. 1.
4. Toll Revenue Credits - created by the National Highway Designation Act of 1995 and approved for continuation through TEA-21. Allows for soft match of FTA capital programs in lieu of local cash match. In effect allows for 100% federal share of capital projects. Costs provided for improvements have been inflated to allow for the use of toll revenue credits. Example: in order to purchase a \$100,000 vehicle, in your application to the Federal Transit Administration you must identify a total project cost of \$125,000. From that \$125,000 you will request \$100,000 in federal funds and will request toll revenue credits for the \$25,000. The primary purpose for the establishment of the program was to enable local transit systems to divert local funds that would have been provided as a cash match to federal capital grant programs to the operating budget of the system in exchange for reduced capital expenditures.

Table 5-4
Projected Budget Including TDP Recommendations
(In program year \$, in 000s)

Item	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	Total
Operating Expenses (including Spectran)	\$26,727	\$27,727	\$28,958	\$30,168	\$31,395	\$144,975
Additional TDP Operating Expenses	\$444	\$1,854	\$2,600	\$3,362	\$4,209	\$12,469
Total Operating Expenses	\$27,171	\$29,581	\$31,558	\$33,530	\$35,604	\$157,444
Operating Revenues	\$26,727	\$28,972	\$30,358	\$31,761	\$33,132	\$150,950
Net Operating	(\$444)	(\$609)	(\$1,200)	(\$1,769)	(\$2,472)	(\$6,494)
Operating (Cumulative Total Operating Deficit)	(\$444)	(\$1,053)	(\$2,253)	(\$4,022)	(\$6,494)	(\$6,494)
Total Capital Expenses	\$18,439	\$28,025	\$10,967	\$9,437	\$7,848	\$74,716
Capital Revenues	\$17,775	\$14,143	\$15,604	\$17,153	\$17,153	\$81,828
Net Capital	(\$664)	(\$13,882)	\$4,637	\$7,716	\$9,305	\$7,112
Net Capital (Cumulative Total (Deficit)/Surplus)	(\$664)	(\$14,546)	(\$9,909)	(\$2,193)	\$7,112	\$7,112
Total Expenses	\$45,610	\$57,606	\$42,525	\$42,967	\$43,452	\$232,160
Total Revenue	\$44,502	\$43,115	\$45,962	\$48,914	\$50,285	\$232,778
Net gain/(loss)	(\$1,108)	(\$14,491)	\$3,437	\$5,947	\$6,833	\$618
Cumulative Total (Deficit)/ Surplus	(\$1,108)	(\$15,599)	(\$12,162)	(\$6,215)	\$618	\$618