SFRTA
MOVING OUR REGION
FORWARD

FY 2014-2023

SFRTA FORWARD PLAN

A Transit Development Plan for SFRTA

Final Report

August 2013

SFRTA FY 2014-2023

SFRTA FORWARD PLAN

Final Report

Prepared for:

South Florida Regional Transportation Authority
800 NW 33rd Street, Suite 100
Pompano Beach, FL 33064
(954) 942-7245

Prepared by:

Tindale-Oliver & Associates, Inc.
6750 N. Andrews Avenue, Suite 200
Fort Lauderdale, FL 33309
(954) 489-2748

In cooperation with

HNTB FTE CUNNINGHAM GROUP INC.

August 2013

(This page is intentionally left blank)

TABLE OF CONTENTS

LIST OF TABLES

EXECUTIVE SUMMARY

SFRTA FORWARD PLAN

LIST OF MAPS

EXECUTIVE SUMMARY

SFRTA FORWARD PLAN

LIST OF FIGURES

EXECUTIVE SUMMARY

SFRTA FORWARD PLAN

FINAL REPORT

EXECUTIVE SUMMARY

SFRTA

MOVING OUR REGION FORWARD

(This page intentionally left blank.)

ES.1 INTRODUCTION

Numerous current transportation and land development trends point towards a bright future for transit in South Florida. Nationwide, transit ridership has now grown to levels not seen since the 1950s. Transit ridership is growing at a faster pace than automobile vehicle miles traveled and population growth. Higher gasoline prices have become the "new normal," and all signs point to a future of volatile energy prices. Fewer numbers of teenagers and the "millennial" age cohort are seeking drivers' licenses. Numerous recent real estate studies indicate that the desirability of walkable mixed-use communities has grown significantly and that properties with easy access to transit have either retained their value or seen their value increase at higher levels than properties without transit access. All of these trends point to a need for increased transit investment in South Florida over the next 10 years.

The South Florida Regional Transportation Authority (SFRTA) seeks to work with partners in both the public sector and private sector to provide improved transit, along with its associated economic development benefits, to the region in the coming years. The FY 2014–2023 Transit Development Plan (TDP) for SFRTA serves as the strategic guide for public transportation for the agency over the next 10 years. This TDP, referred to as SFRTA: Moving Our Region Forward (***SFRTA Forward***), documents the investments that SFRTA is committed to making over the next five years, as well as its vision for additional priorities and improvements through FY 2023. The ***SFRTA Forward*** process presents a great opportunity for the agency to:

- reinvigorate its identity and reassess its mission
- address the mobility needs of a growing and dynamic region
- continue building partnerships to advance transportation projects in the South Florida region and beyond

Many exciting transit projects and concepts are included throughout the 10-year period of ***SFRTA Forward***, including some near-term projects that are poised to have a significant positive impact. These immediate improvements include the modernization and expansion of the Tri-Rail fleet, the shift of rail corridor dispatch and maintenance duties to SFRTA, and the opening of the new Miami Airport Tri-Rail Station at the Miami Intermodal Center (MIC). SFRTA is working diligently with multiple agencies to advance other transformational projects, such as Tri-Rail expansion onto the Florida East Coast (FEC) Railway corridor (now known as the Tri-Rail Coastal Link) and The WAVE modern streetcar in downtown Fort Lauderdale.

SFRTA is grateful to the thousands of individuals who participated in the numerous ***SFRTA Forward*** outreach activities and helped to shape the vision and priorities contained within this document.

ES.1.1 TDP CHECKLIST

SFRTA Forward meets the requirement for a major TDP update in accordance with Rule Chapter 14-73, Florida Administrative Code (F.A.C.). Table ES-1 is a list of TDP requirements from Rule 14-73.001 and serves as a checklist that all requirements are addressed in the ***SFRTA Forward*** plan documentation.

Table ES-1: TDP Checklist

Public Involvement Process	
√	Public Involvement Plan (PIP)
√	PIP approved by FDOT
√	TDP includes description of Public Involvement Process
√	Provide notification to FDOT
√	Provide notification to Regional Workforce Board
Situation Appraisal	
√	Land use
√	State and local transportation plans
√	Other governmental actions and policies
√	Socioeconomic trends
√	Organizational issues
√	Technology
√	10-year annual projections of transit ridership using approved methodology
√	Assessment of whether land uses and urban design patterns support/hinder transit service provision
√	Calculate farebox recovery
Mission and Goals	
√	Provider's vision
√	Provider's mission
√	Provider's goals
√	Provider's objectives
Alternative Courses of Action	
√	Develop and evaluate alternative strategies and actions
√	Benefits and costs of each alternative
√	Financial alternatives examined
Implementation Program	
√	Ten-year implementation program
√	Maps indicating areas to be served
√	Maps indicating types and levels of service
√	Monitoring program to track performance measures
√	Ten-year financial plan listing operating and capital expenses
√	Capital acquisition or construction schedule
√	Anticipated revenues by source
Relationship to Other Plans	
√	Consistent with Florida Transportation Plan
√	Consistent with local government comprehensive plans
√	Consistent with MPO Long Range Transportation Plans
√	Consistent with regional transportation goals and objectives
Submission	
√	Adopted by SFRTA Governing Board
√	Submitted to FDOT by September 1, 2013

ES.2 OVERVIEW OF SFRTA

SFRTA was created on July 1, 2003, when legislation passed by the Florida Senate and the Florida House of Representatives and signed by Governor Jeb Bush transformed the Tri-County Commuter Rail Authority (Tri-Rail) into SFRTA. The SFRTA service area is defined by statute as Miami-Dade, Broward, and Palm Beach counties. However, this area may be expanded to include Monroe County by mutual consent of SFRTA and the Boards of County Commissioners representing the proposed expansion area. Expanding SFRTA's service area outside of these four counties requires legislative action.

ES.2.1 SFRTA EXISTING SERVICES

SFRTA operates Tri-Rail commuter rail service in Miami-Dade, Broward, and Palm Beach counties. The rail line goes as far south as Miami International Airport and as far north as Mangonia Park in Palm Beach County. There are currently 17 Tri-Rail stations open for service—6 in Palm Beach County (Mangonia Park, West Palm Beach, Lake Worth, Boynton Beach, Delray Beach, and Boca Raton), 7 in Broward County (Deerfield Beach, Pompano Beach, Cypress Creek, Fort Lauderdale, Fort Lauderdale/Hollywood International [FLL] Airport at Dania Beach, Sheridan Street, and Hollywood), and 4 in Miami-Dade County (Golden Glades, Opa-locka, Metrorail Transfer, and Hialeah Market/Miami Airport). Since September 2011, the Hialeah Market Station has served as the southern terminus for Tri-Rail service due to the Miami Airport Station being temporarily closed to facilitate the construction of the MIC. A new Tri-Rail Miami Airport Station is being rebuilt and will be connected to the airport via an escalator and people mover. It is expected to open to the public in 2014.

SFRTA also operates a free shuttle bus program to and from selected Tri-Rail stations, providing connecting service for Tri-Rail riders to numerous destinations in South Florida. Map ES-1 displays the existing network of SFRTA's services, including Tri-Rail's commuter rail line and station locations and the SFRTA shuttle bus service network. Table ES-2 provides a summary of the average weekly boardings by Tri-Rail station, and Table ES-3 summarize the shuttle bus routes currently operated and/or funded by SFRTA.

Map ES-1: SFRTA Existing Service

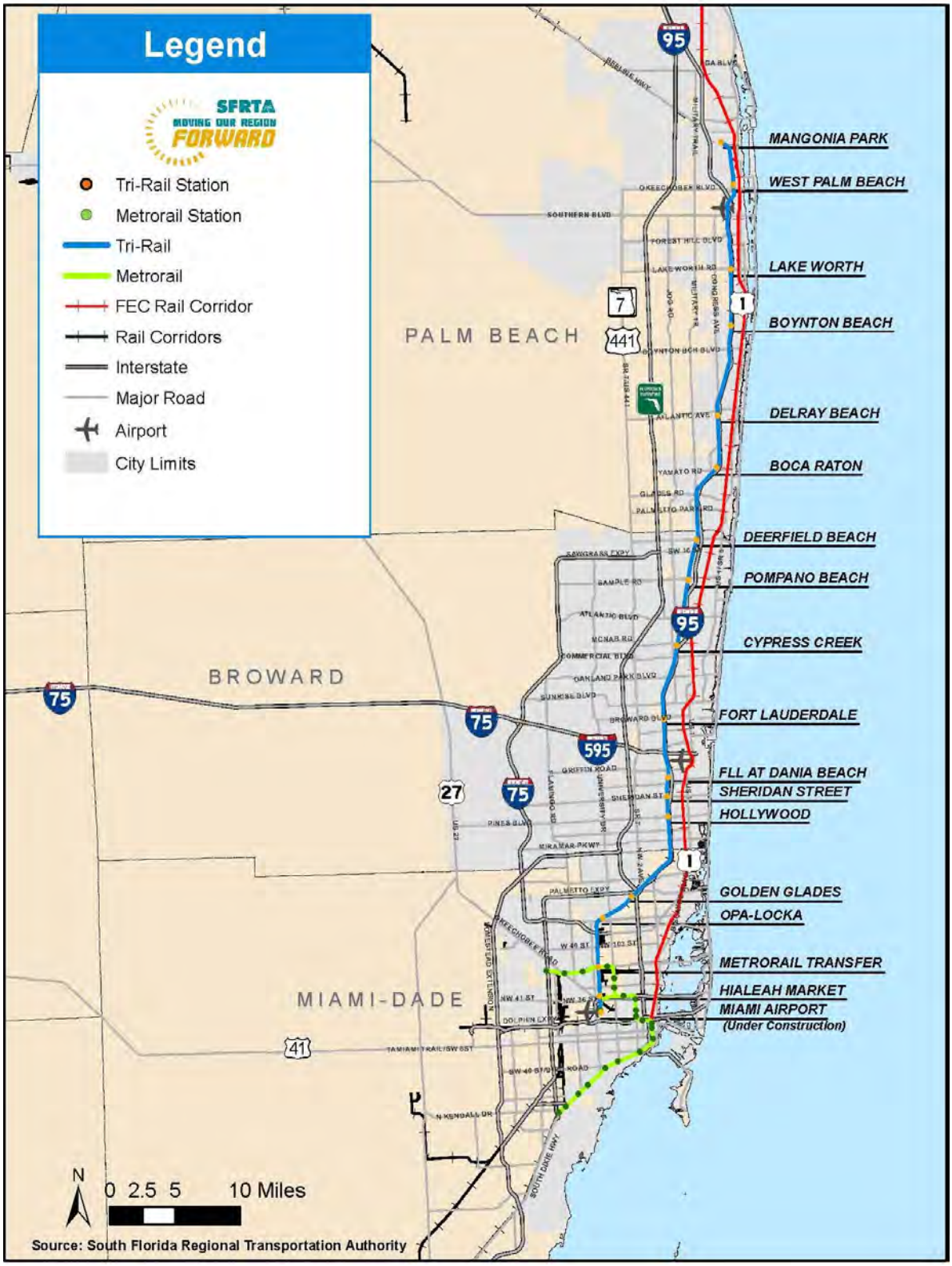


Table ES-2: Average Weekly Boardings by Tri-Rail Station (CY 2012)

Station	Weekday		Weekend/Holiday	
	Average Weekday Boardings	*Rank*	*Average Weekend Boardings*	*Rank*
Mangonia Park	898	6th	500	10th
West Palm Beach	1,104	3rd	917	2nd
Lake Worth	853	7th	833	3rd
Boynton Beach	754	10th	449	12th
Delray Beach	596	15th	386	15th
Boca Raton	1,329	2nd	436	13th
Deerfield Beach	734	11th	431	14th
Pompano Beach	828	8th	511	9th
Cypress Creek	1,064	4th	567	7th
Fort Lauderdale	936	5th	655	5th
FLL at Dania Beach	805	9th	651	6th
Sheridan Street	408	16th	245	16th
Hollywood	694	12th	553	8th
Golden Glades	615	14th	500	10th
Opa-locka	294	17th	187	17th
Metrorail Transfer	1,428	1st	1,330	1st
Hialeah Market/Miami Airport	660	13th	660	4th
Total Boardings	**14,000**		**9,811**	

Source: SFRTA

Table ES-3: SFRTA Shuttle Bus Routes and Annual Boardings

Tri-Rail Station	Shuttle Bus Routes	Start Time	End Time	Peaks Only Service	Weekend Service	Annual Boardings (March 2012–February 2013)
Lake Worth	LKW-1	5:45	18:54	No	No	28,171
Boca Raton	BR-1	6:05	19:05	Yes	No	28,289
Boca Raton	APOC East	6:40	21:32	No	No	31,030
Boca Raton	APOC West	6:30	19:29	No	No	41,711
Deerfield Beach	DB-1	5:35	19:25	Yes	No	31,554
Deerfield Beach	DB-2	5:30	19:45	Yes	No	18,268
Pompano Beach	PB-1	4:55	19:30	Yes	No	22,850
Cypress Creek	CC-1	5:11	19:20	Yes	No	31,620
Cypress Creek	CC-2	5:11	19:20	Yes	No	53,376
Cypress Creek	CC-3	5:11	19:20	Yes	No	35,744
Fort Lauderdale	FL-1	5:10	22:15	No	Yes	113,452
Fort Lauderdale	FL-2	6:00	19:15	No	No	25,278
Fort Lauderdale	FL-3	6:46	21:00	No	Yes (Only)	17,120
Fort Lauderdale	NW Community Link	7:10	18:48	No	No	104,791
FLL at Dania Beach	FLA-1	4:55	22:00	No	Yes	349,871
Sheridan Street	SS-1	6:02	19:10	Yes	No	15,084
Opa-locka	North Link	6:28	19:07	No	No	58,032
Opa-locka	South Link	5:45	19:10	No	No	114,204
					Total Boardings	**1,120,445**

Source: SFRTA

ES.2.2 ACCOMPLISHMENTS SINCE LAST TDP MAJOR UPDATE

Since the adoption of the last SFRTA TDP Major Update in 2008, the agency has accomplished several initiatives and participated in a number of activities that have set the tone for the agency's vision for the next 10 years. Some of SFRTA's efforts and accomplishments since the 2008 Major TDP Update are outlined below.

- ***The WAVE, Downtown Fort Lauderdale Modern Streetcar*** – The WAVE will operate along a 2.7-mile corridor that will connect and circulate the downtown area and connect to regional bus and rail systems currently and planned in the area. SFRTA serves as the project sponsor for this project.
- ***Tri-Rail Coastal Link*** – SFRTA has worked with its partner agencies over the past two years to accelerate the process to expand Tri-Rail service onto the FEC Railway. Recent technical coordination with the Florida Department of Transportation (FDOT), the region's MPOs, and regional planning councils (RPCs) has resulted in planning for achievable and affordable alternatives that are fully integrated with the existing Tri-Rail system.
- ***South Florida Rail Corridor*** – In March 2013, SFRTA executed an agreement to take over the SFRC dispatch and maintenance of way on the CSX tracks. The agency is working towards an implementation date of December 2014. This agreement will allow SFRTA to provide more reliable service, as SFRTA will control Tri-Rail's trains movement as well as CSX Transportation freight trains and Amtrak intercity passenger trains.
- ***Shuttle Bus Program*** – The SFRTA Shuttle Bus Service and Financial Assessment Study, completed in 2009 (Phase I) and in 2010 (Phase II), identified the new routes to be implemented within the next five years.
- ***Station Improvements*** – SFRTA has continued to perform heavy maintenance at all of its Tri-Rail stations. These activities include the regular repairs, painting, and upkeep of the parking lots and station platforms. In addition, the agency has revised its Station Design Guidelines to incorporate "green" building initiatives.
- ***Parking Enhancements*** – SFRTA closely analyzed the parking needs and strategies along the Tri-Rail system to monitor demand for parking at its stations. Some of the recent parking enhancements efforts include the completion of the SFRTA Parking Management Study in 2010, regular parking lot utilization counts, and individual projects to increase capacity at certain stations. These projects include the 163-space parking lot at West Palm Beach Intermodal Center (2009); a 402-space, 3-level parking garage on the west side of the Fort Lauderdale Airport Station (2010); the 358-space parking lot west of the Cypress Creek Tri-Rail Station (2011); and the Opa-locka Tri-Rail station 74-space parking lot expansion (construction anticipated to begin in 2013).
- ***Bicycle Locker Program*** – Bicycle lockers have been implemented system wide. SFRTA's bicycle locker program is the fourth largest bicycle locker program to be implemented by a public agency in the United States. Currently, there are approximately 600 lockers installed at stations for passenger use.

- ***Hialeah Yard Maintenance Facility*** – The Hialeah Yard Maintenance Facility has been upgraded. Construction of new storage tracks, a new fueling facility, and an inspection pit have been completed.
- ***EASY Card Implementation*** – This new fare collection system, implemented in February 2011, is fully integrated into the Miami Dade Transit (MDT) fare system and shares the central computer system. The system has the technical capabilities to process and maintain a regional fare card program.
- ***Transit Oriented Development (TOD) Opportunities at Tri-Rail Stations*** – The recent economic recovery and improving housing market in the region have sparked a renewed interest in TOD and has renewed efforts to facilitate such development. SFRTA is ready to implement the TOD planning efforts conducted in past years near existing Tri-Rail stations and future Tri-Rail Coastal Link stations on the FEC corridor.
- ***Federal Funding/Grants*** – SFRTA has worked diligently to apply for Federal and State grants to help fund and support efforts that enhance accessibility and mobility for the region, as summarized in Table ES-4.

Table ES-4: SFRTA Federal Grant Awards

Grant	Amount Awarded	Project	Award Date
Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER)	$5,713,549	Tri-Rail's Pompano Beach Green Station Demo Project	December 1, 2011
Transportation Investment Generating Economic Recovery Program (TIGER IV)	$18,000,000	The WAVE Streetcar Project	June 1, 2012
Bus Livability	$4,556,000	Alternative Fuel Shuttle Bus Fleet	October 1, 2011
Job Access and Reverse Commute (JARC)	$479,050	SFRTA New Shuttle Bus Routes	September 1, 2010
JARC	$371,800	SFRTA Opa-Locka Shuttle South Route	September 1, 2010
JARC	$273,845	SFRTA Shuttle Service	February 1, 2013
JARC	$10,992	SFRTA Boynton Beach Shuttle Service	February 1, 2013
New Freedom	$960,219	ADA Improvements of Tri-Rail Pompano Green Station Demo Project	May 1, 2012
New Freedom	$1,612,788	ADA Improvements of Tri-Rail Pompano Green Station Demo Project	February 1, 2013

Source: SFRTA

- ***Tri-Rail Mobile Application*** – A free Tri-Rail phone application was launched on September 2012 for iPhone, iPad, and Android mobile devices. The mobile app is free and allows mobile users to plan their trips by checking for train arrival and departure times, locating the nearest train station, and calculating how much a trip will cost.

(This page intentionally left blank.)

ES.3 SUMMARY OF PUBLIC INVOLVEMENT

A Public Involvement Plan (PIP) was prepared at the onset of the 10-year TDP for SFRTA that identified the public engagement activities to be completed during the ***SFRTA Forward*** planning process. The PIP was reviewed and approved by FDOT per TDP Rule on March 15, 2013. This section summarizes the public involvement activities undertaken throughout the course of ***SFRTA Forward*** and assesses the level of participation of the ***SFRTA Forward*** public outreach efforts.

ES.3.1 TRI-RAIL ON-BOARD SURVEY

A system-wide survey was conducted on-board Tri-Rail as a separate task from the TDP update on Wednesday, February 13, 2013. A total of 5,175 on-board surveys were collected and analyzed during this effort, the results of which were reviewed and incorporated into the development of ***SFRTA Forward***, as appropriate. The survey instrument asked 27 questions on various origin-destination elements, demographics, and customer service aspects.

ES.3.2 INTERCEPT SURVEY

Intercept surveys or platform interviews were conducted at nine Tri-Rail stations over the course of three days in 2013: Tuesday, March 19; Thursday, March 21; and Saturday, April 6, 2013. These platform interviews were conducted to obtain feedback from Tri-Rail riders on their main reasons to ride Tri-Rail and their most important improvements or initiatives for SFRTA/Tri-Rail in the next 10 years. During the interviews, Project Team members were available to obtain feedback and answer any questions the riding public had about the TDP Major Update process, SFRTA operations, etc. A table was set up at the station at which project presentation boards were displayed and ***SFRTA Forward*** published materials were available. A total of 898 intercept surveys were completed from the interviews with Tri-Rail riders over the three-day survey period.

ES.3.3 ONLINE EFFORTS

Project Website

A website for ***SFRTA Forward*** (*www.SFRTAForward.com*) was developed early in the project and launched on March 18, 2013, to serve as the principal information portal for citizens and stakeholder agencies. In addition to hosting project-related information and documents, visitors to the website could access the online survey (in either English or Spanish), send comment/questions to the Project Team, and join the project e-mail mailing list.

Table ES-5 summarizes the statistics for the project website, including the total number of website visitors, number of persons that provided a comment or question via the website comment box, and number of persons who participated in the survey via the website. The website was updated regularly throughout the course of the project. Draft project documents and PowerPoint presentations were uploaded to the website as they were available for review and comment.

Table ES-5: Project Website Statistics

Description	Statistic
Total website visits (unique visits)*	982 (848)
Total comments/questions submitted	25
Total website survey participants (English)	733
Total website survey participants (Spanish)	11

*Includes website visits from April 1–May 31, 2013.
Unique visits are those visits from the same computer.

Online Survey

The online survey was prepared to obtain feedback from both public transportation users (including those who use Tri-Rail or other county transit service providers) and non-transit users that will help make decisions to improve service, evaluate the transportation needs of the region, and prioritize future improvements and initiatives. Table ES-6 summarizes participation in the ***SFRTA Forward*** online survey.

Table ES-6: Online Survey Participation Summary

Survey Version	Number of Participants
English	733
Spanish	11
Social Media	62
Total	**806**

Based on survey responses received March 18–May 31, 2013

E-mail Campaign

An e-mail blast was sent on March 28, 2013, to 7,000+ persons in SFRTA's contact database to inform the public about the launch of ***SFRTA Forward*** and to provide a link to the project website and online survey. Regional and local agencies and organizations also maintain their own internal contact lists. In most cases, it was not feasible for the Project Team to obtain these internal contact lists to send them the e-mail blast directly. Therefore, the Project Team coordinated with several partner agencies and organizations in the region to have the ***SFRTA Forward*** e-mail blast forwarded to their internal databases.

Social Media

Given the expedited project schedule for ***SFRTA Forward***, it was determined that there was not enough time to create a project-specific Facebook page or Twitter account and invite enough people to join the page and build a "friend" or follower network. In the interest of time, the Project Team reached out to other partner agencies and organizations that already have a social media presence to request that information about ***SFRTA Forward*** be shared with their social media contact networks. The benefit to using existing social media accounts from partner agencies is that these agencies already have established contact networks or a list of followers, so there was no delay in reaching new contacts through existing social media networks. Several partner agencies and organizations posted information about ***SFRTA Forward*** on their Facebook page and to their Twitter accounts, reaching close to 20,000 friends in each social media network.

ES.3.4 MEETINGS AND PRESENTATIONS

During the development of ***SFRTA Forward***, several presentations were made to the SFRTA's Planning Technical Advisory Committee (PTAC), which serves as the External Review Committee (ERC) for ***SFRTA Forward***, as well as to the SFRTA Governing Board, the boards and committees of the Palm Beach, Broward, and Miami-Dade MPOs, and other organizations. A list of each meeting attended and where a presentation was made is provided in Table ES-7.

Table ES-7: Meetings and Presentations Summary

Meeting	Date	Participation
External Review Committee/PTAC	February 19, 2013	20
External Review Committee/PTAC	April 10, 2013	34
SFRTA Governing Board	April 26, 2013	19
Palm Beach MPO – Technical Advisory Committee (TAC)	May 1, 2013	18
Palm Beach MPO –Citizen's Advisory Committee (CAC)	May 1, 2013	12
Miami-Dade MPO –Transportation Planning Technical Advisory Committee (TPTAC)	May 1, 2013	14
Citizen's Independent Transportation Trust (CITT)	May 9, 2013	26
Miami-Dade MPO– Citizen's Transportation Advisory Committee(CTAC)	May 22, 2013	20
PTAC	June 12, 2013	24
Broward MPO – Board	June 13, 2013	41
Broward MPO – Technical Coordinating Committee (TCC)	June 26, 2013	20
Broward MPO – Community Involvement Roundtable (CIR)	June 26, 2013	23
External Review Committee/PTAC	July 22, 2013	TBD
SFRTA Governing Board*	August 23, 2013	TBD
TOTAL		**271**

TBD – To be determined when minutes of meeting are available.

*No meeting summary available.

ES.4 SFRTA GOALS & OBJECTIVES

SFRTA Forward presents a great opportunity for SFRTA to reassess its mission and reinvigorate its identity, address the mobility needs of a growing and dynamic region, and continue building partnerships to move transportation projects forward in South Florida. The SFRTA Goals and Objectives reflect the internal and external strategies and initiatives that SFRTA is committing to pursue to achieve its vision to promote transit growth and improvement over the next decade. The Goals and Objectives were developed by SFRTA staff in response to 1) communication with each department of SFRTA, 2) input from the PTAC/ERC and numerous public outreach efforts, and 3) input from regional stakeholders, including local Workforce Board representatives. The Goals were grouped into six categories reflective of the mission of SFRTA, its regional identity, and its vision for the next 10 years.

VISION

Goal 1: Take an active leadership role in expanding premium transit in the region.

Goal 2: Provide leadership in advocacy and education of the need for an expanded regional premium transit system.

PARTNERSHIPS

Goal 3: Continue utilization of private sector contractors for the majority of SFRTA services and operations.

Goal 4: Develop and pursue partnerships with agencies/entities in both the public and private sectors.

QUALITY/PERFORMANCE

Goal 5: Maximize the performance, reliability, efficiency, and capacity of the existing SFRTA/Tri-Rail system.

Goal 6: Improve the Tri-Rail passenger experience.

Goal 7: Improve connecting transit and transportation services.

SUSTAINABLE FUNDING

Goal 8: Pursue funding opportunities to support both the existing SFRTA/Tri-Rail system and expanded premium transit in the region.

ECONOMIC GROWTH

Goal 9: Facilitate economic growth and development throughout the region.

ENVIRONMENTAL SUSTAINABILITY

Goal 10: Maximize environmentally-sustainable practices for both the current SFRTA/Tri-Rail system and expanded premium services in the region.

ES.5 SFRTA NEEDS PLAN

In response to public outreach, direction from SFRTA staff, PTAC/ERC, and the SFRTA Governing Board, as well as the demand and mobility needs identified during the ***SFRTA Forward*** development process, potential transit improvements and initiatives are documented below as candidates for funding in the ***SFRTA Forward*** plan. These improvements and initiatives essentially comprise the ***SFRTA Forward*** Needs Plan.

ES.5.1 PREMIUM TRANSIT

1. Expand periods of Tri-Rail 20-minute headways on weekdays.
2. Provide late evening service on Tri-Rail.
3. Manage dispatch and maintenance of the South Florida Rail Corridor.
4. Implement Tri-Rail Coastal Link service on the FEC Railway corridor (as lead agency for financial planning, design, construction, operations, and FTA project sponsor).
    - Rehabilitate older existing rolling stock and acquire some additional units to support "full build" scenario of Tri-Rail Coastal Link.
5. Implement The WAVE modern streetcar in downtown Fort Lauderdale (as coordinating agency, FTA project sponsor, and lead of design and construction phases).
6. Coordinate streetcar feasibility studies:
    - Extensions of The WAVE (south and west)
    - West Palm Beach
    - Delray Beach
    - Boca Raton
    - Miami-Dade County
7. Study future passenger rail service in Miami-Dade on underutilized freight corridors (Dolphin, Kendall, and FEC-Ludlam corridors).
8. Coordinate feasibility studies for regional premium transit connections to Monroe, Martin, and St. Lucie counties.

ES.5.2 SHUTTLE BUS AND OTHER STATION ACCESS

1. Expand existing shuttle bus routes.
    - Address capacity issues:
        - Add capacity to Fort Lauderdale International Airport Shuttle (FLA 1).
        - Add capacity to Downtown Fort Lauderdale Shuttle (FLL 1).
    - Improve shuttle bus stop infrastructure at stations.

2. Pursue new shuttle bus route concepts:
    - Shuttle Bus Improvement Program
    - Improved, direct connections to major regional destinations and employment centers, including Miami Beach, Port Miami, and Palm Beach International Airport
3. Improve bicycle and pedestrian access to stations.
4. Implement car sharing program at stations.
5. Implement bike sharing program at stations.

ES.5.3 SYSTEM AND STATION INFRASTRUCTURE

1. Plan, design, and construct new facilities.
    - Construct Pompano Beach Green Station Demonstration Project.
    - Pursue new northern layover and maintenance facility at Mission Spur in Palm Beach County.
    - Pursue Miami River/Miami Intermodal Center Capacity Improvement (MR-MICCI).
    - Pursue small, strategic track improvements at key locations.
    - Pursue direct connection to east Tri-Rail platform at Metrorail Transfer station.
    - Design and construct new Tri-Rail Coastal Link stations.
    - Construct permanent administration building for SFRTA.
2. Implement parking and circulation improvements:
    - Opa-locka Station circulation and parking project
    - West Palm Beach Station
    - Lake Worth Station (in conjunction with adjacent School Board parking)
    - Delray Beach Station
    - Boca Raton Station
    - Deerfield Beach Station
    - Work with CRAs, DDAs, and local governments to develop cost-effective shared-use parking strategies at new Tri-Rail Coastal Link stations.
3. Support and/or develop inter/multimodal transfer facilities:
    - Complete/fully open Miami Intermodal Center (MIC) at MIA
    - All Aboard Florida stations in Miami, Fort Lauderdale, and West Palm Beach
    - “Mobility Hubs” at current and future Tri-Rail stations in Broward County
4. Upgrade signage at stations.
5. Provide electric car charging stations.
6. Allow for increased bicycle capacity onboard Tri-Rail trains.

ES.5.4 STATION AREA DEVELOPMENT

1. Pursue transit-oriented development (TOD) at existing stations.
2. Pursue TOD at new stations:
    - Boca Raton at Glades Road
    - Palm Beach International (PBI) Airport
    - Tri-Rail Coastal Link stations

ES.5.5 TECHNOLOGY

1. Pursue technologies to enhance the passenger experience and increase efficiency:
    - Online renewal capability for EASY card system
    - New passenger announcement system
    - Real-time passenger information
    - Wi-Fi and additional power outlets on-board and at stations
    - More ticket vending machines and ticket validation machines
    - Enhanced regional fare integration

ES.5.6 SERVICE AND CAPITAL PLANNING

1. Conduct plans and studies that support SFRTA's service and capital planning work program:
    - Develop procedures to streamline and simplify the TOD approval and implementation process.
    - Conduct station way-finding study and implementation plan.
    - Conduct streetcar feasibility studies.
    - Conduct market analysis for new SFRTA administrative building.
    - Conduct fare study to reevaluate existing fare structure and policies.
    - Conduct planning studies for new Tri-Rail stations (Boca Raton @ Glades and PBI Airport).
    - Implement demonstration project at selected stations for enhancing bicycle and pedestrian access to stations (one in each county).
    - Document benefits of premium transit to educate citizens and elected officials (economic development, environmental, sustainability, etc.).
    - Update Five-Year Shuttle Bus Service and Financial Plan on an annual basis.
    - Perform annual progress reports for TDP from 2014 through 2017.
    - Complete major update of TDP in 2018.
    - Update Tri-Rail monitoring program annually to assess performance.
    - Other plans and studies as identified.

(This page intentionally left blank.)

ES.6 SFRTA FORWARD PLAN

This section presents the 10-year implementation program and finance plan for ***SFRTA Forward*** based on current and projected operating and capital budgets. It also presents a 10-year outlook of SFRTA's financial situation for programmed and planned improvements, including a summary of the assumptions used. The expansion of SFRTA's role and responsibilities beyond operating the existing Tri-Rail System (i.e. SFRC Dispatch, The WAVE, Tri-Rail Coastal Link, etc.) will require additional capital and operating funds to fully implement these initiatives, as outlined below.

ES.6.1 OPERATING PLAN FORECAST

Operating Costs

SFRTA's operating costs for FY 2014, based on the adopted operating budget, totaled $75.3 million. For the purposes of estimating the operating expenses of SFRTA in the next 10 years, service-related contract costs (operating, maintenance, feeder service, security, fuel, and personnel services were assumed to escalate by 2 percent annually for the 10-year projection, while other expenses were assumed to remain constant to match recent historical trends. The SFRC and New River Bridge dispatch as well as maintenance-of-way expenses for the New River Bridge were assumed to escalate by 3 percent annually, based on current contract rates. Professional fees and office rent were also assumed to escalate by 3 percent for the analysis period. Under these assumptions, operating costs in FY 2023 are estimated to reach $88.2million for the existing SFRTA/Tri-Rail system.

The expansion of the existing Tri-Rail system to the proposed Tri-Rail Coastal Link starting in FY 2019will bring SFRTA's operating costs to a total of $120.7 million by FY 2023 for its future integrated system, as shown in Table ES-8 and Figure ES-1. Tri-Rail Coastal Link's operating costs are estimated to be about $30 million for its first year and escalating about 2 percent each year thereafter.

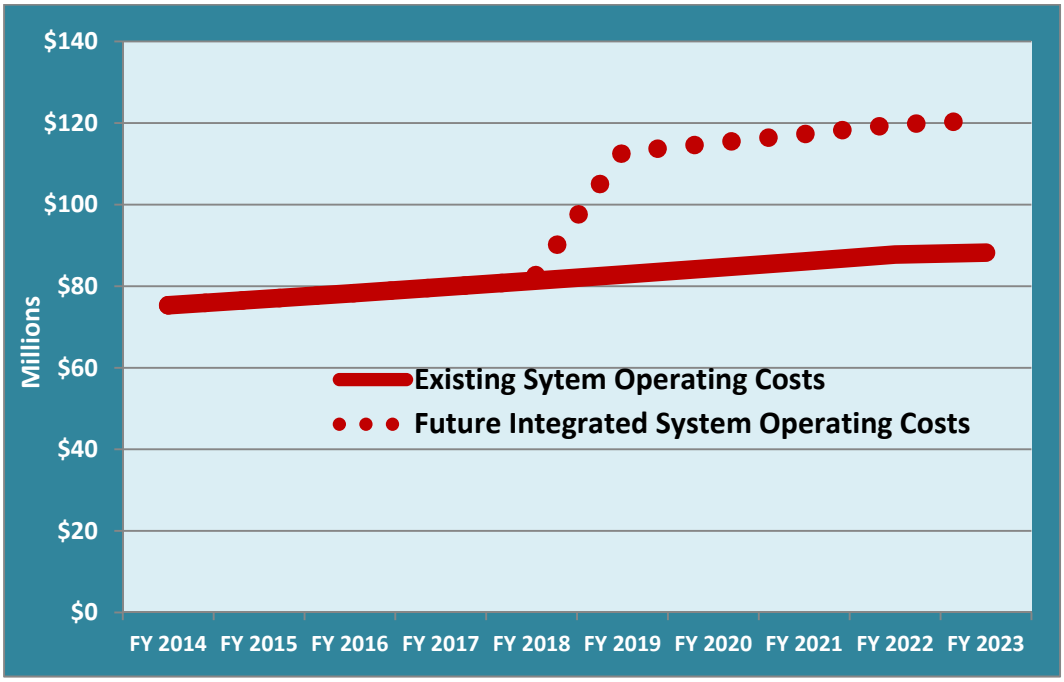
(This page intentionally left blank.)

Table ES-8: *SFRTA Forward* Projected 10-Year Operating Costs (FY 2014–FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
OPERATING EXPENSES											
Operating Contract	$11,356,868	$11,584,005	$11,815,685	$12,051,999	$12,293,039	$12,538,900	$12,789,678	$13,045,472	$13,306,381	$13,306,381	$124,088,408
Train Maintenance Contract	$18,406,716	$18,774,850	$19,150,347	$19,533,354	$19,924,021	$20,322,502	$20,728,952	$21,143,531	$21,566,401	$21,566,401	$201,117,077
Station Maintenance Contract	$2,393,584	$2,441,456	$2,490,285	$2,540,090	$2,590,892	$2,642,710	$2,695,564	$2,749,476	$2,804,465	$2,804,465	$26,152,988
Feeder Service Contract	$5,289,632	$5,395,425	$5,503,333	$5,613,400	$5,725,668	$5,840,181	$5,956,985	$6,076,124	$6,197,647	$6,197,647	$57,796,042
Emergency Feeder Service	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$550,000
Security Contract	$6,089,147	$6,210,930	$6,335,149	$6,461,852	$6,591,089	$6,722,910	$6,857,369	$6,994,516	$7,134,406	$7,134,406	$66,531,773
Insurance - Liability/Property/Auto	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$25,000,000
Train Fuel Contract	$9,937,500	$10,136,250	$10,338,975	$10,545,755	$10,756,670	$10,971,803	$11,191,239	$11,415,064	$11,643,365	$11,643,365	$108,579,985
SFRC Dispatch	$381,320	$392,760	$404,542	$416,679	$429,179	$442,054	$455,316	$468,976	$483,045	$497,536	$4,371,406
NRB Dispatch	$3,354,096	$3,454,719	$3,558,360	$3,665,111	$3,775,065	$3,888,317	$4,004,966	$4,125,115	$4,248,868	$4,376,335	$38,450,952
NRB Maintenenace	$550,000	$566,500	$583,495	$601,000	$619,030	$637,601	$656,729	$676,431	$696,724	$717,625	$6,305,134
Station Utilities	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$6,520,000
Revenue Collection	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$6,050,000
Corporate & Community Outreach	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$6,275,000
Legal Expenses	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$8,432,140
Personnel Services	$10,322,506	$10,528,956	$10,739,535	$10,954,326	$11,173,412	$11,396,881	$11,624,818	$11,857,315	$12,094,461	$12,336,350	$113,028,561
Office Business Expense	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$9,459,000
Business Travel/Conferences	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$2,404,750
Dues & Subscriptions	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$1,577,580
General Training & Seminar	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$1,454,850
Professional Fees	$609,500	$627,785	$646,619	$666,017	$685,998	$706,578	$727,775	$749,608	$772,096	$795,259	$6,987,234
Office Rent	$655,705	$675,376	$695,637	$716,507	$738,002	$760,142	$782,946	$806,434	$830,627	$855,546	$7,516,923
Electronic Messaging Boards	$145,500	$145,500	$145,501	$145,502	$145,503	$145,504	$145,505	$145,506	$145,507	$145,508	$1,455,036
Smart Card	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$850,000
APTA Peer Review	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$190,000
Alarm Systems	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$180,000
Uniforms	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$40,000
Reserve	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$5,000,000
Transfer to Capital Program	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($15,750,000)
Projected Existing System Operating Costs	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$84,441,174	$86,076,899	$87,747,326	$88,200,157	$820,614,838
Tri-Rail Coastal Link Operating Costs						$30,000,000	$30,600,000	$31,212,000	$31,836,240	$32,472,965	$156,121,205
Integrated System Operating Costs	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**

(This page intentionally left blank.)

Figure ES-1: SFRTA Projected 10-Year Operating Costs (FY 2014–FY 2023)



Operating Revenues

SFRTA's operating revenues for FY 2014, based on the adopted operating budget, total $75.3 million. SFRTA's operating train revenues are generated through Tri-Rail fares. The remainder of the operating revenues is a combination of federal, State, and local funds received from each of the three counties in the South Florida region (Palm Beach, Broward, and Miami-Dade).

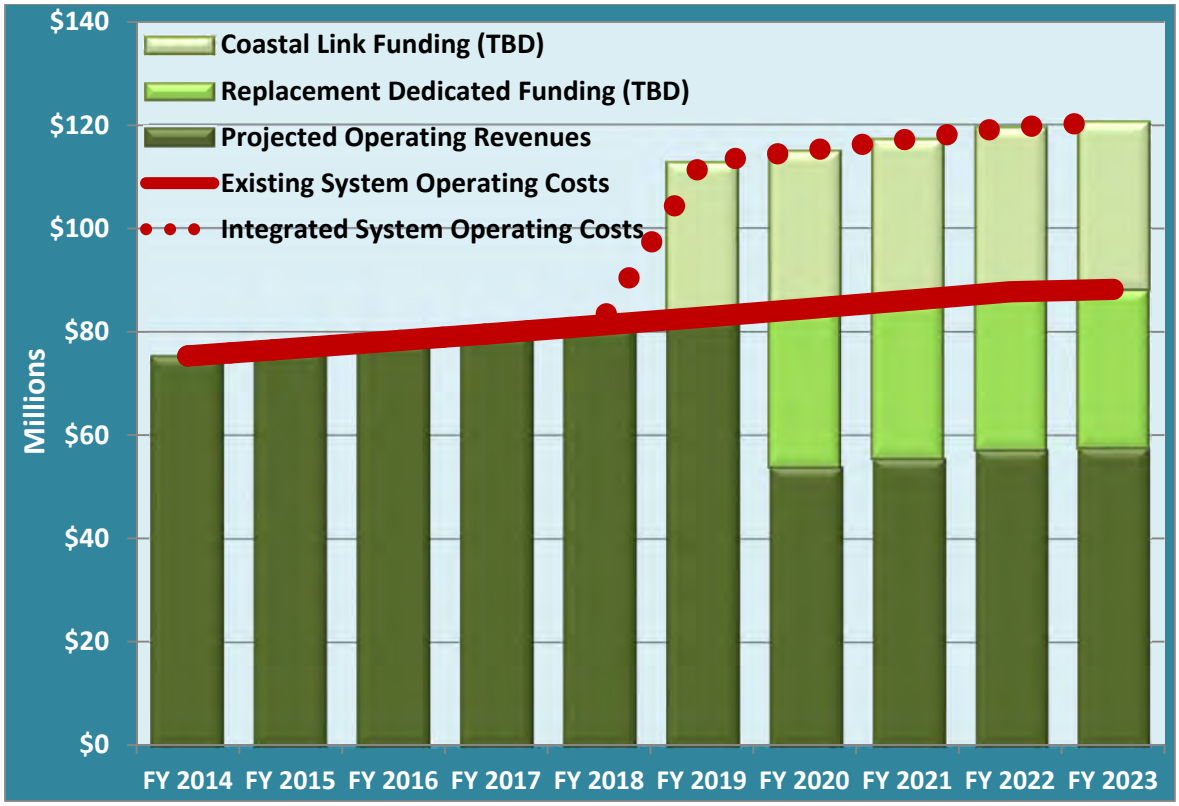
Based on the first five-year revenue estimates for FY 2015–FY 2019 produced by SFRTA's Finance Department and the TDP Project Team, train revenues are assumed to increase 2 percent annually. Federal funds will range between $23 and $28 million, including an increase in FTA Preventive Maintenance funds but the loss of FTA JARC/New Freedom revenues starting in FY 2017. The new transportation reauthorization, MAP-21, combined these programs with other funding programs that will be managed by local transit agencies and not SFRTA. State and local funding assistance are assumed to remain at the same levels for the first five-year estimates.

For the second five-year estimates (FY 2019–FY 2023), SFRTA is committed to working with FDOT and other partners to identify a new dedicated revenue source that will cover continued operations for the existing Tri-Rail system and the Coastal Link expansion on the FEC Railway. The intent is to identify and secure a new dedicated revenue source prior to FY 2019, so that Tri-Rail Coastal Link service on the FEC can be implemented in an accelerated manner. By FY 2020, the State dedicated operating assistance now received by SFRTA ($13.3 million and $17.3 million, respectively) will cease per the terms of HB 599 (signed into law in 2012). Per HB 599, a new dedicated revenue source must replace this state statutory operating assistance by FY 2020. Therefore, for purposes of the ***SFRTA Forward*** financial plan, it is assumed that a new dedicated

funding source will be identified by SFRTA, the State, and other partners to cover operating costs of both the existing system and anticipated Tri-Rail Coastal Link expansion.

As shown in Figure ES-2, potential funding provided by this new dedicated funding source is first shown in FY 2019 for Coastal Link expansion and in FY 2020 to replace the current State dedicated funding.

Figure ES-2: SFRTA Estimated Operating Revenues (FY 2014–FY 2023)



Starting in FY 2015, SFRTA will assume the Maintenance of Way (MOW) of the SFRC, for which it will receive an additional $11.5 million annually of dedicated funding from the State. FDOT has agreed to a cost-sharing plan to cover MOW expenses in excess of the $11.5 million in dedicated funding. For the purposes of this financial analysis, it is assumed that this MOW dedicated funding source will remain constant for the second five-year projection period, as shown in Table ES-9. County and other local contributions are also assumed to continue through FY 2023. Under these assumptions, the ***SFRTA Forward*** 10-year plan estimated and expected operating revenues are estimated to total $120.7million by FY 2023, as shown in Table ES-10. Table ES-11 summarizes the 10-year operating costs and revenues projections.

SFRTA is committed to implementing the Tri-Rail Coastal Link in the near future as funding becomes available. As the leading agency of the newly formed Tri-Rail Coastal Link Finance Subcommittee, SFRTA is investigating a wide variety of funding options to cover both the incremental capital and operating and maintenance costs of the Tri-Rail Coastal Link expansion, as well as a plan to cover all costs of the future integrated Tri-Rail system.

Table ES-9: South Florida Rail Corridor (SFRC) Maintenance-of-Way (MOW) Operating Budget (FY 2014–FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
SFRC Maintenance-of-Way (MOW)											
Statutory Operating Assistance MOW	$0	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$103,500,000
SFRC MOW Expense	$0	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($103,500,000)
Total	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Table ES-10: *SFRTA Forward* Estimated Operating Revenues (FY 2014–FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
OPERATING REVENUES											
Train Service Revenue	$12,289,106	$12,534,888	$12,785,586	$13,041,298	$13,302,124	$13,568,166	$13,839,529	$14,116,320	$14,398,646	$14,398,646	$134,274,309
Interest Income/Other Income	$325,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$3,205,000
Statutory Dedicated Funding	$13,300,000	$13,300,000	$13,300,000	$13,300,000	$13,300,000	$13,300,000					$79,800,000
Statutory Operating Assistance	$17,300,000	$17,300,000	$17,300,000	$17,300,000	$17,300,000	$17,300,000					$103,800,000
FTA Planning Grant	$1,700,000	$1,300,000	$1,450,000	$1,450,000	$1,500,000	$800,000	$800,000	$800,000	$800,000	$800,000	$11,400,000
FTA Preventive Maintenance	$20,472,940	$22,222,183	$23,290,210	$24,538,626	$26,608,775	$28,611,248	$29,941,644	$31,300,579	$32,688,680	$33,141,511	$272,816,396
FTA Designated Recipient Fees	$618,000	$350,000	$350,000	$350,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$1,968,000
FTA JARC/NF Program Fee	$46,897	$125,000	$125,000	$125,000							$421,897
FTA JARC/NF Program Match	$373,725	$415,773	$420,000	$420,000							$1,629,498
FHWA	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$40,000,000
Miami-Dade Statutory Operating Assistance	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$15,650,000
Broward Statutory Operating Assistance	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$15,650,000
Palm Beach Statutory Operating Assistance	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$15,650,000
Other Local Funding	$194,738	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$1,949,738
Projected Operating Revenues	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$53,841,174	$55,476,899	$57,147,326	$57,600,157	$698,214,838
Projected Operating Funding Gap						($30,000,000)	($61,200,000)	($61,812,000)	($62,436,240)	($63,072,965)	($278,521,205)
Coastal Link Funding (TBD)						*$30,000,000*	*$30,600,000*	*$31,212,000*	*$31,836,240*	*$32,472,965*	*$156,121,205*
Replacement Dedicated Funding (TBD)							*$30,600,000*	*$30,600,000*	*$30,600,000*	*$30,600,000*	*$122,400,000*
Total Operating Revenues	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**

Table ES-11: *SFRTA Forward* 10-Year Operating Budget (FY 2014–FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
OPERATING EXPENSES											
Projected Existing System Operating Costs	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$84,441,174	$86,076,899	$87,747,326	$88,200,157	$820,614,838
Tri-Rail Coastal Link Operating Costs						$30,000,000	$30,600,000	$31,212,000	$31,836,240	$32,472,965	$156,121,205
Integrated System Operating Costs	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**
OPERATING REVENUES											
Projected Operating Revenues	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$53,841,174	$55,476,899	$57,147,326	$57,600,157	$698,214,838
Projected Operating Funding Gap						($30,000,000)	($61,200,000)	($61,812,000)	($62,436,240)	($63,072,965)	($278,521,205)
Coastal Link Funding (TBD)						*$30,000,000*	*$30,600,000*	*$31,212,000*	*$31,836,240*	*$32,472,965*	*$156,121,205*
Replacement Dedicated Funding (TBD)							*$30,600,000*	*$30,600,000*	*$30,600,000*	*$30,600,000*	*$122,400,000*
Total Operating Revenues	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**

ES.6.2 CAPITAL PLAN FORECAST

This section presents the 10-year Capital Plan for ***SFRTA Forward.*** It is based on the demand and mobility needs documented previously in Section ES.5: SFRTA Needs Plan and SFRTA's Adopted Capital Budget and Five-Year Plan. The improvements and initiatives identified in the Needs Plan and included in the Capital Plan are listed in Table ES-12. This table also makes reference to the capital improvement projects identified by the PTAC (External Review Committee) and the general public as priorities for SFRTA in the next 10 years and relates each improvement to the SFRTA's Goals presented earlier in Section ES.4.

Table ES-12: *SFRTA Forward* Capital Improvements Implementation Plan

10-Year Improvement List	Implementation Year	PTAC	Public Outreach	Goal
Pompano Beach Green Station	Prior allocation	√		10
Passenger Wi-Fi to Fleet	Prior allocation	√	√	6
Passenger Information System	FY 2014	√	√	6
WAVE Streetcar (Phase 1A)	FY 2014–FY 2015	√	√	1
Miami River/Miami Intermodal Center	FY 2014–FY 2018	√	√	5
New TOD Station (Location TBD)	FY 2014–FY 2017	√	√	9
TOD Support	FY 2014–FY 2018	√	√	9
Tri-Rail/Metrorail Transfer Connection	FY 2015		√	5
Opa-Locka Parking Lot Improvements	FY 2015		√	5
Miami Airport/Hialeah Station - MIC	FY 2015	√	√	5
Broward Mobility Hub	FY 2016	√	√	9
Cypress Creek Mobility Hub	FY 2018	√		9
Northern Layover Facility	Unfunded	•	•	5
Iris & Northwood Rail Connection (SFRTA Match)	Unfunded	√	√	5
Locomotive & Railcar Rehab	Unfunded	•	•	5
WAVE Streetcar(Phase 1)	Unfunded	√	√	1
WAVE Streetcar Extension	Unfunded	√	√	1
Tri-Rail Coastal Link	Unfunded	√	√	1
New Rolling Stock for Tri-Rail Coastal Link	Unfunded	•	•	5
"Mobility Hubs" at current/future stations	Unfunded	√	√	9
Streetcar Feasibility Studies	Unfunded	√	√	9
Bike Storage Cars	Unfunded	√	√	6
West Palm Beach Additional Parking (250)	Unfunded		√	5
Lake Worth Parking Improvements	Unfunded		√	5
Palm Beach Int'l Airport Station	Unfunded	√	√	5
Boca Raton Station @ Glades Rd.	Unfunded	√	√	5
Miami Freight Rail Corridors Study	Unfunded	√	√	1

• These items relate to the ability to increase train frequency, capacity, hours of operation, etc. to address service improvements.

Capital Expenses

For the purposes of the ***SFRTA Forward*** plan, the Capital Budget has been expanded into a Capital Program. The first five years of the Capital Program originate directly from the SFRTA FY 2014 Capital Budget and the Five-Year Plan for FY 2015–FY 2018. The latter years (FY 2019–FY 2023) contain not only those projects that are anticipated to receive funding but also a list of additional projects that SFRTA has identified as priorities. While projects in this second five years are unfunded, it is anticipated that, as additional funding becomes available, projects can be programmed into the first five years. Table ES-13 summarizes the programmed and planned capital expenses for ***SFRTA Forward.***

Based on the 10-year projection of the ***SFRTA Forward*** Capital Plan summarized in Table ES-12, SFRTA would require $1.3 billion to implement its planned capital improvements in the next 10 years. The largest capital expense in the next decade will be implementing the Tri-Rail Coastal Link expansion, at an estimated capital cost of $700 million in FY 2019.It is important to emphasize that the implementation schedule developed by SFRTA staff and presented in Table ES-13 does not preclude the opportunity to advance or delay any of the projects included in the ***SFRTA Forward*** 10-year Capital Plan. As capital funding opportunities become available, this capital plan should be adjusted according to SFRTA's priorities during next year's TDP Annual Progress Report.

Table ES-13: *SFRTA Forward* 10-Year Capital Expenses (FY 2014–FY 2023)

	FIRST FIVE YEAR PLAN					SECOND FIVE YEAR PLAN					
	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
CAPITAL EXPENSES											
Project Support/Administration	$1,700,000	$1,300,000	$1,450,000	$1,450,000	$1,500,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$13,900,000
Computer/Office Equipment/Software	$100,000	$300,000		$450,000	$275,000	$1,500,000	$150,000	$150,000	$150,000	$150,000	$3,225,000
79th Street Station - Metrorail Transfer		$2,802,000									$2,802,000
Planning & Capital Development	$2,500,000	$2,205,000	$1,500,000	$850,000	$850,000	$700,000	$700,000	$700,000	$700,000	$700,000	$11,405,000
Hialeah Yard Improvements	$205,000	$250,000	$250,000	$250,000	$250,000	$300,000	$300,000	$300,000	$300,000	$300,000	$2,705,000
Passenger Information System	$378,450										$378,450
Non-Revenue Fleet Vehicles	$75,000		$75,000		$75,000		$75,000		$75,000		$375,000
General Engineering Consultants	$1,750,000	$1,000,000	$1,000,000	$1,000,000	$840,000	$840,000	$840,000	$840,000	$840,000	$840,000	$9,790,000
New Locomotives	$6,680,000										$6,680,000
Locomotive Spare Parts		$300,000	$250,000	$500,000	$500,000	$550,000	$550,000	$550,000	$550,000	$550,000	$4,300,000
Passenger Emergency Intercom	$825,000										$825,000
Transit Oriented Development (TOD II)	$75,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$1,875,000
Heavy Station Maintenance/Construction			$250,000	$325,000	$350,000	$350,000	$350,000	$350,000	$350,000	$350,000	$2,675,000
Station Beautification	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$1,350,000
Opa Locka Parking Lot Improvements	$1,321,708										$1,321,708
Northern Layover Facility					$5,900,000	$28,967,890					$34,867,890
WAVE Streetcar - Phase 1A	$78,922,707	$4,277,293									$83,200,000
Broward Mobility Hub			$8,840,000								$8,840,000
Miami Airport/Hialeah Station	$336,126										$336,126
Miami River Intermodal Center (MR-MICCI)	$2,600,000	$2,000,000	$6,500,000	$6,500,000	$12,000,000						$29,600,000
Positive Train Control	$1,000,000	$2,106,000									$3,106,000
Preventive Maintenance	$10,043,292	$15,160,000	$17,390,000	$18,040,000	$18,050,000	$19,865,000	$19,865,000	$19,865,000	$19,865,000	$19,865,000	$178,008,292
New TOD Station	$1,000,000	$1,000,000	$1,000,000	$1,500,000							$4,500,000
Cypress Creek Mobility Hub	$800,000				$8,000,000						$8,800,000
Passenger Car Spare Parts	$2,460,000										$2,460,000
County Gas Tax Funds Unallocated	$521,550	$1,252,000	$10,000	$310,000	$985,000						$3,078,550
Tri-Rail Coastal Link						$700,000,000					$700,000,000
WAVE Streetcar - Phase 1						$50,000,000					$50,000,000
WAVE Streetcar Extension						$1,500,000					$1,500,000
Locomotive & Railcar Rehab						$10,000,000					$10,000,000
New Rolling Stock										$25,000,000	$25,000,000
Iris & Northwood Connections						$2,500,000					$2,500,000
Pompano Beach Mobility Hub						$2,900,000					$2,900,000
Deerfield Mobility Hub							$10,500,000				$10,500,000
Hollywood Mobility Hub								$10,500,000			$10,500,000
FLL/Dania Beach Mobility Hub									$10,500,000		$10,500,000
Sheridan Mobilty Hub										$2,900,000	$2,900,000
Hollywood Coastal Link Mobility Hub						$10,000,000					$10,000,000
Oakland Park Coastal Link Mobility Hub						$2,900,000					$2,900,000
Pompano Beach Coastal Link Mobility Hub						$2,900,000					$2,900,000
FLL Airport Coastal Link Mobility Hub						$10,500,000					$10,500,000
Bike Storage Cars						$1,000,000					$1,000,000
West Palm Beach Additional Parking (250)						$3,000,000					$3,000,000
Lake Worth Parking Improvements						$500,000					$500,000
PBI Airport Station						$1,500,000			$5,100,000		$6,600,000
Boca Raton Station @ Glades						$1,500,000		$8,500,000			$10,000,000
Miami Freight Rail Corridors						$7,500,000					$7,500,000
Streetcar Feasibility Studies						$800,000					$800,000
Total Capital Expenses	**$113,428,833**	**$34,287,293**	**$38,850,000**	**$31,510,000**	**$49,910,000**	**$863,707,890**	**$34,965,000**	**$43,390,000**	**$40,065,000**	**$52,290,000**	**$1,302,404,016**

Source: SFRTA Adopted Budget FY 2013–2014 and Five Year Plan, and TDP Analysis by SFRTA staff

(This page intentionally left blank.)

Capital Revenues

Table ES-14 presents the capital revenues forecasted for SFRTA's FY 2014 Adopted Capital Budget and its Five-Year Plan as well as the forecasted revenues for the second five years of the 10-year Capital Plan. The first five year plan's revenue estimates present SFRTA's assumption that FTA Section 5307 Formula funds and FTA Section 5309 Rail Modernization funds will be the federal funds available for the capital plan. The majority of the State and local capital funds available in the first five years will support the development of The WAVE modern streetcar project where a multi-agency partnership agreed to share the capital costs of design and construction of its first phase. SFRTA, as the responsible party to design and construct the project, will receive capital funds from FDOT, the MPO, the City of Fort Lauderdale, and Downtown Fort Lauderdale's special taxing district in FY 2014. The capital funds assumed for the second five years of the 10-year ***SFRTA Forward*** plan are FTA Section 5307, FTA Section 5309, and County gas tax contributions. Under these assumptions, the total capital revenues expected in the 10-year period of the plan are $418 million.

The ***SFRTA Forward*** 10-year Capital Plan calls for $1.3 billion in investments, as presented earlier, but revenue estimates provide only $418 million, resulting in a capital funding gap of about $884.4million for the 10-year period, as shown in Table ES-15. The Tri-Rail Coastal Link Finance Subcommittee's charge is to investigate a wide variety of funding options to cover both the capital and operating costs of the new Coastal Link service, as well as the existing Tri-Rail system. For other capital initiatives, SFRTA will continue to use current county capital contributions and pursue Federal and State grant opportunities (as it has successfully done in the past) to advance the implementation schedule of the capital improvements included in the ***SFRTA Forward*** Capital Plan.

(This page intentionally left blank.)

Table ES-14: *SFRTA Forward* Estimated Capital Revenues (FY 2014 - FY 2023)

	FIRST FIVE YEAR PLAN					SECOND FIVE YEAR PLAN					
	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
CAPITAL REVENUES											
FTA Section 5307 - Formula Funds	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$130,000,000
FTA Section 5309 - Rail Mod.	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$90,000,000
FTA - TIGER Funds	$18,000,000										$18,000,000
FDOT GMR Funds				$1,500,000	$5,900,000						$7,400,000
FDOT JPA's	$28,658,833	$4,277,293									$32,936,126
FDOT TRIP Funds	$900,000				$6,000,000						$6,900,000
MPO Funds	$8,940,000		$8,840,000		$8,000,000						$25,780,000
City of Fort Lauderdale	$10,500,000										$10,500,000
Taxing District	$13,960,000										$13,960,000
Rotem Credit	$2,460,000										$2,460,000
County Gas Tax	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$80,100,000
Total Capital Revenues	**$113,428,833**	**$34,287,293**	**$38,850,000**	**$31,510,000**	**$49,910,000**	**$30,010,000**	**$30,010,000**	**$30,010,000**	**$30,010,000**	**$30,010,000**	**$418,036,126**

Source: SFRTA Adopted Budget FY 2013–2014 and Five Year Plan, and TDP Analysis by SFRTA staff.

Table ES-15: *SFRTA Forward* 10-Year Projected Funding Gap (FY 2014–FY 2023)

	FIRST FIVE YEAR PLAN					SECOND FIVE YEAR PLAN					
	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
CAPITAL EXPENSES											
Total Capital Expenses	$113,428,833	$34,287,293	$38,850,000	$31,510,000	$49,910,000	$863,707,890	$34,965,000	$43,390,000	$40,065,000	$52,290,000	$1,302,404,016
CAPITAL REVENUES											
Total Capital Revenues	$113,428,833	$34,287,293	$38,850,000	$31,510,000	$49,910,000	$30,010,000	$30,010,000	$30,010,000	$30,010,000	$30,010,000	$418,036,126
Projected Capital Funding Gap						**($833,697,890)**	**($4,955,000)**	**($13,380,000)**	**($10,055,000)**	**($22,280,000)**	**($884,367,890)**

(This page intentionally left blank.)

ES.6.3 CONCLUSION

SFRTA's FY 2014–2023 Transit Development Plan Major Update, "SFRTA: Moving our Region Forward," documents the investments that SFRTA is committed to making over the next five years, as well as its vision for additional priorities and improvements through FY 2023.

As summarized in the ***SFRTA Forward*** Capital Plan presented earlier, many exciting transit projects and concepts are included throughout the 10-year period of ***SFRTA Forward***, including some near-term projects that are poised to have a significant positive impact in the South Florida region. These immediate improvements include the modernization and expansion of the Tri-Rail fleet, the shift of rail corridor dispatch and maintenance duties to SFRTA, and the opening of the new Miami Airport Tri-Rail Station at the MIC. SFRTA is working diligently with multiple agencies to advance other premium transit projects, such as Tri-Rail expansion onto the FEC Railway corridor (Tri-Rail Coastal Link) and The WAVE modern streetcar in downtown Fort Lauderdale, which are poised to transform the transportation landscape in the South Florida region.

SFRTA is committed to expanding premium transit in the South Florida region. As capital and operating funding opportunities become available, the ***SFRTA Forward*** Capital Plan will be adjusted and these transformational projects advanced.

In conclusion, ***SFRTA Forward*** is an ambitious plan that is responsive to the project's extensive outreach activities, addresses the mobility needs of South Florida's growing and dynamic region, identifies a need for continued partnerships, and shows a commitment to expanded premium transit and associated economic development.

(This page intentionally left blank.)

SECTION 1

INTRODUCTION

SFRTA
MOVING OUR REGION
FORWARD

(This page is intentionally left blank)

1. INTRODUCTION

Numerous current transportation and land development trends point towards a bright future for transit in South Florida. Nationwide, transit ridership has now grown to levels not seen since the 1950's. Transit ridership is growing at a faster pace than automobile vehicle miles traveled and population growth. Higher gasoline prices have become the new normal, and all signs point to a future of volatile energy prices. Fewer numbers of teenagers and the "millennial" age cohort are seeking drivers' licenses. Numerous recent real estate studies indicate that the desirability of walkable mixed-use communities has grown significantly and that properties with easy access to transit have either retained their value or saw their value increase at higher levels than properties without transit access. All of these trends point to a need for increased transit investment in South Florida over the next ten years.

The South Florida Regional Transportation Authority (SFRTA) seeks to work with partners in both the public sector and private sector to provide improved transit, along with its associated economic development benefits, to the region in the coming years. The FY 20142023 Transit Development Plan (TDP) for the SFRTA serves as the strategic guide for public transportation for the agency over the next 10 years. This TDP, referred to as SFRTA: Moving Our Region Forward (***SFRTA Forward***), documents the investments that SFRTA is committed to making over the next five years, as well as its vision for additional priorities and improvements through FY 2023. The ***SFRTA Forward*** process presents a great opportunity for the agency to:

- reinvigorate its identity and reassess its mission
- address the mobility needs of a growing and dynamic region
- continue building partnerships to advance transportation projects in the South Florida region and beyond

Many exciting transit projects and concepts are included throughout the ten-year period of ***SFRTA Forward***, including some near-term projects that are poised to have a significant positive impact. These immediate improvements include the modernization and expansion of the Tri-Rail fleet, the shift of rail corridor dispatch and maintenance duties to SFRTA, and the opening of the new Miami Airport Tri-Rail Station at the Miami Intermodal Center (MIC). SFRTA is working diligently with multiple agencies to advance other transformational projects, such as Tri-Rail expansion onto the Florida East Coast (FEC) Railway corridor (now known as the Tri-Rail Coastal Link) and The WAVE modern streetcar in downtown Fort Lauderdale. SFRTA is extremely grateful to the thousands of individuals who participated in the numerous ***SFRTA Forward*** outreach activities and helped to shape the vision and priorities contained within this document.

TDP REQUIREMENTS

SFRTA Forward is consistent with the requirements for the State of Florida Public Transit Block Grant (PTBG) Program, a program enacted by the Florida Legislature to provide a stable source of funding for public transit. The Block Grant Program requires public transit service providers to develop and adopt a 10-Year TDP using the requirements formally adopted by the Florida Department of Transportation (FDOT) on February 20, 2007. Major requirements of the rule include the following:

- Major updates must be completed every 5 years, covering a 10-year planning horizon.
- A public involvement plan must be developed and approved by FDOT or be consistent with the approved MPO public involvement plan.
- FDOT, the Regional Workforce Development Board, and the Metropolitan Planning Organization (MPO) must be advised of all public meetings where the TDP is presented and discussed, and these entities must be given the opportunity to review and comment on the TDP during the development of the mission, goals, objectives, alternatives, and 10-year implementation program.
- Estimation of the community's demand for transit service (10-year annual projections) must be made using the planning tools provided by FDOT or a demand estimation technique approved by FDOT.
- Consistency with the approved local government comprehensive plans and the MPO's Long Range Transportation Plans is required.

An additional requirement for the TDP was added by the Florida Legislature in 2007 when it adopted House Bill 985. This legislation amended s. 341.071 of the Florida Statutes (F.S.), requiring transit agencies to "… specifically address potential enhancements to productivity and performance which would have the effect of increasing farebox recovery ratio." FDOT subsequently issued guidance requiring the TDP and each annual update to include a one- to two-page summary report on the farebox recovery ratio, and strategies implemented and planned to improve it (provided in Appendix E of this plan).

TDP CHECKLIST

This 10-year plan meets the requirement for a major TDP update in accordance with Rule Chapter 14-73, Florida Administrative Code (F.A.C.). Table 1-1 is a list of TDP requirements from Rule 14-73.001. The table serves as a checklist that all requirements are addressed in the ***SFRTA Forward*** plan documentation.

Table 1-1: TDP Checklist

Public Involvement Process	
√	Public Involvement Plan (PIP)
√	PIP approved by FDOT
√	TDP includes description of Public Involvement Process
√	Provide notification to FDOT
√	Provide notification to Regional Workforce Board
Situation Appraisal	
√	Land use
√	State and local transportation plans
√	Other governmental actions and policies
√	Socioeconomic trends
√	Organizational issues
√	Technology
√	10-year annual projections of transit ridership using approved methodology
√	Assessment of whether land uses and urban design patterns support/hinder transit service provision
√	Calculate farebox recovery
Mission and Goals	
√	Provider's vision
√	Provider's mission
√	Provider's goals
√	Provider's objectives
Alternative Courses of Action	
√	Develop and evaluate alternative strategies and actions
√	Benefits and costs of each alternative
√	Financial alternatives examined
Implementation Program	
√	Ten-year implementation program
√	Maps indicating areas to be served
√	Maps indicating types and levels of service
√	Monitoring program to track performance measures
√	Ten-year financial plan listing operating and capital expenses
√	Capital acquisition or construction schedule
√	Anticipated revenues by source
Relationship to Other Plans	
√	Consistent with Florida Transportation Plan
√	Consistent with local government comprehensive plans
√	Consistent with MPO long-range transportation plans
√	Consistent with regional transportation goals and objectives
Submission	
√	Adopted by SFRTA Governing Board
√	Submitted to FDOT by September 1, 2013

ORGANIZATION OF *SFRTA Forward*

SFRTA Forward is organized into eight major sections (including this introduction). Each of the remaining sections is summarized below.

Section 2 summarizes the baseline conditions within SFRTA's transit service area, which establish the context for delivery of transit services in the South Florida region, including Miami-Dade, Broward, and Palm Beach counties. The baseline conditions analysis also provides the necessary background information needed to understand SFRTA's service operating environment and includes a description of the service area, demographic characteristics, land use information (existing and future), commuting patterns, and roadway conditions. Information and data reflect the most recent available at the time of the preparation of the ***SFRTA Forward*** plan.

Section 3 begins with an overview of SFRTA services, as well as a summary of improvements and accomplishments since the last TDP Major Update (2008). In addition to commuter rail and shuttle buses operated by SFRTA, an overview of the county's transit operators and other transportation providers in the region is provided. This is followed by a performance evaluation of Tri-Rail, including a trend analysis to assess the performance of the system for the last five years and a peer review analysis that compares Tri-Rail to other commuter rail systems throughout the U.S.

Section 4 presents the public involvement efforts undertaken as part of ***SFRTA Forward***. A Public Involvement Plan (PIP) was prepared at the onset of the TDP to identify the public engagement activities to be completed during the TDP update process. Evaluation measures also were identified to gauge the effectiveness of the public involvement activities. The PIP was reviewed and approved by FDOT per TDP Rule on March 15, 2013. The results of public involvement activities are summarized in this section.

Section 5 documents the situation appraisal performed as part of ***SFRTA Forward***. As required by Florida Statutes, a situation appraisal is an evaluation of the environment in which the transit agency operates. To support the appraisal, a review of applicable federal, state, regional, and local plans, programs, and studies that influence SFRTA operations, infrastructure, policy, or funding was performed. Findings of this review are used as appropriate to support the situation appraisal. A good understanding of SFRTA's operating environment provides a better starting point for updating the vision, goals, and objectives for the next 10 years.

Section 6 includes the goals and objectives developed to reinforce SFRTA's vision to promote transit growth and improvement over the next decade. The goals and objectives were developed by SFRTA staff in response to (1) communication with each department of SFRTA; (2) input from the ***SFRTA Forward*** External Review Committee, the composition of which included the SFRTA's Planning Technical Advisory Committee (PTAC) and representatives from the workforce development boards from each of the three counties in South Florida; (3) input from the significant public outreach efforts; and (4) input from regional stakeholders.

Section 7 discusses the demand and mobility needs assessment conducted as part of ***SFRTA Forward***. The assessment techniques are summarized, along with the results of each analysis used to assess

demand for transit services in the SFRTA study area. The transit market assessment uses dwelling unit densities, employment densities, and selected demographics to assess the discretionary and traditional transit markets by area throughout the South Florida region. In addition, this section includes a 10-year annual projection of ridership for the existing and future commuter rail and shuttle bus services provided by SFRTA. Also included is an overview of planned commuter rail expansion and the 10-year plan for shuttle bus services (committed shuttle bus routes and conceptual shuttle bus opportunities). This is followed by the identification and categorization of alternatives and initiatives that were established based on technical analysis of the project team, guidance from SFRTA staff and Board, input from the ERC, and public input derived from significant outreach efforts undertaken throughout the plan development process.

Section 8 presents the ***SFRTA Forward*** 10-year transit plan, including the 10-year implementation program and finance plan for SFRTA's operating and capital programs. The 10-year financial plan includes a cost feasible plan and a needs plan that reflects unfunded projects.

In conclusion, ***SFRTA Forward*** is a plan that thinks big and focuses on reinvigorating the identity of SFRTA and evolving and expanding the leadership role of SFRTA with regarding to premium transit services throughout the South Florida region.

TRANSIT AGENCY CONTACT INFORMATION

Agency:	South Florida Regional Transportation Authority
Contact:	Natalie Yesbeck Pustizzi, AICP
	Planning Project Manager
Telephone Number:	(954) 788-7957
Mailing Address:	800 NW 33rd Street
	Pompano Beach, FL 33064

(This page is intentionally left blank)

SECTION 2

BASELINE CONDITIONS

SFRTA
MOVING OUR REGION FORWARD

(This page is intentionally left blank)

2. BASELINE CONDITIONS

2.1: INTRODUCTION

This section summarizes the baseline conditions within SFRTA's transit service area, which establish the context for delivery of transit services in the South Florida region, including Miami-Dade Broward, and Palm Beach counties. The baseline conditions analysis also provides the necessary background information needed to understand SFRTA's service operating environment and includes a description of the service area, demographic characteristics of the region, land use information (existing and present), commuting patterns, and roadway conditions (existing and present). Information and data reflect the most recent available at the time of the preparation of the ***SFRTA Forward*** plan.

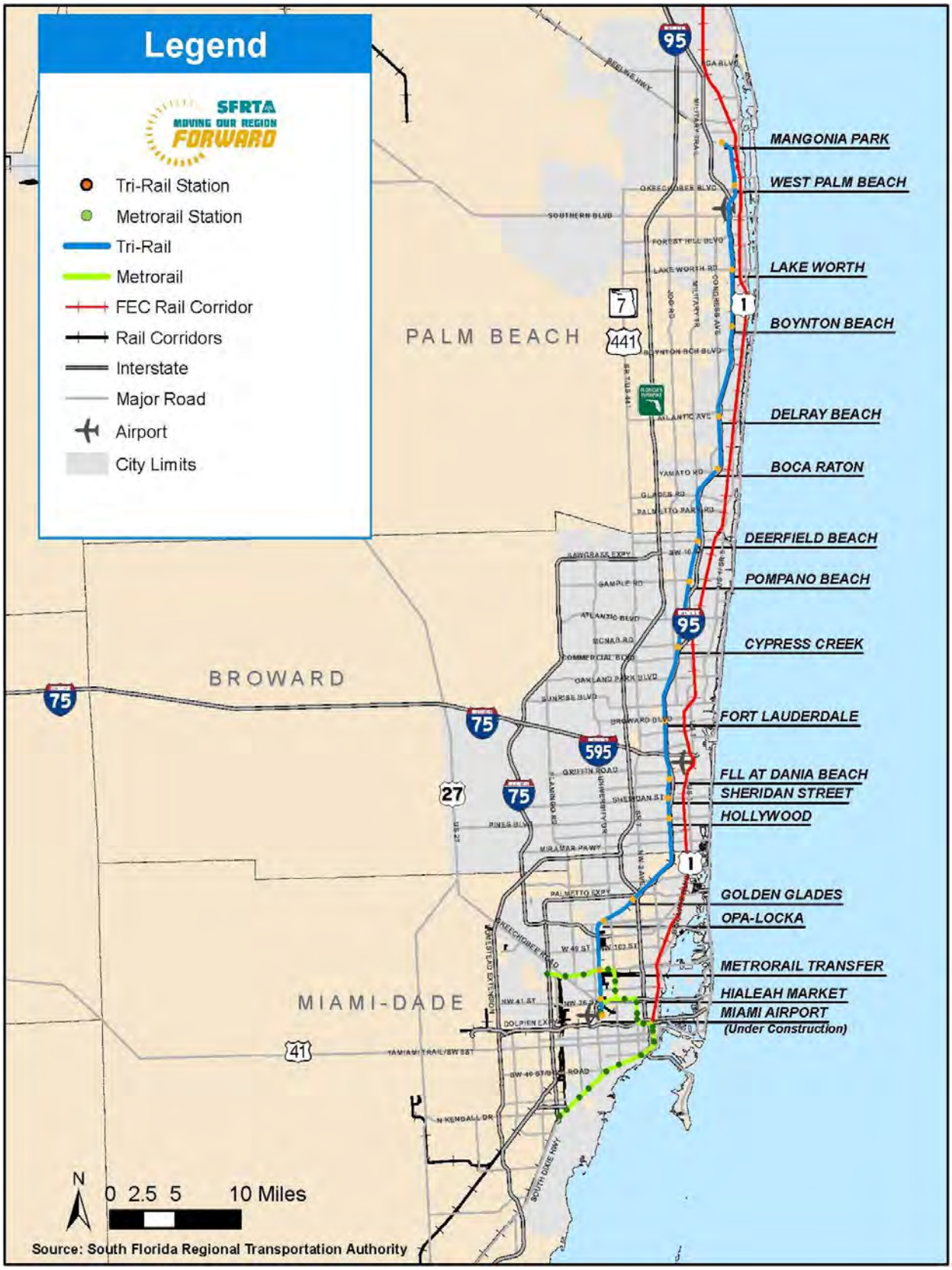
2.2: SERVICE AREA DESCRIPTION

SFRTA was created on July 1, 2003, when legislation passed by the Florida Senate and the Florida House of Representatives and signed by Governor Jeb Bush[1] transformed the Tri-County Commuter Rail Authority (Tri-Rail) into SFRTA. The SFRTA service area is defined by statute as Miami-Dade, Broward, and Palm Beach counties. However, this area may be expanded to include Monroe County by mutual consent of SFRTA and the Boards of County Commissioners representing the proposed expansion area. Expanding SFRTA's service area outside of these four counties requires legislative actions

Map 2-1 illustrates SFRTA's existing service area. To better understand the service area conditions and demographic characteristics of these counties and the South Florida region as a whole, a review of pertinent information was conducted as part of the ***SFRTA Forward*** process. The sources for this information are documented within this report and include the U.S. Census Bureau, the American Community Survey (ACS), the Southeast Florida Regional Planning Model (SERPM) 6.5, SFRTA/Tri-Rail, and others as noted.

[1] Chapter 343.51-343.58, Florida Statutes: Regional Transportation Authorities, Part I South Florida Regional Transportation Authority, http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&Search_String=&URL=0300-0399/0343/0343PARTIContentsIndex.html.

Map 2-1: SFRTA Service Area



2.3: POPULATION PROFILE

Per the 2010 Census, the total population of Miami-Dade, Broward, and Palm Beach counties was 5 million, with 50 percent of the population residing in Miami-Dade County. Table 2-1 provides a comparison of the 2000 and 2010 population and 10-year population growth for the three counties and municipalities within SFRTA's existing service area.

At the county level, Palm Beach County experienced the most significant population growth during this 10-year period (17%), followed by Miami-Dade County (11%) and Broward County (8%). At the municipal level, the cities of Sunny Isles Beach, Aventura, Florida City, and Homestead in Miami-Dade County experienced the most significant increases in population growth between 2000 and 2010. The cities of Greenacres, Palm Beach Gardens, Jupiter, Wellington, Royal Palm Beach, and Palm Springs experienced the most significant increases in population growth within Palm Beach County. The cities of Pompano Beach, Weston, Oakland Park, Dania Beach, Miramar, Parkland, and Lauderdale-by-the-Sea experienced the most significant increases in population growth within Broward County.

Another aspect of the population profile is to examine the population, employment, and dwelling unit densities using existing data and future projections by Traffic Analysis Zone (TAZ) from the SERPM. TAZs are geographic units in the transportation planning process used to assist in forecasting travel demand. Existing and future population, employment, and housing unit data by TAZ are used to calculate densities on a per-acre basis.

- **Existing and Future Population Densities** – Map 2-2 illustrates the 2013 population densities; Map 2-3 illustrates the future (2035) population densities for the South Florida region. As shown, the highest existing and future population densities are found in Miami-Dade County, with notable increases in population densities projected to occur in central Broward County. In Palm Beach County, smaller concentrations of population density increases are projected to occur in and around Mangonia Park, West Palm Beach, Boynton Beach, Delray Beach, and Boca Raton.
- **Existing and Future Employment Densities** – Map 2-4 illustrates the 2013 employment densities; Map 2-5 illustrates the 2035 employment densities for the South Florida region. As shown, the highest concentrations of existing employment densities are located in Miami-Dade County, specifically in downtown Miami and near Miami International Airport (MIA). Employment densities are projected to increase in these areas as well as within smaller geographic areas in Broward and Palm Beach counties.
- **Existing and Future Dwelling Unit Densities** – Map 2-6 illustrates the 2013 dwelling unit densities; Map 2-7 illustrates the 2035 dwelling unit densities for the South Florida region. These two maps illustrate that little change is projected to occur for dwelling unit densities throughout the region, as the urban areas that are primarily developable within these counties are largely built out, and increasing dwelling unit densities would require significant changes to the single-family housing patterns and overall land-use patterns. However, more prominent increases in employment densities will occur due to redevelopment projects with higher floor area ratios (FARs) and development intensities as opposed to large-scale geographic redevelopment.

(This page intentionally left blank.)

Table 2-1: Population Trends for Counties and Cities

Population Trends - Miami-Dade County			
Location	2000	2010	Population Growth (2000-2010)
Miami-Dade County	**2,253,779**	**2,496,435**	**11%**
Aventura	25,267	35,762	42%
Bal Harbour	3,305	2,513	-24%
Bay Harbor Islands	5,146	5,628	9%
Biscayne Park	3,269	3,055	-7%
Coral Gables	42,249	46,780	11%
Cutler Bay	0	40,286	--
Doral	0	45,704	--
El Portal	2,505	2,325	-7%
Florida City	7,843	11,245	43%
Golden Beach	919	919	0%
Hialeah	226,419	224,669	-1%
Hialeah Gardens	19,297	21,744	13%
Homestead	31,909	60,512	90%
Indian Creek Village	33	86	161%
Islandia	6	18	200%
Key Biscayne	10,507	12,344	17%
Medley	1,098	838	-24%
Miami	362,470	399,457	10%
Miami Beach	87,933	87,779	0%
Miami Gardens	0	107,167	--
Miami Lakes	0	29,361	--
Miami Shores	10,380	10,493	1%
Miami Springs	13,712	13,809	1%
North Bay	6,733	7,137	6%
North Miami	59,880	58,786	-2%
North Miami Beach	40,786	41,523	2%
Opa-locka	14,951	15,219	2%
Palmetto Bay	0	23,410	--
Pinecrest	19,055	18,223	-4%
South Miami	10,741	11,657	9%
Sunny Isles Beach	15,315	20,832	36%
Surfside	4,909	5,744	17%
Sweetwater	14,226	13,499	-5%
Virginia Gardens	2,348	2,375	1%
West Miami	5,863	5,965	2%
Unincorporated County	1,204,705	1,109,571	-8%

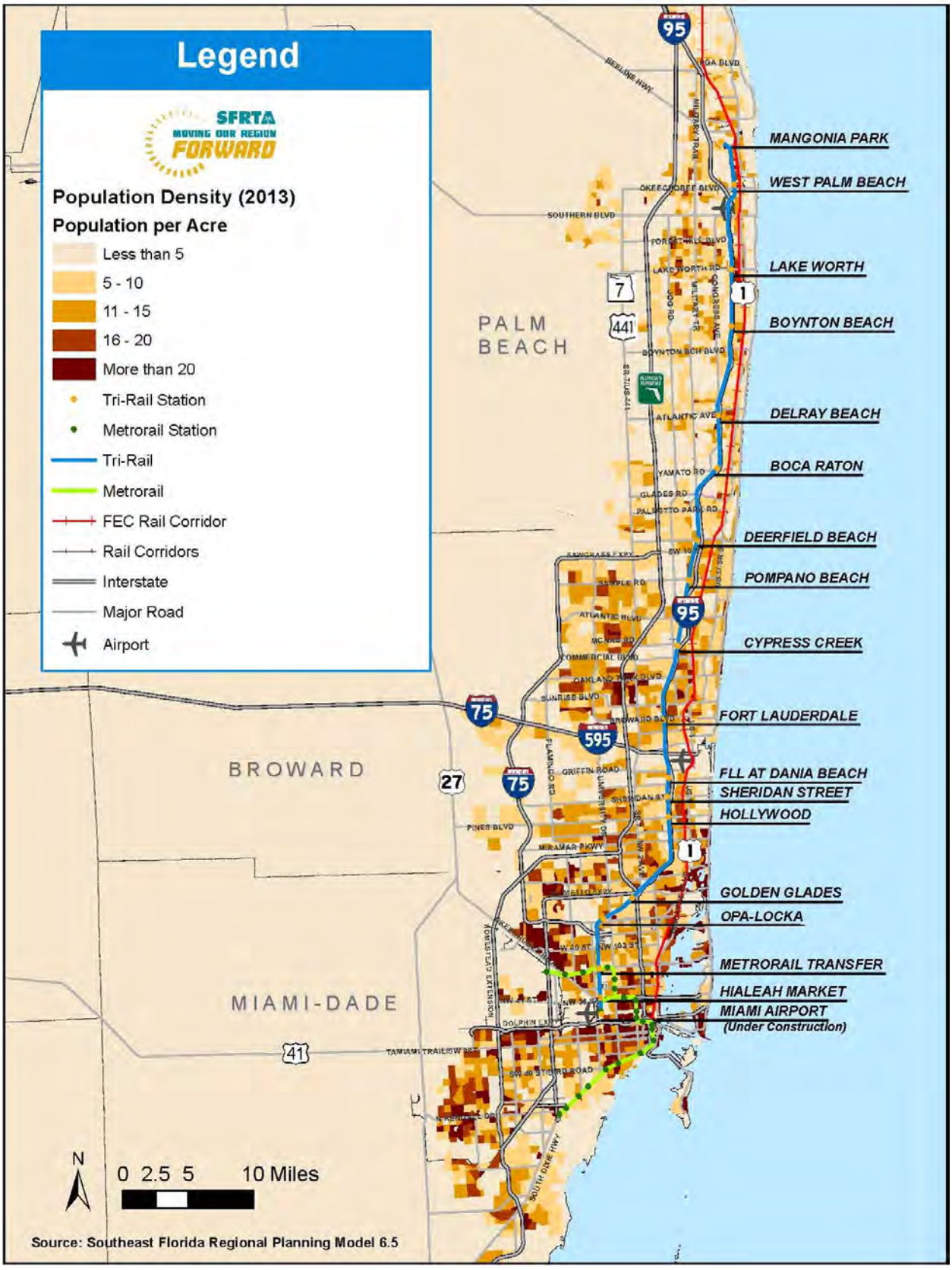
Population Trends - Broward County			
Location	2000	2010	Population Growth (2000-2010)
Broward County	**1,623,018**	**1,748,066**	**8%**
Coconut Creek	43,566	52,909	21%
Cooper City	27,914	28,547	2%
Coral Springs	117,549	121,096	3%
Dania Beach	20,061	29,639	48%
Davie	75,720	91,992	21%
Deerfield Beach	64,585	75,018	16%
Ft. Lauderdale	152,397	165,521	9%
Hallandale Beach	34,282	37,113	8%
Hillsboro Beach	2,163	1,875	-13%
Hollywood	139,368	140,768	1%
Lauderdale-by-the-Sea	3,221	6,056	88%
Lauderdale Lakes	31,705	32,593	3%
Lauderhill	57,585	66,887	16%
Lazy Lake Village	38	24	-37%
Lighthouse Point	10,767	10,344	-4%
Margate	53,909	53,284	-1%
Miramar	72,739	122,041	68%
North Lauderdale	32,264	41,023	27%
Oakland Park	30,966	41,363	34%
Parkland	13,835	23,962	73%
Pembroke Park	5,384	6,102	13%
Pembroke Pines	137,427	154,750	13%
Plantation	82,934	84,955	2%
Pompano Beach	78,191	99,845	28%
Sea Ranch Lakes	734	670	-9%
Southwest Ranches	0	7,345	--
Sunrise	85,787	84,439	-2%
Tamarac	55,588	60,427	9%
Weston	49,286	65,333	33%
West Park	0	14,156	--
Wilton Manors	12,697	11,632	-8%
Unincorporated County	130,356	16,357	-87%

Population Trends - Palm Beach County			
Location	2000	2010	Population Growth (2000-2010)
Palm Beach County	**1,131,191**	**1,320,134**	**17%**
Atlantis	2,005	2,005	0%
Belle Glade	14,906	17,467	17%
Boca Raton	74,764	84,392	13%
Boynton Beach	60,389	68,217	13%
Briny Breezes	411	601	46%
Cloud Lake	167	135	-19%
Delray Beach	60,020	60,522	1%
Glen Ridge	276	219	-21%
Golf Village	230	252	10%
Greenacres	27,569	37,573	36%
Gulf Stream	716	786	10%
Haverhill	1,454	1,873	29%
Highland Beach	3,775	3,539	-6%
Hypoluxo	2,015	2,588	28%
Juno Beach	3,262	3,176	-3%
Jupiter	39,328	55,156	40%
Jupiter Inlet Colony	368	400	9%
Lake Clarke Shores	3,451	3,376	-2%
Lake Park	8,721	8,155	-6%
Lake Worth	35,133	34,910	-1%
Lantana	9,404	10,423	11%
Loxahatchee Groves	0	3,180	--
Manalapan	321	406	26%
Mangonia Park	1,283	1,888	47%
North Palm Beach	12,064	12,015	0%
Ocean Ridge	1,636	1,786	9%
Pahokee	5,985	5,649	-6%
Palm Beach	9,676	8,348	-14%
Palm Beach Gardens	35,058	48,452	38%
Palm Beach Shores	1,269	1,142	-10%
Palm Springs	11,699	18,928	62%
Riviera Beach	29,884	32,488	9%
Royal Palm Beach	21,523	34,140	59%
South Bay	3,859	4,876	26%
South Palm Beach	1,531	1,171	-24%
Tequesta Village	5,273	5,629	7%
Wellington	38,216	56,508	48%
West Palm Beach	82,103	99,919	22%
Unincorporated County	521,447	587,844	13%

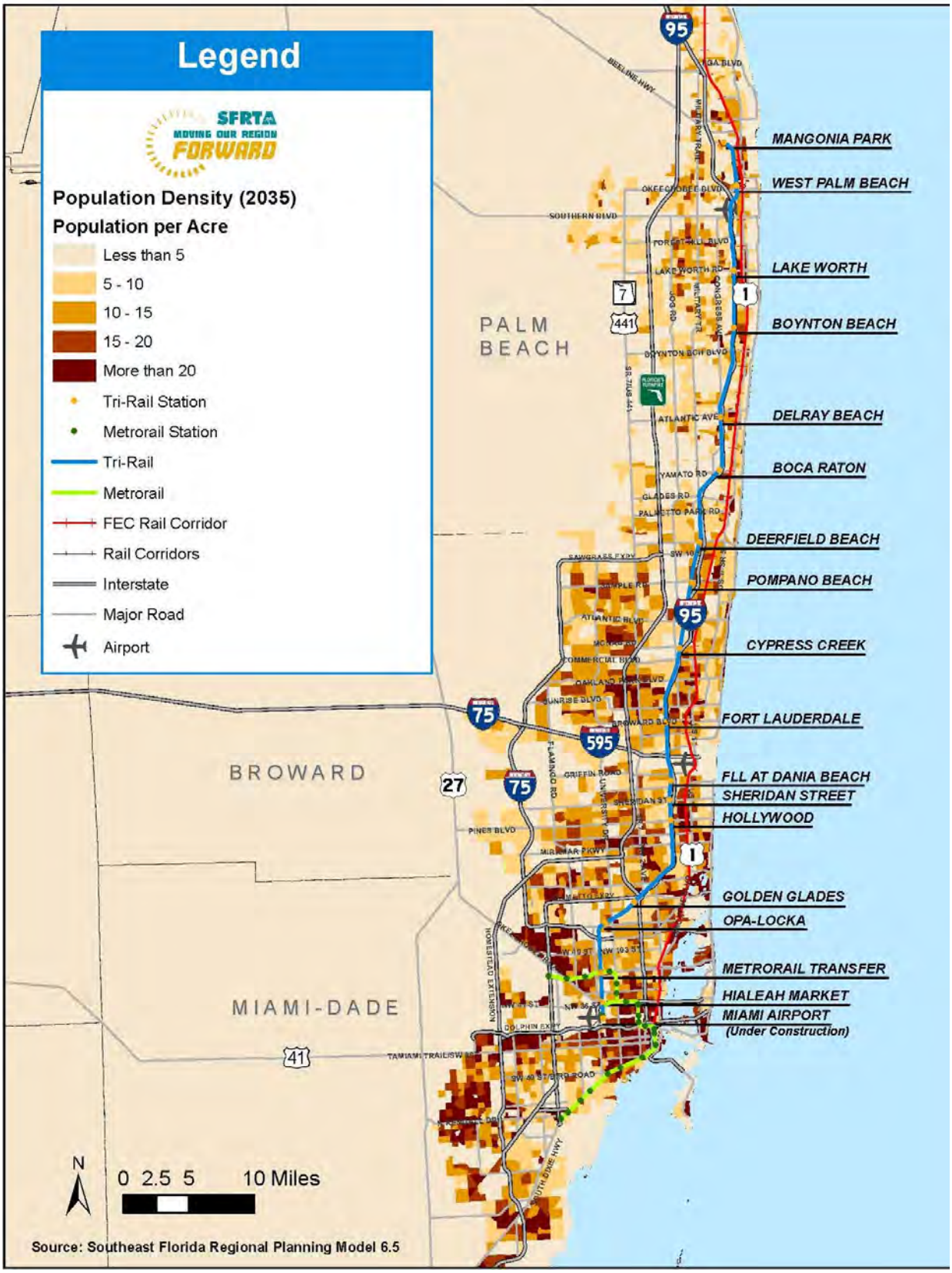
Note: Cities with zero population shown for 2000 were incorporated after April 1, 2000.
Source: University of Florida Bureau of Economic and Business Research (BEBR), *2011 Florida Statistical Abstract*, Table 1.25.

(This page intentionally left blank.)

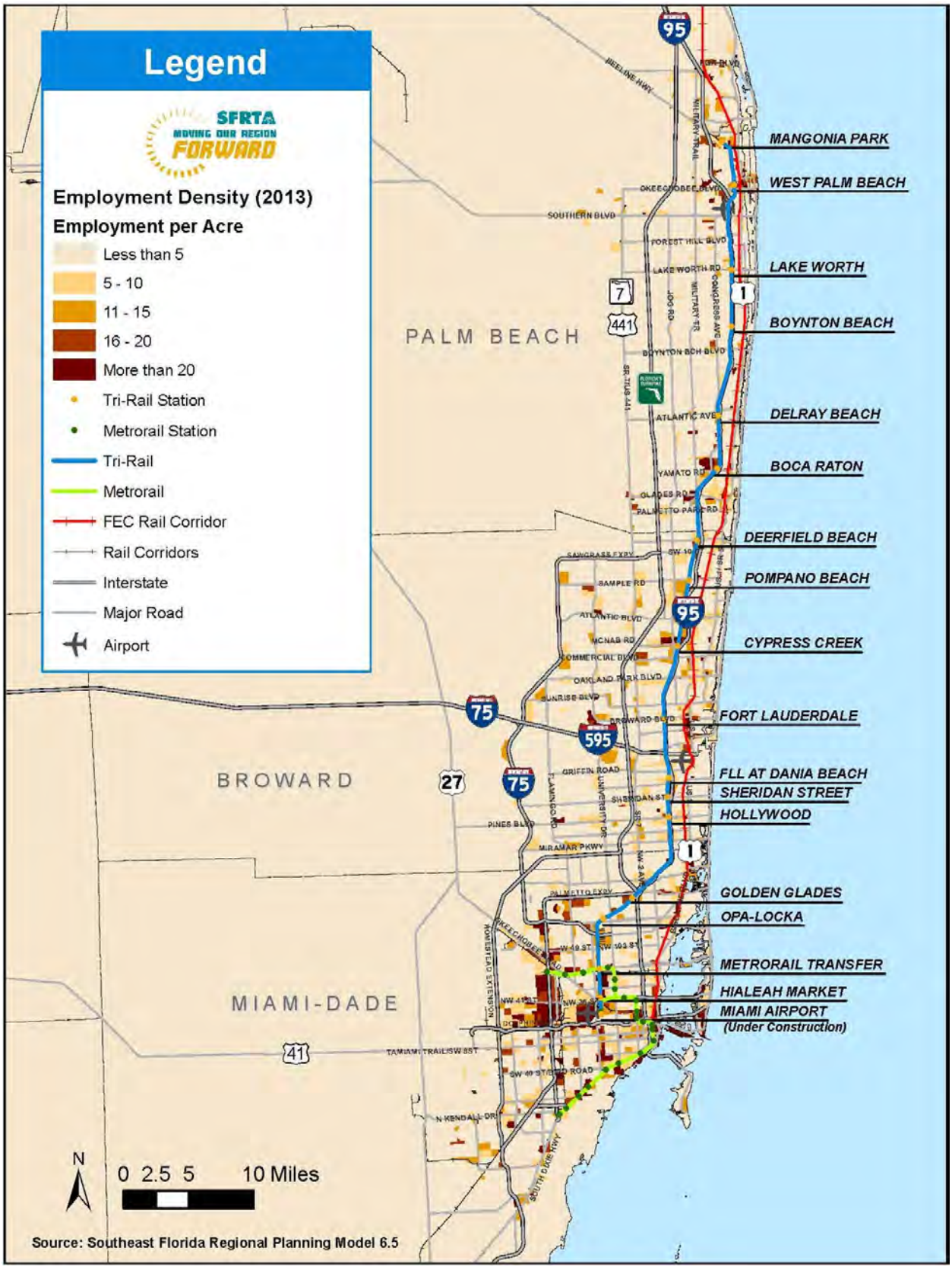
Map 2-2: 2013 Population Densities



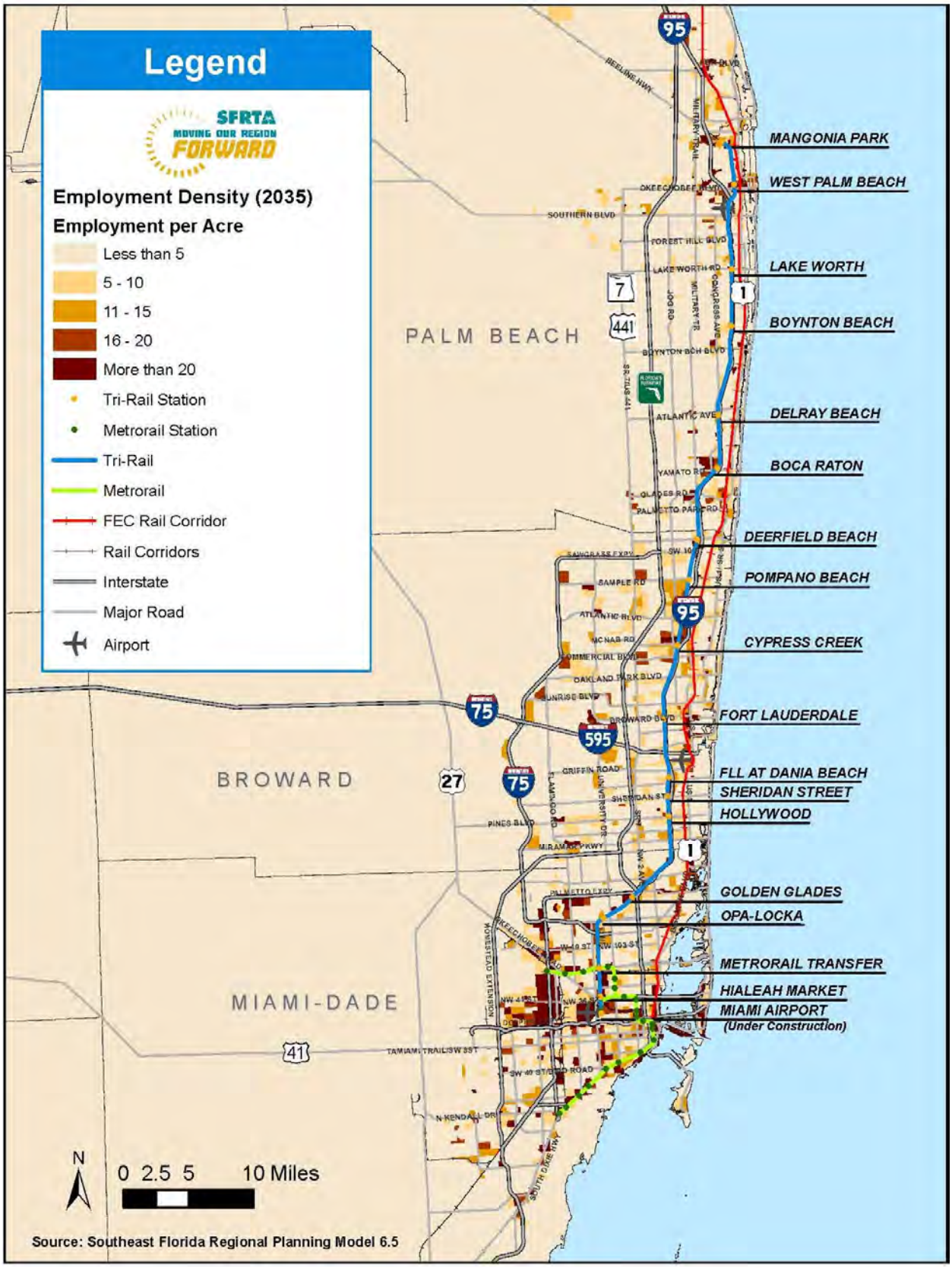
Map 2-3: 2035 Population Densities



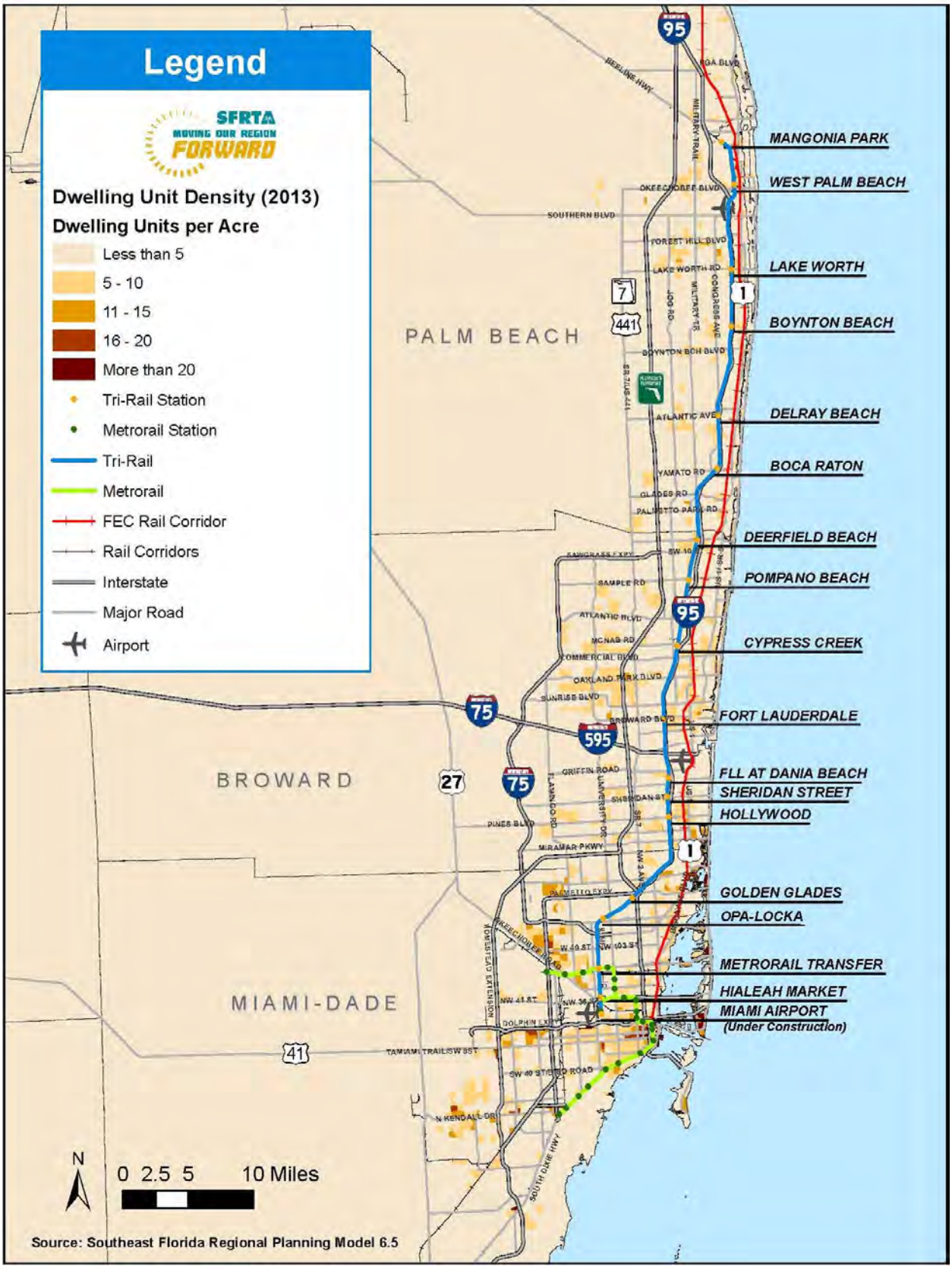
Map 2-4: 2013 Employment Densities



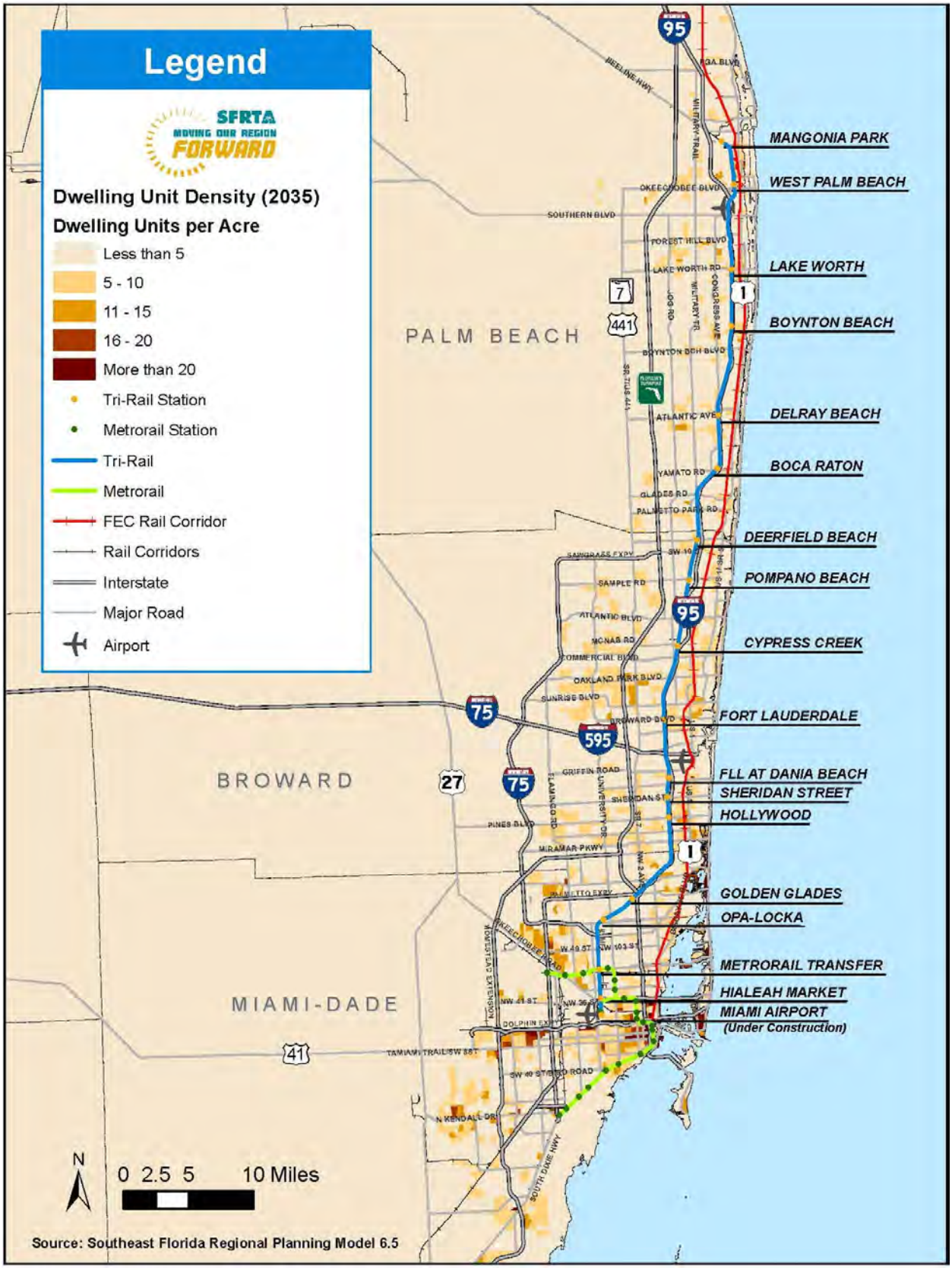
Map 2-5: 2035 Employment Densities



Map 2-6: 2013 Dwelling Unit Densities



Map 2-7: 2035 Dwelling Unit Densities



2.4: POTENTIAL TRANSPORTATION DISADVANTAGED POPULATION

As shown in Table 2-2, Transportation Disadvantaged (TD) population estimates are provided for each county, based on the most recent TDP updates completed for each the local transit service providers in the South Florida region. The percent of total population, based on the estimated TD population for each county, also is provided. As shown, there is significant variation in the TD population as a percentage of the total countywide population within the South Florida region, with the TD population equating to only 9 percent of the total population in Palm Beach County, while the TD population equates to 39 percent and 48 percent of the total population in Broward and Miami-Dade counties, respectively.

Table 2-2: Potential Transportation Disadvantaged Population

Estimated Transportation Disadvantaged Population			
County	**Total Population**	**TD Population (Year)**	**Percent of Total Population**
Miami-Dade	2,474,676	1,198,615 (2012)	48%
Broward	1,742,012	687,000 (2009)	39%
Palm Beach	1,309,401	121,314 (2009)	9%
Total	**5,526,089**	**2,006,929**	**36%**

Source: Miami-Dade County Transit Development Plan 2012, Broward County TDP 2009, Palm Beach TDP 2009

2.5: DEMOGRAPHIC AND JOURNEY-TO-WORK CHARACTERISTICS

Table 2-3 displays the percent distribution of minority populations in the South Florida region. Miami-Dade County has the highest percentage of minority population (84%), followed by Broward County and Palm Beach County. The significant minority population found in Miami-Dade County is due primarily to the concentration of Hispanic population, which equates to approximately 1.6 million persons (65% of the total county population).

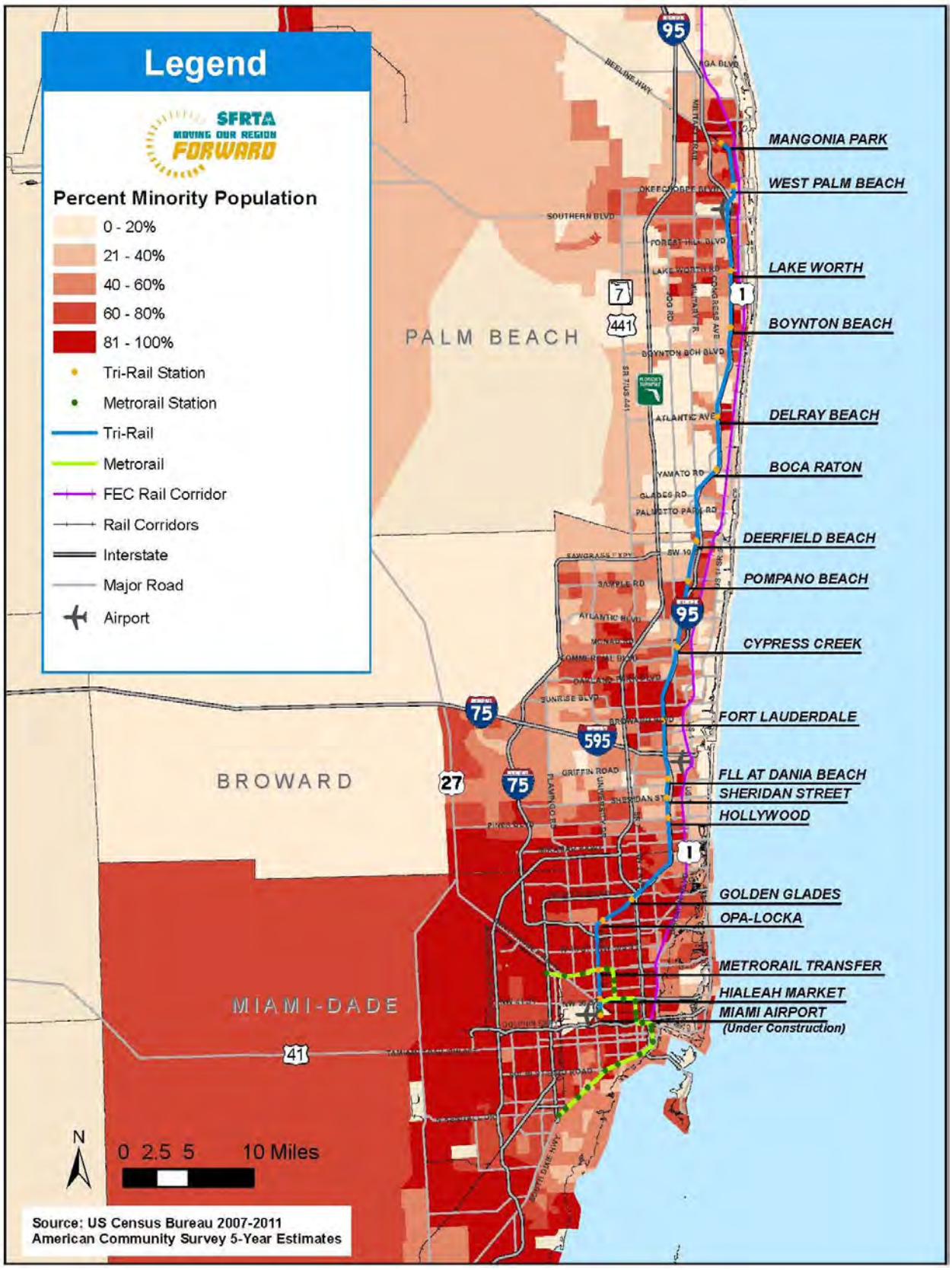
Table 2-3: Minority and Non-Minority Population, 2011

Minority Population			
County	**Population (2010)**	**Non-Hispanic White**	**Percent Minority**
Miami-Dade	2,474,676	15.8%	84.2%
Broward	1,742,012	44.6%	55.4%
Palm Beach	1,309,401	60.9%	39.1%

Source: U.S. Census Bureau, 2007–2011 American Community Survey

Map 2-8 illustrates the percent minority population by TAZ for the South Florida region. A significant portion of Miami-Dade County has minority population levels that exceed 80 percent of the total population. In Broward and Palm Beach counties, areas with higher percentages of minority population are located, in many instances, along the Tri-Rail corridor.

Map 2-8: Percent of Minority Population by Census Tract, 2011



Age Distribution

Table 2-4 provides an overview of the total population and population by age distribution for the South Florida region. As shown, the three counties have a similar distribution of persons under the age of 18 years. Palm Beach County has a higher percentage of persons over age 65 and a higher average age compared to Miami-Dade and Broward counties.

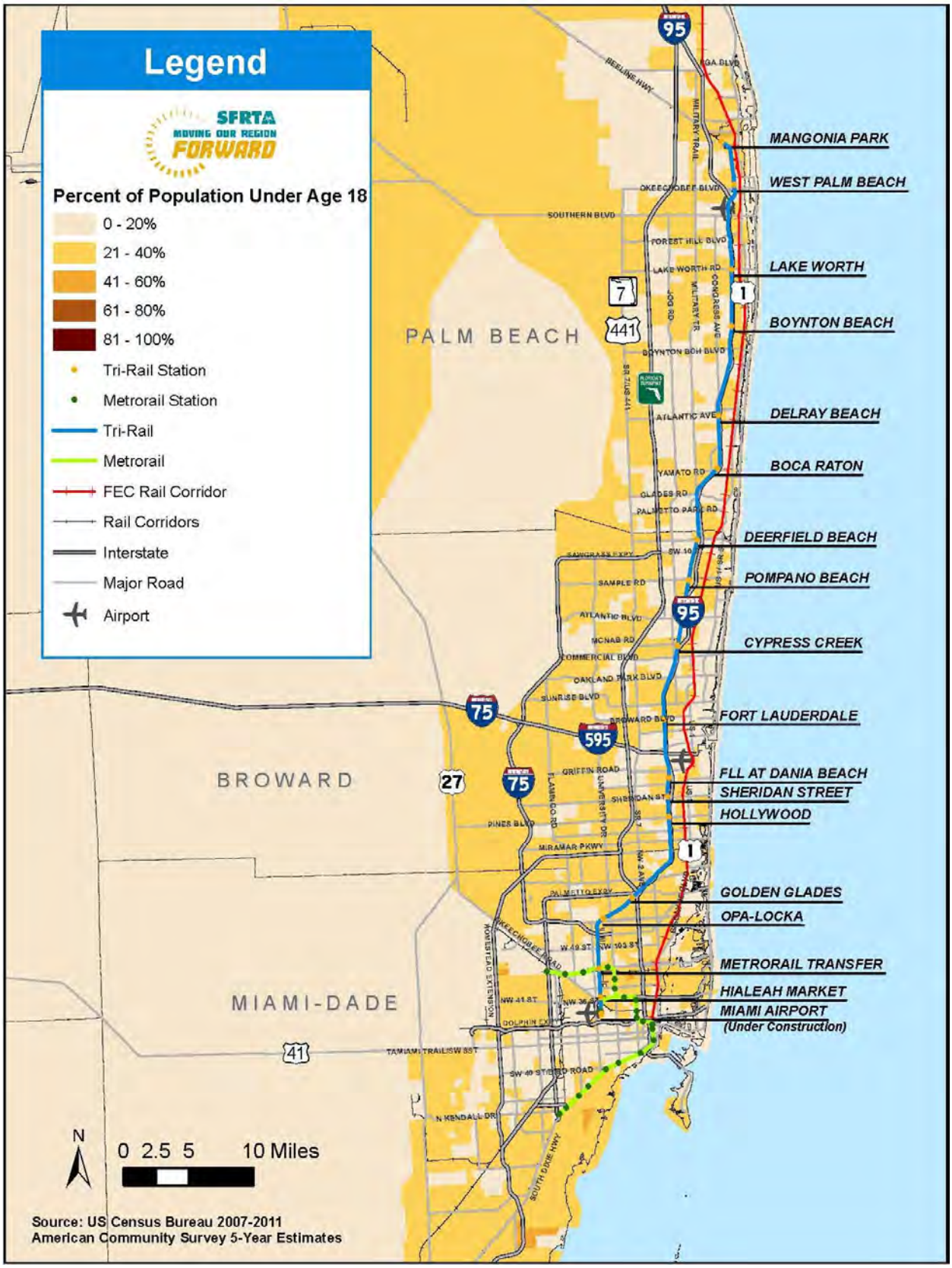
Table 2-4: Distribution of Population by Age, 2011

Age Distribution					
County	**Population (2010)**	**Under Age 18**	**Age 18–64 Years**	**Over Age 65**	**Average Age (Years)**
Miami-Dade	2,474,676	21.4%	64.3%	14.2%	38.0
Broward	1,742,012	22.0%	63.6%	14.3%	39.4
Palm Beach	1,309,401	20.3%	57.8%	21.8%	43.3

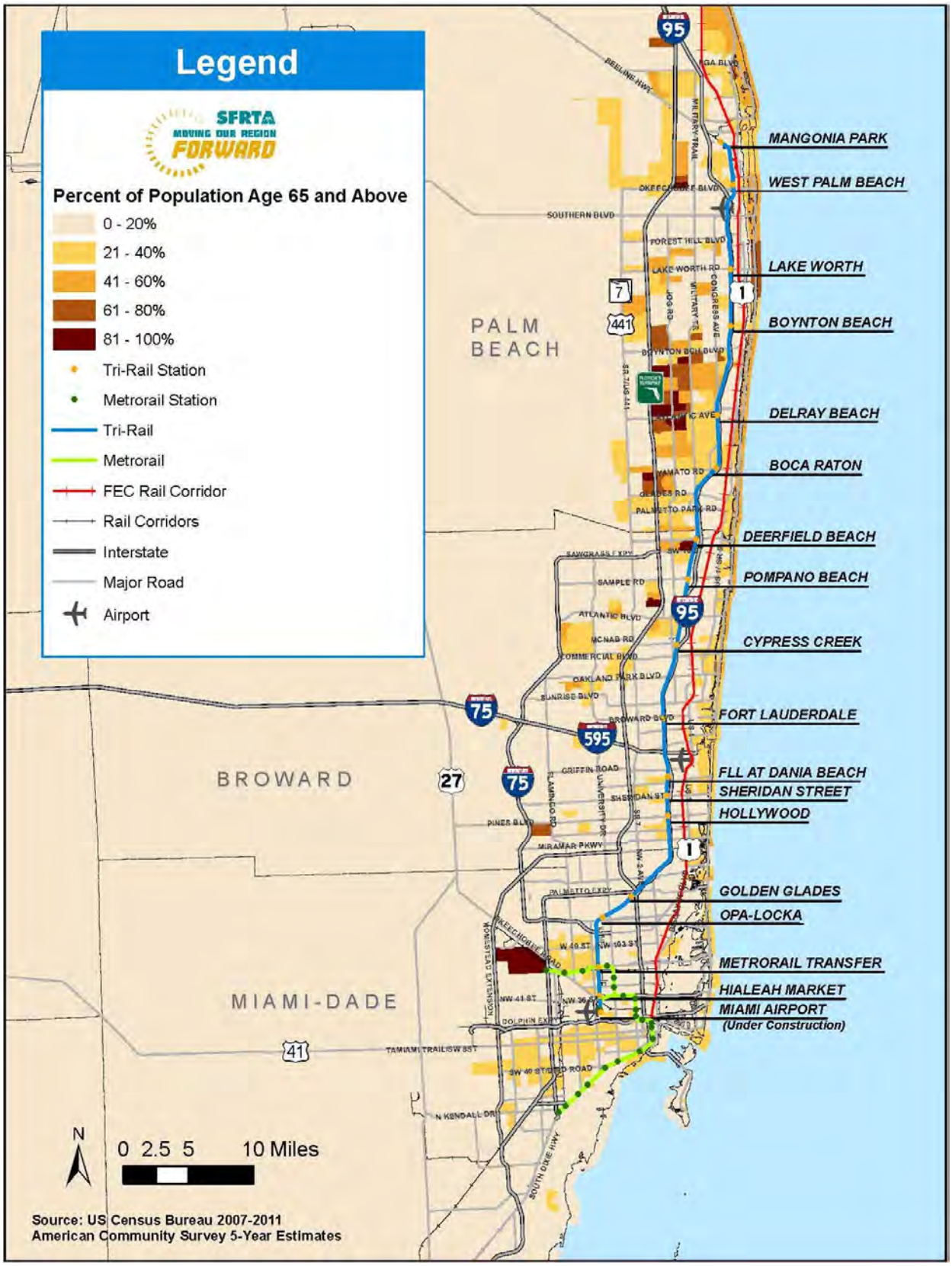
Source: U.S. Census Bureau, 2007-2011 American Community Survey

Age distribution is an important factor to consider because young people and older adults are more likely than the rest of the population to use public transportation. These populations include youth under age 18 who either cannot legally operate a motor vehicle or are not likely to own their own vehicle and, therefore, typically have a higher propensity for using transit, as well as older adults, who often are no longer able to drive due to impairments from aging. Maps 2-9 and 2-10 illustrate the concentrations of residents under age 18 and those who are over age 65 within each county.

Map 2-9: Percent of Population under Age 18, 2011



Map 2-10: Percent of Population over Age 65, 2011



Income

As shown in Table 2-5, Miami-Dade County has a slightly higher percentage of households below the poverty level compared to Broward and Palm Beach counties. Miami-Dade County also has a lower average income compared to both Broward and Palm Beach counties. Households with incomes below the poverty level may be more likely to require public transit for transportation due to the cost of owning and operating a household vehicle.

Table 2-5: Household Income Distribution, 2011

Household Income Distribution			
County	**Total Households**	**Average Income**	**Below Poverty Level**
Miami-Dade	825,337	$43,957	17.9%
Broward	665,037	$51,782	13.0%
Palm Beach	523,559	$52,951	13.3%

Source: U.S. Census Bureau, 2007–2011 American Community Survey

Household Vehicle Availability

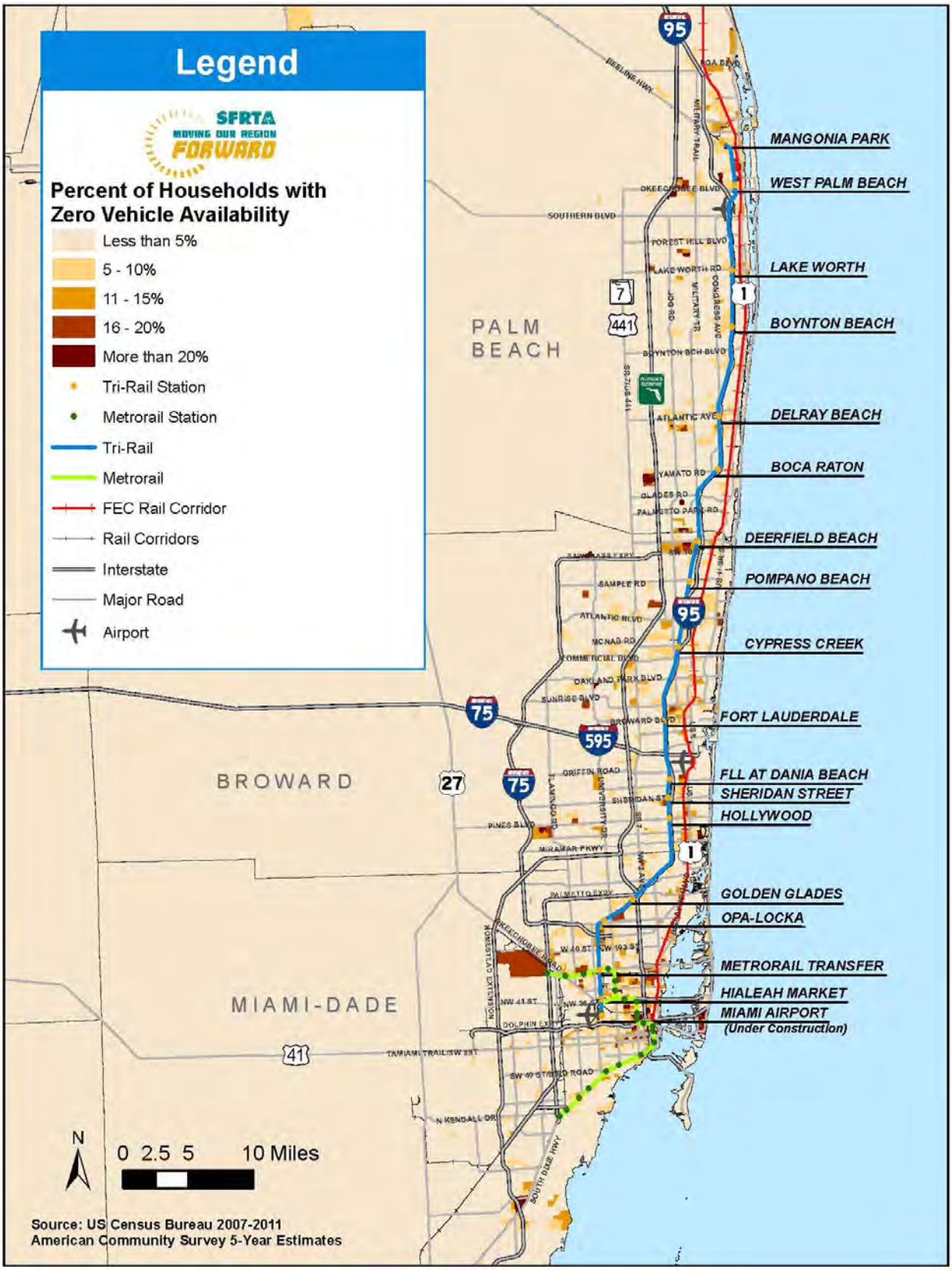
As shown in Table 2-6, Miami-Dade County has the highest percentage of households with zero vehicles. Zero-vehicle households are traditionally considered transit-dependent as they rely heavily upon transit to fulfill their transportation needs. Map 2-11 illustrates the geographic distribution of zero-vehicle households within the South Florida region by census block group.

Table 2-6: Distribution of Vehicle Availability by Household, 2011

Distribution of Vehicle Availability by Household					
County	**Total Households**	**0 vehicle**	**1 vehicle**	**2 vehicles**	**3 or more vehicles**
Miami-Dade	825,337	11.1%	39.5%	35.1%	14.3%
Broward	665,037	7.3%	41.8%	36.8%	14.1%
Palm Beach	523,559	6.2%	44.1%	37.5%	12.2%

Source: U.S. Census Bureau, 2007-2011 American Community Survey

Map 2-11: Percent of Households with No Vehicle, 2011



Labor Force

Table 2-7 displays the percentage of population ages 16 and older in the labor force and the unemployment rate within each county. As of 2011, the unemployment rate is slightly lower in Miami-Dade County than in Broward and Palm Beach counties.

Table 2-7: Labor Force Participation, 2011

Labor Force Participation				
County	**Population (Age 16 and older)**	**Part of Labor Force**	**Not in Labor Force**	**Percent Unemployed**
Miami-Dade	1,995,801	1,257,458	738,343	9.9%
Broward	1,398,747	946,193	452,554	10.5%
Palm Beach	1,074,083	647,885	426,198	10.5%

Source: U.S. Census Bureau, 2007-2011 American Community Survey

Commuting Patterns

Tables 2-8 and 2-9 summarize the commuter flows for workers living in the South Florida region. Table 2-8 looks at the percentage of residents of each county traveling outside of the county for work versus those staying within their county of residence for work. The result of this analysis indicates that a higher percentage of residents of Broward and Palm Beach Counties are employed and must commute outside of their county of residence for work compared to residents of Miami-Dade County.

Table 2-8: County of Work for Workers Residing in the SFRTA Service Area

County in which South Florida Residents Live			
	Miami-Dade	**Broward**	**Palm Beach**
Lives in county	892,925	717,651	477,488
Lives in county but employed outside of county	196,983	270,665	161,133
Percent of residents employed outside of county	22%	38%	34%
Lives and employed in county	695,942	446,986	316,355
Percent of residents employed in county	78%	62%	66%

Source: U.S. Census Bureau, OnTheMap Application and Longitudinal Employer-Household Dynamics (LEHD) Origin Destination Employment Statistics

Conversely, Table 2-9 looks at the total number of persons employed within each county and their location of residence. The results of this table also indicate that Broward and Palm Beach counties have more employees commuting into each respective county for work than Miami-Dade County, which has a higher percentage of employees that both live and work within the county. The findings of these two tables are consistent with Map 2-4, which illustrates that the highest concentration of existing employment densities in the South Florida region is found in Miami-Dade County, specifically in Miami.

Table 2-9: Commuting from Neighboring Counties, SFRTA Service Area

County in which South Florida Employees Live			
	Miami-Dade	**Broward**	**Palm Beach**
Employed in county	938,014	695,631	485,188
Employed in county but live outside of county	242,072	248,645	168,833
Percent of employees living outside of county	26%	36%	35%
Employed and lives in county	695,942	446,986	316,355
Percent of employees living inside of county	74%	64%	65%

Source: U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics

Means of Travel to Work

Table 2-10 provides the distribution of the primary modes of transportation used to commute to work by employees in Broward, Palm Beach, and Miami-Dade counties. Approximately 77 percent of workers in Miami-Dade County, 80 percent of workers in Broward County, and 79 percent of workers in Palm Beach County drive alone to work; the remaining workers use some form of alternative mode of transportation or work from home. Miami-Dade County has the highest percentage of workers using public transportation to travel to work compared to Broward County or Palm Beach County. Palm Beach County has a slightly higher percentage of workers that carpool, walk, use some other mode, or work at home (20%) than Miami-Dade County (18%) or Broward County (17%).

Table 2-10: Journey-to-Work Mode Split and Average Travel Time to Work, 2011

Journey-To-Work Mode Split														
County	**Workers (16 years and older)**	**Car, Truck, or Van (drove alone)**		**Car, Truck, or Van (carpooled)**		**Public Transp.**		**Walked**		**Other Modes**		**Worked at Home**		**Avg. Travel Time to Work (mins)**
Miami-Dade	1,112,485	857,994	77%	107,117	10%	57,546	5%	23,705	2%	22,647	2%	43,476	4%	29.2
Broward	825,581	661,053	80%	79,357	10%	23,702	3%	11,068	1%	14,832	2%	35,569	4%	26.9
Palm Beach	565,488	445,356	79%	61,043	11%	8,626	2%	9,521	2%	11,612	2%	29,330	5%	24.3

Source: U.S. Census Bureau, 2007-2011 American Community Survey

2.6: ROADWAY CONDITIONS

Maps 2-12 and 2-13 illustrate the existing and future peak-hour level-of-service (LOS) information for major roadways within the South Florida region for 2013 and 2035, respectively. A number of major travel corridors throughout the region are either currently deficient or are projected to become deficient by 2035. When comparing the existing and future roadway LOS, notable geographic areas of LOS deterioration include northern Palm Beach County, central Broward County, and Miami-Dade County, which is projected to have the greatest overall deterioration of level of service by 2035.

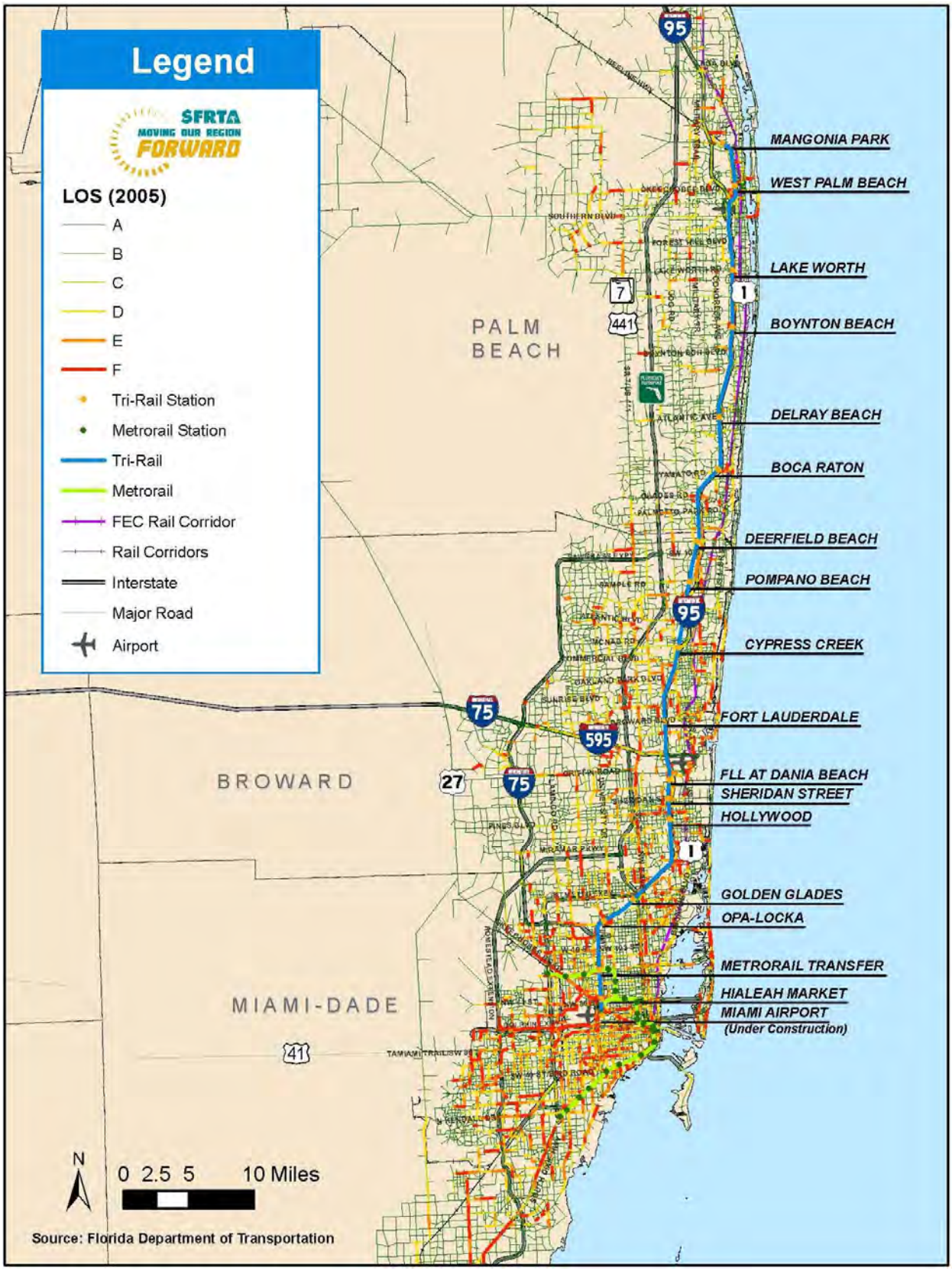
2.7: MAJOR EMPLOYERS AND TRIP GENERATORS

As part of the baseline conditions analysis, data on major public and private employers in Broward, Miami-Dade, and Palm Beach counties were reviewed and summarized. The major industries in the South Florida region are diverse and include education and health care services, retail trade, professional services, and arts, entertainment, leisure, and hospitality.

Table 2-11 summarizes the top public and private employers in the South Florida region by county, and the location of each employer is illustrated in Map 2-14 using the Map ID # reference provided in Table 2-11. Within each county, the top public employer is the respective School District. The second largest public employer in both Miami-Dade and Palm Beach counties is the respective county government agency; in Broward County, the second largest public employer is Memorial Health Care System. Broward County has the largest private employer in the region, Spherion Corporation, which employs approximately 258,000 workers. Table 2-12 summarizes the distribution of workers by industry for the civilian population age 16 and older by county, based on data obtained from the ACS.

Table 2-13 lists the major trip generators in Miami-Dade, Broward, and Palm Beach counties by type of trip generator: employment centers, educational institutions, hospitals, shopping centers, and recreational attractions. Maps 2-14, 2-15, and 2-16 illustrate the location of each major trip generator in each of the using the Map ID # reference provided in Table 2-13.

Map 2-12: Existing Peak-Hour Roadway Level of Service (2005)



Map 2-13: Future Peak-Hour Roadway Level of Service (2035)

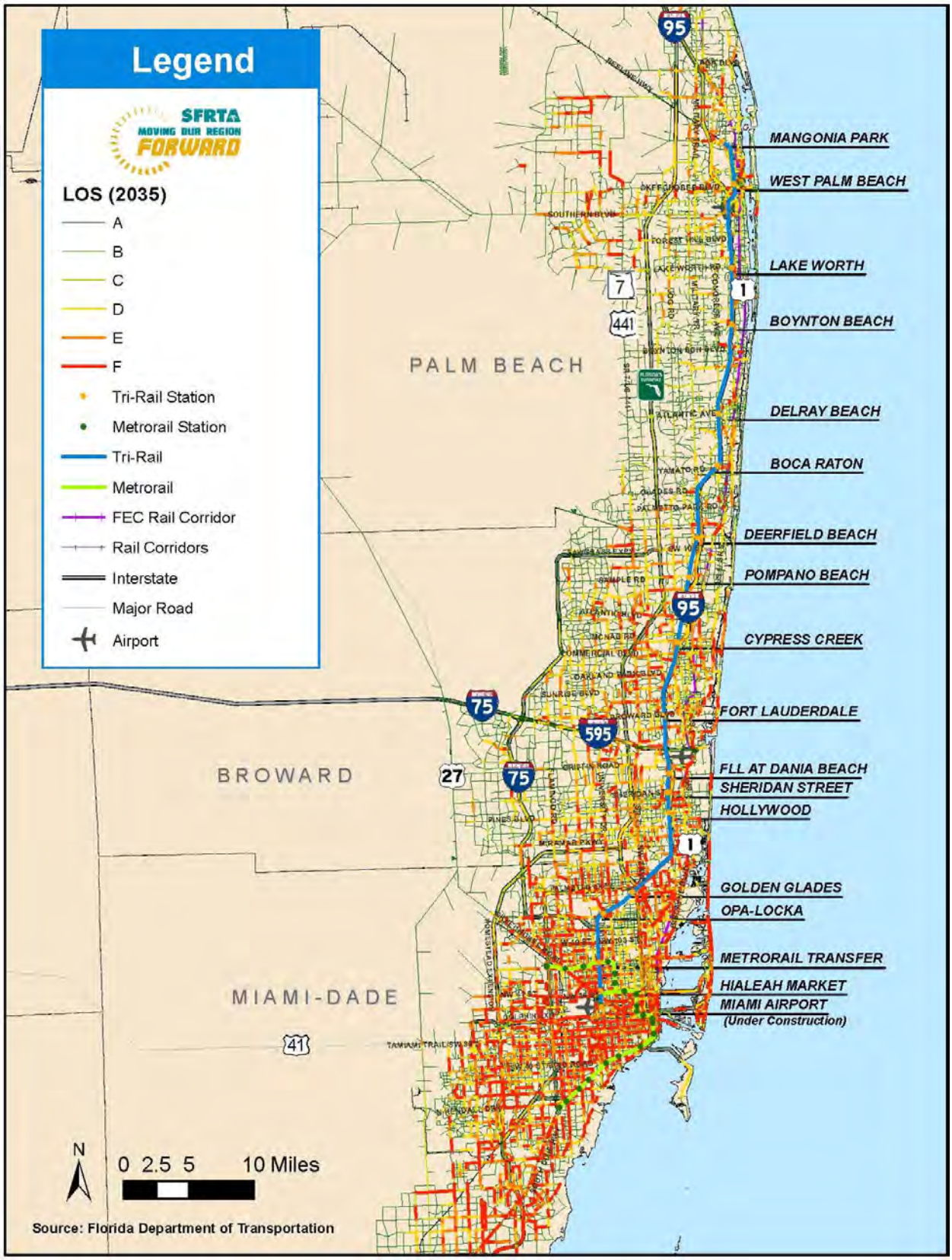


Table 2-11: Major Public and Private Employers

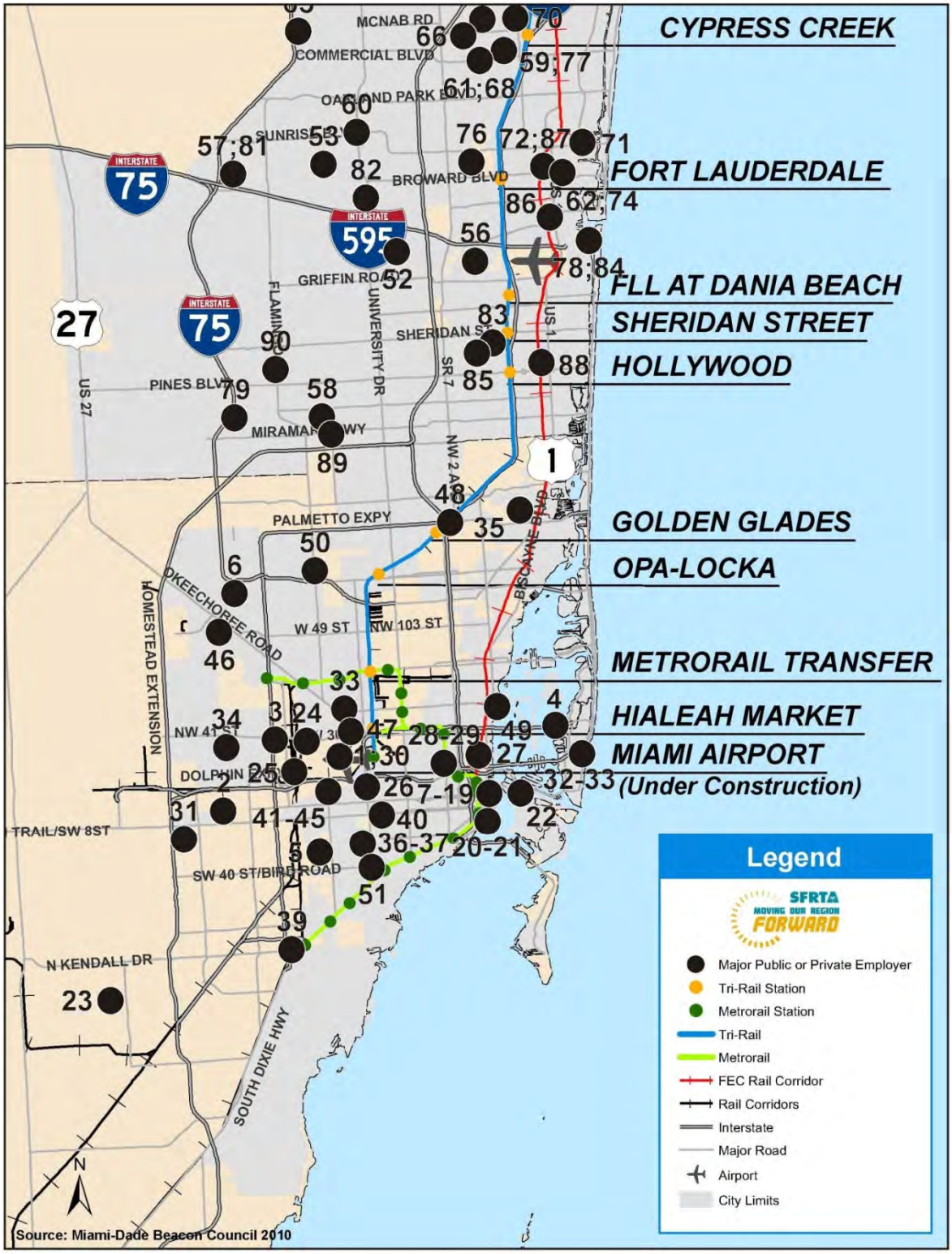
Major Public and Private Employers								
Map ID #	Miami-Dade County	# of Employees	Map ID #	Broward County	# of Employees	Map ID #	Palm Beach County	# of Employees
Public Employers per County								
27	Miami-Dade County Public Schools	48,571	73	Broward County School Board	26,933	99	Palm Beach School Board	21,718
11	Miami-Dade County	29,000	85	Memorial Healthcare System	10,700	100	Palm Beach County	11,381
16	Federal Government	19,500	86	Broward Health	8,207	104	Florida Atlantic University	2,776
17	Florida State Government	17,100	84	Broward County Sheriff	5,315	106	Veterans Health Administration	2,205
28	Jackson Health System	12,571	87	City of Fort Lauderdale	2,487	111	South Florida Water Management	1,700
31	Florida International University	8,000	88	City of Hollywood	1,239	112	City of West Palm Beach	1,671
18	Miami-Dade College	6,200	90	City of Pembroke Pines	1,077	113	City of Boca Raton	1,638
19	City of Miami	4,309	89	City of Miramar	938	114	Palm Beach State College	982
29	Miami VA Healthcare System	2,385				115	City of Boynton Beach	925
32	City of Miami Beach	1,950				125	Palm Beach Atlantic University	400
33	City of Hialeah	1,700						
34	U.S. Southern Command	1,600						
36	City of Coral Gables	901						
35	City of North Miami Beach	626						
Private Employers per County								
1	American Airlines	9,000	77	Spherion Corp.	258,000	101	Tenet Healthcare Corporation	5,127
2	Florida Power & Light Company	3,840	74	AutoNation	25,000	102	Hospital Corporation of America	4,150
3	Carnival Cruise Lines	3,500	76	Republic Services	13,000	103	Florida Power & Light	3,658
4	Mount Sinai Medical Center	3,000	78	Seacor Holdings	5,268	105	Bethesda Memorial Hospital	2,300
5	Miami Children's Hospital	2,800	75	JM Family Enterprises	4,700	107	Boca Raton Resort & Club	2,200
6	Sedanos Supermarkets	2,500	52	Nova Southeastern University	3,971	108	Office Depot	2,100
7	Wachovia, A Wells Fargo Co.	2,179	81	Pediatrix Medical Group	3,914	109	Boca Raton Community Hospital	2,100
8	Bank of America	2,000	80	BFC Financial Corp	3,559	91	Florida Crystals	1,900
22	Royal Caribbean International/Celebrity Cruises	1,880	53	American Express	3,000	110	The Breakers	1,800
23	Beckman Coulter Corp.	1,400	79	Elizabeth Arden	2,850	92	Thomas Produce Co.	1,000
24	United Parcel Service	1,150	54	Kaplan Higher Education	2,800	116	NCCI	872
48	Vitas Innovative Hospice Cars	1,118	55	The Answer Group	2,800	117	CSC Applied Technologies	700
25	Eulen America	1,000	56	Interbond Corp. of America dba BrandsMart USA	2,600	118	Lynn University	700
9	Miami Herald Publishing Co.	850	83	Heico Corporation	2,185	93	SimplexGrinnell/Tyco International	698
20	BankUnited	750	57	Alorica	2,000	119	The Continental Group Inc.	640
13	Regions Bank	700	58	Spirit Airlines	1,450	120	The GEO Group	635
43	Burger King	700	59	Citrix Systems	1,428	94	IBM Corporation	600
26	Ocean Bank	633	60	Motorola	1,400	95	Palm Beach Newspapers	585
40	MasTec, Inc.	500	82	National Beverage Corporation	1,300	96	Cheney Brothers	550
49	TEVA Pharmaceuticals Industries	500	61	SFN Group	1,208	121	Applied Card Systems	550
10	SunTrust Bank	400	62	Sun Sentinel Co. / WSFL - TV	1,133	122	TMS Health	515
12	CitiBank	391	63	DHL Express	1,075	123	Tropical Shipping	515
41	Discovery Networks Latin America/US Hispanic	385	64	Saveology.com	900	124	Churchill Benefit Corporation/Yurcor Virtual Bank	500
15	Terremark Worldwide, Inc.	350	65	City Furniture	883	97	Pepsi Cola Bottling Corporation	450
38	Northern Trust Bank of Florida	325	66	Aviall	842	98	Siemens/Enterprise Communications	400
14	Mellon United National Bank	300	67	First Data	800			
44	Avaya	300	68	Zimmerman Advertising	800			
46	AAR Landing Gear Services	279	69	Rick Case Automotive Group	796			
50	Merck	260	70	American Changer Corp.	590			
30	LAN Airlines	257	71	Ed Morse Automotive Group	558			
21	Telefonica Data USA	193	72	Franklin Templeton Investments	550			
39	AXA Advisors South Florida Branch	125						
47	Swissport USA, Inc.	110						
51	HBO Latin America	105						
42	Hewlett-Packard Co.	100						
45	Aerospace Engineering Group	95						
37	ExxonMobil Inter-America	53						

Note: Map ID # for each Major Employer associated with numbers found on Map 2-14.

Source: Broward Alliance Economic Sourcebook 2012, Palm Beach Business Development Board 2011, Miami-Dade Beacon Council 2010

(This page intentionally left blank.)

Map 2-14: Major Public and Private Employers, Miami-Dade County



Map 2-15 Major Public and Private Employers, Broward County

Map 2-16 Major Public and Private Employers, Palm Beach County

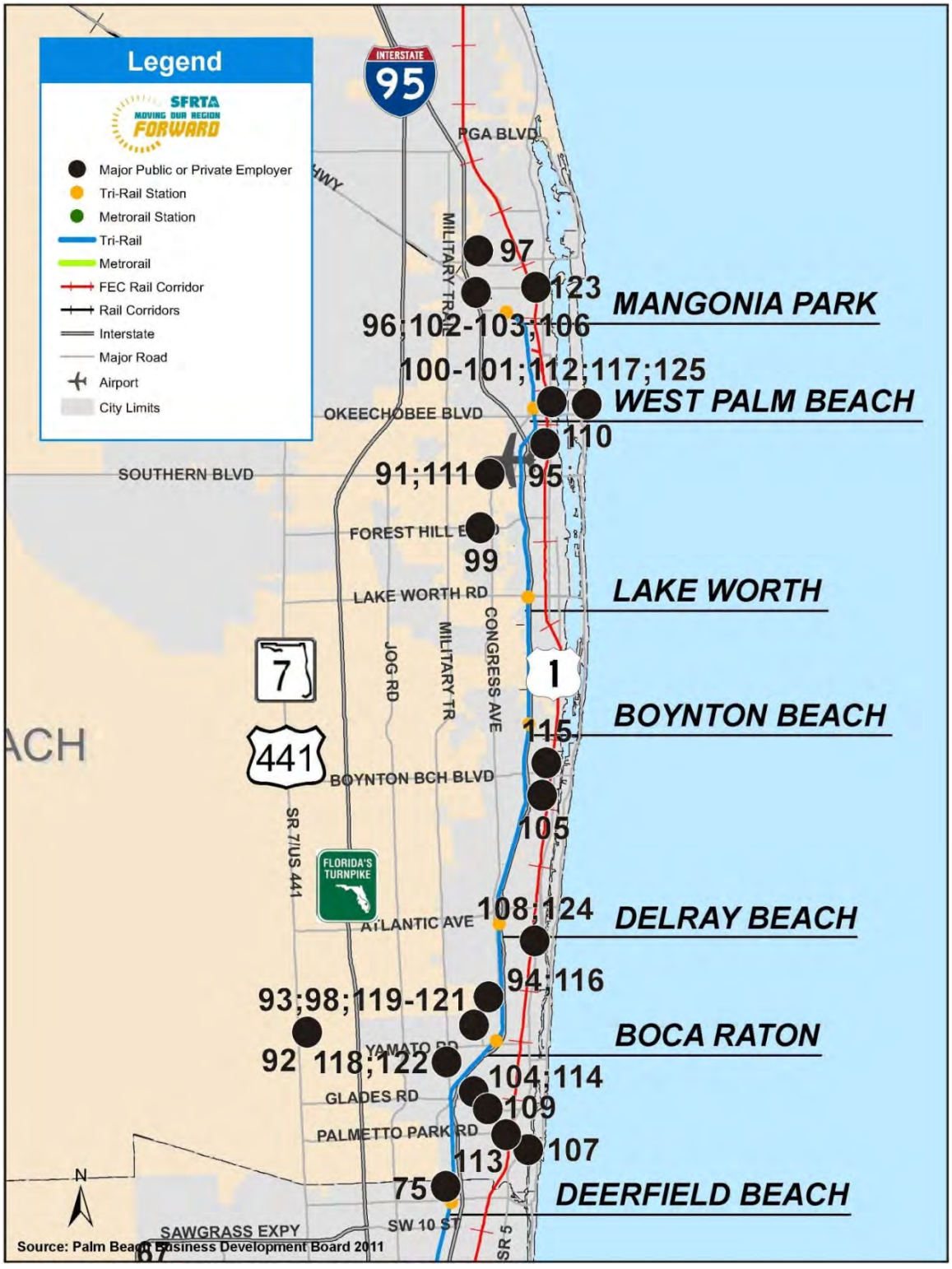


Table 2-12: Distribution of Civilian Workers Age 16 and Older by Industry, 2011

Employment Distribution by Industry						
Industry	**Miami-Dade**		**Broward**		**Palm Beach**	
Agriculture/forestry/fishing/hunting, mining	7,328	0.6%	2,248	0.3%	6,732	1.2%
Construction	87,730	7.8%	56,498	6.7%	44,245	7.6%
Manufacturing	61,043	5.4%	43,585	5.2%	25,890	4.5%
Wholesale trade	51,127	4.5%	33,486	4.0%	17,367	3.0%
Retail trade	140,414	12.4%	111,300	13.2%	77,603	13.4%
Transportation/warehousing, utilities	82,575	7.3%	45,377	5.4%	25,772	4.4%
Information	25,757	2.3%	23,050	2.7%	12,066	2.1%
Finance/insurance, real estate, rental/leasing	85,899	7.6%	75,364	8.9%	49,467	8.5%
Professional/scientific/management, administrative, waste management services	138,423	12.2%	112,691	13.3%	80,980	14.0%
Educational services/health care/social assistance	223,765	19.8%	170,671	20.2%	115,679	20.0%
Arts/entertainment/recreation, accommodation/food services	114,331	10.1%	85,718	10.1%	64,851	11.2%
Other services (except public administration)	69,819	6.2%	48,336	5.7%	35,351	6.1%
Public administration	43,247	3.8%	37,168	4.4%	23,513	4.1%
Total	**1,131,458**	**100.0%**	**845,492**	**100.0%**	**579,516**	**100.0%**

Source: U.S. Census Bureau, 2007–2011 American Community Survey

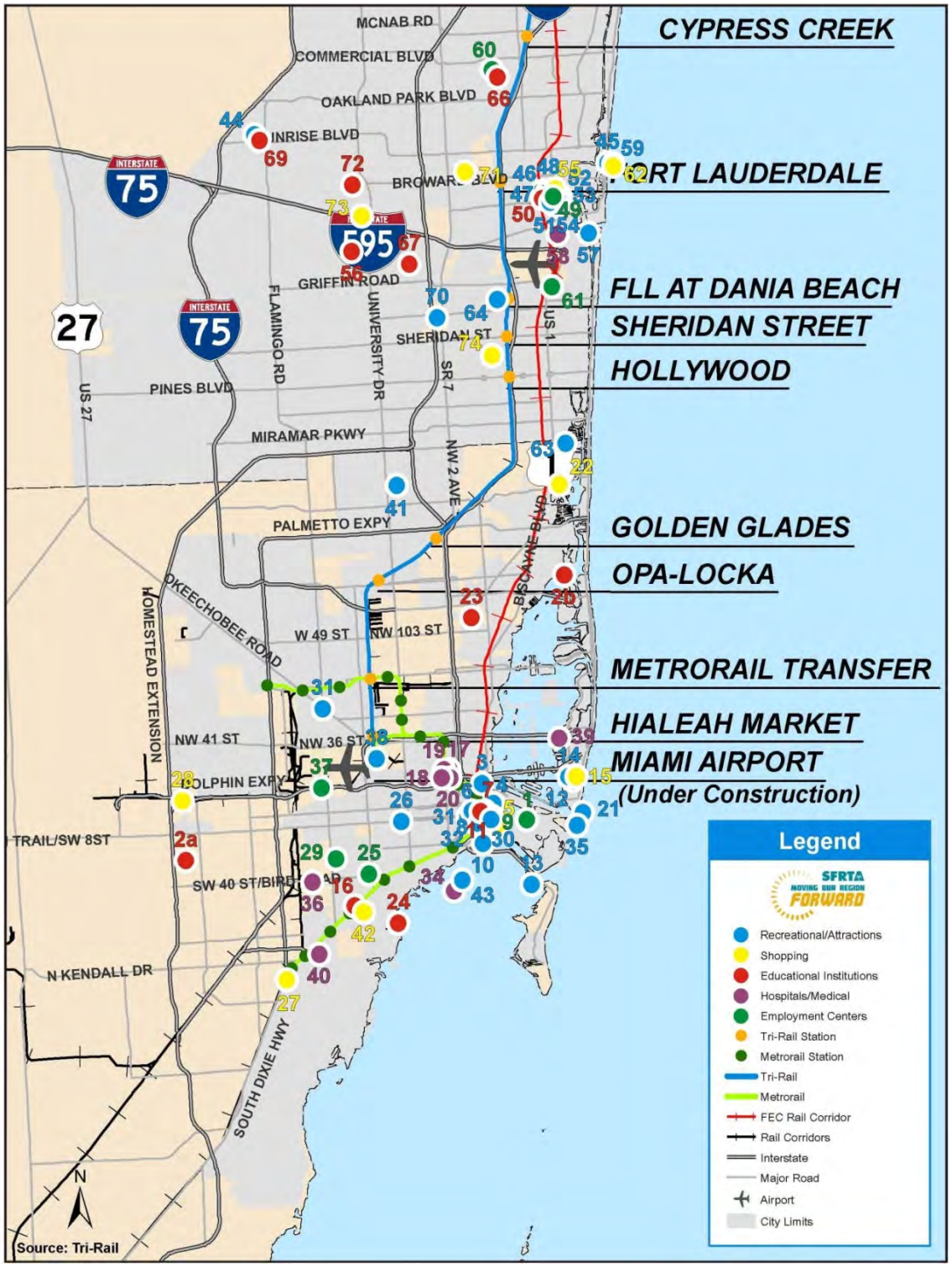
Table 2-13: Major Trip Generators

Major Trip Generators								
Trip Generator Type	**Map ID #**	**Miami-Dade County**	**Trip Generator Type**	**Map ID #**	**Broward County**	**Trip Generator Type**	**Map ID #**	**Palm Beach County**
Hospital/Medical	17	UM - Jackson Memorial Hospital	Hospital/Medical	58	Broward General Medical Center	Hospital/Medical	95	VA Medical Center
Hospital/Medical	18	UM - Sylvester Comprehensive Cancer Center	Hospital/Medical	65	Imperial Point Medical Center	Hospital/Medical	96	Worth Avenue Shopping District
Hospital/Medical	19	VA Hospital	Hospital/Medical	68	North Broward Medical Center	Educational Institution	81	Florida Atlantic University - Main Campus
Hospital/Medical	20	Bascom Palmer Eye Institute	Educational Institution	50	Florida Atlantic University - Broward Campus	Educational Institution	84	Lincoln Culinary Institute
Hospital/Medical	34	Mercy Hospital	Educational Institution	56	Broward College - Central Campus	Educational Institution	89	Palm Beach State College
Hospital/Medical	36	Miami Children's Hospital	Educational Institution	66	Keiser University	Employment Centers	78	Downtown Delray Beach
Hospital/Medical	39	Mount Sinai Hospital	Educational Institution	67	McFatter Technical Center	Employment Centers	79	Downtown Lake Worth
Hospital/Medical	40	South Miami Hospital	Educational Institution	72	University of Phoenix - South Florida Campus	Employment Centers	80	Downtown West Palm Beach
Educational Institution	2a	Florida International University (FIU) - Modesto A. Maidique Campus	Employment Centers	49	Downtown Fort Lauderdale	Employment Centers	88	Palm Beach International Airport
Educational Institution	2b	Florida International University (FIU) - Biscayne Bay Campus	Employment Centers	60	Fort Lauderdale Executive Airport	Recereation/Attraction	77	Cruzan Amphitheatre
Educational Institution	7	Miami-Dade College	Employment Centers	61	Fort Lauderdale-Hollywood International Airport	Recereation/Attraction	82	Norton Museum of Art
Educational Institution	11	New World School of The Arts	Recereation/Attraction	44	Bank Atlantic Center	Recereation/Attraction	83	Kravis Center for the Performing Arts
Educational Institution	16	University of Miami (UM)	Recereation/Attraction	45	Bonnet House	Recereation/Attraction	86	Museum of Polo and Hall of Fame
Educational Institution	23	Barry University	Recereation/Attraction	46	Broward Center for the Performing Arts	Recereation/Attraction	87	Palm Beach Institute of Contemporary Art
Employment Centers	1	Port Miami	Recereation/Attraction	47	Broward County Main Library	Recereation/Attraction	90	Palm Beach Zoo
Employment Centers	9	Downtown Miami	Recereation/Attraction	48	Broward Central Terminal	Recereation/Attraction	91	Rapids Water Park
Employment Centers	25	Coral Gables City Hall	Recereation/Attraction	51	Las Olas Riverfront	Recereation/Attraction	92	South Florida Science Museum
Employment Centers	29	Downtown Coral Gables & Miracle Mile	Recereation/Attraction	52	Museum of Art	Recereation/Attraction	93	The Henry M. Flagler Museum
Employment Centers	37	Miami International Airport	Recereation/Attraction	53	Museum of Discovery and Science	Shopping	75	Boynton Beach Mall
Recereation/Attraction	3	Adrienne Arsht Center	Recereation/Attraction	54	Fort Lauderdale Historical Society	Shopping	76	City Place
Recereation/Attraction	4	American Airlines Arena	Recereation/Attraction	57	Broward County Convention Center	Shopping	85	Mizner Park
Recereation/Attraction	6	Miami Art Museum	Recereation/Attraction	59	Fort Lauderdale Beach	Shopping	94	Town Center Mall
Recereation/Attraction	8	Miami-Dade Cultural Center & Main Library	Recereation/Attraction	63	Gulfstream Park	Shopping	96	Worth Avenue Shopping District
Recereation/Attraction	10	Miami Science Museum	Recereation/Attraction	64	IGFA Fishing Hall of Fame & Museum			
Recereation/Attraction	12	The Fillmore Miami Beach at the Jackie Gleason Theater	Recereation/Attraction	70	Seminole Hard Rock Hotel and Casino			
Recereation/Attraction	13	Miami Seaquarium	Shopping	55	Riverwalk			
Recereation/Attraction	14	Miami Beach Convention Center	Shopping	62	Galleria Mall			
Recereation/Attraction	21	Art Deco District	Shopping	69	Sawgrass Mills			
Recereation/Attraction	26	Dade County Auditorium	Shopping	71	Swap Shop			
Recereation/Attraction	30	Gusman Center for the Performing Arts	Shopping	73	Westfield Broward			
Recereation/Attraction	31	Hialeah Park & Race Course	Shopping	74	Yellow Green Farmers Market			
Recereation/Attraction	32	Historical Museum of Sourthern Florida						
Recereation/Attraction	33	James L. Knight International Center/Miami Convention Center						
Recereation/Attraction	35	Miami Beach (South)						
Recereation/Attraction	38	Miami Jai Alai						
Recereation/Attraction	41	Sun Life Stadium						
Recereation/Attraction	43	Vizcaya Museum and Gardens						
Shopping	5	Bayside Marketplace						
Shopping	15	Lincoln Road Mall Shops						
Shopping	22	Aventura Mall						
Shopping	24	Coconut Grove/Coco Walk						
Shopping	27	Dadeland Mall						
Shopping	28	Dolphin Mall						
Shopping	29	Downtown Coral Gables & Miracle Mile						
Shopping	42	The Village of Merrick Park						

Note: Map ID # for each Major Trip Generator associated with numbers found on Map 2-15.
Source: http://www.tri-rail.com/# (Destinations)

(This page intentionally left blank.)

Map 2-17: Major Trip Generators, Miami-Dade County



Map 2-18: Major Trip Generators, Broward County

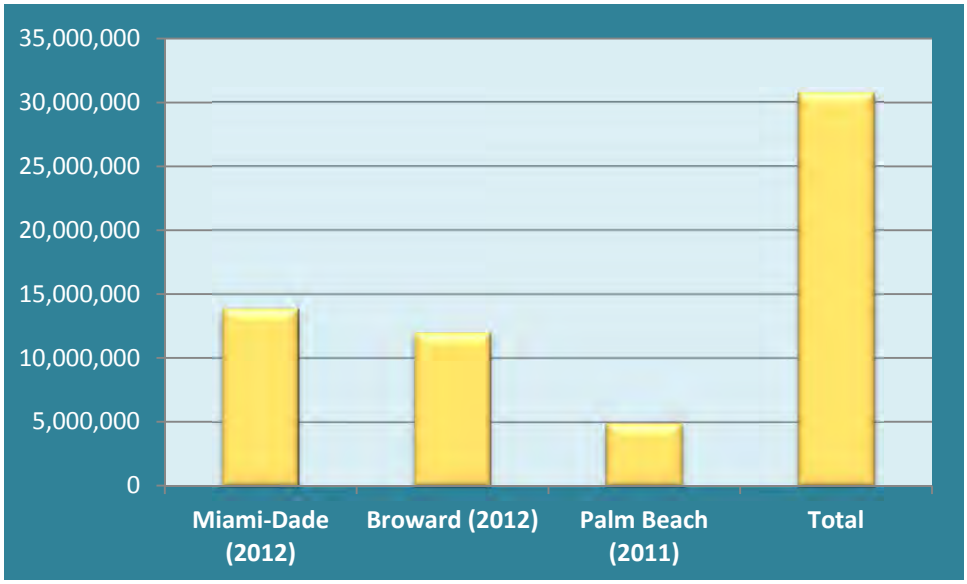
Map 2-19: Major Trip Generators, Palm Beach County

2.8: TOURISM

Tourism is one of the largest economic and employment sectors in the South Florida region. Figure 2-1 summarizes the number of annual visitors to each county, with the total for the region exceeding 30 million annual visitors. Map 2-20 illustrates the locations of hotel units within the South Florida region and in relation to SFRTA services. As expected, the majority of the hotel/motel units are located along the coastal areas of the region as well as in downtown Miami and around Miami International Airport.

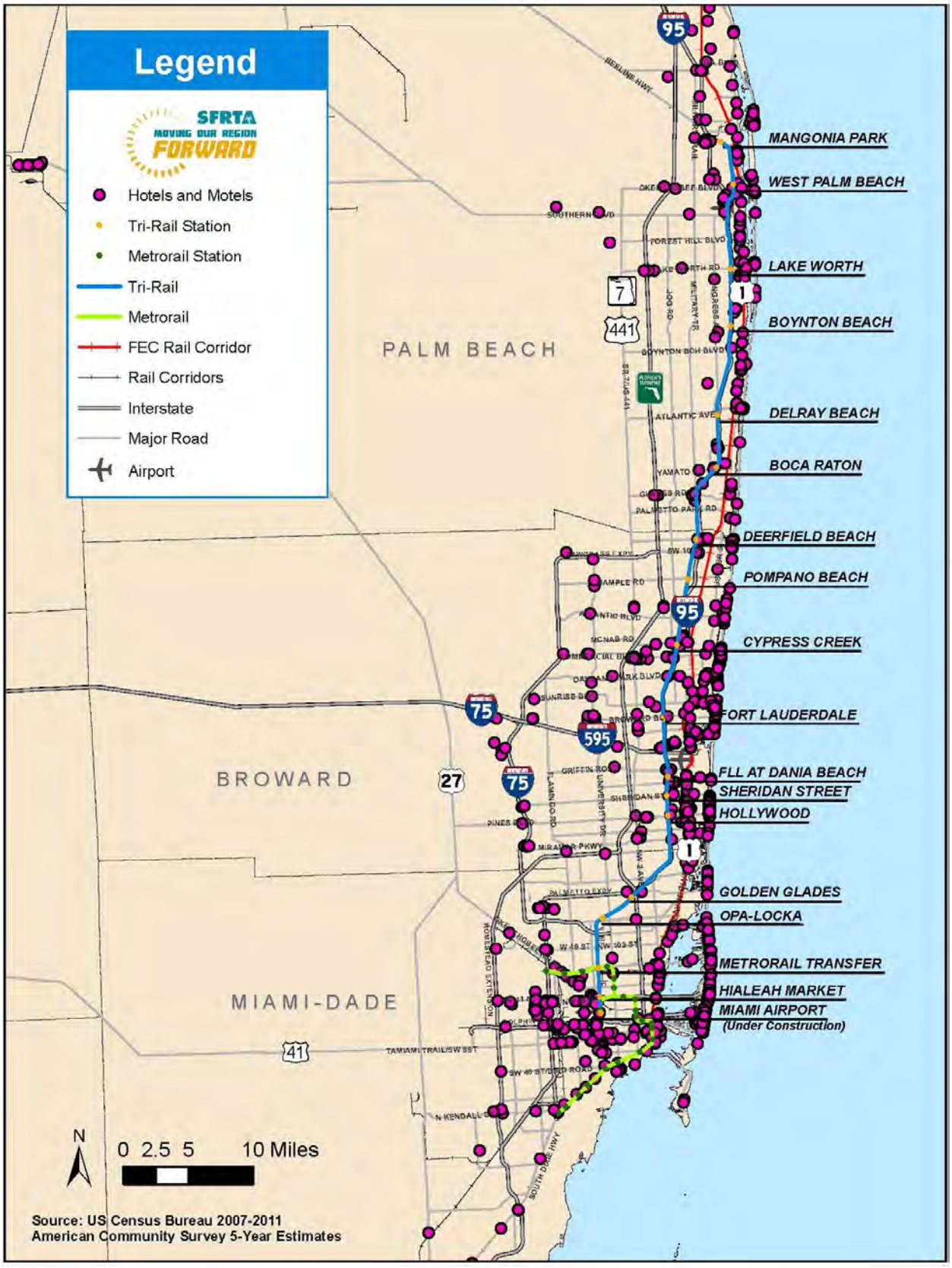
In 2012, Broward County had a total of 12 million visitors, including 2.8 million international visitors, according to the Greater Fort Lauderdale Convention & Visitors Bureau. In addition, visitors spent $9.81 billion in Broward County in 2012. In Miami-Dade County, a record $21.8 billion was spent by overnight visitors in 2012, according to the Greater Miami and the Beaches Visitors and Convention Bureau. According to the Palm Beach County Visitors and Convention Bureau, tourism is Palm Beach County's top industry, with nearly 5 million annual visitors generating more than $5 billion in 2011 for the local economy.

Figure 2-1: Annual Number of Tourists by County



Source: Greater Miami and the Beaches Visitors and Convention Bureau, Greater Fort Lauderdale Convention and Visitors Bureau, Palm Beach County Visitors and Convention Bureau

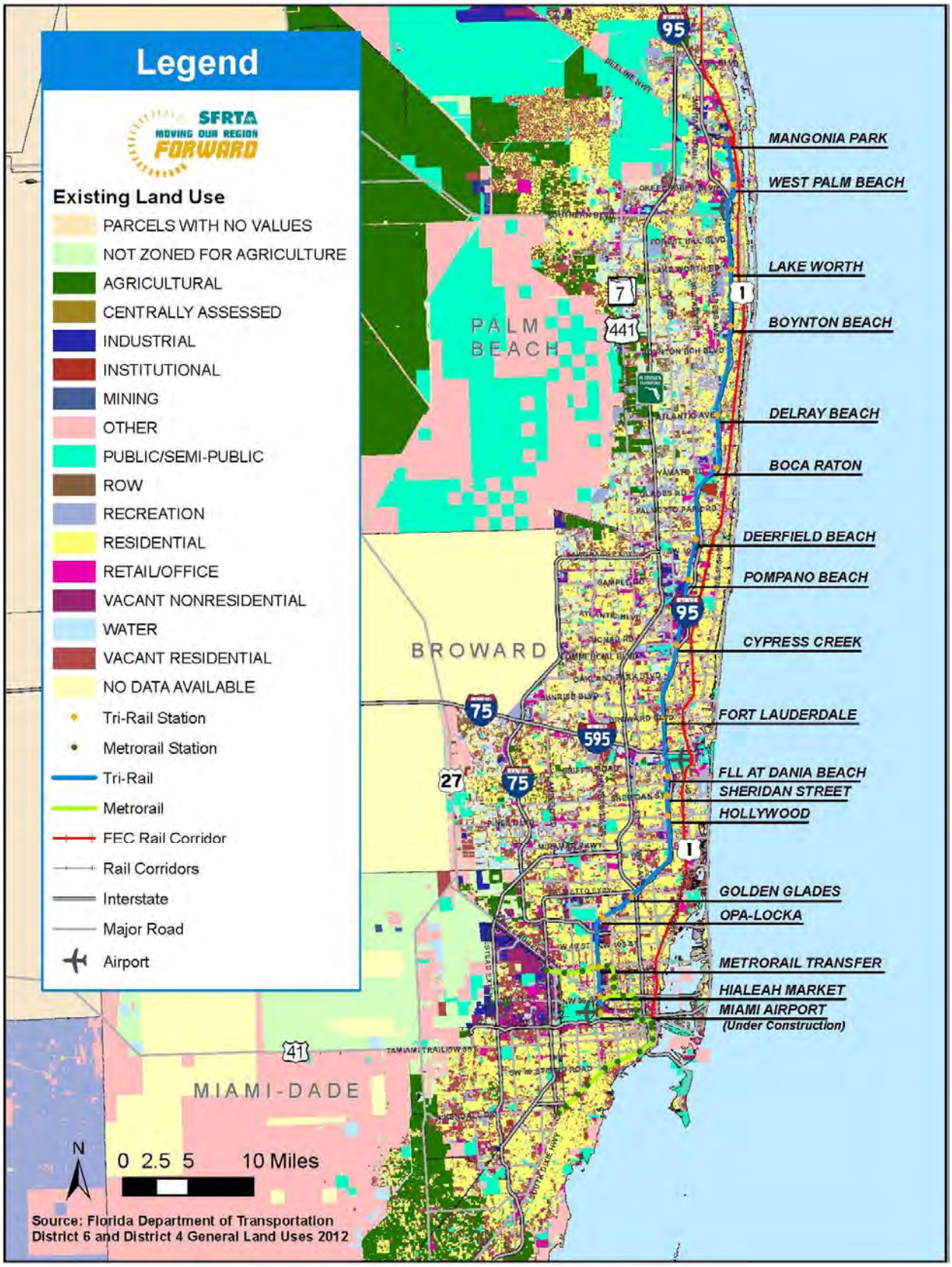
Map 2-20: Hotel and Motel Units, 2011



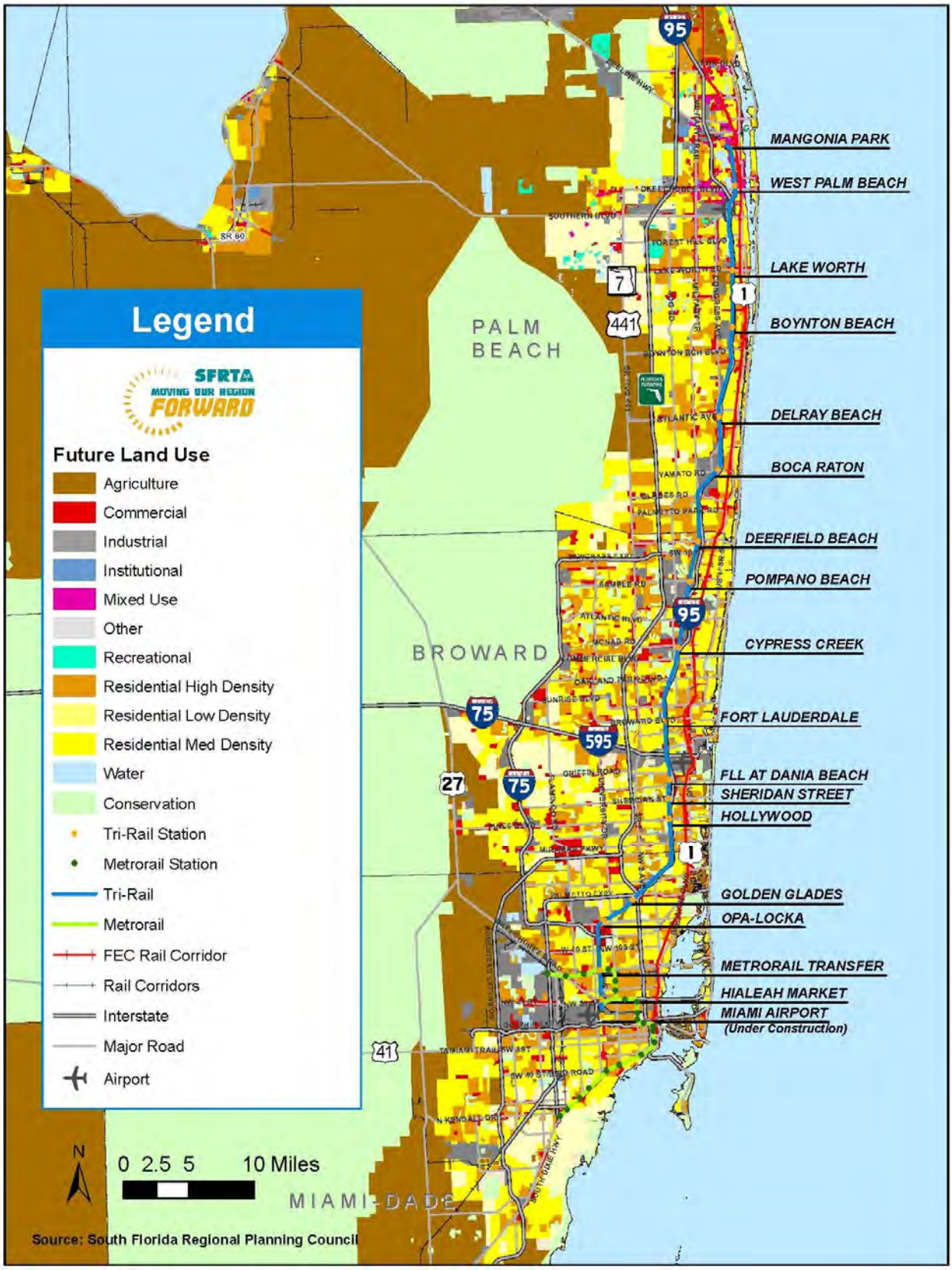
2.9: LAND USE CHARACTERISTICS

FDOT's updated TDP guidelines promote the review of ongoing and anticipated residential and commercial development activities. Broward, Palm Beach, and Miami-Dade counties and their respective municipalities have established land use and zoning maps to guide future developments in both the unincorporated and incorporated areas of each county. Map 2-21 presents the existing land uses, and Map 2-22 presents future land use designations within the South Florida region, based on the adopted land use maps for each county. While not shown on the map, within each county are designated future land use designations that are considered transit-supportive and that may be applied in specific locations of the county. Examples of transit supportive land use policies and designations include Regional Activity Centers, Local Activity Centers, Transit-Oriented Corridors, and Transit-Oriented Developments in Broward County; Mixed-Use Planned Developments, Transit-Oriented Developments, and Transit-Oriented Corridors in Palm Beach County; and Mixed-Use Developments, Urban Centers, Transit Corridors, Intermodal Centers, and Station Areas in Miami-Dade County.

Map 2-21: Existing Land Use, 2012



Map 2-22: Future Land Use



SECTION 3

EVALUATION OF EXISTING TRANSIT SERVICES

SFRTA
MOVING OUR REGION FORWARD

(This page intentionally left blank.)

3.1 SFRTA OVERVIEW AND EXISTING SERVICES

3.1.1: HISTORY OF SFRTA

In January 1989, the Tri-Rail was established to provide interim commuter rail service along a 67-mile corridor between the West Palm Beach Station in Palm Beach County and the Hialeah Market Station in Miami-Dade County after the 1988 FDOT purchase of the South Florida Rail Corridor (SFRC) from CSX Transportation, Inc. Between 1997 and 1998, Tri-Rail service was extended to the Mangonia Park Station in Palm Beach County and to the Miami Airport Station in Miami-Dade County.

In 2003, SFRTA, a tri-county federal public transit authority, was created by the Florida Legislature and enacted by FDOT, transforming Tri-Rail into SFRTA. The purpose for creating SFRTA was to expand cooperation between Tri-Rail commuter rail services and county transit operators and planning agencies within Miami-Dade, Broward, and Palm Beach counties with a vision to coordinate, develop, and implement a viable transportation system in South Florida that improves the quality of life and promotes sustainable growth for future generations.

3.1.2: SFRTA EXISTING TRANSPORTATION SERVICES

SFRTA operates Tri-Rail commuter rail service in Miami-Dade, Broward, and Palm Beach counties. The rail line goes as far south as Miami International Airport and as far north as Mangonia Park in Palm Beach County. There are currently 17 Tri-Rail stations open for service—6 in Palm Beach County (Mangonia Park, West Palm Beach, Lake Worth, Boynton Beach, Delray Beach, and Boca Raton), 7 in Broward County (Deerfield Beach, Pompano Beach, Cypress Creek, Fort Lauderdale, Fort Lauderdale/Hollywood International (FLL) Airport at Dania Beach, Sheridan Street, and Hollywood), and 4 in Miami-Dade County (Golden Glades, Opa-locka, Metrorail Transfer, and Hialeah Market/Miami Airport). Since September 2011, the Hialeah Market Station has served as the southern terminus for Tri-Rail service due to the Miami Airport Station being temporarily closed to facilitate the construction of the MIC. A new Tri-Rail Miami Airport Station is being rebuilt and will be connected to the airport via an escalator and people mover. The new Tri-Rail Miami Airport Station is expected to open to the public in 2014.

SFRTA also operates a free shuttle bus program to and from select Tri-Rail stations, providing connecting service for Tri-Rail riders to numerous destinations in South Florida.

Map 3-1 displays the existing network of SFRTA's services, including Tri-Rail's commuter rail line and station locations and the SFRTA shuttle bus service network. Table 3-1 provides a summary of the shuttle bus routes currently operated and/or funded by SFRTA.

Map 3-1: SFRTA Existing Service

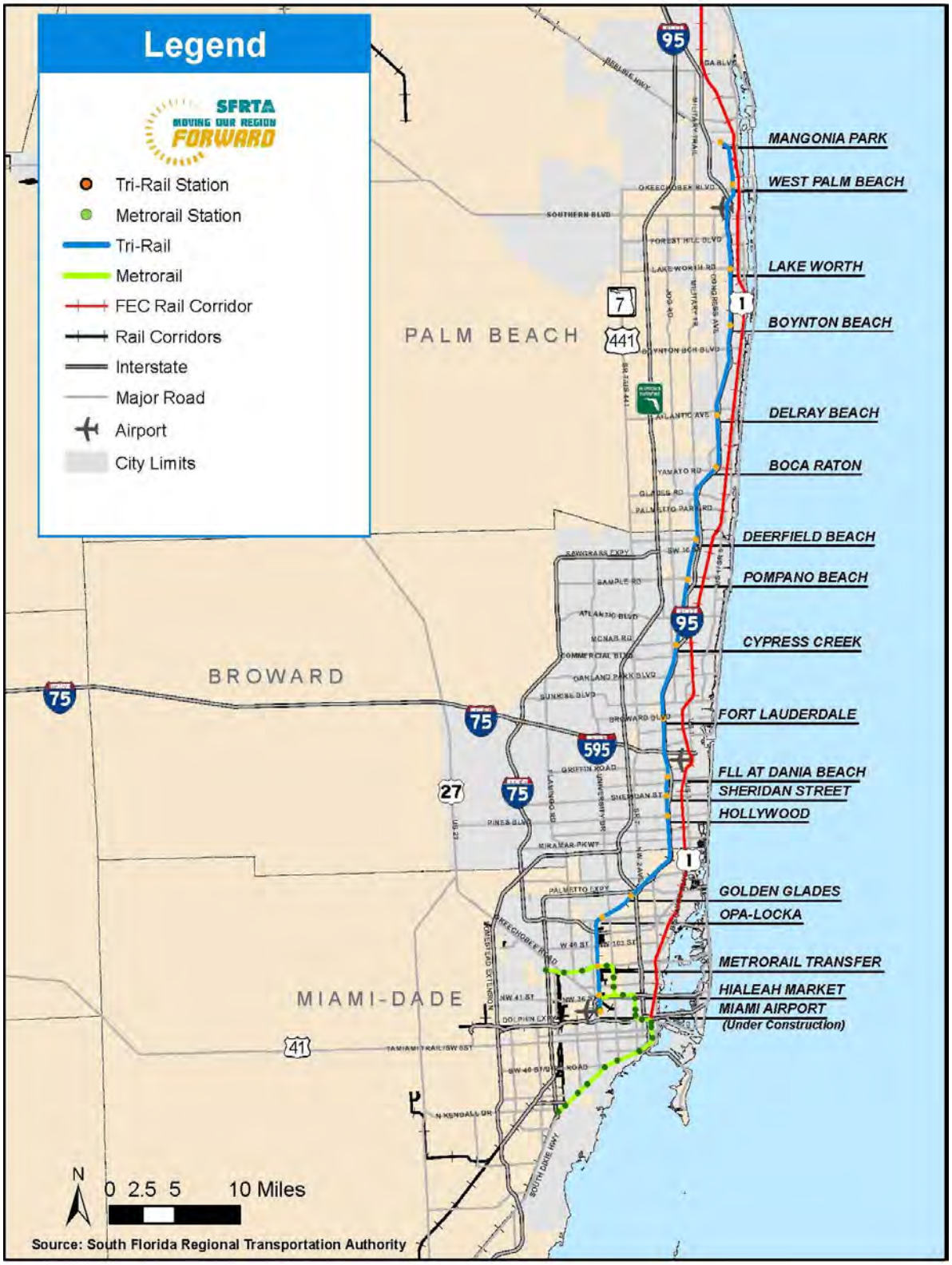


Table 3-1: SFRTA Shuttle Bus Routes

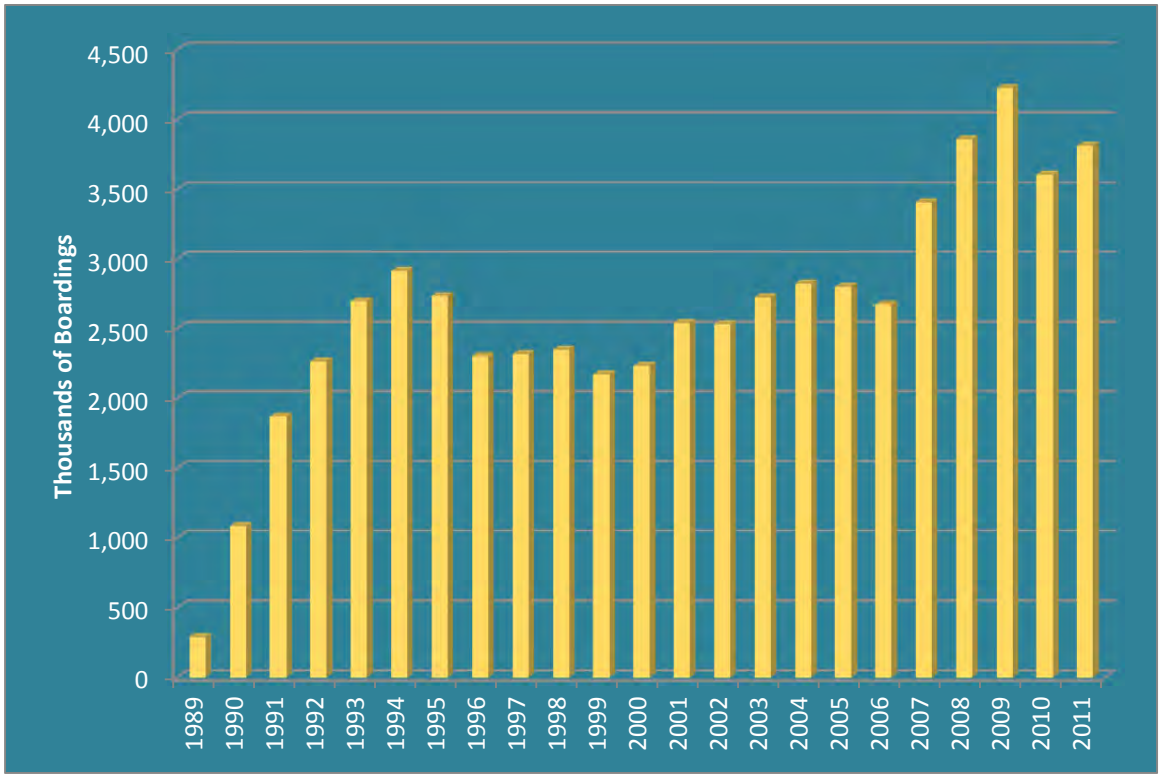
Tri-Rail Station	Shuttle Bus Routes	Start Time	End Time	Peaks Only Service	Weekend Service	Annual Ridership (March 2012–February 2013)
Lake Worth	LKW-1	5:45	18:54	No	No	28,171
Boca Raton	BR-1	6:05	19:05	Yes	No	28,289
Boca Raton	APOC East	6:40	21:32	No	No	31,030
Boca Raton	APOC West	6:30	19:29	No	No	41,711
Deerfield Beach	DB-1	5:35	19:25	Yes	No	31,554
Deerfield Beach	DB-2	5:30	19:45	Yes	No	18,268
Pompano Beach	PB-1	4:55	19:30	Yes	No	22,850
Cypress Creek	CC-1	5:11	19:20	Yes	No	31,620
Cypress Creek	CC-2	5:11	19:20	Yes	No	53,376
Cypress Creek	CC-3	5:11	19:20	Yes	No	35,744
Fort Lauderdale	FL-1	5:10	22:15	No	Yes	113,452
Fort Lauderdale	FL-2	6:00	19:15	No	No	25,278
Fort Lauderdale	FL-3	6:46	21:00	No	Yes (Only)	17,120
Fort Lauderdale	NW Community Link	7:10	18:48	No	No	104,791
FLL at Dania Beach	FLA-1	4:55	22:00	No	Yes	349,871
Sheridan Street	SS-1	6:02	19:10	Yes	No	15,084
Opa-locka	North Link	6:28	19:07	No	No	58,032
Opa-locka	South Link	5:45	19:10	No	No	114,204
					Total Ridership	**1,120,445**

Source: SFRTA

Ridership Trends

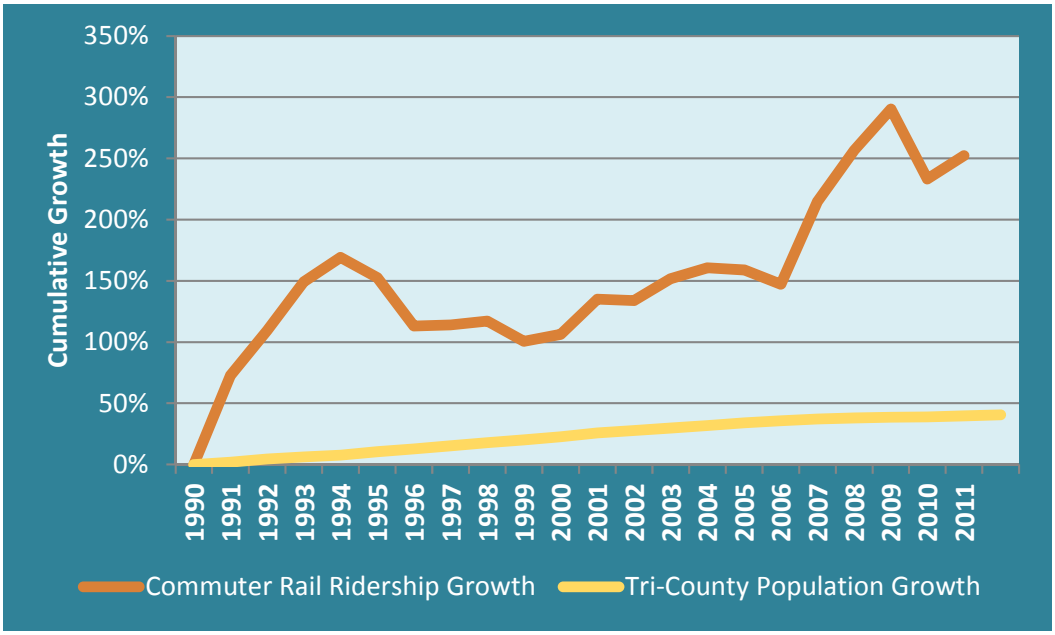
Figure 3-1 presents SFRTA's commuter rail ridership, which peaked in 2009 at 4.2 million passenger trips. Figure 3-2 provides a comparison of the historical growth in commuter rail ridership compared to growth in population for the tri-county region since 1990. As shown, SFRTA's commuter rail ridership growth has significantly outpaced population growth.

Figure 3-1: Commuter Rail Historical Ridership Data (FYs 1989–2011)



Source: National Transit Database (NTD) (FYs 1989-2011)

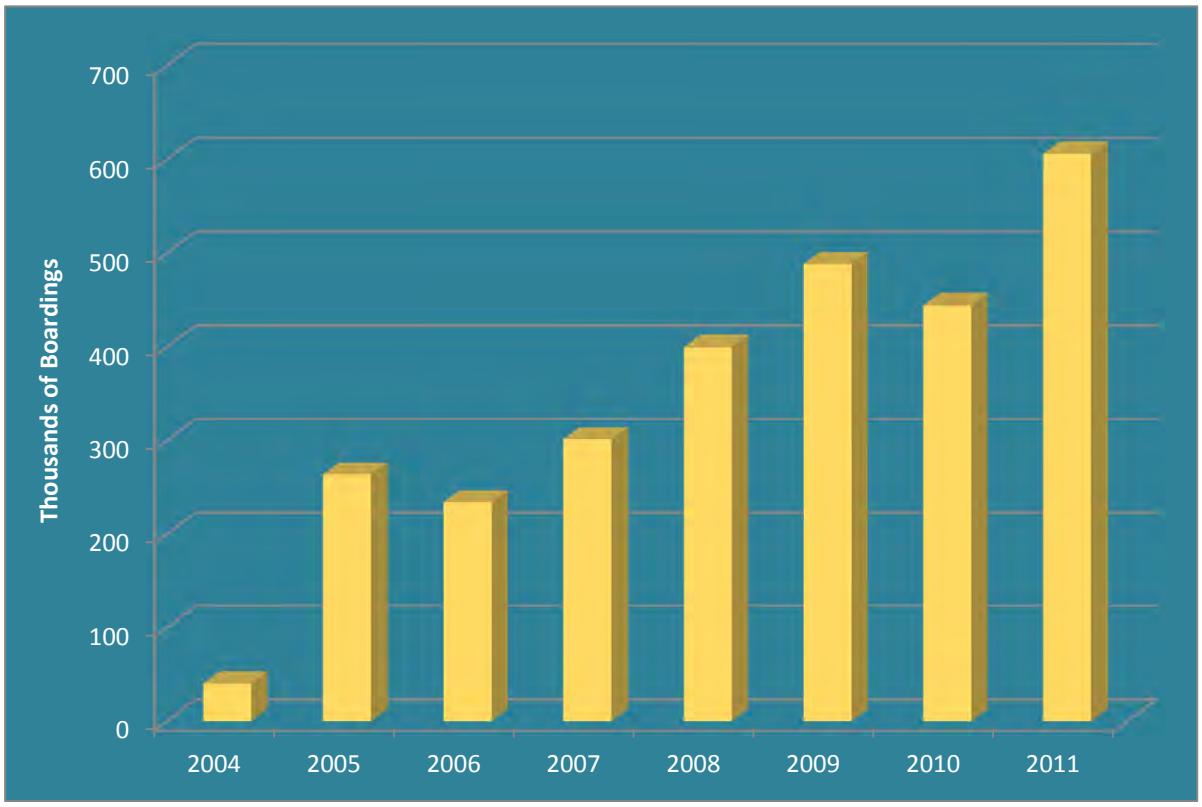
Figure 3-2: Commuter Rail Ridership and Tri-County Population Growth (FYs 1990–2011)



Sources: NTD for ridership (FYs 1990–2011); Florida Office of Economic and Demographic Research for historical population figures (population count April 1st 1990-2011).

Figure 3-3 illustrates the historical annual ridership for SFRTA's shuttle services since 2004, as reported to the National Transit Database (NTD). In Calendar Year (CY) 2012, the SFRTA shuttle bus program experienced record ridership with just over one million riders system-wide. In addition, currently, all shuttle bus routes are exceeding the minimum performance standard of seven passengers per hour.

Figure 3-3: Shuttle Bus Service Historical Ridership Data (FYs 2004–2011)



Source: NTD (FYs 2004-2011)

COMMUTER RAIL SCHEDULE

As shown in Table 3-2, on weekdays, southbound Tri-Rail service operates from approximately 4:00 AM until 10:30 PM, with a morning peak frequency of approximately 20 minutes and an evening peak frequency of around 30 minutes. Northbound weekday service runs from approximately 4:15 AM to 11:35 PM, with a morning peak frequency of approximately 20 minutes and an evening peak frequency of 10–20 minutes.

Tri-Rail service was improved on weekends and holidays on March 2, 2013, from every 2 hours to every 60 minutes/1 hour. As shown in Table 3-3, southbound service runs from 5:50 AM to 11:00 PM, and northbound service runs from 5:20 AM to 11:45 PM.

Table 3-2: Commuter Rail Weekday Operating Schedule

Tri-Rail Weekday Operating Schedule					
Weekday Southbound Train			Weekday Northbound Train		
Train	*FROM* Mangonia Park	*TO* Hialeah Market	Train	*FROM* Hialeah Market	*TO* Mangonia Park
P601	4:00 AM	5:44 AM	P600	4:18 AM	6:05 AM
P603	4:40 AM	6:29 AM	P602	4:48 AM	6:40 AM
P605	5:20 AM	7:09 AM	P604	5:13 AM	7:05 AM
P607	6:00 AM	7:49 AM	P606	5:38 AM	7:35 AM
P609	6:20 AM	8:09 AM	P608	6:03 AM	7:55 AM
P611	6:40 AM	8:29 AM	P610	6:23 AM	8:15 AM
P613	7:00 AM	8:49 AM	P612	7:03 AM	8:55 AM
P615	7:30 AM	9:19 AM	P614	7:43 AM	9:35 AM
P617	8:00 AM	9:49 AM	P616	8:23 AM	10:20 AM
P619	9:00 AM	10:54 AM	P618	9:23 AM	11:20 AM
P621	10:00 AM	11:54 AM	P620	10:23 AM	12:20 PM
P623	11:00 AM	12:54 PM	P622	11:23 AM	1:20 PM
P625	12:00 PM	1:54 PM	P624	12:23 PM	2:20 PM
P627	1:00 PM	2:54 PM	P626	1:23 PM	3:20 PM
P629	2:00 PM	3:56 PM	P628	2:23 PM	4:20 PM
P631	3:00 PM	5:12 PM	P630	3:13 PM	5:10 PM
P633	3:30 PM	5:26 PM	P632	3:53 PM	5:55 PM
P635	4:00 PM	6:12 PM	P634	4:33 PM	6:25 PM
P637	4:25 PM	6:21 PM	P636	4:53 PM	6:45 PM
P639	5:00 PM	6:56 PM	P638	5:00 PM	7:15 PM
P641	5:30 PM	7:19 PM	P640	5:51 PM	7:43 PM
P643	6:15 PM	8:04 PM	P642	5:58 PM	8:15 PM
P645	6:45 PM	8:34 PM	P644	6:53 PM	8:45 PM
P647	7:40 PM	9:29 PM	P646	7:53 PM	9:45 PM
P649	8:40 PM	10:29 PM	P648	9:43 PM	11:35 PM

Source: SFRTA

Table 3-3: Commuter Rail Weekend and Holiday Operating Schedule

Tri-Rail Weekend Operating Schedule					
Southbound Train			Northbound Train		
Train	*FROM* Mangonia Park	*TO* Hialeah Market	Train	*FROM* Hialeah Market	*TO* Mangonia Park
P661	5:50 AM	7:50 AM	P660	5:20 AM	7:20 AM
P663	6:50 AM	8:50 AM	P662	6:20 AM	8:20 AM
P665	7:50 AM	9:50 AM	P664	7:20 AM	9:20 AM
P667	8:50 AM	10:50 AM	P666	8:20 AM	10:25 AM
P669	9:50 AM	11:50 AM	P668	9:20 AM	11:20 AM
P671	10:50 AM	12:50 PM	P670	10:20 AM	12:20 PM
P673	11:50 AM	1:50 PM	P672	11:20 AM	1:20 PM
P675	12:50 PM	2:50 PM	P674	12:20 PM	2:20 PM
P677	1:50 PM	3:50 PM	P676	1:20 PM	3:20 PM
P679	2:50 PM	4:50 PM	P678	2:20 PM	4:20 PM
P681	3:50 PM	5:50 PM	P680	3:20 PM	5:20 PM
P683	4:50 PM	6:50 PM	P682	4:20 PM	6:20 PM
P685	5:50 PM	7:50 PM	P684	5:20 PM	7:20 PM
P687	6:50 PM	8:50 PM	P686	6:20 PM	8:20 PM
P689	9:00 PM	11:00 PM	P688	9:45 PM	11:45 PM

Source: SFRTA

Commuter Rail Passenger Activity

Table 3-4 summarizes the average weekly boardings at each Tri-Rail station during 2012. The top three stations for weekday boardings include Metrorail Transfer, Boca Raton and West Palm Beach. The top station for weekend and holiday boardings also is Metrorail Transfer, followed by West Palm Beach and Lake Worth. The three stations with the least number of boardings are Delray Beach, Sheridan Street, and Opa-locka. This ranking is consistent for both weekday and weekend/holiday travel.

SFRTA conducted the 2013 SFRTA On-Board Survey of Tri-Rail riders in February 2013, the results of which provide information on commuter rail passenger travel activity. Table 3-5 summarizes the northbound passenger activity observed during the 2013 SFRTA On-Board Survey. During the morning travel period, the Metrorail Transfer, Golden Glades, and Fort Lauderdale stations had the greatest number of passengers boarding the trains and traveling northbound. Northbound passengers most frequently disembarked the trains at the Boca Raton, West Palm Beach, and Mangonia Park stations. During the evening travel period, the Hialeah Market, Metrorail Transfer, and Boca Raton stations experienced the greatest number of passengers boarding the trains, whereas passengers most frequently disembarked in the evening at the Lake Worth, West Palm Beach, and Mangonia Park stations.

Table 3-4: Average Weekly Boardings by Tri-Rail Station (CY 2012)

Station	WEEKDAY		WEEKEND/HOLIDAY	
	Avg. Weekday Boardings	Rank	Avg. Weekend Boardings	Rank
Mangonia Park	898	6th	500	10th
West Palm Beach	1,104	3rd	917	2nd
Lake Worth	853	7th	833	3rd
Boynton Beach	754	10th	449	12th
Delray Beach	596	15th	386	15th
Boca Raton	1,329	2nd	436	13th
Deerfield Beach	734	11th	431	14th
Pompano Beach	828	8th	511	9th
Cypress Creek	1,064	4th	567	7th
Fort Lauderdale	936	5th	655	5th
FLL at Dania Beach	805	9th	651	6th
Sheridan Street	408	16th	245	16th
Hollywood	694	12th	553	8th
Golden Glades	615	14th	500	10th
Opa-locka	294	17th	187	17th
Metrorail Transfer	1,428	1st	1,330	1st
Hialeah Market/Miami Airport	660	13th	660	4th
Total Boardings	**14,000**		**9,811**	

Source: SFRTA

Table 3-5: Northbound Passenger Activity by Tri-Rail Station

Northbound Station Activity						
Station	Total Ons	Total Offs	AM		PM	
			Ons	Offs	Ons	Offs
Hialeah Market	847	0	358	0	489	0
Metrorail Transfer	1328	26	479	13	849	13
Opa-Locka	337	28	157	8	180	20
Golden Glades	541	100	368	30	173	70
Hollywood	465	233	292	96	173	137
Sheridan Street	336	124	220	56	116	296
FLL/Dania Beach	542	307	248	149	294	158
Fort Lauderdale	671	309	368	126	303	183
Cypress Creek	606	582	327	354	279	228
Pompano Beach	439	428	259	213	180	215
Deerfield Beach	357	507	192	228	165	279
Boca Raton	682	949	278	795	404	154
Delray Beach	267	464	184	236	83	228
Boynton Beach	337	625	267	159	70	466
Lake Worth	145	834	96	250	49	584
West Palm Beach	47	1255	13	692	34	563
Mangonia Park	0	1176	0	701	0	475
TOTAL	**7,947**	**7,947**	**4,106**	**4,106**	**3,841**	**3,841**

Source: 2013 SFRTA On-Board Survey

Table 3-6 summarizes the southbound passenger activity observed during the 2013 SFRTA On-Board Survey. During the morning travel period, the three northernmost stations (Mangonia Park, West Palm Beach, and Lake Worth) had the greatest number of passengers boarding the trains. The greatest number of morning passengers disembarked at the Boca Raton, Metrorail Transfer, and Hialeah Market stations. This indicates that morning passengers were traveling from West Palm Beach to the Boca Raton and Miami employment centers. During the evening travel period, the Mangonia Park, West Palm Beach, and Boca Raton stations had the most passengers boarding the trains, whereas afternoon passengers disembarked at stations throughout the study area, though most frequently at the Metrorail Transfer station.

Table 3-6: Southbound Passenger Activity by Tri-Rail Station

Southbound Station Activity						
Station	**TOTAL ONS**	**TOTAL OFFS**	**AM**		**PM**	
			ONS	**OFFS**	**ONS**	**OFFS**
Mangonia Park	1,136	0	430	0	706	0
West Palm Beach	1,277	67	525	23	752	44
Lake Worth	832	203	536	45	296	158
Boynton Beach	588	303	397	78	191	225
Delray Beach	437	296	246	102	191	194
Boca Raton	961	666	212	421	749	245
Deerfield Beach	465	348	270	145	195	203
Pompano Beach	380	410	203	157	177	253
Cypress Creek	491	576	205	274	286	302
Fort Lauderdale	334	678	173	331	161	347
FLL at Dania Beach	268	484	142	249	126	235
Sheridan Street	116	316	65	105	51	211
Hollywood	258	449	164	124	94	325
Golden Glades	87	532	52	178	35	354
Opa-locka	46	293	29	145	17	148
Metrorail Transfer	32	1,324	18	845	14	479
Hialeah Market	0	763	0	445	0	318
TOTAL	**7,708**	**7,708**	**3,667**	**3,667**	**4,041**	**4,041**

Source: 2013 SFRTA On-Board Survey.

Table 3-7 summarizes passenger count characteristics resulting from the 2013 SFRTA On-Board Survey. Key highlights include the following:

- The number of total boardings was evenly split between the morning (AM) travel period (49.7%) and evening (PM) travel period (50.3%).
- There were slightly more boardings for northbound travel (53%) versus boardings for southbound travel (47%) during the morning travel period. During the evening travel period, the directional split was more evenly split, with 49 percent of passengers boarding traveling northbound and the remaining 51 percent of passengers traveling southbound.
- The heaviest northbound train carried 610 passengers, whereas the heaviest southbound train carried 612 passengers.

- The Metrorail Transfer station had the largest number of boardings for northbound passengers in both the morning and evening travel periods. The West Palm Beach station had the largest number of passengers boarding and traveling southbound in both the morning and evening travel period.
- Traveling northbound, the Boca Raton station had the largest number of passengers disembarking (alighting) the trains during the morning travel period; the Lake Worth station had the largest number of alightings by morning travelers. Traveling southbound, the Metrorail Transfer station had the largest number of passengers alighting the trains during both the morning and evening travel periods.

Table 3-7: 2013 SFRTA On-Board Survey Passenger Count Characteristics

Passenger Count Results			
Total Boardings: 15,655			
AM		**PM**	
Total Boardings: 7,773 (49.7%)		*Total Boardings: 7,882 (50.3%)*	
Northbound	Southbound	Northbound	Southbound
4,106 (53%)	3,667 (47%)	3,841 (49%)	4,041 (51%)
Heaviest Boardings		Heaviest Boardings	
Northbound	Southbound	Northbound	Southbound
Metrorail Transfer (429)	West Palm Beach (525)	Metrorail Transfer (849)	West Palm Beach (752)
Heaviest Alightings		Heaviest Alightings	
Northbound	Southbound	Northbound	Southbound
Boca Raton (795)	Metrorail Transfer (525)	Lake Worth (584)	Metrorail Transfer (479)
Northbound		**Southbound**	
Total Boardings: 7,947 (50.7%)		*Total Boardings: 7,708 (49.3%)*	
AM:	PM	AM	PM
4,106 (52%)	3,841 (48%)	3,667 (46%)	4,041 (54%)
Peak Load: 368		Peak Load: 336	
Load Point: Train 608 at Lake Worth		Load Point: Train 633 at West Palm Beach	
Heaviest NB Train 608/610 passengers		Heaviest SB Train 633/612 passengers	

Source: 2013 SFRTA On-Board Survey

Commuter Rail Capital Equipment and Rolling Stock

Table 3-8 provides SFRTA's inventory of rolling stock by type of vehicle. Table 3-9 provides an overview of the different categories of equipment in SFRTA's broader capital inventory; the estimated useful life of each equipment category also is shown.

Table 3-8: Inventory of Commuter Rail Rolling Stock

SFRTA Rolling Stock		
Vehicles	**Number**	**Status**
Locomotives		
• MK F40 PHL (802, 803, 805) • MK F40 PHL (801, 804) • MK F40 PHM-2C (807-809) • EMD F40 PHR (810, 811) • EMD GP 49PH (812-817)	3 2 3 2 6	To be retired Used for parts
In Operation	14	
• Brookville BL 36 PH	12	On Order
Cab Cars		
• Bombardier Cab Car (501-511) • Hyundai/Rotem Cab Cars (512-515)	11 4	
Current Cab Cars	15	
• Hyundai/Rotem Cab Cars	6	On Order
Coaches		
• Bombardier Coaches (1001-1015) • Hyundai/Rotem Coaches (1101-1102)	15 2	
Current Cab Cars	17	
• Hyundai/Rotem Coaches	12	On Order
DMU		
• Colorado Rail Car Power Car (703-706) • Colorado Rail Car Trailers (7001-7002)	4 2	
Total Diesel Multiple Units	6	

Source: SFRTA

Table 3-9: Commuter Rail Capital Equipment Useful Life

SFRTA Capital Equipment	
Equipment	**Estimated Useful Life (yrs)**
Rail track	30
Rolling stock	25
Ticket vending machines	15
Stations	15
Hialeah Yard	5
Leasehold improvements	15
Furniture/fixtures/office equipment	5
Bridges	45
Repairable parts	5
Automobiles	5
Other fixed assets	5
Computer Equipment	3

Source: 2012 SFRTA Comprehensive Annual Financial Report

Park-and-Ride Facilities

SFRTA provides free parking at Tri-Rail stations as a convenience to riders. Table 3-10 provides the inventory of available parking capacity at each SFRTA park-and-ride facility, as well as a summary of the occupancy observed during the 2013 SFRTA On-Board Survey.

For all but two of the 17 stations (Pompano Beach and Cypress Creek), parking occupancy was 60 percent or higher, based on the results of the SFRTA 2013 On-Board Survey. Parking occupancy was greater than 80 percent for 6 stations, with the Hollywood and Hialeah Market stations experiencing the greatest parking occupancy rates, approximately 96 percent and 104 percent, respectively.

Table 3-10: SFRTA Park-and-Ride Location, Capacity and Occupancy

Tri-Rail Parking Occupancy – February 13, 2013			
Tri-Rail Station	**Total Parking Spaces**	**Parking Count**	**Occupancy**
Mangonia Park	272	225	82.7%
West Palm Beach	231	157	67.9%
Lake Worth	225	178	79.1%
Boynton Beach	324	184	56.8%
Delray Beach	129	87	67.4%
Boca Raton	159	109	68.5%
Deerfield Beach	236	143	60.5%
Pompano Beach	298	121	40.6%
Cypress Creek	345	175	50.7%
Fort Lauderdale	325	219	67.4%
FLL at Dania Beach	450	205	45.5%
Sheridan Street	470	323	68.7%
Hollywood	110	106	96.3%
Golden Glades	205	181	88.2%
Opa-locka	72	60	83.3%
Metrorail Transfer	44	38	86.3%
Hialeah Market	164	170	103.6%
TOTAL	**4,059**	**2,681**	**66.1%**

Source: 2013 SFRTA On-Board Survey

Fare Structure and Programs

The Tri-Rail system consists of six fare zones. Weekday fare is determined by the number of zones through which a passenger travels. Fares range from $2.50 to $6.90 per one-way trip and $4.40 to $11.55 per round trip. SFRTA recently implemented the EASY Card, Tri-Rail's automated fare collection system. Users are able to add cash values of up to $150 to pay fares, or they can load the card with all of Tri-Rail's different fare products, including monthly, multi-trip, or weekend passes. The EASY Card

can also be used to pay fares for service on Miami-Dade Transit routes, including Metrorail and Metrobus.

To enhance commuter benefits and to meet the needs of employees of area businesses throughout the tri-county region, SFRTA has developed the Employer Discount Program (EDP). Through the EDP, employees of registered companies can save 25 percent off Tri-Rail fares on monthly and 12-trip passes. To-date, more than 2,600 companies have signed up to receive benefits under the EDP.

SFRTA does not charge passengers extra for its connecting shuttle bus service.

Table 3-11 provides an overview of SFRTA's existing fare structure for Tri-Rail.

Table 3-11: Commuter Rail Fare Structure

SFRTA Tri-Rail Fare Structure						
	Zone 1	**Zone 2**	**Zone 3**	**Zone 4**	**Zone 5**	**Zone 6**
One-Way or Two-Way Discount	$2.50	$3.75	$5.00	$5.65	$6.25	$6.90
One-Way Discount	$1.25	$1.90	$2.50	$2.80	$3.15	$3.45
Two-Way (per One-Way trip)	$4.40 ($2.20)	$6.25 ($3.12)	$8.45 ($4.22)	$9.70 ($4.85)	$10.65 ($5.32)	$11.55 ($5.77)
12 Trip Ticket (per One-Way trip)	$21.25 ($1.77)	$31.25 ($2.60)	$41.90 ($3.49)	$47.50 ($3.96)	$52.50 ($4.37)	$57.50 ($4.79)
12 Trip Employer Discount Program (per One-Way trip)	$15.95 ($1.33)	$23.45 ($1.95)	$31.40 ($2.62)	$35.65 ($2.97)	$39.40 ($3.28)	$43.15 ($3.60)
Monthly Pass	$100.00					
Monthly Discount	$50.00					
Monthly Employer Discount Program	$75.00					
Regional Pass	$140.00					
Regional Discount	$70.00					
Regional Employer Discount Program	$115.00					
Weekend One- or Two-Way Travel	$5.00					
Weekend Discount Travel	$2.50					

Source: SFRTA

3.1.3: SFRTA EFFORTS AND ACCOMPLISHMENTS SINCE LAST TDP

Since the adoption of the last SFRTA TDP Major Update in 2008, the agency has accomplished several initiatives and participated in a number of activities that have set the tone for the agency's vision for the next 10 years. SFRTA's efforts and accomplishments since the 2008 Major TDP Update are summarized below.

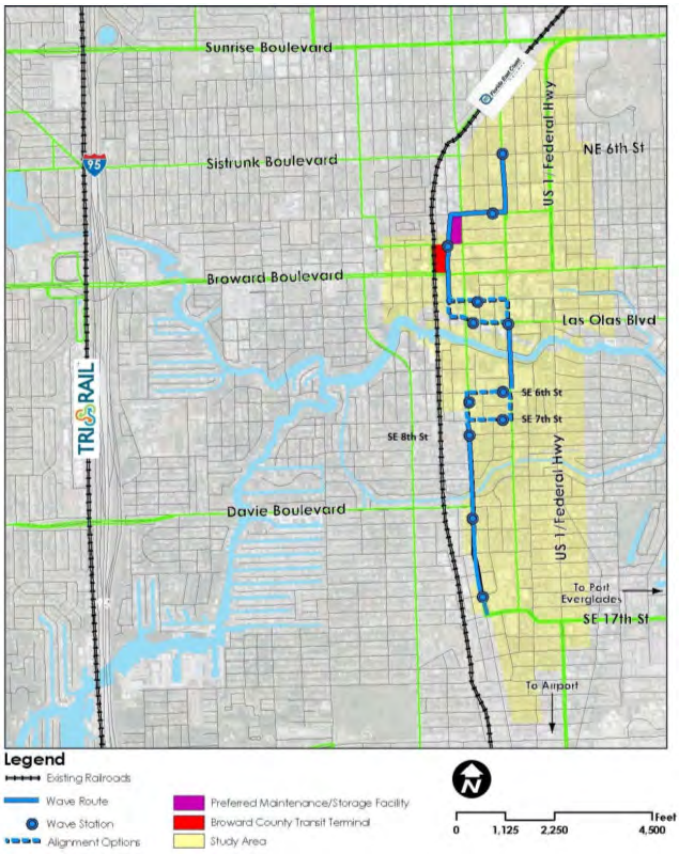
Premium Transit Implementation

The WAVE, Downtown Fort Lauderdale Modern Streetcar

SFRTA has partnered with the Fort Lauderdale Downtown Development Authority (DDA), the Broward MPO, Broward County, Broward County Transit, the City of Fort Lauderdale, and FDOT to bring The WAVE streetcar project to Downtown Fort Lauderdale. The WAVE will operate along a 2.7-mile corridor that will connect and circulate the downtown area and connect to regional bus and rail systems currently and planned in the area; the proposed route is shown in Figure 3-4 below. It is anticipated that this project will bring private investment, growth, and jobs to Downtown Fort Lauderdale.

As the project sponsor, SFRTA will administer the $18 million grant awarded to the SFRTA through the Federal Transit Administration (FTA) Transportation Investment Generating Economic Recovery (TIGER) program in June, 2012 and also lead the planning, environmental review, design, vehicle procurement, and construction of the planned streetcar system. In April 2013, the partnership agreement detailing the planning, finance, design, implementation, project sponsorship, ownership, and maintenance roles agreed among the regional team of partners was signed, which will allow the FTA to release the $18 million TIGER funds. SFRTA will also sponsor an application for additional capital funds under the FTA's Small Starts Discretionary Grant Program in Summer 2013.

Figure 3-4: The WAVE Streetcar Route



Tri-Rail Coastal Link

SFRTA has been part of the South Florida East Coast Corridor (SFECC) Study partnership dating back to its inception in 2004. SFRTA has worked with its partner agencies over the past two years to accelerate the process to expand Tri-Rail service onto the FEC Railway. Recent technical coordination with FDOT, the region's MPOs, and regional planning councils (RPCs) has resulted in planning for achievable and affordable alternatives that are fully integrated with the existing Tri-Rail system. SFRTA's recent outreach and engagement with municipalities on a station area market and economic analysis has resulted in the direct project benefits to cities being quantified for the first time.

In 2013, the region's MPOs and RPCs, under the umbrella of the Southeast Florida Transportation Council (SEFTC), worked to develop a Memorandum of Understanding (MOU) that establishes clear roles and responsibilities for the project going forward. As part of the MOU, SFRTA has been identified as the FTA Project Sponsor and designated federal grant recipient, as well as the lead agency for the project financial plan, engineering, design, construction, and operations. The MOU also identifies the project as the Tri-Rail Coastal Link, a new name that was approved by the SFECC Steering Committee in March 2013.

South Florida Rail Corridor

In March 2013, SFRTA executed an agreement to take over the SFRC dispatch and maintenance of way on the CSX tracks. The agency is working towards an implementation date of December 2014. This agreement will allow SFRTA to provide more reliable service as SFRTA will control Tri-Rail's trains movement, but also CSX Transportation freight trains and Amtrak intercity passenger trains.

SFRTA will also serve as the "Host Railroad" for Positive Train Control (PTC) purposes as well as provide oversight and management of the Hialeah Yard and provide all flagging services on the corridor. The agency will also be responsible for rail crossings.

Regional Leadership and Coordination

SFRTA has always strived for effective and extensive coordination with its partner agencies. Those efforts have increased over the last five years as new initiatives emerge. These include the following.

Transportation Workshops

- In Fall 2008, SFRTA held transportation workshops in each of the three counties in the South Florida region. These workshops brought together members of the general public with those working within private and public sectors to discuss issues surrounding public transportation. This culminated with the 2009 SFRTA Transportation Summit, which brought national leaders to South Florida to discuss the region's public transportation and financial needs.

- A West Palm Beach FEC Corridor charrette was held in January 2010. The report resulted in community direction on station locations along the FEC in West Palm Beach, as well as the location of a rail connection between the FEC and the South Florida Rail Corridor.
- On April 23, 2010, the SFRTA Governing Board held a transportation planning workshop. This informative workshop was held after the Governing Board's monthly meeting and was an informative session for SFRTA Board Members and the public. The focus of the workshop was on the transportation plans of each MPO in the tri-county area, SEFTC, FDOT Districts 4 and 6, and SFRTA.

Transportation Studies

- SFRTA has partnered with the City of Fort Lauderdale, the Broward MPO, and FDOT for the Broward Boulevard Gateway and Downtown Mobility Hub Project. This project is aimed at developing a well-coordinated land use and transportation vision for the corridor and will include a gateway master plan, a mobility HUB walkability initiative, and a joint development agreement.
- SFRTA has participated in the Miami-Dade MPO's Sustainability and The Transportation System study, which identified strategies to improve the sustainability of the county's transportation system.

SFRTA has and continues to participate in studies/committees throughout the South Florida region, as are summarized in Table 3-12.

Table 3-12: SFRTA Participation in Transportation Studies/Committees

Regional Project Studies/Committees	SFRTA Participation/Involvement
Southeast Florida Transportation Council (SEFTC)	Regional Transportation Technical Advisory Committee
South Florida East Coast Corridor (SFECC) Study	Steering Committee
Tri-Rail Coastal Link	Steering Committee and Finance Sub-Committee
Miami-Dade MPO	Transportation Planning Technical Advisory Committee and LRTP Steering Committee
Broward MPO	Technical Coordinating Committee and LRTP Steering Committee
Palm Beach MPO	Technical Advisory Committee
Broward County Transit Development Plan	Advisory Review Committee
Central Broward East-West Transit Study	Technical Advisory Group
Oakland Park Boulevard Transit Study	Technical Advisory Committee
University Drive Mobility Improvements Planning Study	Project Advisory Committee
Hollywood/Pines Boulevard Corridor Project	Project Advisory Committee
Glades Road Mobility Study	Kick-Off Meeting
Urban Land Institute – Southeast Florida/ Caribbean	Infrastructure Committee and Transportation Subcommittee

Source: SFRTA

Shuttle Bus Program

In September 2008, SFRTA implemented the new Fort Lauderdale/Hollywood International Airport Circulator. This shuttle service runs 20–30 minute continuous loops between the airport and the Airport Tri-Rail Station at Dania Beach. The SFRTA Shuttle Bus Service and Financial Assessment Study, completed in 2009 (Phase I) and in 2010 (Phase II), identified the following new routes to be implemented within the next five years:

- Collaboration with the Downtown Fort Lauderdale Transportation Management Association (TMA) to expand its Northwest Circulator Route to connect to the Fort Lauderdale Tri-Rail station (weekday operation) – implemented October 2010
- Fort Lauderdale-Hospital Route (weekday peak operation) – implemented December 2010
- Lake Worth Palm Beach State College/Palm Beach County School Board/South Florida Water Management District Route (weekday peak operation) – implemented December 2010
- Fort Lauderdale-Downtown/Hospital Route (weekend operation)- implemented January 2011
- Opa-locka South Route (weekday operation) – implemented February 2011

Among other standards, the Shuttle Bus Service and Financial Assessment Study established a minimum threshold for route ridership of seven passengers per hour. The implemented routes noted above have all surpassed that minimum and are now among SFRTA's higher ridership shuttle routes. SFRTA now funds and/or operates approximately 20 shuttle routes and recently surpassed one million passengers in calendar year 2012. Since July 2010, shuttle bus ridership has more than doubled, and the surge in ridership has increased overall cost efficiency. In February 2011, the shuttle bus cost per passenger was $6.64; two years later, that cost was reduced by more than half, to $3.13 per passenger.

The shuttle system is an important part of the Tri-Rail system moving forward, as nearly 25 percent of all rail passengers use shuttle service at some point in their daily trips. The shuttle system has become more popular due to an agency-wide focus on efficiency, collaborative private-public partnerships, and a user-friendly marketing approach.

Capital Improvements

New Rolling Stock

Over the past five years, SFRTA purchased 12 new locomotives. These environmentally-friendly locomotives will help SFRTA save on operating costs by featuring improved fuel efficiency, idling/shut-off features, and lower emissions. Additionally, 24 new railcars have been purchased. Ten of these cars are currently in service, with the remainder to be delivered to SFRTA by the end of 2013. These high-tech railcars provide needed capacity and operational flexibility to operate both the existing Tri-Rail system, as well as the Tri-Rail Coastal Link expansion.

Station Improvements

SFRTA has continued to perform heavy maintenance at all of its Tri-Rail stations. These activities include the regular repairs, painting, and upkeep of the parking lots and station platforms. In addition, the agency has revised its Station Design Guidelines to incorporate "green" building initiatives. These guidelines will be used in all new stations, as well as any major station renovations.

Parking Enhancements

- The Tri-Rail Parking and Circulation Study, completed in 2007, identified parking needs based on moderate growth. A year after the study was completed, an update was needed to respond to the increase in parking demand resulting from the boost in ridership. The document was updated in 2008 based on a revised station parking demand forecast and parking improvement strategies. The study estimated parking demand at each station for both short-term (2015) and long-term (2025) scenarios. Parking occupancy is continually monitored quarterly at all SFRTA parking facilities.
- To monitor demand for parking at its stations, the SFRTA closely analyzed the parking needs and strategies along the Tri-Rail system. This includes the completion of the SFRTA Parking Management Study in 2010, regular parking lot utilization counts, and individual projects to increase capacity at certain stations. These are summarized below:
    - The West Palm Beach Intermodal Center was fully completed in August 2009. This included a new parking lot that added 163 parking spaces (118 public and 45 employee spaces), motorcycle and scooter parking, 20 bicycle lockers, sidewalks, and a drop-off lane.
    - A 402-space, 3-level parking garage on the west side of the Fort Lauderdale Airport Station was completed in September 2010. This garage added 222 parking spaces and 12 motorcycle spaces to the west side of the station. It also features LED lighting, machine-room-less elevators, and efficient vehicular circulation for buses, taxis, and kiss-and-ride.
    - Improvements for the Cypress Creek Tri-Rail Station were completed in 2011. A new surface lot added 358 new parking spaces. The new parking lot also includes new sidewalks, bicycle racks, ADA ramps, motorcycle parking, and a bus lane and canopy. The Lake Worth Tri-Rail Station also received parking enhancements. The parking lot received new bus drop-off lanes to improve bus circulation and was rewired for LED lighting.
    - The Opa-locka Tri-Rail station is currently undergoing a parking lot expansion, which will create an additional 74 spaces. The agency is now working through the federal National Environmental Policy Act (NEPA) approval process. Construction is anticipated to begin in 2013.

Bicycle Locker Program

Bicycle lockers have been implemented system wide. The SFRTA bicycle locker program is the fourth largest bicycle locker program to be implemented by a public agency in the United States. Currently, there are approximately 600 lockers installed at stations for passenger use.

Hialeah Yard Maintenance Facility

The Hialeah Yard Maintenance Facility has been upgraded. Construction of new storage tracks, a new fueling facility, and an inspection pit have been completed.

EASY Card

In August 2008, the SFRTA Governing Board approved SFRTA to enter into negotiations for the procurement of a new fare collection system. In February 2010, SFRTA entered into a contract with Cubic Transportation Systems, Inc., and in February 2011, the new fare collection system was implemented. The new system, named EASY Card, is fully integrated into the Miami Dade Transit (MDT) fare system and shares the central computer system. The system has the technical capabilities to process and maintain a regional fare card program. A regional fare card program has been established between SFRTA and MDT by extending the EASY Card, already in use by MDT, into the SFRTA system. In addition to seamlessly integrating with MDT, the EASY Card offers discounted transfers on both Broward County Transit (BCT) and Palm Tran regular bus fares.

Transit-Oriented Development (TOD) Activities and Opportunities at Tri-Rail Stations

For many years, SFRTA and its partner agencies have been engaged in various efforts to advance new transit-oriented development (TOD) projects at Tri-Rail stations. Before the recession hit in 2008, many of the stations along the existing Tri-Rail line had active TOD plans or initiatives that were moving forward. Unfortunately, the global economic downturn and the housing market crash created havoc in South Florida, devastating the real estate development and construction industry. One of the many negative outcomes of the recession was the stalling and/or cancellation of various TOD projects and initiatives at Tri-Rail stations.

However, the recent economic recovery and improving housing market in the region have sparked a renewed interest in TOD and has renewed efforts to facilitate such development. TOD planning conducted in past years is now poised to be put into action. For example, various charrettes on which SFRTA partnered over the years with agencies such as the region's RPCs and MPOs, FDOT, and local governments are now the basis for some of the current TOD initiatives near existing Tri-Rail stations and future Tri-Rail Coastal Link stations on the FEC corridor. Current trends that show an increased preference for housing and commercial spaces near transit will likely prompt more of the concepts and community visions that were established as part of these charrettes and will earn serious consideration by local governments and developers in the coming months and years.

Over the past 12 months, a number of new TOD-related analyses and efforts have taken place in the region. Some of these include FDOT's completion of a statewide TOD guidebook in December 2012 and the region's participation in Reconnecting America's "Financing TOD and Infill Supportive Infrastructure Peer Exchange" in February 2013. In addition, SFRTA has worked with the Urban Land Institute's (ULI) Southeast Caribbean chapter on two recent TOD-related events with extensive developer involvement.

A joint SFRTA-ULI-sponsored TOD developer brainstorming session in November 2012 provided valuable insight and guidance from 10 of the region's most prominent urban developers. A larger scale SFRTA-ULI event in April 2013, "Development Opportunities on the FEC Corridor: An Interactive Forum," had 250 attendees and included a showcase that allowed cities to show off their potential TOD sites to members of the development community. One of the products of the April 2013 SFRTA-ULI event is *Tri-Rail Coastal Link Station Area Opportunities*, a compilation of local plans that includes a detailed analysis that quantifies development potential and tax revenue around future Tri-Rail Coastal Link stations. *Tri-Rail Coastal Link Station Area Opportunities* is available online at www.sfrta.fl.gov.

In addition to data on future FEC corridor stations, *Tri-Rail Coastal Link Station Area Opportunities* also contains valuable information on the characteristics of the areas surrounding existing Tri-Rail stations, including demographics, housing, employment and land use data. However, to further facilitate a better understanding of the TOD opportunities and activities along the existing Tri-Rail system, a brief status report for each station is presented.

Mangonia Park

The vacant former Palm Beach jai-alai fronton site is the key to future TOD development at the Mangonia Park Station. Totaling more than 45 acres (almost as large as the successful Midtown Miami redevelopment along the FEC corridor), the site is privately-owned and sits immediately southwest of the station. Currently, there are no active development plans for the site. Despite this large vacancy adjacent to the station, Mangonia Park continues to attract strong ridership, with the 4th highest ridership on weekdays. SFRTA hopes to work with the Town of Mangonia Park, private landowners, and other partners to facilitate development on the fronton site.

West Palm Beach

TOD implementation at the West Palm Beach Station is progressing. A private developer and Palm Beach County are in negotiations to acquire land to construct a new mixed-use development on the west side of the station. SFRTA has worked with the developer to reserve 250 spaces in the TOD project's future parking garage for Tri-Rail patrons. The TOD concept now moving forward at the West Palm Beach Station stems from the SFRTA's multi-party "Transit Village" charrette in 2005 that evaluated the station's development potential.

Lake Worth

Various challenges and opportunities at the Lake Worth Station were identified as part of the Lake Worth Transit-Oriented Development Charrette conducted by the Treasure Coast Regional Planning Council in 2008. The charrette investigated TOD opportunities at future Lake Worth stations on the FEC corridor and at the existing Lake Worth Tri-Rail Station. TOD opportunities on the east side of the station are challenging due to the presence of an elevated section of Interstate 95. The charrette's Citizens' Master Plan proposed an appropriately scaled "Transit Village" on a 6.5-acre privately-owned

parcel located immediately west of the station. However, the transit village concept on this site has not moved forward. SFRTA hopes to work with the City of Lake Worth and other key partners in the coming years to advance this concept further.

Boynton Beach

While not immediately adjacent to the Boynton Beach Tri-Rail Station, new development activity (part of the Quantum Park development, within one-half mile west and south of the station) has occurred in recent years. Through its established relationship with Treasure Coast Regional Planning Council, The City of Boynton Beach has moved forward recently with transit supportive amendments to its comprehensive plan and is contemplating zoning and regulatory changes that would spur TOD at both the existing Tri-Rail station and the future FEC corridor station. While no development activities are currently taking place at the Boynton Beach Tri-Rail Station, but it is one of the few locations where SFRTA has land holdings large enough to accommodate a future TOD project.

Delray Beach

Palm Beach County is the primary land owner at the Delray Beach Tri-Rail Station, as the South County Government Center is located immediately to the west. Various TOD concepts have been discussed for this station area over the years, with a new parking garage to serve both Tri-Rail patrons and a new development identified as a critical element. SFRTA hopes to work with Palm Beach County and the City of Delray Beach to maximize the potential of this station area and collaborate on infrastructure that will facilitate TOD investment.

Boca Raton

The Boca Raton station has recently become the Tri-Rail station with the highest weekday ridership. Office and retail development in the area just west and southwest of the Boca Raton Station has occurred in recent years. SFRTA owns land immediately northwest of the station that generated strong developer interest just prior to the recession. Unfortunately, none of the developer proposals that emerged during that period came to fruition. SFRTA hopes to work with the City of Boca Raton and other key partners to bring development activity to the SFRTA parcel in the near term.

Deerfield Beach

Broward County is the primary land owner on the west side of the Deerfield Beach Station, as its North Regional Courthouse is located in close proximity. Parcels on the east side of the station are privately-owned. Prior to the recession, SFRTA worked with the City of Deerfield Beach and a private developer to have the east station area designated for TOD for future land use and zoning. A TOD project on the east side was approved but was never implemented due to the housing market crash and economic downturn. SFRTA hopes to work with the City of Deerfield Beach and other key partners to bring development interest back to this site. Broward MPO Mobility Hub funds may help to provide infrastructure that would facilitate TOD at the Deerfield Beach Station.

Pompano Beach

The Pompano Beach Station will undergo a number of environmentally-friendly upgrades and infrastructure improvements in the near term, resulting in it being SFRTA's first LEED certified station. However, minimal TOD-related activity has taken place at the Pompano Beach Station over the years. SFRTA is now investigating the feasibility of a new headquarters building immediately adjacent to the station, which could spark additional TOD efforts at Pompano Beach.

Cypress Creek

A number of large office buildings are located in close proximity to the Cypress Creek Station. Nearby parcels owned by SFRTA (west side of station) and FDOT (east of Andrews Avenue) that are currently used as park-and-ride lots present opportunities for further development at the station. SFRTA is considering its land on the west side as one of the potential sites for a new headquarters building. An improving office market in the Cypress Creek area and the availability of Broward MPO Mobility Hub funds in the near term may help facilitate station improvements and TOD development at Cypress Creek.

Fort Lauderdale

FDOT is the primary landowner at the Fort Lauderdale Station, as its large park-and-ride lots dominate the landscape on the west side and a combined 15 traffic lanes (mainline and ramps) of Interstate 95 are located immediately to the east. Large parcels within a half-mile west of the station are slated for development by private interests, but the timetable is uncertain. It is expected that the Fort Lauderdale Station will be transformed in the long term, but the station area's numerous highway ramps and unfriendly pedestrian conditions serve as an impediment in the near term. Broward MPO Mobility Hub funds have enabled a study of potential pedestrian and gateway enhancements to the area. The future WAVE Streetcar extension planned from Downtown Fort Lauderdale to the Fort Lauderdale Tri-Rail Station will also serve as a TOD catalyst.

Fort Lauderdale-Hollywood International Airport (FLL) at Dania Beach

The City of Dania Beach is the primary landowner on the west side of the FLL station, which includes parks and educational facilities that are part of the Tigertail Lake Center. Development on the east side of the station has already occurred, including a hotel, the International Game Fish Association Museum, Bass Pro Shops, and Outdoor World. With the west side consisting primarily of park lands and the east side containing relatively new development, future TOD opportunities in the immediate area surrounding the FLL/Dania Beach station will likely be infill supporting the development east of the station with corresponding pedestrian connection improvements.

Sheridan Street

Industrial uses and a farmers market on privately-owned land are located immediately west of the Sheridan Street Station. The east side of the station contains a large park-and-ride lot on tracts owned by FDOT. A large scale mixed-use development was proposed on these east side tracts, but its timing was hampered by the recession. It is hoped that improved economic conditions will allow for FDOT and private developers to bring TOD to this site to transform the character and passenger experience at the Sheridan Street Station.

Hollywood

The Hollywood Tri-Rail Station's TOD prospects are limited due to a number of factors: the station has a small land footprint and challenging access to/from Hollywood Boulevard, is bounded by a park to the north, and has a major interchange of Interstate 95 located immediately to its east. The current Hollywood/Pines Boulevard Corridor Congestion Management Process/Livability Planning Project is investigating a number of concepts that could improve the connectivity and functionality of the Hollywood Tri-Rail Station, but no new TOD activity is anticipated.

Golden Glades

The west side of the Golden Glades Station contains numerous active private industrial properties, none of which have access to the station. The east side of the station consists of large park-and-ride lots owned by FDOT. A charrette and developer forum for the Golden Glades Station area was held as part of the Rail-Volution Conference in Miami in 2007. The charrette, which included developers from all over the U.S., expressed little hope that the Golden Glades Station area was a viable market for a traditional mixed-use TOD. Charrette participants viewed transportation-related uses as being much more viable at Golden Glades. Consistent with these findings, plans have advanced for the Golden Glades Station area to be transformed into a modern transportation hub with improved direct seamless access between different modes. SFRTA hopes to work with FDOT District 6, the Miami-Dade MPO, Miami-Dade Transit, and other potential partners to allow for the construction and ongoing operations and maintenance of an improved Golden Glades multimodal facility.

Opa-locka

Opa-locka's distinctive Moorish architecture and historic character (with 20 buildings listed on the National Register of Historic Places) make it unique among Tri-Rail station areas. Various grant funded initiatives are seeking to bring increased economic development to Opa-locka. The Opa-locka Community Development Corporation and South Florida RPC have engaged SFRTA to conduct a market study to assist in efforts to bring more development to downtown Opa-locka and the area immediately surrounding the Tri-Rail Station. One impediment to large-scale TOD development at Opa-locka is that the majority of parcels in the station area are relatively small in size and have numerous private owners.

Metrorail Transfer (79th Street)

Thousands of transit patrons use the Tri-Rail and Metrorail stations at the Metrorail Transfer Station on a daily basis, but currently there are no TOD plans or projects actively moving forward. The area surrounding the station consists of small parcels and primarily industrial land uses. SFRTA has land holdings on both the east and west sides of the station but, similar to most of the parcels in the area, these are small in size. A community-based group called the 79th Street Neighborhood Initiative was formed many years ago with hopes of revitalizing the area in the vicinity of the station and beyond, but no major development plans or projects have advanced. SFRTA hopes to work with Miami-Dade County, the City of Hialeah, and other key partners to overcome some of the area's challenges and attract additional development activity to the Metrorail Transfer Station.

Hialeah Market

The Hialeah Market Station has a number of characteristics that make future TOD development a challenge. The area around the station primarily has industrial land uses, including sanitation related facilities on the east side of the tracks. A Home Depot store, with a large surface parking lot, is located immediately west of the station. Also, the Airport Expressway (SR 112) is located to the south of the station, creating a barrier and challenging local road access. Currently, there is no TOD-related activity at the Hialeah Market Station. Any future TOD at the station would need to bridge these industrial land uses with the residential neighborhoods and elementary school within walking distance to the west of the station.

Miami Airport

The multi-faceted new Miami Intermodal Center (MIC) will include a new Miami Airport Tri-Rail Station and a joint development component. The MIC joint development component may contain up to 1.4 million square feet of new mixed-use development on land now in public ownership. In addition, the Palmer Lake area to the immediate northeast of the station has promising development potential and has undergone an extensive community planning process in recent years. The Palmer Lake Charrette in 2010 led to the May 2013 adoption of the Palmer Lake Metropolitan Urban Center District by the Miami-Dade Board of County Commissioners. This new district provides development standards that permit mixed residential, retail, office, hotel, and industrial uses. SFRTA looks forward to working with FDOT, Miami-Dade County, and other key partners to facilitate TOD implementation in the area surrounding the new MIC and Tri-Rail Miami Airport Station.

Environmental Sustainability

In October 2008, SFRTA announced its transition to biodiesel fuels. The goal is to operate trains on a 99% blend whenever possible. The transition to biodiesel fuel has resulted in significant environmental and economic benefits and has not caused any operational or performance difficulties. This initiative is supported by FTA.

SFRTA has completed a design plan for its Pompano Beach Green Station Demonstration Project. This new station will be the prototype "green" Tri-Rail station; its various design elements work to reduce energy consumption, generate solar energy, and promote alternative modes of transportation.

Federal Funding/Grants

SFRTA has worked diligently to apply for Federal and State grants to help fund and support efforts that enhance accessibility and mobility for the region. The agency has submitted applications for the enhancement of its shuttle system and has been successful in gaining that funding through the Bus and Bus Facility Livability Grant and the Job Access and Reverse Commute (JARC) program. The Pompano Beach Green Station Demonstration Project received funding through Transit Investment in Greenhouse Gas and Energy Reduction (TIGGER) III and New Freedom (NF) grants.

As the project sponsor for The WAVE, SFRTA received funding through Transportation Investment Generating Economic Recovery (TIGER) IV grants. In 2009, it received $16.2 million under the American Recovery and Reinvestment Act (ARRA) program, which was applied towards the purchase of three new locomotives. In recent years, Transportation Regional Incentive Program (TRIP) grant funds were awarded by FDOT District 4; the $2.25 million was used towards the purchase of 10 new locomotives. SFRTA was also fortunate to have several projects included in the State of Florida Rail Plan, Investment Element. These projects included Hialeah Yard Improvements, Positive Train Control, and Boynton Beach station improvements.

Table 3-13 summarizes grants awarded to SFRTA since FY 2012.

Table 3-13: SFRTA Grant Awards

Grant	Amount Awarded	Project	Award Date
Transit Investments for Greenhouse Gas and Energy Reduction (TIGGER)	$5,713,549	Tri-Rail's Pompano Beach Green Station Demo Project	December 1, 2011
Transportation Investment Generating Economic Recovery Program (TIGER IV)	$18,000,000	The WAVE Streetcar Project	June 1, 2012
Bus Livability	$4,556,000	Alternative Fuel Shuttle Bus Fleet	October 1, 2011
Job Access and Reverse Commute (JARC)	$479,050	SFRTA New Shuttle Bus Routes	September 1, 2010
JARC	$371,800	SFRTA Opa-Locka Shuttle South Route	September 1, 2010
JARC	$273,845	SFRTA Shuttle Service	February 1, 2013
JARC	$10,992	SFRTA Boynton Beach Shuttle Service	February 1, 2013
New Freedom	$960,219	ADA Improvements of Tri-Rail Pompano Green Station Demo Project	May 1, 2012
New Freedom	$1,612,788	ADA Improvements of Tri-Rail Pompano Green Station Demo Project	February 1, 2013

Source: SFRTA

Job Access and Reverse Commute/ New Freedom Designated Recipient

In 2008, FTA informed MDT that the Miami Urbanized Area would lose its FY 2007 JARC and NF funds unless it received applications by July 15, 2009. In February 2009, SFRTA agreed to become the Designated Recipient for JARC Section 5316 and NF Section 5317 funds for the Miami Urbanized Area. In doing this, SFRTA ensured that the region would be able to receive millions of dollars in funding for eligible transportation projects. Since then, SFRTA successfully completed five cycles to distribute funding for FYs 2007–2011. Currently, SFRTA is in the process of completing the last funding cycle, distributing funds for FY 2012.

Customer Support and Outreach

Market Research Initiatives

The SFRTA Public Opinion Study, conducted between November 2008 and January 2009, was designed to capture the public's opinions regarding needs, strategies, and attitudes towards public transportation. Using Web-based, telephone, and focus group survey methods, SFRTA was able to identify the views of the general public.

In October 2008, SFRTA coordinated with FDOT to conduct a Tri-Rail on-board survey. Designed as an update to the 2007 on-board survey, it collected travel pattern information for 6,148 passengers. SFRTA conducted another on-board survey in February 2013. The results from this effort will be compared to the previous effort.

In October 2009, SFRTA invited the public to participate in an online survey and follow-up focus groups. These initiatives were designed to gather the public's opinion on parking strategies for the Tri-Rail Parking Management Study.

Signage and Wayfinding Plan

The Tri-Rail Signage and Wayfinding Plan was completed in June 2009. This effort created a database of existing Tri-Rail signage and a program for sign maintenance. It also identified existing Americans with Disabilities Act (ADA) signage and produced GIS maps that can be used to locate signage in the field. SFRTA maintains a database of all existing wayfinding signage, which is continually monitored for accuracy and good repair.

Train Safety Awareness Week

SFRTA continues its annual participation in Train Safety Awareness Week (TSAW), working with Operation Lifesaver, Amtrak, Bombardier, CSX Transportation, FTA, FDOT, Veolia, and the Wackenhut Corporation, as well as various law-enforcement agencies and first-responder teams throughout the region.

Tri-Rail Mobile Application

A free Tri-Rail phone application was launched on September 2012 for iPhone, iPad, and Android mobile devices. The mobile app is free and allows mobile users to plan their trips by checking for train arrival and departure times, locating the nearest train station, and calculating how much a trip will cost. In addition, mobile app users can get receive notifications on service interruptions, access information to get to popular destinations, and obtain general information of Tri-Rail system.

Industry Involvement

Rail-Volution is a national conference that focuses on building livable communities through land use and transit. SFRTA is a national partner and participates on the National Steering Committee. SFRTA helped plan and organize the following national Rail-Volution conferences:

- San Francisco, 2008
- Boston, 2009
- Portland, 2010
- Washington DC, 2011
- Los Angeles, 2012

SFRTA is continually a partner/sponsor of relevant groups in the transportation industry, including the Conference of Minority Transportation Officials (COMTO) and the Women in Transportation Seminar (WTS), as well as regional transportation summits and other related collaborative opportunities.

Awards

The Florida Association of Public Purchasing Officers (FAPPO) awarded SFRTA's Procurement Department with awards for Excellence in Public Procurement in 2010, 2011, and 2012. This awards program was established to recognize organizational excellence in procurement and recognizes agencies that meet and exceed benchmarks and best practices in the Procurement Profession based on high scores on a rating of standardized criteria. The program is designed to measure innovation, professionalism, e-procurement, productivity, and leadership attributes of the procurement function.

The Government Finance Officers Association (GFOA) awarded SFRTA with 18 Certificates of Achievement for Excellence in Financial Reporting (CAEFR), which are designed to encourage governments to go beyond the minimum requirements and prepare comprehensive annual financial reports that further the spirit of full disclosure.

SFRTA also took top honors in both the American Public Transportation Association (APTA) and the Florida Public Transportation Association (FPTA) marketing awards competitions in 2011, including a Gold Star for APTA's Ad Wheel awards in the Special Events category for "Senior Idol" and a first place award in the Print category for its "Cleared for Take Off" campaign, which promoted service to the region's airports. SFRTA also won two first place awards in FPTA's annual marketing competition; a TV

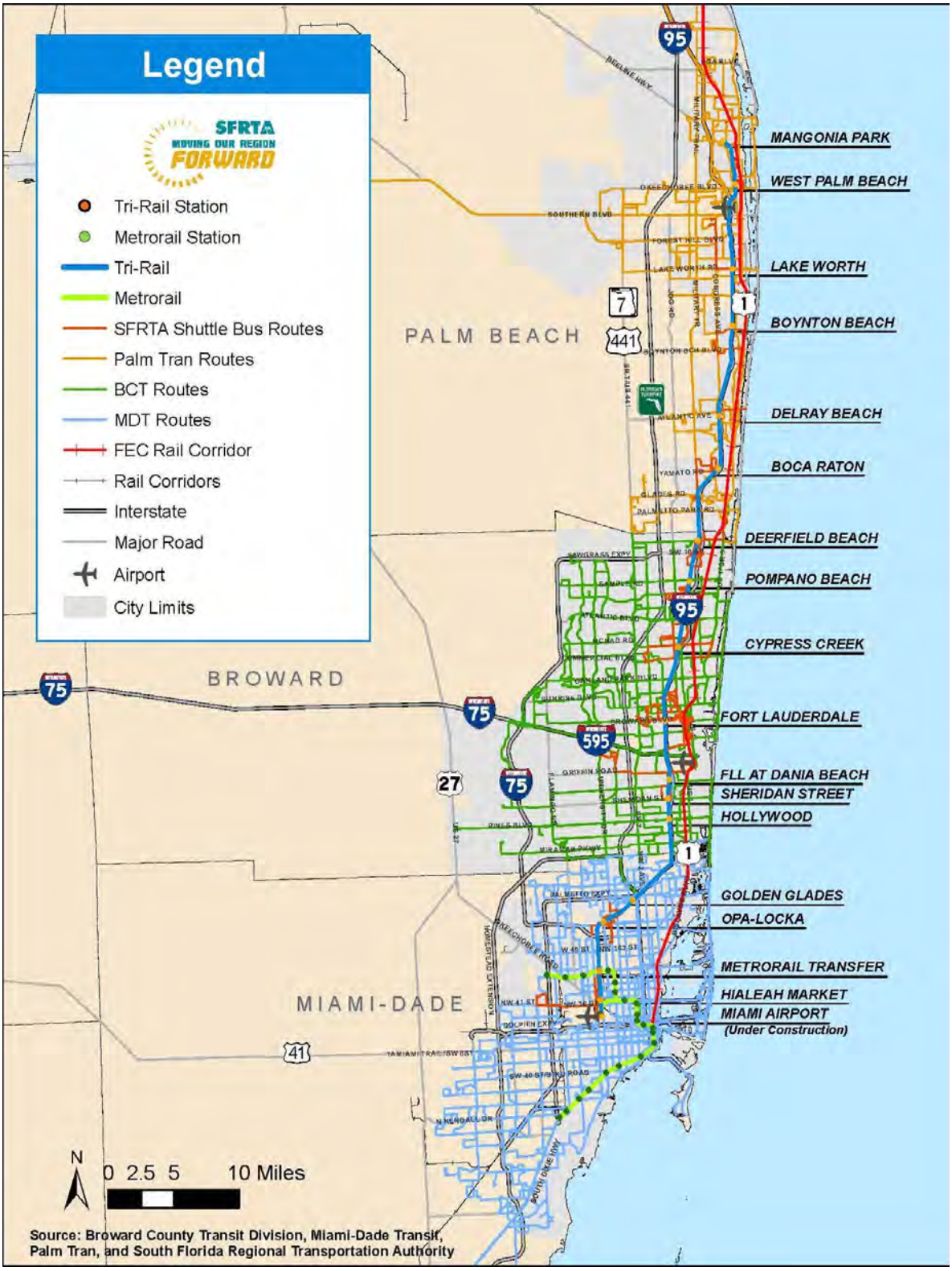
spot created for “Dump the Pump” won in the Electronic Media/Audio/Visual category and the “Cleared for Take Off” poster won in the “Collateral” category.

3.1.4: EXISTING TRANSPORTATION SERVICES—OTHER PROVIDERS

Palm Tran, BCT, and MDT operate fixed-route, circulator, and community shuttle service within the tri-county region that connects to Tri-Rail stations. Connecting service to Metrorail (operated by MDT) is available at the Tri-Rail/Metrorail Transfer Station. This section summarizes transit services provided by Palm Tran, BCT, and MDT, as well as other transportation providers operating in the region.

Map 3-2 illustrates the existing transportation services provided by Palm Tran, BCT, and MDT.

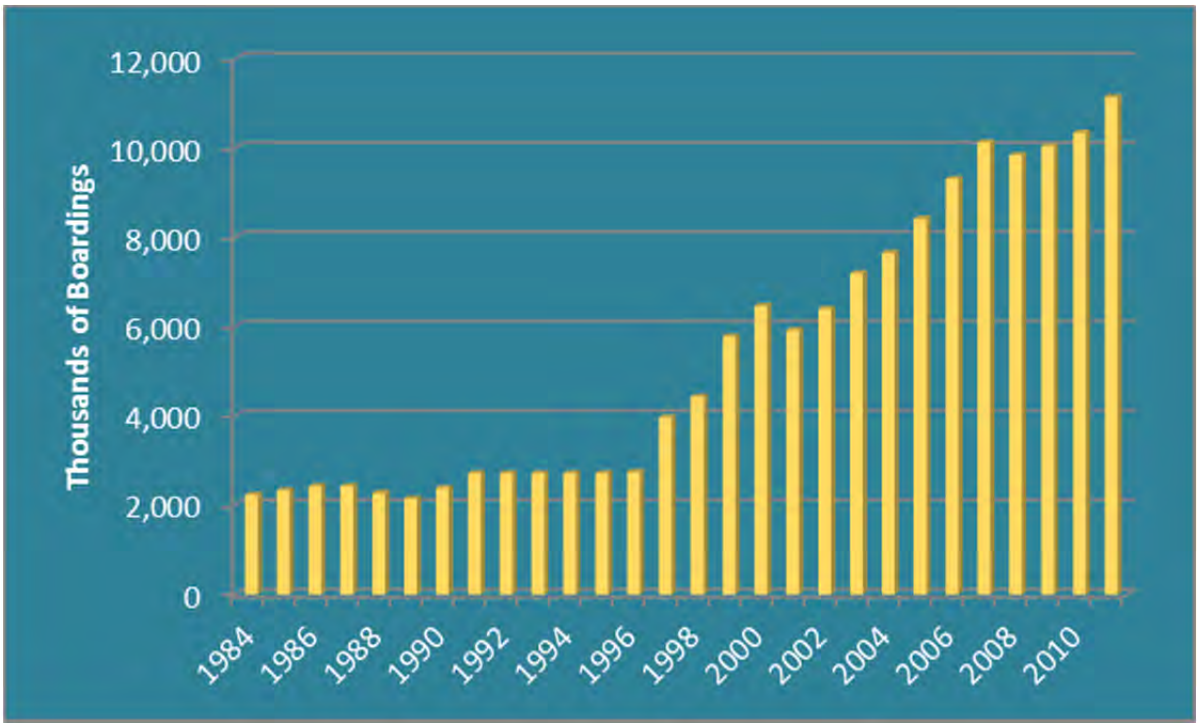
Map 3-2: Existing Transportation Services-Other County Providers



Palm Tran

Palm Tran operates as a department of Palm Beach County. Palm Tran currently operates 34 fixed routes and provides more than10 million trips per year. Operating 7 days a week, Palm Tran provides weekday peak service with 30-minute headways and off-peak and weekend service with 60-minute headways. The majority of fixed-route service is concentrated in the eastern portions of the county between Jupiter and Boca Raton. Three routes (1, 91, and 92) travel into Broward County and connect with BCT Routes 10 and 18. The standard one-way fare on Palm Tran buses is $1.50; 1-Day Passes are $4, and 31-Day Passes are $60. Historical ridership data for Palm Tran is shown in Figure 3-5. Ridership has grown steadily since 1984, with significant growth occurring since 2000.

Figure 3-5: Palm Tran Fixed-Route Bus Historical Ridership Data (FYs 1984–2011)



Source: NTD (FYs 1984-2011)

In addition to its fixed-route service, Palm Tran also serves as the Community Transportation Coordinator (CTC) and provides demand response service known as the Palm Tran Connection. Connection is a shared-ride, door-to-door paratransit service that provides transportation for residents and visitors with disabilities in Palm Beach County. It travels in Palm Beach County from Jupiter to Boca Raton and from Palm Beach to South Bay. The fare for Palm Tran Connection is $3 per one-way trip.

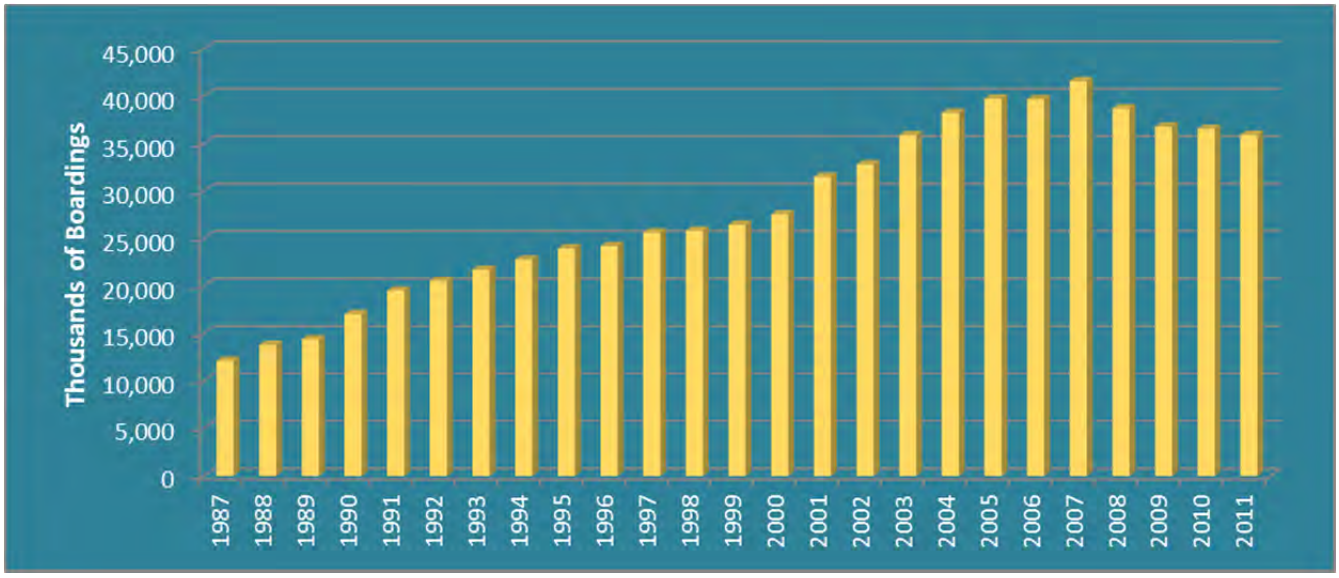
Broward County Transit

BCT provides public transportation services in Broward County, providing fixed-route, community bus, and complementary paratransit service.

BCT Fixed-Route Service

BCT's fixed-route bus services include 42 weekday routes, 30 Saturday routes, and 28 Sunday routes, providing 13.7 million miles of service annually. BCT's fixed routes provide connections to the community's multimodal transportation network and system-wide connections at four transfer terminals: Broward Central Terminal (downtown Fort Lauderdale), West Regional Terminal (Plantation), Lauderhill Mall Transfer Facility (Lauderhill) and Northeast Transit Center (Pompano Beach). The standard one-way fare on BCT is $1.75, an unlimited daily pass is $4, an unlimited 7-Day pass is $16, a 10-Ride pass is $16, and a 31-Day unlimited pass is $58. Historical fixed-route ridership data for BCT are shown in Figure 3-6. Similar to Palm Tran, BCT has experienced significant growth in ridership since 2000.

Figure 3-6: BCT Fixed-Route Bus Historical Ridership Data (FYs 1987-2011)



Source: NTD (FYs 1984-2011).

Broward County Community Bus Service

Broward County Community Bus Service (BCCB) operates in partnership with 18 Broward County municipalities to provide 50 routes. Community buses serve residential areas, freeing larger fixed-route buses to travel along major thoroughfares as part of a regional bus network. BCCB routes provide local circulation to passengers traveling short distances, as well as "first-mile" and "last-mile" connections to BCT fixed routes. BCCB service is designed to increase the number of destinations within city limits that

residents can access through public transit. All community buses connect to BCT fixed routes and are wheelchair accessible and equipped with bike racks.

TOPS

BCT also offers TOPS (Transportation Options) complementary paratransit service for qualified individuals with disabilities. The service is for persons with physical, cognitive, emotional, visual, or other disabilities that functionally prevent them from using the BCT fixed-route bus system. TOPS service is available during BCT's fixed-route hours of service, and reservations must be made in advance. The estimated travel time of a TOPS trip is similar to the same trip, including transfers, if made by a fixed-route bus. The one-way fare per trip is $3.50. Additionally, any registered TOPS rider with current eligibility may use the fixed-route service free of charge.

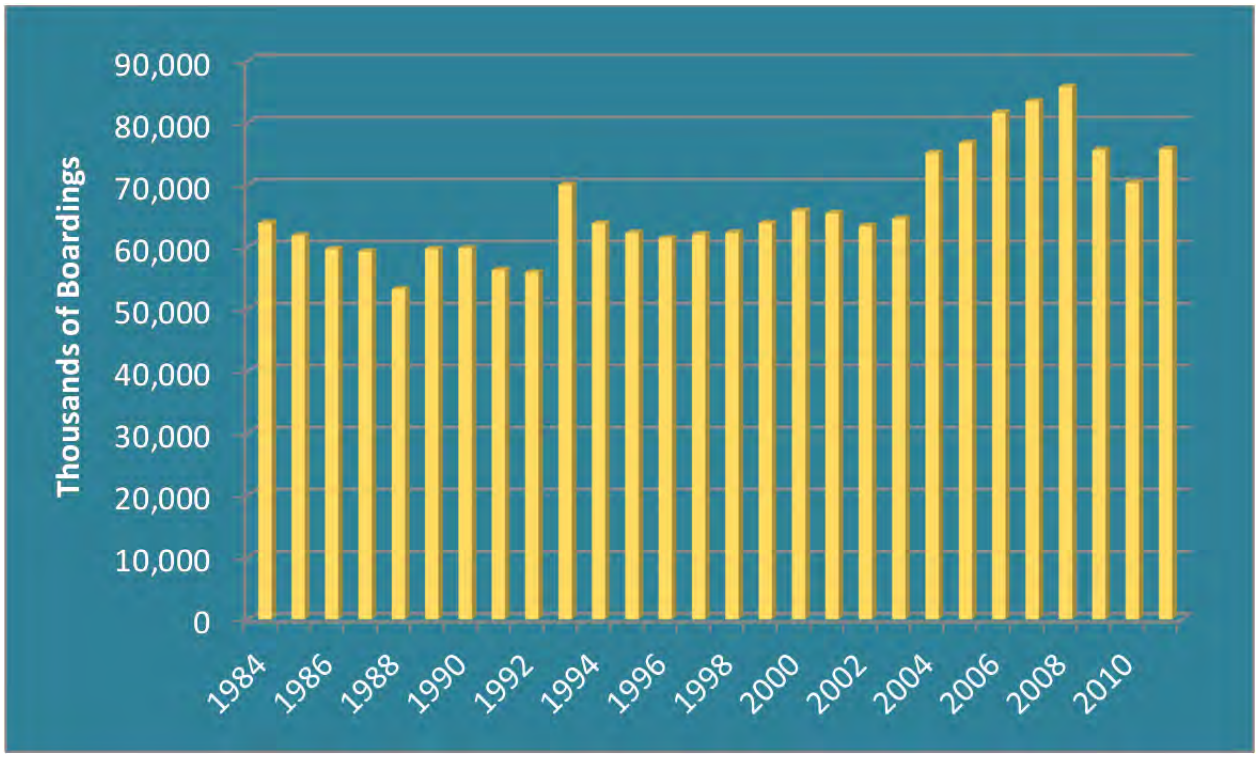
Miami-Dade Transit

MDT operates as a department of the Miami-Dade County government and is the largest transit agency in Florida. It operates Metrobus (fixed-route bus service), Metrorail (24.4-mile elevated heavy rail system); Metromover (4.4-mile, elevated, electric people-mover system); and Special Transportation Service (STS) (paratransit service). MDT's regular fixed-route fare is $2, and monthly passes are $100.

Metrobus

Metrobus offers countywide service from Miami Beach to West Miami-Dade and from the Middle Keys to Broward Boulevard in Broward County. All MDT buses are wheelchair accessible. In addition, Metrobus connects with Metrorail and Metromover. More than 90 Metrobus routes travel approximately 29 million miles per year using over 800 buses. Several bus routes operate 24 hours a day and 3 routes provide overnight service between 11 p.m. and 6 a.m. MDT Routes E and 95 travel into Broward County. Figure 3-7 shows historical ridership data for MDT Metrobus services.

Figure 3-7: MDT Metrobus Historical Ridership Data (FYs 1984–2011)



Source: NTD (FYs 1984–2011)

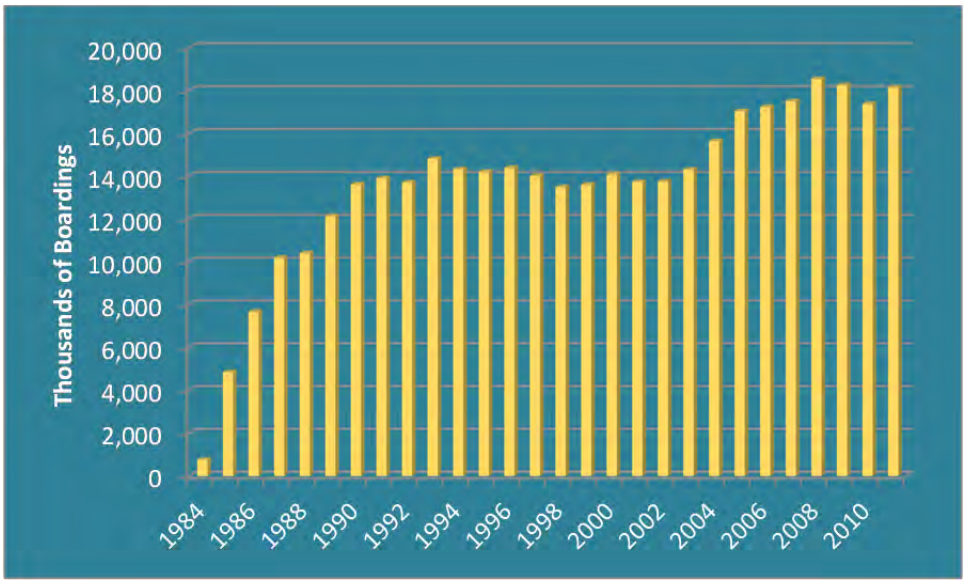
Metrorail

Miami-Dade County's 24.4-mile elevated rail system runs from Kendall through South Miami, Coral Gables, and downtown Miami to the Civic Center/Jackson Memorial Hospital area and to Brownsville, Liberty City, Hialeah, and Medley in northwest Miami-Dade, with connections to Broward and Palm Beach counties at the Tri-Rail/Metrorail Transfer station. There are 23 accessible Metrorail stations, located approximately one mile apart, providing easy access for bus riders, pedestrians, and passengers to be dropped off and picked up. Metrorail operates from 5 AM to 12 midnight, seven days per week. Trains arrive every 10 minutes during weekday peak hours, every 15 minutes at midday, every 30 minutes from about 7:30 PM until closing, and every 30 minutes on weekends. Map 3-3 illustrates the Metrorail system and Figure 3-8 presents historical Metrorail ridership data.

Map 3-3: MDT Metrorail System Map

Source: http://www.miamidade.gov/transit/library/metrorail-map.pdf. Accessed May 2013.

Figure 3-8: MDT Metrorail Historical Ridership Data (FYs 1984–2011)



Source: NTD (FYs 1984–2011)

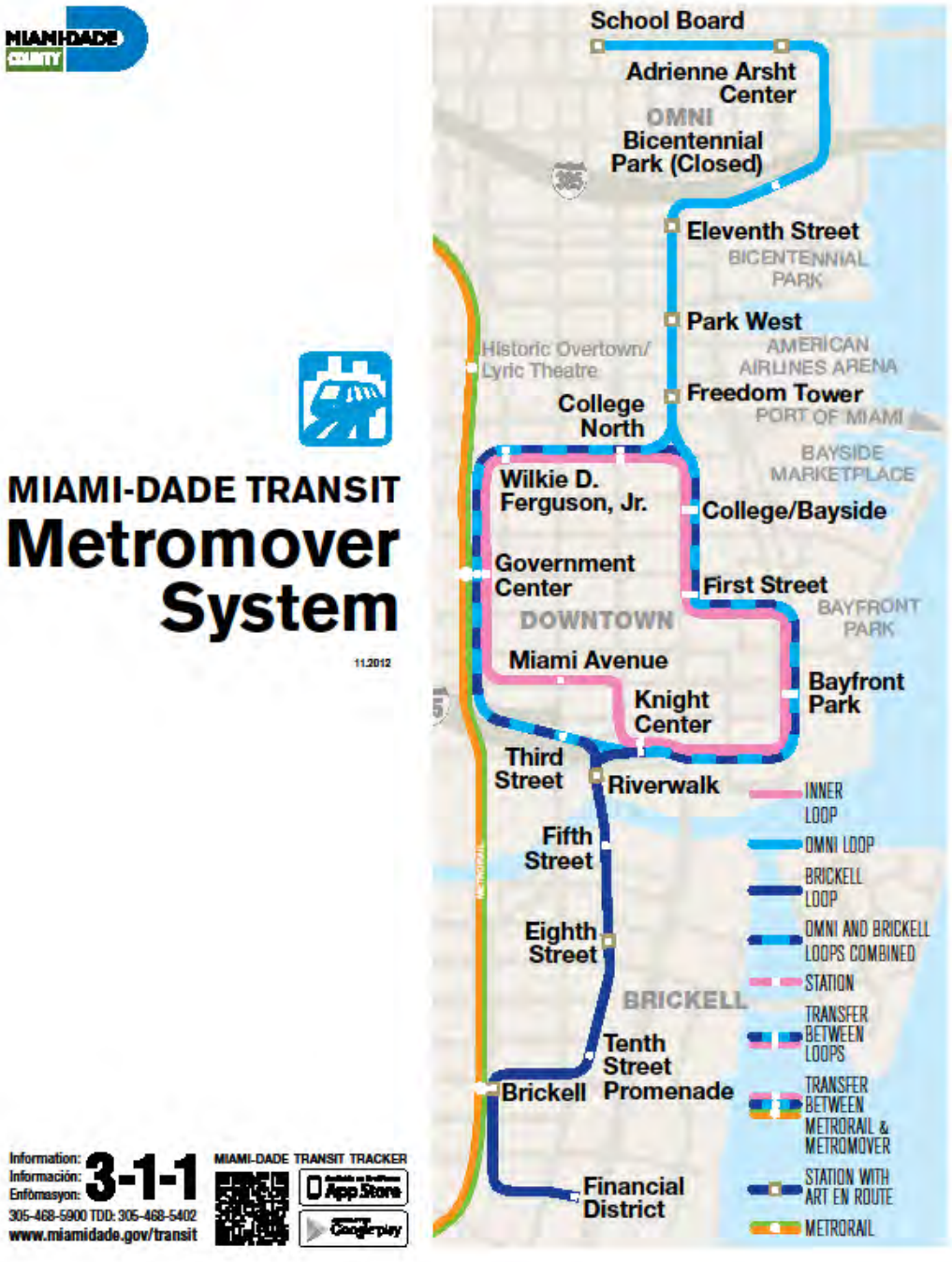
Metromover

Metromover is a 4.4-mile elevated electric people-mover system. The Metromover inner loop and outer loop to Omni and Brickell operate in the downtown Miami area. Trains run from 5 AM to 12 midnight seven days per week. Trains arrive frequently, and all fares are free on the Metromover. Map 3-4 illustrates the Metromover system and Figure 3-9 shows historical Metromover ridership data.

Special Transportation Service

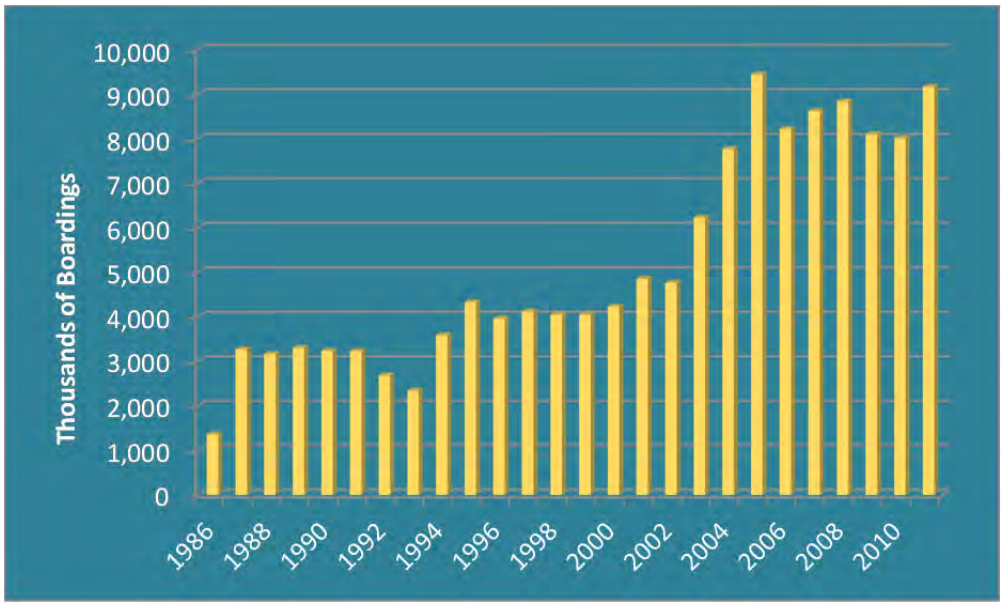
STS is MDT's complementary paratransit service. Established in 1976 to meet the special transportation needs of Miami-Dade County citizens with disabilities, STS is available to anyone deemed eligible. Privately-contracted sedans, vans, and vans equipped with lifts provide door-to-door service for eligible customers. Service is offered with no restrictions on trip purpose.

Map 3-4: MDT Metromover System Map



Source: http://www.miamidade.gov/transit/library/metromover-map.pdf. Accessed May 2013.

Figure 3-9: MDT Metromover Historical Ridership Data (FYs 1986–2011)



Source: NTD (FY 1984–2011)

Other Service Providers

Tables 3-14 through 3-17 summarize other transportation service providers in the tri-county region:

- Table 3-14 lists transportation disadvantaged (TD) service providers.
- Table 3-15 lists intercity transportation service providers.
- Table 3-16 lists charter bus companies.
- Table 3-17 lists taxi service companies.

Intercity service is currently offered from Southeast Florida by Amtrak and Greyhound. As shown in Table 3-15, both transportation companies provide multiple stations throughout the South Florida region. Greyhound offers service between there stations and most cities in Florida and the US. Amtrak provides two round trips each day between Miami and New York. One round trip is provided on the Silver Star, which runs through Tampa and the other route is the Silver Meteor through Orlando.

(This page is intentionally left blank)

Table 3-14: Transportation Disadvantaged Service Providers

Palm Beach County		Broward County		Miami-Dade County	
• Children's Home Society • Federation Transportation Services • For the Children, Inc. • Glades Area Assoc. for Retarded Children • Habilitation Center for the Handicapped • Housing Partnership, Inc. • Jewish Residential & Family Services • Marc Volen Senior Center • Palm Beach Habilitation Center • Planned Parenthood • Seagull Industries for the Disabled • South Coast Mental Health Center • The ARC • United Cerebral Palsy	• Achievement and Rehabilitation Center • Agency for Community Treatment Services • Allied Medical Treatment • Ann Storck Center • Archways, Inc. • BARC Housing, Inc. • Broward Children's Center, Inc. • Cerebral Palsy Adult Home • City of Deerfield Beach NEFP • City of Hallandale Beach • City of Lauderhill • City of Margate NWFP • City of Miramar MSSC • City of North Lauderdale • City of Pembroke Pines SWFP • City of Tamarac Senior Ctr. • Daniel D. Cantor Senior Ctr. • Douglas Gardens North • Gulf Coast Jewish Family & Community Services	• Henderson Mental Health • Inktel Direct • Joseph Meyerhoff Senior Ctr. • Lucanus Development Ctr. • Medex Transportation, Inc. • NW Federated Women's Club • Quality Community Services • Rayfield Family Literacy • Seref Jewish Community Center • St. Elizabeth Gardens • St. Joseph Tower • Sunrise Community, Inc. • Sunrise Opportunity, Inc. • Tender Loving Care Transportation Services • Total Intervention Early Services • United Cerebral Palsy • Woodhouse, Inc.	• Action Community Center • Advanced Transportation Solutions • Allapatah Community Center • Alliance for Aging • American Coach Lines of Miami • Assoc. of Retarded Citizens • Better Way of Miami • CHARLEE of Dade County, Inc. • Children's Home Society • Citrus Health Network • Community AIDS Resource, Inc. • Community Council for Jewish Elderly • Dave/Mary Alper Jewish Community Center • DEEDCO • Easter Seals • Economic Opportunity Family Health Ctr. • Federation Gardens • GALATA, Inc. • Goodwill Industries	• Handi-Van, Inc. • Helen Bentley Family Health Ctr. • Hialeah Housing Authority • Historic Mt. Zion Missionary Baptist Church • Hope Center, Inc. • James E. Scott Community Assoc. • Jewish Community Services • JGT Transportation • Little Havana Activities and Nutrition Center • Logistic Solutions, Inc. • MACtown, Inc. • Miami Beach Marian Towers • Miami Bridge Youth and Family Services • Miami Dade County Community Action Agency • Miami Dade County School Board • Miami Jewish Home and Hospital for the Aged • Miami Lighthouse for the Blind	• Michael-Ann Russell Jewish Community Ctr. • New Horizons Community Mental Health Ctr. • North Dade Medical Foundation Regis House • North Miami Foundation for Senior Citizens • Psychosocial Rehabilitation Center • Southern Shuttle Services • Southwest Social Services Program • Sunrise Community • The Village South • UM Linda Ray Intervention Ctr. • UM Mailman Ctr. For Child Development • UM Perinatal Care Program • Unique Charters • United Cerebral Palsy Assoc. • Villa Maria Nursing & Rehabilitation Ctr. • Zuni Transportation

Source: Miami-Dade County Transit Development Plan 2012, Broward County TDP 2009, Palm Beach TDP 2009

(This page is intentionally left blank)

Table 3-15: Intercity Transportation Service Providers

Greyhound Stations	Amtrak Stations
Belle Glade	Miami
Delray Beach	Hollywood
Ft. Lauderdale	Ft. Lauderdale
Miami	Deerfield Beach
Miami International Airport	West Palm Beach
Cutler Bay	Delray Beach
Miami North	
West Palm Beach	

Source: Greyhound and Amtrak websites

Table 3-16: Charter Bus Companies

Charter Bus Companies	
Mears Transportation	Coachways Charter Bus
South Florida Tours	Bus One Charter Bus
South Florida Bus Charters	MIA VIP Transportation and Tours
Magic Carpet Ride	National Bus Tansportation
Miami Jet Tours	Bus Reserve
Miami-Dade Bus Charter	Cabana Coaches
Bus Charter.net	

Table 3-17: Taxi Service Companies

Inventory of Taxi Services			
Palm Beach County	**Broward County**	**Miami-Dade County**	
Palm Beach Taxi	Broward Taxi	Yellow Taxi	Key Biscayne Taxi
Yellow Cab	Ft. Lauderdale Taxi	G&K Taxi	Metro Taxi
West Palm Beach City Taxi	Intercity Taxi	Airport Best Taxi	Miami Dade Taxi
Escondido Taxi Service	Best Taxi	AAA Taxi	Miami Springs Taxi
Admiral Cab	On-Time Taxi Services	American Taxi	Moskocab of Dade
Choice Cab Services	Shuttle and Taxi Services	Central Cab	Rickenbacker Taxi
	GM Taxi/Airport Transp.	Century Cab	Society Cab
	King Transportation	Checker Cab	South Beach Taxi Cab
	A Regal Transportation	Comfort Wheelchair Cab	Springs Taxi
	Airport Taxi	Coral Gables Taxi	Sunny Isles Taxi
	Yellow Cab	Crandon Taxi of Key Biscayne	Yellow Taxi
	American Taxi	Diamond Cab	Super Nice Taxi
	Checker Taxi	Doral Taxi	Super Yellow Cab
	SW Ranches Taxi	Eastern Taxi	USA Taxi
	AAA Taxi	Flamingo Taxi	
	Ft. Lauderdale A Taxi	Homestead Yellow Taxi	
		Homestead Yellow Taxi	
		Hurricane Taxi	

Source: Miami-Dade.gov business license taxi cab companies, Internet search of taxi service companies operating in South Florida region.

(This page intentionally left blank.)

3.2 TREND ANALYSIS

3.2.1: INTRODUCTION

A trend analysis of critical performance measures and indicators was conducted to examine the performance of SFRTA commuter rail and shuttle bus services over time. To accomplish this, NTD data that present selected performance indicators, effectiveness measures, and efficiency measures for the five-year trend period of FY 2007-2011 were compiled and analyzed. Highlights of the trend analysis are presented below, and summary results are provided at the conclusion of this section.

Three categories of indicators were analyzed for the trend analysis. These include:

- Performance Indicators – the quantity of service supply, passenger and fare revenue generation, and resource input
- Effectiveness Measures –the extent to which the service is effectively provided
- Efficiency Measures –the extent to which cost efficiency is achieved

3.2.2: COMMUTER RAIL TREND ANALYSIS

Table 3-18 lists the measures used in the performance trend analysis conducted for SFRTA's commuter rail service. Highlights of the trend analysis are presented in the remainder of this section.

Table 3-18: Commuter Rail Performance Review Measures for Trend Analysis (FYs 2007–2011)

Commuter Rail Performance Evaluation Indicators and Measures		
General Performance Indicators	**Effectiveness Measures**	**Efficiency Measures**
Passenger Trips	Vehicle Miles per Capita	Operating Expenses per Capita
Passenger Miles	Passenger Trips per Capita	Operating Expenses per Passenger Trip
Vehicle Miles	Passenger Trips per Revenue Mile	Operating Expenses per Passenger Mile
Revenue Miles	Passenger Trips per Vehicle Hour	Operating Expenses per Revenue Mile
Vehicle Hours	Revenue Miles between Incidents	Farebox Recovery Ratio
Route Miles		Revenue Miles per Vehicle Mile
Operating Expenses		Revenue Miles per Vehicle
Capital Expenses		Vehicle Miles per Gallon
Operating Revenue		Average Fare
Vehicles Available for Maximum Service		Fare Revenue

Commuter Rail General Performance Indicators

The general performance indicators are used to gauge the overall system operating performance for Tri-Rail. Table 3-19 and Figures A-1 through A-10 (found in Appendix A) present the selected performance indicators from FY 2007 to FY 2011 for SFRTA commuter rail service. The following is a summary of the trends for Tri-Rail evident from the performance indicators analysis.

- Commuter rail passenger trips increased from 3.4 million in 2007 to 3.8 million in FY 2011, an increase of 11.8 percent. In addition, passenger miles increased from 108 million to 112.4 million during the same period, an increase of 4.1 percent, peaking at 122 million passenger miles in 2008 and 2009. During this same five-year period, the tri-county service area population increased 1.9 percent.
- Total vehicle miles of service increased from 2.6 million miles in FY 2007 to nearly 3.0 million miles in FY 2011, an increase of 12.7 percent. Total revenue miles of service increased from 2.6 million in 2007 to approximately 2.9 million in 2011, or 12.5 percent.
- The number of route miles served remained consistent during this five-year period, at 142.24 miles.
- Total operating expenses increased from $43.3 million in 2007 to $51.7 million FY 2011, an increase of 19.4 percent (peaking in 2008 and 2009 at $52.8 million). Total capital expenses decreased from $64.9 million to $18.0 million during this same period, or 72 percent. Operating revenues increased from $46.8 million to $55.4 million, or 18.4 percent during the five-year period from FY 2007 to FY 2011; the annual operating revenue peaked in FY 2009 at $57.2 million.
- The total number of vehicles needed to operate peak service increased from 44 vehicles in FY 2007 to 45 vehicles in FY 2011, peaking at 47 vehicles in FY 2009 and FY 2010.

Table 3-19: Performance Indicators, Commuter Rail Trend Analysis (FYs 2007–2011)

SFRTA Commuter Rail Performance Indicators						
Performance Indicator	**2007**	**2008**	**2009**	**2010**	**2011**	**% Change (2007–2011)**
Passenger Trips	3,408,500	3,859,000	4,223,400	3,606,100	3,810,800	11.8%
Passenger Miles	107,980,800	122,257,900	122,469,600	104,575,600	112,394,600	4.1%
Vehicle Miles	2,641,700	3,124,400	3,050,300	2,971,400	2,976,500	12.7%
Revenue Miles	2,559,000	2,856,500	2,953,200	2,892,400	2,879,900	12.5%
Vehicle Hours	68,200	87,100	99,500	107,700	108,500	59.1%
Route Miles	142.24	142.24	142.24	142.24	142.24	0.0%
Operating Expenses	$42,306,800	$52,841,600	$52,871,700	$50,252,000	$51,719,000	19.42%
Vehicles Available for Max. Svc.	44	44	47	47	45	2.3%

Source: NTD (FYs 2007-2011)

Commuter Rail Effectiveness Measures

Table 3-20 presents three categories of effectiveness measures that include service supply, service consumption, and quality of service. Figures A-11 through A-15 (located in Appendix A) present the trends in these effectiveness measures observed for SFRTA's commuter rail service, a summary of which is provided below.

- Vehicle miles per capita for commuter rail service increased from 0.48 miles in FY 2007 to 0.52 miles in FY 2011, an increase of nearly 10 percent.
- Passenger trips per capita increased by nearly 9 percent between FY 2007 and FY 2011, from 0.62 trips to 0.67 trips. However, passenger trips per revenue mile decreased slightly (0.7%), from 1.33 trips to 1.32 trips during this same period. Passenger trips per vehicle hour also decreased from 49.98 trips in FY 2007 to 35.12 trips in FY 2011, a decrease of nearly 30 percent.
- Revenue miles between incidents decreased 25.3 percent between FY 2009 and FY 2011, the period for which these data were available. Overall, the revenue miles between incidents decreased from 91,813 in 2009 to 68,569 in FY 2011 (peaking at 97,184 in FY 2010).

Table 3-20: Effectiveness Measures, Commuter Rail Trend Analysis (FYs 2007–2011)

SFRTA Commuter Rail Effectiveness Measures						
Effectiveness Measure	**2007**	**2008**	**2009**	**2010**	**2011**	**Percent Change (2007–2011)**
Service Supply:						
Vehicle Miles per Capita	0.48	0.56	0.55	0.54	0.52	9.8%
Service Consumption:						
Passenger Trips per Capita	0.62	0.70	0.77	0.65	0.67	8.9%
Passenger Trips per Revenue Mile	1.33	1.35	1.43	1.25	1.32	-0.7%
Passenger Trips per Vehicle Hour	49.98	44.31	42.45	33.48	35.12	-29.7%
Quality of Service:						
Revenue Miles Between Incidents	No data available	No data available	91,813	97,184	68,569	-25.3%

Note: Percent Change for Revenue Miles between Incidents reflects change between 2009–2011, the years data for this indicator were available.
Source: NTD (FYs 2007-2011).

Commuter Rail Efficiency Measures

Table 3-21 presents efficiency measures for SFRTA commuter rail service, including cost efficiencies, operating ratios, vehicle and energy utilization, and fare trends. The trends for these efficiency measures are illustrated in Figures A-16 through A-24 (located in Appendix A) and are summarized below.

- Operating expenses per capita increased from $7.84 in 2007 to $9.12 in 2011, or 16.3 percent; however, when the effects of inflation are removed, operating expenses per capita increased only 5.4 percent. Operating expenses per passenger trip increased from $12.71 in FY 2007 to $13.57 in FY 2011, or 6.8 percent (after inflation, decreased 3.3%). Operating expenses per passenger mile increased from $0.40 per mile to $0.46 per mile, or 14.7 percent (5.0% after inflation). Operating expenses per revenue mile increased between FY 2007 and FY 2011 from $16.92 to $17.96, or 6.1 percent (decreased 3.9% after inflation). These trends suggest that SFRTA has experienced some success over the last five years in controlling numerous factors impacting the cost of the agency's commuter rail operations.
- Revenue miles per vehicle mile had no change between FY 2007 and FY 2011, and revenue miles per vehicle increased 10 percent, from 58,159 in 2007 to 63,998 in FY 2011.
- In terms of energy utilization, total vehicle miles per gallon of gasoline increased by 4.6 percent, or 1.18 vehicle miles per gallon in FY 2009 to 1.23 in FY 2011, the years these data were available.
- Farebox recovery has steadily increased from 16.8 percent in FY 2007 to 21.1 percent in FY 2011, an overall increase of 25.6 percent. During this same time period, the average fare increased from $2.10 to $2.90 (38.1%) and annual fare revenue increased from $7.3 million to $10.9 million, a total increase of approximately 50 percent.

Table 3-21: Efficiency Measures, Commuter Rail Trend Analysis (FYs 2007–2011)

SFRTA Commuter Rail Efficiency Measures						
Efficiency Measure	**2007**	**2008**	**2009**	**2010**	**2011**	**Percent Change (2007–2011)**
Cost Efficiency						
Operating Expenses per Capita	$7.84	$9.55	$9.60	$9.09	$9.12	16.3%
Operating Expenses per Capita (2007$)	$7.84	$9.32	$9.28	$8.54	$8.26	5.4%
Operating Expenses per Passenger Trip	$12.71	$13.69	$12.52	$13.94	$13.57	6.8%
Operating Expenses per Passenger Trip (2007$)	$12.71	$13.36	$12.09	$13.08	$12.29	-3.3%
Operating Expenses per Passenger Mile	$0.40	$0.43	$0.43	$0.48	$0.46	14.7%
Operating Expenses per Passenger Mile (2007$)	$0.40	$0.42	$0.42	$0.45	$0.42	5.0%
Operating Expenses per Revenue Mile	$16.92	$18.50	$17.90	$17.37	$17.96	6.1%
Operating Expenses per Revenue Mile (2007$)	$16.92	$18.05	$17.29	$16.31	$16.26	-3.9%
Vehicle Utilization						
Revenue Miles per Vehicle Mile	$0.97	$0.91	$0.97	$0.97	$0.97	-0.1%
Revenue Miles per Vehicle	$58,159	$79,347	$62,834	$61,540	$63,998	10.0%
Energy Utilization						
Vehicle Miles per Gallon	No data available	No data available	1.18	1.17	1.23	4.6%
Operating Ratios						
Farebox Recovery Ratio	16.8%	16.5%	18.4%	20.5%	21.1%	25.6%
Fare						
Average Fare	$2.10	$2.30	$2.30	$2.90	$2.90	38.1%
Fare Revenue	$7,263,500	$8,699,800	$9,744,700	$10,294,670	$10,902,100	50.1%

Note: Percent Change for vehicle miles per gallon reflects change between 2009–2011, the years that data for this indicator were available.

Source: NTD (FYs 2007-2011)

Summary Results of Commuter Rail Trend Analysis

The trend analysis evaluates the performance of SFRTA's commuter rail service over time. A summary of SFRTA's performance for commuter rail is provided for general performance, cost efficiency, operating ratios, vehicle and energy utilization, fare, service supply, service consumption, and quality of service.

- *Service Consumption and Service Supply*– Vehicle miles per capita and passenger trips per capita both have shown positive growth trends from FY 2007 to FY 2011, outpacing overall population growth. Passenger trips per revenue mile have remained almost neutral, whereas passenger trips per vehicle hour have declined. Service supply measures are favorable for Tri-Rail, while service consumption measures reflect some decline in productivity relative to the amount of service supplied.
- *Cost Efficiency*– When removing the effects of inflation, operating expenses per capita and per passenger mile increased minimally (approximately 5%), while operating expenses per passenger trip and per revenue mile decreased from FY 2007 to FY 2011. These trends generally suggest that SFRTA costs have been controlled over the last five-year period.
- *Operating Ratio and Fare*–From FY 2007 to FY 2011, farebox recovery increased nearly 26 percent, whereas average fares increased 38 percent and overall fare revenue increased 50 percent. The trend in Tri-Rail's operating ratio and farebox recovery is very positive, reflecting a good balance of fare policy and increasing ridership. The Farebox Recovery Report is included in Appendix B.

Table 3-22 summarizes the trend analysis, with positive, neutral, or negative trends identified for each indicator. Tri-Rail's overall trend performance is generally positive with a few exceptions that are reflected in the table and mentioned previously.

Table 3-22: Summary of Trend Analysis –Commuter Rail (FYs 2007–2011)

Measure	Percent Change (2007-2011)	Indicator
General Performance		
Passenger Trips	11.8%	+
Passenger Miles	4.1%	+
Vehicle Miles	12.7%	+
Revenue Miles	12.5%	+
Vehicle Hours	59.1%	+
Route Miles	0.0%	o
Operating Expenses	19.4%	-
Capital Expenses	-72.3%	+
Operating Revenue	18.4%	+
Vehicles Available for Maximum Service	2.3%	o
Cost Efficiency		
Operating Expenses per Capita (2007$)	5.4%	-
Operating Expenses per Passenger Trip (2007$)	-3.3%	+
Operating Expenses per Passenger Mile (2007$)	5.0%	-
Operating Expenses per Revenue Mile (2007$)	-3.9%	+
Operating Ratios		
Farebox Recovery Ratio	25.6%	+
Vehicle Utilization		
Revenue Miles per Vehicle Mile	-0.1%	o
Revenue Miles per Vehicle	10.0%	+
Energy Utilization		
Vehicle Miles per Gallon	4.6%	+
Fare		
Average Fare	38.1%	+
Fare Revenue	50.1%	+
Service Supply		
Vehicle Miles per Capita	9.8%	+
Service Consumption		
Passenger Trips per Capita	8.9%	+
Passenger Trips per Revenue Mile	-0.7%	o
Passenger Trips per Vehicle Hour	-29.7%	-
Quality of Service		
Revenue Miles between Incidents	-25.3%	-

Sources: Tables 3-19, 3-20, and 3-21

3.2.3: SHUTTLE BUS SERVICE TREND ANALYSIS

Table 3-23 lists the measures used in the performance trend analysis conducted for SFRTA's shuttle bus service. Highlights of the trend analysis are presented in the remainder of this section.

Table 3-23: Shuttle Bus Service Performance Review Measures for Trend Analysis (FYs 2007–2011)

Shuttle Bus Service Performance Evaluation Indicators and Measures		
General Performance Indicators	**Effectiveness Measures**	**Efficiency Measures**
Passenger Trips	Vehicle Miles per Capita	Operating Expenses per Capita
Passenger Miles	Passenger Trips per Capita	Operating Expenses per Passenger Trip
Vehicle Miles	Passenger Trips per Revenue Mile	Operating Expenses per Passenger Mile
Revenue Miles	Passenger Trips per Vehicle Hour	Operating Expenses per Revenue Mile
Vehicle Hours		Revenue Miles per Vehicle Mile
Route Miles		Revenue Miles per Vehicle
Operating Expenses		Vehicle Miles per Gallon
Vehicles Available for Max. Svc.		

Shuttle Bus Service Performance Indicators

The performance indicators are used to gauge the overall system operating performance for SFRTA's shuttle bus service. Table 3-24 and Figures A-25 through A-32 (located in Appendix A) present the selected performance indicators from 2007 to 2011 for SFRTA shuttle bus service, a summary of which is provided below.

- Passenger trips for shuttle service doubled from 301,400 in FY 2007 to 605,900 in FY 2011. In addition, passenger miles increased by nearly 184 percent during this same period. The tri-county service area population increased 1.9 percent.
- The total vehicle miles of service increased from 610,300 to 827,600, or 35.6 percent, between FY 2007 and FY 2011. Annual revenue miles of service increased from 402,700 miles to nearly 629,000 miles, or 56.2 percent during this same five-year period. Total vehicle hours increased nearly 41 percent, from 53,000 hours in 2007 to 74,800 hours in FY 2011.
- The number of route miles served increased by 26.4 percent between FY 2007 and FY 2011, from 132.3 to 167.2 miles.
- Total operating expense (in current dollars) increased from $2.8 million in FY 2007 to $3.0 million FY 2011, an increase of 6.3 percent.
- The total number of vehicles needed to operate peak service increased from 20 vehicles in FY 2007 to 27 vehicles in FY 2011, an overall increase of 35 percent.

Table 3-24: Performance Indicators, SFRTA Shuttle Bus Service Trend Analysis (FYs 2007–2011)

SFRTA Shuttle Bus Service Performance Indicators						
Performance Indicator	**2007**	**2008**	**2009**	**2010**	**2011**	**Percent Change (2007-2011)**
Passenger Trips	301,400	399,700	488,100	444,300	605,900	101.0%
Passenger Miles	838,000	1,102,700	1,675,000	1,523,900	2,378,400	183.8%
Vehicle Miles	610,300	654,600	658,300	578,600	827,600	35.6%
Revenue Miles	402,700	433,600	436,500	475,900	628,900	56.2%
Vehicle Hours	53,200	56,900	57,000	53,000	74,800	40.6%
Route Miles	132.3	137.3	137.3	105.2	167.2	26.4%
Operating Expenses	$2,849,500	$4,260,800	$4,350,800	$4,261,800	$3,028,000	6.3%
Vehicles Available for Max. Svc.	20	20	20	20	27	35.0%

Source: NTD (FYs 2007-2011)

Shuttle Bus Service Effectiveness Measures

Table 3-25 presents the effectiveness measures analyzed for SFRTA's shuttle bus service, including service supply and service consumption. Figures A-33 through A-36 (located in Appendix A) present trends in effectiveness measures for SFRTA's shuttle bus service, the results of which are summarized below.

- Vehicle miles per capita for shuttle bus service increased from 0.11 miles in FY 2007 to 0.15 miles in FY 2011, an overall increase of 32 percent.
- Passenger trips per capita nearly doubled, increasing by almost 96 percent, from 0.05 trips in FY 2007 to 0.11 trips in FY 2011. Passenger trips per revenue mile increased 28.7 percent during this period, from 0.75 trips to 0.96 trips, though peaking at 1.12 trips in FY 2009. Passenger trips per vehicle hour increased from 5.67 trips in FY 2007 to 8.10 trips in FY 2011, an increase of 43 percent.

Table 3-25: Effectiveness Measures: Shuttle Bus Service Trend Analysis (FYs 2007–2011)

SFRTA Shuttle Bus Service Effectiveness Measures						
Effectiveness Measure	**2007**	**2008**	**2009**	**2010**	**2011**	**Percent Change (2007-2011)**
Service Supply:						
Vehicle Miles per Capita	0.11	0.12	0.12	0.10	0.15	32.1%
Service Consumption:						
Passenger Trips per Capita	0.05	0.07	0.09	0.08	0.11	95.8%
Passenger Trips per Revenue Mile	0.75	0.92	1.12	0.93	0.96	28.7%
Passenger Trips per Vehicle Hour	5.67	7.02	8.56	8.38	8.10	43.0%

Source: NTD (FYs 2007-2011)

Shuttle Bus Service Efficiency Measures

Table 3-26 presents the trends of the efficiency measures for SFRTA shuttle bus service, which are illustrated in Figures A-37 through A-42 (located in Appendix A) and summarized below.

- Operating expenses per capita increased from $0.52 in FY 2007 to $0.53 in FY 2011, an overall increase of 3.5 percent. However, operating expenses per capita were significantly higher in the interim years at $0.77 per capita in FY 2008 and FY 2010 and $0.79 per capita in FY 2009. When the effects of inflation are removed, operating expenses per capita decreased 7.7 percent. Operating expenses per passenger trip decreased from $9.45 in FY 2007 to $5.00 in FY 2011, an overall decrease of approximately 47 percent (or a decrease of 52.2% in 2007 dollars). Operating expenses per passenger mile decreased from $3.40 per mile to $1.27 per mile, a decrease of 62.6 percent (or 66.2% when removing the effects of inflation). Operating expenses decreased from $7.08 to $4.81 per revenue mile, or 32 percent between FY 2007 and FY 2011 (38.4% in FY 2007 dollars). These trends suggest that SFRTA has experienced some success over the last five years in controlling numerous factors impacting the cost of the agency's shuttle bus operations.
- Revenue miles per vehicle mile increased by 15.2 percent between FY 2007 and FY 2011, from 0.66 to 0.76 per mile. Revenue miles per vehicle increased 15.7 percent, from 20,135 in 2007 to 23,293 in FY 2011, though peaking at 48,178 revenue miles per vehicle in FY 2008.
- In terms of energy utilization, total vehicle miles per gallon of gasoline increased by 153.2 percent, or from 2.35 vehicle miles per gallon in FY 2009 to 5.96 in FY 2011 (peaking at 7.82 vehicle miles per gallon in FY 2010).

Table 3-26: Efficiency Measures: Shuttle Bus Service Trend Analysis (FYs 2007–2011)

SFRTA Shuttle Bus Service Efficiency Measures						
Efficiency Measure	**2007**	**2008**	**2009**	**2010**	**2011**	**Percent Change (2007–2011)**
Cost Efficiency						
Operating Expenses per Capita	$0.52	$0.77	$0.79	$0.77	$0.53	3.5%
Operating Expenses per Capita (2007$)	$0.52	$0.75	$0.76	$0.72	$0.48	-7.7%
Operating Expenses per Passenger Trip	$9.45	$10.66	$8.91	$9.59	$5.00	-47.1%
Operating Expenses per Passenger Trip (2007$)	$9.45	$10.40	$8.61	$9.00	$4.52	-52.2%
Operating Expenses per Passenger Mile	$3.40	$3.86	$2.60	$2.80	$1.27	-62.6%
Operating Expenses per Passenger Mile (2007$)	$3.40	$3.77	$2.51	$2.63	$1.15	-66.2%
Operating Expenses per Revenue Mile	$7.08	$9.83	$9.97	$8.96	$4.81	-32.0%
Operating Expenses per Revenue Mile (2007$)	$7.08	$9.59	$9.63	$8.41	$4.36	-38.4%
Vehicle Utilization						
Revenue Miles per Vehicle Mile	0.66	0.66	0.66	0.82	0.76	15.2%
Revenue Miles per Vehicle	20,135	48,178	21,825	23,795	23,293	15.7%
Energy Utilization						
Vehicle Miles per Gallon	No data available	No data available	2.35	7.82	5.96	153.2%

Note: Percent change for vehicle miles per gallon reflects change between FYs 2009–2011, the years data for this indicator were available.

Source: NTD (FYs 2007–2011)

Summary Results of Shuttle Bus Service Trend Analysis

Similar to that provided for commuter rail service, a summary of SFRTA's performance for its shuttle bus service is provided, based on the trend analysis in terms of general performance, cost efficiency, vehicle and energy utilization, service supply, and service consumption.

- ***Service Consumption and Service Supply*** – Vehicle miles per capita, passenger trips per capita, passenger trips per revenue mile, and passenger trips per vehicle hour have all shown positive growth trends from FY 2007 to FY 2011, with growth in both vehicle miles and passenger trips significantly outpacing overall population growth for the tri-county region.
- ***Cost Efficiency*** – When removing the effects of inflation, operating expenses per capita, per passenger trip, per passenger mile, and per revenue mile decreased from FY 2007 to FY 2011. These trends generally suggest that SFRTA costs for its shuttle bus service have largely been controlled over the last five-year period.

- ***Vehicle and Energy Utilization*** – From FY 2007 to FY 2011, revenue miles per vehicle mile and revenue miles per vehicle increased consistently at approximately 15 percent, while vehicle miles per gallon increased considerably (153.2%).

Table 3-27 summarizes the trend analysis, with positive and negative trends identified for each indicator. Nearly all performance indicators and performance measures reflect positive trends for SFRTA shuttle bus services.

Table 3-27: Summary of Trend Analysis: Shuttle Bus Service (FYs 2007–2011)

Measure	Percent Change (2007-2011)	Indicator
General Performance		
Passenger Trips	101.0%	+
Passenger Miles	183.8%	+
Vehicle Miles	35.6%	+
Revenue Miles	56.2%	+
Vehicle Hours	40.6%	+
Route Miles	26.4%	+
Operating Expenses	6.3%	-
Vehicles Available for Maximum Service	35.0%	+
Cost Efficiency		
Operating Expenses per Capita (in 2007$)	-7.7%	+
Operating Expenses per Passenger Trip (in 2007$)	-52.2%	+
Operating Expenses per Passenger Mile (in 2007$)	-66.2%	+
Operating Expenses per Revenue Mile (in 2007$)	-38.4%	+
Vehicle Utilization		
Revenue Miles per Vehicle Mile	15.2%	+
Revenue Miles per Vehicle	15.7%	+
Energy Utilization		
Vehicle Miles per Gallon	153.2%	+
Service Supply		
Vehicle Miles per Capita	32.1%	+
Service Consumption		
Passenger Trips per Capita	95.8%	+
Passenger Trips per Revenue Mile	28.7%	+
Passenger Trips per Vehicle Hour	43.0%	+

Sources: Tables 3-24, 3-25, and 3-26

3.3 PEER REVIEW ANALYSIS

3.3.1: INTRODUCTION

A peer review analysis of SFRTA's Tri-Rail existing service provides the opportunity for SFRTA to compare its performance with other commuter rail systems in the United States that have similar agency features with SFRTA. In addition to the peer analysis, a similar review of other commuter rail systems in the U.S. was conducted as an opportunity to enlighten, inform, and present SFRTA with a more complete picture of Tri-Rail's performance in relation to not only its peers but the universe of commuter rail systems in the nation.

3.3.2: PEER REVIEW METHODOLOGY

American commuter rail systems can be divided two categories—"Legacy" systems and "New Start" systems.

- "Legacy" refers to systems that were previously reorganized from a combination of private passenger rail systems that have operated commuter or intercity service since as early as the mid-19th century.
- "New Start" systems are new start-up systems that exist where there previously was no commuter or intercity service (typically located in fast-growing southern and western Sunbelt regions). The first wave of New Start systems, of which Tri-Rail is considered part, began operation as early as the mid-1980s.

SFRTA's previous TDP peer reviews analyzed six systems considered to be comparable to SFRTA/Tri-Rail based on operating and other characteristics: CalTrain, Virginia Railway Express (VRE), Sounder Commuter Rail, Trinity Railway Express (TRE), Coaster, and Altamont Commuter Express (ACE). These were all included in the peer means in previous TDPs. Metrolink and Maryland Area Rail Commuter (MARC) were shown in past comparisons but not actually included in the peer means.

As part of the SFRTA TDP 2013–2022 Major Update, MARC and four additional new systems were included in the peer means; South Shore Line, FrontRunner, New Mexico Rail Runner Express, and Shore Line East were all considered to have enough characteristics similar to SFRTA/Tri-Rail to be included and present a more inclusive peer analysis.

Table 3-28 presents the 23"Legacy" and "New Start" commuter rail systems reviewed to compare SFRTA/Tri-Rail's performance to its 11 peers and 12 non-peers.

Table 3-28: U.S. Commuter Rail Systems Reviewed

Commuter Rail System	Major Cities Served	Date Opened	Legacy/ New Start	Saturday Service	Sunday Service	Tri-Rail Peer?
A-Train	Denton–Carrollton, TX	2011	New Start	Yes	No	No
Altamont Commuter Express	Stockton–San Jose, CA	1998	New Start	No	No	Yes
CalTrain	San Francisco–San Jose, CA	1987	Legacy	Yes	Yes	Yes
Capital MetroRail	Austin, TX	1996	New Start	Yes	No	No
Coaster	San Diego, CA	1995	New Start	Yes	Yes	Yes
FrontRunner	Salt Lake City, UT	2008	New Start	Yes	No	Yes
Long Island Rail Road	New York, NY	1836	Legacy	Yes	Yes	No
MARC	Baltimore M.D–Washington DC	1984	New Start	No	No	Yes
MBTA	Boston, MA	1973	Legacy	Yes	Yes	No
Metra	Chicago, IL	1984	Legacy	Yes	Yes	No
Metrolink	Los Angeles, CA	1992	New Start	Yes	Yes	No
Metro-North Railroad	New York, NY	1983	Legacy	Yes	Yes	No
Music City Star	Nashville, TN	2006	New Start	No	No	No
New Jersey Transit Rail	New York, NY/ Philadelphia, PA	1983	Legacy	Yes	Yes	No
New Mexico Rail Runner Express	Albuquerque–Santa Fe, NM	2006	New Start	Yes	Yes	Yes
Northstar Line	Minneapolis, MN	2009	New Start	Yes	Yes	No
SEPTA Regional Rail	Philadelphia, PA	1983	Legacy	Yes	Yes	No
SFRTA/Tri-Rail	**Miami–Ft. Lauderdale–West Palm Beach, FL**	**1989**	**New Start**	**Yes**	**Yes**	**N/A**
Shore Line East	New Haven–New London, CT	1990	New Start	Yes	Yes	Yes
Sounder	Seattle–Everett, WA	2000	New Start	No	No	Yes
South Shore Line	Chicago, IL–Gary–South Bend, IN	1903	Legacy	Yes	Yes	Yes
Trinity Railway Express (TRE)	Dallas–Fort Worth, TX	1996	New Start	Yes	No	Yes
Virginia Railway Express (VRE)	Washington DC–Manassas –Fredericksburg, VA	1992	New Start	No	No	Yes
Westside Express Service	Beaverton–Wilsonville, OR	2010	New Start	No	No	No

Source: SFRTA

SFRTA/Tri-Rail Peer Systems

A total of 11 commuter rail agencies were selected as peers of SFRTA/Tri-Rail. They are described below, including the reasons they were deemed eligible to be considered SFRTA/Tri-Rail peers.

Altamont Commuter Express (ACE)

The ACE train connects San Jose to Stockton, California. Service began in 1998, and the trains are owned by the San Joaquin Regional Rail Commission (SJRRC). ACE trains traverse some operationally-challenging countryside, including climbing mountain passes and tunnels that may impact travel times. ACE operates very similar diesel-electric locomotives and rolling stock to SFRTA/Tri-Rail and other "New Start" systems. According to APTA's fourth-quarter 2012 ridership statistics, ACE had an average weekday ridership of approximately 3,700. It is considered a peer of SFRTA/Tri-Rail given the age of the system, fleet similarities, its single-lined system, and other similar operating characteristics.

CalTrain[1]

CalTrain is a "Legacy" system that operates between the San Francisco peninsula and Silicon Valley connecting San Francisco to Gilroy through San Jose, California. CalTrain, formed in 1987 and operated by the Peninsula Corridor Joint Powers Board (PCJPB), is a single-lined system that is a successor of the Southern Pacific Railroad. The PCJPB is made up of agencies from the three counties within which it operates (San Francisco, San Mateo, Santa Clara). CalTrain operates an all-diesel-powered locomotive system and a unique system of express service (dubbed the Baby Bullet) that accounts for a significant portion of its overall system ridership. According to APTA's fourth-quarter 2012 ridership statistics, CalTrain had an average weekday ridership of just over 47,000. It is considered a peer of SFRTA/Tri-Rail due to it being a single-line system, its similarities in route mile length, and other operating characteristics.

Coaster[2]

Coaster is a commuter rail system that operates near the Pacific coast between Oceanside and San Diego. The service is operated by a private entity, with overall management oversight provided by the North County Transit District (NCTD). A "New Start" system that began service in 1995, Coaster uses a combination of diesel-electric locomotives and rolling stock very similar to SFRTA/Tri-Rail. According to APTA's fourth-quarter 2012 ridership statistics, Coaster had an average weekday ridership of about 5,000. It is considered a peer of SFRTA/Tri-Rail given the age of the system, fleet similarities, and its single-line system, among other similar operating characteristics.

[1] "CalTrain History," CalTrain website: http://www.caltrain.com/about/History.html,accessed April 29, 2013.
[2] "NCTD Overview," Coaster website, http://www.gonctd.com/nctd_overview, accessed April 30, 2013.

FrontRunner[3]

The FrontRunner is a commuter rail system that serves Salt Lake City and the communities in the Wasatch Front, north to Ogden, terminating south in Provo. FrontRunner is operated by the Utah Transit Authority (UTA). A "New Start" system beginning operations in 2008, FrontRunner uses diesel-electric locomotives and has enjoyed strong ridership for such a young system. According to APTA's fourth-quarter 2012 ridership statistics, FrontRunner had an average weekday ridership of approximately 7,800. A single-line system with 88 route miles and 16 stations, it shares enough operating and system characteristics to be considered a peer of SFRTA/Tri-Rail.

Maryland Area Regional Commuter (MARC)[4]

One of the top 10 busiest commuter rail systems in the country, MARC connects the greater Baltimore-Washington metropolitan area. The three-lined MARC system extends as far west as West Virginia and is considered a "New Start" system, beginning service in 1984. MARC uses a combination of diesel locomotives and electric rolling stock and, in certain segments, trains travel at speeds up to 125 MPH. According to APTA's fourth-quarter 2012 ridership statistics, MARC had an average weekday ridership of just over 36,100. It is considered a peer of SFRTA/Tri-Rail due to the comparable age of the two systems, similarities in rolling stock, and other operating characteristics.

New Mexico Rail Runner Express[5]

Beginning operation in 2006, the New Mexico Rail Runner Express is a commuter rail system connecting the cities of Santa Fe, Albuquerque, and Belen. The dual-line "New Start" system is administered jointly by the Mid Region Council of Governments (MRCOG) and the New Mexico Department of Transportation (NMDOT). Rail Runner uses a combination of diesel-electric locomotives and rolling stock very similar to SFRTA/Tri-Rail. According to APTA's fourth-quarter 2012 ridership statistics, Rail Runner had an average weekday ridership of about 3,500. It can be considered a peer of SFRTA/Tri-Rail given the fleet similarities and its single-line system, among other similar operating characteristics.

Shore Line East (SLE)[6]

The Shore Line East is a commuter rail service that operates along the Amtrak-owned Northeast Corridor, connecting coastal Connecticut cities and indirectly providing access to New York City. Much like SFRTA/Tri-Rail, SLE began in 1990 as a temporary measure to mitigate construction-related impacts on Interstate 95 and is considered a "New Start" system. The system is jointly owned by the

[3] "Five Years of FrontRunner," UTA website, http://www.letsrideuta.com/2013/04/25/five-years-of-frontrunner/, accessed April 26, 2013.
[4] "MARC Train History," Trains.com website, http://trn.trains.com/en/sitecore/content/Home/Railroad%20Reference/Passenger%20Trains/2006/06/Maryland%20Rail%20Commuter%20MARC.aspx,accessed April 27, 2013.
[5] "New Mexico Rail Runner Project History," Rail Runner website, http://www.nmrailrunner.com/rio-metro-schedules/train-schedule/19-ct-categories-en/ct-about-en/71-project-history, accessed April 29, 2013.
[6] "Governor Rell and Amtrak Announce Expanded Shore Line East Service to New London," Connecticut DEP website, http://www.ct.gov/deep/cwp/view.asp?A=3847&Q=455216,accessed April 30, 2013.

Connecticut Department of Transportation (CDOT) and Amtrak, with Amtrak also serving as the sole operator. SLE uses diesel-electric locomotives and push-pull rolling stock. According to APTA's fourth-quarter 2012 ridership statistics, SLE had an average weekday ridership of approximately 2,200. It is considered a peer agency of SFRTA/Tri-Rail considering its similar beginning service date, number of stations, and route miles.

Sounder[7]

Sounder is a commuter rail system that serves Seattle and the neighboring cities of Everett, Lakewood, and Tacoma, among others. A "New Start" system, the two-line Sounder is operated by Sound Transit and originally began service in 2000. Sounder is operated by BNSF and uses diesel-electric locomotives with electric rolling stock. According to APTA's fourth-quarter 2012 ridership statistics, Sounder had an average weekday ridership of approximately 10,900. Although the system has two lines, it operates in a linear fashion comparable to SFRTA/Tri-Rail. The route miles, locomotives, and rolling stock are also comparable to SFRTA/Tri-Rail; therefore, because of these and other characteristics, it was determined to be a SFRTA/Tri-Rail peer agency.

South Shore Line[8]

The South Shore Line is a commuter rail system that connects South Bend and other northwestern Indiana cities to Chicago. It is operated by the Northern Indiana Commuter Transportation District (NICTD). The South Shore Line is unique in many ways from other commuter rail systems. The entire South Shore fleet is completely electrically-powered. A "Legacy" system, the South Shore Line is technically the second oldest commuter rail property in the nation opening in 1903. The South Shore Line also operates in the middle of a residential street in Michigan City, Indiana. According to APTA's fourth-quarter 2012 ridership statistics, the South Shore Line had an average weekday ridership of approximately 11,600. A single-line system with 90 route miles and 20 stations, it shares enough operating and system similarities to be considered a peer of SFRTA/Tri-Rail.

Trinity Railway Express (TRE)[9]

TRE connects Dallas and Fort Worth and the in-between cities of Grand Prairie and Irving. A "New Start" system, TRE began service in 1996 and is jointly owned by both Dallas Area Regional Transit (DART) and the Fort Worth Transportation Authority (The T) for commuter rail operations. TRE uses diesel-electric locomotives and rolling stock that are similar to SFRTA/Tri-Rail's. According to APTA's fourth-quarter 2012 ridership statistics, TRE had an average weekday ridership of approximately 7,300. It is considered a peer of SFRTA/Tri-Rail given the age of the system, similarities of locomotives/rolling stock, and its single-line system, among other similar operating characteristics.

[7] "Sounder Chronology," Sound Transit website, http://www.soundtransit.org/Documents/pdf/about/Chronology.pdf, accessed April 29, 2013.
[8] "History of the South Shore Rail Passenger Service," www.nictd.com/links/ourhistory.htm, accessed April 27, 2013.
[9] "About Trinity Railway Express," TRE website, http://www.trinityrailwayexpress.org/aboutTRE.html,accessed April 30, 2013.

Virginia Railway Express (VRE)[10]

The Virginia Railway Express is a weekday-only commuter rail system connecting the Northern Virginia suburbs to Washington, DC via two lines, the Fredericksburg and Manassas lines. VRE is a "New Start" system that began operation in 1992 and is owned by the Northern Virginia Transportation Commission (NVTC) and the Potomac and Rappahannock Transportation Commission (PRTC). VRE operates diesel locomotives owned and maintained by Amtrak, Norfolk Southern, and CSX Transportation. According to APTA's 2011 fourth-quarter ridership statistics (the latest available for VRE), VRE had an average weekday ridership of about 19,000. It is considered a peer due to SFRTA/Tri-Rail due to its similar route miles, number of stations, opening date, fleet, and other operating characteristics.

SFRTA/Tri-Rail Non-Peer Systems

The 12commuter rail systems reviewed but not considered eligible to be SFRTA/Tri-Rail peers are described below, including the reasons for their exclusion from the peer review.

A-Train[11]

A-Train is a commuter rail line that connects Denton, Texas, a northwest Dallas suburb, with the DART system in Carrollton, another northwestern Dallas suburb. The service is owned and operated by the Denton County Transportation Authority (DCTA). A-Train is the newest commuter rail system in the country, with service beginning in 2011. It is a one-way, 21-mile route and provides service to six stations. A-Train uses unique rolling stock, operating diesel multiple unit (DMU) articulated railcars similar to Capital MetroRail in Austin. According to APTA's fourth-quarter 2012 ridership statistics, A-Train had an average weekday ridership of approximately 2,000. A suburb-to-suburb system, it is not considered a peer agency of SFRTA/Tri-Rail considering the newness of the system, different rolling stock, route miles, and other operating characteristics.

Capital MetroRail[12]

Capital MetroRail is relatively new "New Start" commuter rail system that began service in 2010 and connects downtown Austin with its northern suburbs. Although it is technically a commuter rail system, it is classified by NTD as "Hybrid Rail" since it operates as a tram in some downtown Austin areas. Capital MetroRail uses self-propelled DMU articulated railcars without locomotives. According to APTA's fourth-quarter 2012 ridership statistics, Capital MetroRail had an average weekday ridership of approximately 2,800. It is not considered a peer of SFRTA/Tri-Rail given the differences in age of the system, ridership, and lack of similar operating characteristics.

[10] "VRE Chronology," http://www.vre.org/about/company/VRE-Chronology.pdf.
[11] "Denton-Dallas A-Train Services to Start in June," *Railway Gazette* International website, http://www.railwaygazette.com/index.php?id=44&no_cache=1&tx_ttnews%5Btt_news%5D=13268&cHash=d1cb85d83, accessed April 26, 2013.
[12] "MetroRail to begin service," *Austin Statesman* website, http://www.statesman.com/news/news/local/metrorail-to-begin-service-march-22/nRq4h/, accessed April 26, 2013.

Long Island Rail Road (LIRR)[13]

LIRR is the oldest of the "Legacy" systems as well as the oldest continuously-operating railroad in the U.S. (since 1834). As the one of the busiest commuter rail systems in the country, LIRR connects the entire length of Long Island to Manhattan and is the only commuter railroad to currently operate 24 hours a day, seven days a week. Owned and operated by the Metropolitan Transportation Authority (MTA), LIRR runs a combination of diesel-electric and electric rolling stock. According to APTA's fourth-quarter 2012 ridership statistics, LIRR had an average weekday ridership of 324,300. It is not considered a peer of SFRTA/Tri-Rail due to its system size, number of lines, and other operating characteristics.

Massachusetts Bay Transportation Authority Commuter Rail (MBTA)[14]

One of the five busiest commuter rail systems in the country serving the greater Boston area as far west as Worcester and as far south as Rhode Island, MBTA is a "Legacy "system that was consolidated in 1973 from a multitude of private rail companies. Amtrak managed all of MBTA's commuter rail lines between 1987 and 2003. It is now operated under contract by the Massachusetts Bay Commuter Railroad Company (MBCR) a joint partnership of three private companies (Veolia Transportation, Bombardier Transportation, and Alternate Concepts, Inc.). MBTA uses diesel locomotives and has been actively updating its cab fleet. An extensive system that uses 11 lines and 133 stations, MBTA had an average weekday ridership of over 127,000, according to APTA's most recent statistics. MBTA is not considered a peer of SFRTA/Tri-Rail due to its sheer system size, number of lines, and other operating characteristics.

Metra[15]

Metra is one of the busiest commuter rail systems in the country. This "Legacy" system serves greater Chicago and its metropolitan area on 11 different lines. Metra service extends as far as southern Wisconsin and northwestern Indiana, using its existing and extensive 19th-century rail infrastructure. Metra uses primarily diesel-electric locomotives, with the exception of its electric fleet, which is used in the Electric District, a portion of the Chicago south suburbs. While Metra owns all rolling stock, some of its lines are contracted out for operation by freight carriers Union Pacific (UP) and Burlington Northern Santa Fe (BNSF). Overall oversight is provided by the Regional Transportation Authority (RTA). According to APTA's fourth-quarter 2012 ridership statistics, Metra had an average weekday ridership of just over 300,000. It is not considered a peer of SFRTA/Tri-Rail due to its system size, number of lines, and other operating characteristics.

Metrolink[16]

Beginning operations in 1991, Metrolink is the largest of the "New Start" systems, with more than 500 miles of track and 56 stations serving the greater Los Angeles metropolitan area. Owned by the

[13] "MTA Network Info," MTA website, http://www.mta.info/mta/network.htm#statslirr,accessed April 30, 2013.
[14] "History of the MBTA," MBTA website, http://www.mbta.com/about_the_mbta/history/, accessed April 30, 2013.
[15] "Metra History," Metra website, http://metrarail.com/metra/en/home/about_metra/leadership/metra_history.html, accessed April 26, 2013.
[16]"Metrolink History," Metrolink website, http://www.metrolinktrains.com/agency/page/title/about,accessed May 5, 2013.

Southern California Regional Rail Authority (SCRRA), Metrolink operates seven lines, all of which use diesel locomotives and railcars. It serves six counties in the Southern California area (Los Angeles, Ventura, San Bernardino, Orange, Riverside, and San Diego), with the majority of lines meeting at Los Angeles Union Station. According to APTA's fourth-quarter 2012 ridership statistics, Metrolink had an average weekday ridership of just over 42,000. It is not considered a peer of SFRTA/Tri-Rail due to its system size, number of lines, and other operating characteristics.

Metro-North Commuter Railroad (Metro-North)[17]

Metro-North is one of the busiest commuter rail systems in the country. With 6 lines and more than 120 stations, Metro-North operates extensive service between New York City and the northern New York and Connecticut suburbs. The system is operated by the MTA. Metro-North runs a diverse and extensive combination of diesel-electric and electric rolling stock. It is a "Legacy" system formed from a combination of private railroads that had been providing passenger service since the late 19th century. According to the APTA's fourth-quarter 2012 ridership statistics, Metro-North had an average weekday ridership of just over 285,700. It is not considered a peer of SFRTA/Tri-Rail due to its system size, number of lines, and other operating characteristics.

Music City Star[18]

Music City Star is a commuter rail service connecting Nashville to eastern satellite cities, including Lebanon roughly following the U.S. 70/ Interstate 40 corridor. The service is owned by the Tennessee Department of Transportation (TDOT) and is operated by the Tennessee Regional Transportation Authority (RTA). Beginning service in 2006 and thus considered a "New Start" system, the Music City Star's rolling stock includes diesel-electric locomotives similar to those used in some Amtrak services. According to APTA's fourth-quarter 2012 ridership statistics, Music City Star had an average weekday ridership of approximately 900. It is not considered a peer agency of SFRTA/Tri-Rail considering the newness of the system, different rolling stock, route miles, and other operating characteristics, including ridership.

New Jersey Transit Rail (NJTR)[19]

NJT Rail is one of the most used commuter rail systems in the nation. It is a "Legacy" system that was reorganized from a combination of predecessors, the Central Railroad of New Jersey, Pennsylvania, and Erie Lackawanna Railroads in 1983. NJT Rail is an 11-line system that serves primarily northern New Jersey connecting the state to the two major metropolitan areas of New York City and Philadelphia. The system uses a mix of diesel locomotives and railcars, electrified locomotives and railcars, and electric multiple units (EMUs). NJT Rail provides service to more than 160 stations that have multiple owners. According to "New Jersey Transit Facts at a Glance," NJT Rail has an average weekday ridership of

[17] "MTA Network Info," MTA website, http://www.mta.info/mta/network.htm#statslirr, accessed April 30, 2013.
[18] "Rail on a Budget: Nashville's Music City Star," Metro Jacksonville website,http://www.metrojacksonville.com/article/2007-sep-rail-on-a-budget-nashvilles-music-city-star, accessed April 30, 2013.
[19] "New Jersey Facts at a Glance," http://www.njtransit.com/pdf/FactsAtaGlance.pdf, accessed May 5, 2013.

approximately 280,000.It is not considered a peer of SFRTA/Tri-Rail due to its system size, number of lines, and other operating characteristics.

Northstar Line[20]

The Northstar Line is a commuter rail line that connects Minneapolis with satellite communities to the northwest along the U.S. 10 corridor. It is owned and operated jointly by BNSF and the Metropolitan Council, which is a regional governmental and planning agency. Service began in 2009, making the "New Start" Northstar Line one of the newer commuter rail systems in the country. It uses a combination of diesel-electric locomotives and Bombardier rolling stock similar to SFRTA/Tri-Rail. According to APTA's fourth-quarter 2012 ridership statistics, the Northstar Line had an average weekday ridership of approximately 2,400. It is not considered a peer of SFRTA/Tri-Rail given the newness of the system and differences in ridership, route miles, and rail stations, among other operating characteristics.

Southeastern Pennsylvania Transportation Authority (SEPTA)[21]

SEPTA's regional rail is a "Legacy" commuter rail system that serves the Philadelphia area, extending into New Jersey and Delaware. It refers to its commuter rail system as "regional rail" and, unlike most U.S. commuter rail systems, the entire SEPTA fleet is electric-powered by overhead catenary lines. According to APTA's fourth-quarter 2012 ridership statistics, SEPTA's regional rail had an average weekday ridership of just over 125,000 and is one of the top 10 systems in the country in terms of ridership. SEPTA's regional rail is not considered a peer of SFRTA/Tri-Rail due to its system size, number of lines, and other operating characteristics.

Westside Express Service (WES)[22]

Westside Express Service is a north-south commuter rail line connecting Beaverton to Wilsonville, Oregon, both western Portland suburbs. Owned by Tri-Met, the regional transit agency, and operated by a local freight operator, the 15-mile line offers passenger rail service to 5 stations. The service roughly follows Oregon State Road 217 and Interstate 5, two busy major roadways. Like the A-Train, the WES is a suburb-to-suburb commuter rail line. A "New Start" system, its rolling stock uses DMUs, which are self-propelled diesel cars. According to APTA's fourth-quarter 2012 ridership statistics, WES had an average weekday ridership of approximately 1,700. It is not considered a peer agency of SFRTA/Tri-Rail because of the newness of the system, different rolling stock, route miles, and other operating characteristics, including ridership.

[20] "History of Northstar," Northstar website, http://www.mn-getonboard.com/abt_history.html, accessed April 30, 2013.
[21] "SEPTA Fiscal 2014-2025 Year Capital Budget Proposal," SEPTA website, http://www.septa.org/reports/pdf/capbudget14.pdf, accessed May 9, 2013.
[22] "WES Commuter Rail Project History," Tri Met website, http://trimet.org/about/history/wes.htm, accessed April 26, 2013.

3.3.3: PEER REVIEW ANALYSIS

Using general performance indicators and effectiveness and efficiency measures obtained from the NTD for FY 2011 (the most recent NTD data available), the performance of SFRTA/Tri-Rail commuter rail system was compared to the 23 commuter rail systems previously described. The indicators and measures evaluated for the peer review analysis are summarized in Table 3-29.

Table 3-29: Peer Review Indicators and Measures Evaluated

General Performance Indicators	Effectiveness Measures	Efficiency Measures
Fleet size	Service density (train miles/route miles)	Passenger trips per revenue hour
Track miles	Average train load (passenger miles/train miles)	Operating cost per revenue hour
Train miles	Fleet productivity (passenger trips/fleet size)	Operating cost per passenger trip
Unlinked passenger trips (boardings)	Boardings per station (passenger trips/no. of stations)	
Passenger miles traveled	Route productivity (passenger miles per one-way route mile)	
Route miles		
Average trip length		
Vehicle revenue miles		
Total operating cost		
Vehicle revenue hours		

Source: SFRTA

From the indicators/measures shown in Table 3-29, a peer mean was calculated for the 11 SFRTA/Tri-Rail peer systems. In addition, FY 2011 NTD data are also shown for the other 12 national systems to compare SFRTA/Tri-Rail's performance to both the 11 peer systems and the other commuter rail systems throughout the U.S. Data for only the 11 peer systems are included in calculating the "peer mean" shown in Table 3-30 (provided in the next section) and the supporting peer analysis figures provided in Appendix A. In each of these tables and the Appendix A figures, the 11 SFRTA/Tri-Rail peer systems are denoted by an asterisk (*) next to the agency name.

Table 3-30 summarizes FY 2011 NTD data for each performance indicator, effectiveness measure, and efficiency measure identified in Table 3-29. To demonstrate the relative magnitude of each system's size, the systems are generally ordered based on highest to lowest annual ridership (unlinked passenger trips) to show the peer agencies together.

Table 3-30: SFRTA/Tri-Rail Peer Review Analysis

Commuter Rail System	Legacy/ New Start	Included in Peer Mean?	Fleet Size	Track Miles	Train Miles	Unlinked Passenger Trips	Passenger Miles Traveled	Route Miles	Vehicle Revenue Miles	Total Operating Cost	Vehicle Revenue Hours	Stations	Average Trip Length (miles)	Operating Cost Per Revenue Hour	Operating Cost Per Passenger Trip	Passenger Trips per Revenue Hour	Service Density	Average Train Load	Fleet Productivity	Boardings Per Station	Route Productivity
Long Island Rail Road (NY)	Legacy	No	1,186	701.1	8,063,842	96,457,658	2,087,848,879	638.2	62,445,372	$1,069,768,165	2,006,356	124	21.6	$533.19	$11.09	48.1	12,635	258.9	81,330.2	777,884.3	3,271,464.9
Metro-North (New York)	Legacy	No	1,167	808.8	9,753,755	81,841,665	2,613,236,453	545.7	57,461,493	$910,491,999	1,584,481	111	31.9	$574.63	$11.13	51.7	17,873	267.9	70,130.0	737,312.3	4,788,427.6
NJ Transit Rail (New Jersey)	Legacy	No	1,370	868.0	9,937,650	79,632,021	1,995,448,983	1001.8	63,945,200	$838,957,195	1,873,800	164	25.1	$447.73	$10.54	42.5	9,920	200.8	58,125.6	485,561.1	1,991,863.6
Metra (Chicago)	Legacy	No	1,156	1206.1	7,157,787	72,349,785	1,645,354,028	980.4	41,844,981	$596,040,975	1,394,927	241	22.7	$427.29	$8.24	51.9	7,301	229.9	62,586.3	300,206.6	1,678,247.7
SEPTA (Philadelphia)	Legacy	No	379	609.5	5,475,041	37,820,990	538,649,776	446.9	17,925,662	$238,669,815	661,700	154	14.2	$360.69	$6.31	57.2	12,250	98.4	99,791.5	245,590.8	1,205,194.8
MBTA (Boston)	Legacy	No	497	665.9	4,111,220	36,212,904	749,345,888	737.5	22,869,608	$301,557,532	776,936	134	20.7	$388.14	$8.33	46.6	5,575	182.3	72,863.0	270,245.6	1,016,062.2
Metrolink (Los Angeles)	New Start	No	247	655.8	2,435,835	11,270,214	387,997,046	777.8	10,294,225	$161,020,631	259,055	55	34.4	$621.57	$14.29	43.5	3,132	159.3	45,628.4	204,913.0	498,839.1
CalTrain (San Jose-San Fco)*	**Legacy**	**Yes**	**118**	**136.7**	**1,328,350**	**12,574,233**	**289,067,501**	**153.7**	**6,502,392**	**$92,227,280**	**185,792**	**32**	**23.0**	**$496.40**	**$7.33**	**67.7**	**8,644**	**217.6**	**106,561.3**	**392,944.8**	**1,880,970.2**
MARC (Baltimore-DC)*	**New Start**	**Yes**	**177**	**471.0**	**1,122,445**	**8,232,729**	**248,136,319**	**400.4**	**5,698,926**	**$92,903,640**	**134,320**	**42**	**30.1**	**$691.66**	**$11.28**	**61.3**	**2,803**	**221.1**	**46,512.6**	**196,017.4**	**619,721.1**
VRE (Northern Virginia-DC)*	**New Start**	**Yes**	**127**	**161.5**	**366,019**	**4,645,591**	**144,938,917**	**161.5**	**1,920,584**	**$57,461,301**	**61,605**	**18**	**31.2**	**$932.74**	**$12.37**	**75.4**	**2,267**	**396.0**	**36,579.5**	**258,088.4**	**897,565.7**
SFRTA/Tri-Rail	***New Start***	***N/A***	***45***	***152.2***	***1,073,885***	***3,810,823***	***112,394,589***	***142.2***	***2,878,369***	***$51,718,986***	***96,960***	***18***	***29.5***	***$533.41***	***$13.57***	***39.3***	***7,550***	***104.7***	***84,685.0***	***211,712.4***	***790,175.7***
PEER MEAN			**74**	**141.3**	**573,928**	**3,610,403**	**97,921,881**	**159.2**	**2,419,187**	**$40,819,837**	**69,558**	**16**	**29.3**	**$635.89**	**$15.69**	**45.8**	**4,074**	**172.3**	**43,116.8**	**195,390.5**	**598,099.4**
NICTD (Indiana-Chicago)*	**Legacy**	**Yes**	**82**	**130.4**	**780,779**	**3,706,676**	**107,122,936**	**179.8**	**3,421,812**	**$39,198,932**	**96,470**	**20**	**28.9**	**$406.33**	**$10.58**	**38.4**	**4,342**	**137.2**	**45,203.4**	**185,333.8**	**595,789.4**
Sounder (Seattle)*	**New Start**	**Yes**	**69**	**140.8**	**256,234**	**2,626,711**	**61,549,342**	**146.9**	**1,508,867**	**$31,681,964**	**38,588**	**10**	**23.4**	**$821.03**	**$12.06**	**68.1**	**1,744**	**240.2**	**38,068.3**	**262,671.1**	**418,931.0**
TRE (Dallas-Ft.Worth)*	**New Start**	**Yes**	**47**	**55.3**	**488,678**	**2,388,407**	**44,337,390**	**72.3**	**1,119,672**	**$37,345,660**	**47,440**	**10**	**18.6**	**$787.22**	**$15.64**	**50.3**	**6,759**	**90.7**	**50,817.2**	**238,840.7**	**613,241.9**
FrontRunner (Utah)*	**New Start**	**Yes**	**56**	**52.1**	**657,738**	**1,610,773**	**41,565,944**	**87.7**	**1,939,536**	**$20,517,540**	**69,228**	**8**	**25.8**	**$296.38**	**$12.74**	**23.3**	**7,498**	**63.2**	**28,763.8**	**201,346.6**	**473,848.0**
Coaster (San Diego)*	**New Start**	**Yes**	**35**	**98.9**	**278,488**	**1,390,142**	**38,483,486**	**82.2**	**1,317,584**	**$15,850,637**	**32,981**	**8**	**27.7**	**$480.60**	**$11.40**	**42.1**	**3,388**	**138.2**	**39,718.3**	**173,767.8**	**468,168.9**
Rail Runner (New Mexico)*	**New Start**	**Yes**	**31**	**111.1**	**490,137**	**1,219,111**	**55,811,553**	**193.1**	**1,382,782**	**$24,228,643**	**37,164**	**12**	**45.8**	**$651.94**	**$19.87**	**32.8**	**2,538**	**113.9**	**39,326.2**	**101,592.6**	**289,029.3**
ACE (Stockton-San Jose)*	**New Start**	**Yes**	**24**	**90.0**	**134,708**	**718,356**	**32,938,428**	**172.0**	**781,200**	**$11,732,070**	**38,588**	**10**	**45.9**	**$304.03**	**$16.33**	**18.6**	**783**	**244.5**	**29,931.5**	**71,835.6**	**191,502.5**
Shore Line East (CT)*	**New Start**	**Yes**	**47**	**106.0**	**409,635**	**601,708**	**13,188,875**	**101.2**	**1,017,697**	**$25,870,538**	**22,966**	**9**	**21.9**	**$1,126.47**	**$43.00**	**26.2**	**4,048**	**32.2**	**12,802.3**	**66,856.4**	**130,324.9**
North Star (Minneapolis)	New Start	Yes	24	69.1	149,290	703,424	17,800,672	77.9	522,871	$15,957,385	14,595	6	25.3	$1,093.35	$22.69	48.2	1,916	119.2	29,309.3	117,237.3	228,506.7
Capital MetroRail (Austin)	New Start	No	6	64.6	227,559	377,666	6,424,718	64.2	224,653	$9,388,517	7,594	9	17.0	$1,236.31	$24.86	49.7	3,542	28.2	62,944.3	41,962.9	100,011.2
WES (Portland)	New Start	No	6	19.2	120,513	371,172	3,106,452	29.2	167,745	$6,256,607	6,587	5	8.4	$949.84	$16.86	56.3	4,124	25.8	61,862.0	74,234.4	106,312.5
Music City Star (Tennessee)	New Start	No	15	33.0	88,600	250,656	3,953,322	62.8	205,168	$3,693,851	6,894	6	15.8	$535.81	$14.74	36.4	1,411	44.6	16,710.4	41,776.0	62,951.0
A-Train (Texas)	New Start	No	11	28.7	79,522	121,061	1,851,047	39.4	137,720	$7,848,267	5,707	8	15.3	$1,375.20	$64.83	21.2	2,018	23.3	11,005.5	15,132.6	46,980.9

* SFRTA/Tri-Rail peer system.

Note: To demonstrate the relative magnitude of each system's size, the systems are generally ordered based on highest to lowest annual ridership (unlinked passenger trips) to show the peer agencies together.

Source: NTD (FY 2011)

(This page intentionally left blank.)

3.3.4: SUMMARY OF PEER ANALYSIS

Among its peer systems, SFRTA/Tri-Rail is a Top 3 performer in 5 out of the 19 performance categories and outperforms the peer mean in 14 of those 19 categories. Adding MARC, South Shore Line, Rail Runner, FrontRunner, and Shore Line East to the established peer review agencies (included in previous TDP efforts) enhances an existing mix of smaller and larger systems, which overall help strengthen the peer comparison. For a single-line system that operates on both weekdays and weekends, SFRTA/Tri-Rail is a productive and efficient system. Based on the performance measures presented earlier and summarized in Table 3-31, SFRTA/Tri-Rail compares favorably with its peer systems as well as the overall universe of American commuter rail systems.

(This page intentionally left blank.)

Table 3-31: Summary of SFRTA/Tri-Rail Peer Analysis

Performance Measure Metric	What is Measured?	Tri-Rail Rank (Out of 12)	Peer Mean	Top Peer Performer	Least Peer Performer
Fleet Size	Capacity; Productivity; Efficiency	9th (45)	73.9	MARC (177)	ACE (24)
Track Miles	Distance, Geographical Coverage	3rd (152.2)	141.3	MARC (471.0)	FrontRunner (52.1)
Annual Train Miles	Miles of Operational Service	5th (1,073,885)	573,928	CalTrain (1,328,350)	ACE (134,708)
Annual Passenger Trips	Ridership	4th (3,810,823)	3,610,403	CalTrain (12,574,233)	Shore Line East (601,708)
Passenger Miles Traveled	Ridership; Passenger Trip Length	4th (112,394,589)	97,921,881	CalTrain (289,067,501)	Shore Line East (13,188,875)
Route Miles	Distance, Geographical Coverage	7th (142.2)	159.2	MARC (400.4)	TRE (72.3)
Vehicle Revenue Miles	Miles Traveled by Fleet	3rd (2,878,369)	2,419,187	CalTrain (6,502,392)	ACE (781,200)
Total Operating Cost	Extent of Service; Cost Efficiency	9th ($51,718,986)	$40,819,837	ACE ($11,732,070)	MARC ($92,903,640)
Vehicle Revenue Hours	Extent of Service	3rd (96,960)	69,558	CalTrain (185,792)	Shore Line East (22,966)
Stations	Extent of Service	T- 4th (18)	16.3	MARC (40)	FrontRunner/NCTD Coaster (8)
Average Trip Length (Miles)	Passenger Travel Patterns	5th (29.5)	29.3	ACE (45.9)	TRE (18.6)
Operating Cost per Revenue Hour	Cost Efficiency	5th ($533.41)	$635.89	FrontRunner ($296.38)	Shore Line East ($1,126.47)
Operating Cost per Passenger Trip	Cost Efficiency; Productivity	8th ($13.57)	$15.69	CalTrain ($7.33)	Shore Line East ($43.00)
Passenger Trips per Revenue Hour	Cost Efficiency; Productivity	7th (39.3)	45.8	VRE (75.4)	ACE (18.6)
Service Density	Service Frequency & Availability	2nd (7,549.8)	4,074.0	CalTrain (8,643.6)	ACE (783.2)
Average Train Load	Productivity	9th (104.7)	172.3	VRE (396)	Shore Line East (32.2)
Fleet Productivity	Productivity	2nd (84,685)	43,117	CalTrain (106,561)	Shore Line East (12,802)
Annual Boardings per Station	Productivity	3rd (211,712.4)	195,390	CalTrain (392,945)	Shore Line East (66,856)
Route Productivity	Productivity	3rd (790,175.7)	598,099.4	CalTrain (1,880,970.2)	Shore Line East (130,324.9)

(This page is intentionally left blank)

3.4 TRI-RAIL PERFORMANCE MEASURES UPDATE

3.4.1: INTRODUCTION

As part of the SFRTA FY 2014–2023 Transit Development Plan Major Update, the performance measures for Tri-Rail were updated based on guidance provided by in the *Tri-Rail Annual Performance Reporting Handbook*, prepared in 2007. The following section summarizes the efforts completed to update Tri-Rail's monitoring program report.

3.4.2: TRI-RAIL PERFORMANCE MEASUREMENT REPORT UPDATE

In 2007, SFRTA developed a Tri-Rail performance measurement report or monitoring program report to "serve as a base for decision making" that "will be integrated into SFRTA planning and operations management." Ongoing measurement and evaluation are important to the success of any performance measurement system. The Tri-Rail performance assessment uses data from NTD, SFRTA Monthly Operations Reports, and other SFRTA internal data sources, and the spreadsheet containing data and charts is designed to be updated annually. Performance measures used in the spreadsheet were updated and data are now available from 1998 to 2011for SFRTA planning and operations management to better assess the performance of Tri-Rail service over the past decade. These internal performance measures are described below.

- **Train Trips per Day:** The total number of trains performing one end-to-end route per day.
- **Span of Revenue Service:** The number of hours during the day that transit service is provided along the route.
- **Span of Peak Service (PM Peak):** The amount of time transit service is provided during daily peak hours (in this case 7–9 AM and 4–6 PM), excluding time not in service.
- **Headway Peak (PM Peak Direction):** The time interval between trains traveling in the peak direction during the PM peak period.
- **Headway Peak (PM Off-Peak Direction):** The time interval between trains traveling in the off-peak direction during the PM peak period.
- **Headway Off-Peak (Midday):** The time interval between trains traveling in the off-peak direction during midday.
- **Train Revenue Miles:** The total train miles per day, excluding distance covered while not in service.
- **Train Revenue Hours:** The total number of hours operated by all trains in service, excluding time used while not in service.

- **Train Vehicle Miles:** The total train miles per day, including distance covered while not in service.
- **Train Vehicle Hours:** The total train hours per day, including hours the train operation while not in service.
- **Route Miles:** Total miles per train to complete one round trip, excluding the distance covered while not in service.
- **Average Daily Boardings:** Average daily boardings per weekday **Boardings per Revenue Hour:** Average passenger train boardings per revenue hour.
- **Passenger Miles Traveled:** Total distance traveled by passengers.
- **Percent Park-and-Ride Lot Usage:** Percent of park-and-ride lots that are at least 80% full but less than 100% full and percent of park-and-ride lots that are completely full.
- **Estimated Park-and-Ride Access:** Percentage of riders who arrive at the station via automobile.
- **On-time Performance, End-to-End:** Percentage of transit vehicles departing or arriving at the end of the line on time.
- **Percent of Population and Employment in Service District with Bus Access to the Station (within ¼ Mile):** The portion of the service district included in the analysis is that portion considered to be a "transit-supportive area." A "transit-supportive area" has enough density to support hourly transit service (minimum household density of 3 households per gross acre, or minimum job density of 4 jobs per gross acre). Within the transit supportive area, the area is considered served by transit if it is within ¼-mile air distances from a bus stop or ½-mile air distances from a rail or bus rapid transit station.
- **Number of Days Not in Service:** Number of days per year that the system did not operate.
- **Vehicles Removed from I-95:** Annual vehicle trips removed from I-95 as a result of Tri-Rail service.
- **Operating Cost:**
    - *Operating Cost per Boarding:* The costs incurred per passenger boarding.
    - *Total Annual Rail Operating Expenses:* The total annual costs associated with operating the entire Tri-Rail system.
- **Annual Tons of Pollutants Reduced:**
    - *Operating Cost per Train Revenue Hour:* The cost of running the train for each hour it is in service (total costs include maintenance, fuel, operators, etc.).
    - *Total Annual Actual Train Revenue Hours:* Total combined train hours per day, excluding distance covered while not in service (non-revenue time).
    - *Air Quality—Tons of CO Reduced per Year:* The carbon monoxide removed from the air per year as a result of the mode shift from vehicle to transit.
    - *Air Quality—Tons of NOx Reduced per Year:* The nitrous oxide removed from the air per year as a result of the mode shift from vehicle to transit.
    - *CO Grams per Mile:* Amount (in grams per mile) of carbon monoxide from vehicle emissions.
    - *NOx Grams per Mile:* Amount (in grams per mile) of nitrous oxide from vehicle emissions.

- **Auto vs. Train Travel Time:**
  - *Rail vs. Auto Travel Time:* No input necessary. Calculation: Train Travel Time minus Auto Travel Time. Shows the extra time it takes to use Tri-Rail.
  - *Auto Travel Time:* Manually input from I-95 non-HOV lane auto travel times, by highway segment, weekdays, both directions. Data is in minutes.
  - *Train Travel Time:* Manually input from Tri-Rail weekday timetables, by segment, both directions. Data is in minutes.
- **Rail Boardings between Passenger Complaints:**
  - *Total Boardings per Complaint:* Total number of rail boardings for every service-related complaint.
  - *Total Annual Complaints Received (Bus + Rail):* The total number of service-related complaints received per year.

3.4.3: SUMMARY OF FINDINGS

Since 2007, the number of train trips per day is 50, as shown in Table 3-32. Revenue miles and vehicle miles reached a peak in 2009, but current numbers still represent a significant increase compared to the amount of service provided before 2007. Revenue hours and vehicle hours have also steadily increased. In 2011, an average of 12,900 passengers traveled 372,600 miles on an average weekday. Passenger trips in 2011 decreased slightly from a peak of 14,430 weekday trips in 2009. At the same time, weekday on-time performance increased to 92 percent in 2011, the best on-time performance seen since 2001.

The updated Tri-Rail performance measures spreadsheet with supporting tables, charts, and maps will be submitted electronically to SFRTA staff for SFRTA's planning and operations management use. A summary of selected performance measures for weekday service since 2007 are presented in Table 3-32.

Finally, the following changes are proposed to the performance measures spreadsheet for the next annual updates:

- **Train Trips per Day** – Data source should be the current schedule, not NTD.
- **Span of Revenue Service** – Data source should be NTD, not the current schedule. This performance measure should be removed for the Saturday and Sunday worksheets, as Saturday and Sunday Span of Revenue Service is not available from NTD.
- **Span of Peak Service** – Remove from spreadsheet analysis. This performance measure is not connected to any other data in the spreadsheet.

Table 3-32: Tri-Rail Selected Weekday Performance Measures (FYs 2007-2011)

Performance Measures	2007	2008	2009	2010	2011
Train trips per day	50	50	50	50	50
Span of revenue service	19.0	19.1	19.1	19.6	19.6
Headway peak (PM peak direction – NB)	20	20	20	20	20
Headway peak (PM off-peak direction – SB)	30	30	30	30	30
Headway off-peak (mid-day)	60	60	60	60	60
Train revenue miles	2,907	3,590	3,696	3,564	3,564
Train revenue hours	75	88	108	122	122
Train vehicle miles	3,066	3,840	3,840	3,692	3,692
Train vehicle hours	79	100	125	137	122
Route miles	142	142	142	142	142
Average daily boardings	11,545	13,228	14,430	12,139	12,900
Boardings per revenue hour	154	150	134	100	106
Passenger miles traveled	365,977	419,328	418,470	352,031	372,600
% park-and-ride lot usage: 80% full	33%	44%	33%	22%	22%
% park-and-ride lot usage: 100% full	6%	39%	0%	6%	6%
Estimated Park and Ride Access	50%	50%	31%	39%	39%
On-time performance, end to end	68%	77%	73%	89%	92%
% of population in service district with bus access to station (within ¼mile)	35%	N/A	N/A	N/A	46%
% of employment in service district with bus access to station (within ¼ mile)	50%	N/A	N/A	N/A	60%
Number of days not in service	2	0	0	0	0

Source: NTD (FYs 2007-2011)

SECTION 4

PUBLIC INVOLVEMENT SUMMARY

SFRTA
MOVING OUR REGION FORWARD

(This page intentionally left blank.)

4.1 PUBLIC INVOLVEMENT SUMMARY

4.1.1: INTRODUCTION

A PIP was prepared at the onset of the 10-year TDP for SFRTA to identify the public engagement activities to be completed during the ***SFRTA Forward*** planning process. Evaluation measures also were identified to gauge the effectiveness of the public involvement activities identified in the PIP. The PIP was reviewed and approved by FDOT per TDP Rule, on March 15, 2013. The PIP is included in Appendix C: Public Involvement Detail.

The remainder of this section summarizes the public involvement activities undertaken throughout the course of ***SFRTA Forward***. In addition, this section provides the results of the evaluation measures that were developed to assess the overall effectiveness of the public outreach efforts.

4.1.2: SUMMARY OF PUBLIC INVOLVEMENT ACTIVITIES

On-Board Survey

A system-wide survey was conducted on-board Tri-Rail as a separate task from the TDP update on Wednesday, February 13, 2013. A total of 5,175 on-board surveys were collected and analyzed during this effort, the results of which were reviewed and incorporated into the development of this 10-year TDP, as appropriate. The survey instrument asked 27 questions on various origin-destination elements, demographics, and customer service aspects. Appendix D contains the final report of the Tri-Rail 2013 On-Board Survey effort, including the survey instrument, the methodology employed, and a summary of survey results/findings.

Project Brand

One of the first tasks for SFRTA's 10-year TDP update was to develop a brand (or project identity). The purpose of the brand is to help convey the vision for the agency over the next decade and also to provide a visual identifier for related TDP documents and materials. The Project Team worked with SFRTA staff to develop the brand—**SFRTA: Moving Our Region Forward** (or ***SFRTA Forward*** for short). In addition to the name, a project logo that complements the SFRTA agency logo was developed to identify all ***SFRTA Forward*** documents and materials (see Figure 4-1).

Figure 4-1: Project Logo

Project Website

A website for ***SFRTA Forward*** (www.SFRTAForward.com) was developed early in the project and launched on March 18, 2013, to serve as the principal information portal for citizens and stakeholder agencies. In addition to hosting project-related information and documents, visitors to the website could access the online survey (in either English or Spanish), send comment/questions to the Project Team, and join the email mailing list.

Table 4-1 summarizes the statistics for the project website, including the total number of website visitors, number of persons that provided a comment or question via the website comment box, and number of persons who participated in the survey via the website. The project website was updated regularly throughout the course of the project. Draft project documents and PowerPoint presentations were uploaded to the project website as they were available for review and comment.

Table 4-1: Project Website Statistics

Description	Statistic
Total website visits (unique visits)*	982 (848)
Total comments/questions submitted	25
Total website survey participants (English)	733
Total website survey participants (Spanish)	11

*Includes website visits from April 1–May 31, 2013.
Unique visits are those visits from the same computer.

Project Contact Information

In an effort to provide multiple options for people to submit questions or comments regarding ***SFRTA Forward,*** a specific voicemail line was created to collect messages left when calling SFRTA's main customer service phone number (1-888-GO-SFRTA). A project-specific email address (TDP@sfrta.fl.gov) also was created to easily collect all comments/questions related to the TDP sent via electronic communication. SFRTA's phone and fax number as well as the TDP email address were published on all ***SFRTA Forward*** materials.

Five calls and 23 emails with comments and/or questions related to the TDP were received. Those calls and emails were responded to directly by the SFRTA Project Manager within two business days.

Project Contact Database

One of the primary components of the PIP for ***SFRTA Forward*** is communicating with and obtaining feedback from stakeholder agencies/organizations and the public through the project website, intercept and website surveys, and email campaigns. To develop the initial contact database, SFRTA provided internal contact and customer databases, including contacts from SFRTA's EDP, New Freedom/JARC program, and *Onboard* newsletter email lists. In addition to SFRTA's internal contact databases, contact information received via the project website, during the intercept surveys, or other contact with the Project Team were added to the contact database.

Email Campaign

An email blast was sent on March 28, 2013, to all persons in the project contact database to inform the public about the launch of ***SFRTA Forward***, as well as to provide a link to the project website and online survey. A copy of the email blast is included in Appendix C: Public Involvement Detail. Table 4-2 provides a summary of the statistics for the email blast sent, including the total number of email addresses to which it was sent, the number of persons who opened it, and the number of recipients who clicked on the online survey link.

Table 4-2: Introductory Email Blast Statistics

Email Blast Statistic	Count
Total email recipients	7,579
Total successful deliveries (% of total recipients)	7,053 (93.5%)
Total unique opens (% of total successful deliveries)	1,954 (27.7%)
Total unique "clicks" on survey link	431 – English survey 12 – Spanish survey

Regional and local agencies and organizations also maintain their own internal contact lists. In most cases, it was not feasible for the Project Team to obtain these internal contact lists to send them the email blast directly. Therefore, the Project Team coordinated with several partner agencies and organizations to have the ***SFRTA Forward*** email blast forwarded to their internal databases.It should be noted that the statistics presented in Table 4-2 do not count the contacts who received the email blast from the partner agencies and organizations that forwarded the ***SFRTA Forward*** email blast to their internal databases. The following agencies and organizations below shared the ***SFRTA Forward*** email blast with their contacts or posted a link to the project website or to the online survey on their websites:

- Palm Beach MPO
- Broward MPO
- Miami-Dade MPO
- Miami-Dade Transit
- South Florida Regional Planning Council
- South Florida Commuter Services

- Workforce Alliance (Palm Beach County)
- Greater Fort Lauderdale Alliance
- West Palm Beach Downtown Development Authority
- Miami Downtown Development Authority
- Institute of Transportation Engineers (ITE), Florida International University Student Chapter
- Institute of Transportation Engineers (ITE), Gold Coast Chapter
- Women's Transportation Seminar (WTS), South Florida Chapter

A follow-up email blast will be sent in the final months of the project to notify those included in the project contact database that the draft 10-year TDP has been developed and is available for review.

Published Materials

Several types of published materials were developed and published to advertise ***SFRTA Forward*** to the community. Each is described below, and a copy of each is provided in Appendix C: Public Involvement Detail.

Press Release

SFRTA sent a press release on ***SFRTA Forward*** to 80 companies and publications on March 29, 2013, to notify them of SFRTA's effort to update its 10-year TDP with a link to the project survey and project website. The following companies and publications received the ***SFRTA Forward*** press release:

- *Miami Herald*
- *El Nuevo Herald*
- *Miami Today News*
- *South Florida Business Journal*
- *Sun-Sentinel*
- *Palm Beach Post*
- SFRTA Board Members
- FDOT
- Bitner Goodman
- Veolia Transportation
- Palm Beach MPO
- Broward MPO
- Palm Tran
- Broward County Transit
- Clear Channel
- South Fla. Media Group
- CBS
- CSX
- City of Hollywood
- Dickey Consultants
- City of North Miami
- City of Deerfield Beach
- FTA
- Sun-Trolley (Ft. Lauderdale TMA)
- Hot 105 FM
- COX Radio
- Classical South Florida
- *El Sentinel*
- NBC
- APTA
- Rail America
- SCRIPPS
- Nova Southeastern Univ.
- Univision
- Reuters
- Broward County
- Miami-Dade County
- Palm Beach County
- WLRN
- *South Florida Times*
- WSVN
- WSCF
- WFOR
- WPTV
- WPLG
- WPBF
- WXEL
- *Boca Magazine*
- CBS 12
- News Radio 610
- WAY FM
- Metro Networks
- WB 39
- TCPalm.com
- WQAM
- WCNO
- WRMI
- DMJM Harris

- *Kiskeya Herald*
- ChiefHomeOfficer.com
- WKIS
- *Florida Trend*
- *METRO Magazine*
- BOBIT Business Media
- *CYGNUS Business Media*
- *Trains Magazine*
- Trade Press Media Group
- Marine Log
- Spanish Broadcasting System
- Bernie Wagenblast Voice Services
- *Broward News and Entertainment Today*
- Finish Line Transportation
- Collins Center for Public Policy
- Latin Business Club of America
- The News Service of Florida
- VisitFlorida.org
- Smart Route Metro Traffic
- TransitNews.net
- *Infocus Magazine*
- Traffic.com

Presentation Display Boards

Presentation display boards were prepared for display at Tri-Rail stations during the intercept surveys to provide information on the TDP process and to advertise the project website and other opportunities for public input. SFRTA staff also used the boards to provide information about ***SFRTA Forward*** at corporate and community outreach efforts throughout the South Florida region, as listed in Table 4-6 later in this document.

Fact Sheet and Rack Card

A fact sheet was developed to provide an overview of SFRTA and its services as an introduction to ***SFRTA Forward*** and to solicit input during the development of ***SFRTA Forward***. A rack card was developed to place onboard Tri-Rail trains to provide information about ***SFRTA Forward*** to riders. It was also distributed at meetings, presentations, and events where the TDP was being promoted. The rack card contains similar information to that provided in the fact sheet.

Onboard Newsletter Articles

Two *Onboard* newsletter articles about the project were published in SFRTA's nearly-monthly newsletter:

- March 2013[1]– article introducing ***SFRTA Forward***
- April/May 2013[2] – article highlighting ***SFRTA Forward*** public involvement efforts

Another *Onboard* article is planned for ***SFRTA Forward,*** which will likely be published in the August/September timeframe and will highlight the development of the plan and notify readers that the TDP is complete.

Intercept Surveys/Platform Interviews

Intercept surveys or platform interviews were conducted at six Tri-Rail stations over the course of three days in 2013: Tuesday, March 19; Thursday, March 21; and Saturday, April 6. These platform interviews were conducted to obtain feedback from Tri-Rail riders on their main reasons to ride Tri-Rail and their

[1]http://www.sfrta.fl.gov/docs/newsletters/2013/MAR_13_EOnboard_Color_LR.pdf
[2]http://www.sfrta.fl.gov/docs/newsletters/2013/APRIL13_Onboard_NL_Color_LR.pdf

most important improvements or initiatives for SFRTA/Tri-Rail in the next 10 years. During the interviews, Project Team members were available to obtain feedback and answer any questions the riding public had about the TDP Major Update process, SFRTA operations, etc. A table was set up at the station where the project presentation boards were displayed and ***SFRTA Forward*** published materials were available. A copy of the English version of the intercept survey instrument is provided in Appendix C: Public Involvement Detail. The intercept survey was also available in Spanish and Creole languages.

As shown in Table 4-3, a total of 898 intercept surveys were completed from the interviews with riders at 9 stations over the 3-day survey period. Of the total intercept surveys collected, 103 surveys (11.5%) were completed in Spanish and 3 were completed in Creole. Appendix C: Public Involvement Detail documents the results of the intercept survey or platform interviews.

Table 4-3: Intercept Survey Summary (2013)

Tri-Rail Station	Date	Responses
Lake Worth	March 19	135
Hialeah Market	March 19	57
Fort Lauderdale	March 19	108
Cypress Creek	March 21	138
Metrorail Transfer	March 21	89
Boca Raton	March 21	168
West Palm Beach	April 6	65
FLL at Dania Beach	April 6	57
Metrorail Transfer	April 6	81
TOTAL		**898**

Social Media

Given the expedited project schedule for ***SFRTA Forward,*** it was determined that there was not enough time to create a project-specific Facebook page or Twitter account and invite enough people to join the page and build a "friend" or follower network. In the interest of time, the Project Team reached out to other partner agencies and organizations that already have a social media presence to request that information about ***SFRTA Forward*** be shared with their social media contact networks. The benefit to using existing social media accounts from partner agencies is that these agencies already have established contact networks or a list of followers, so there was no delay in reaching new contacts through existing social media networks.

Figure 4-2 illustrates the social media posts shared by SFRTA partners in Facebook and Twitter. A link to the project online survey was included in the post and survey responses coming from those social media posts were tracked separately to quantify the level of survey participation generated from social media networks.

Figure 4-2: Social Media Posts

Facebook Post

Twitter Post

Table 4-4 lists the agencies or organizations successfully contacted and who posted information about ***SFRTA Forward*** on their Facebook page and to their Twitter accounts, along with the number of "followers" for each.

Table 4-4: Social Media Exposure

Partner Agency/Organization	Date Posted	Facebook Followers	Twitter Followers
Seven50: SE Florida Prosperity Plan	4/3/2013	365	509
Carras Community Investment, Inc.	4/3/2013	138	N/A
The WAVE Streetcar	4/4/2013	207	N/A
Florida Public Transportation Association/ IM4Transit	4/5/2013	2,310	161
Palm Tran	4/9/2013	839	4,099
BioFlorida	4/9/2013	602	1,103
Transit Miami	4/11/2013	1,927	1,081
South Florida Bike Coalition	4/11/2013	2,091	8,16
West Palm Beach – Downtown Development Authority	4/15/2013	8,024	4,291
Miami - Downtown Development Authority	4/17/2013	2,912	9,486
WTS – South Florida Chapter	4/17/2013	19	N/A
Urban Environment League	5/7/2013	122	N/A
The Cunningham Group	5/22/2013	77	431
TOTAL		**19,633**	**21,976**

Online Survey

A project online survey was prepared to obtain feedback from both public transportation users (including those who use Tri-Rail or other county transit service providers) and non-transit users that will help make decisions to improve service, evaluate the transportation needs of the region, and prioritize future improvements and initiatives.

The project online survey in both English and Spanish was made available on March 18, 2013, on the project website. A link to the survey was also posted on various social media pages of partner agencies, as previously described. Table 4-5 summarizes participation in the ***SFRTA Forward*** online survey. Appendix C: Public Involvement Detail documents the complete results of the online survey as of May 31, 2013.

Table 4-5: Online Survey Participation Summary

Survey Version	Number of Participants
English	733
Spanish	11
Social Media	62
Total	**806**

Based on survey responses received March 18-May 31, 2013

SFRTA Corporate and Community Outreach Efforts

During the development of ***SFRTA Forward***, SFRTA staff from its Corporate and Community Outreach Department attended various corporate and community events to advertise ***SFRTA Forward***, collect any comments or questions to be provided to the Project Team, and hand out SFRTA/Tri-Rail and ***SFRTA Forward*** informational materials. SFRTA representatives also handed out hard copies of the intercept survey to collect input on SFRTA's priorities and initiatives in the next 10 years. Table 4-6 summarizes the corporate and community events attended by SFRTA representatives. A total of 45 surveys were completed and collected at the events conducted by the end of May 2013.

Table 4-6: Summary of SFRTA Community Events

Community Events	Date
Sun Sentinel Fair	April 19, 2013
Citrix Benefit Fair	April 25, 2013
FAU Student Orientation, Davis Campus	March 25, 2013
Mercedes Benz Corporate Run (Fort Lauderdale)	April 4, 2013
Delray Affair	April 5–7, 2013
ULI Development Opportunities on the FEC Corridor: An Interactive Forum	April 17, 2013
Mercedes Benz Corporate Run (Palm Beach)	April 17, 2013
ADT/Tyco Fire and Security, Inc., Benefit Fair	April 24, 2013
Teleperformance Transportation Day	April 25, 2013
Mercedes Benz Corporate Run (Miami)	April 25, 2013
Fort Lauderdale Transportation Summit	May 15, 2013
Florida Crystals Corporation Health Fair	May 15, 2013
Bio-Test Pharmaceuticals Health Fair	May 16, 2013
City of Boca Raton Health, Safety and Benefits Fair	May 16, 2013
Palm Beach County Employee Transportation Day	May 21, 2013
City of Boca Clean Air Challenge Luncheon	May 22, 2013
FAU Student Orientation, Davie Campus	May 23, 2013
Norwegian Vendor Fair	May 24, 2013
Miami-Dade Transportation Summit	June 6, 2013
Broward Financial, Fort Lauderdale/Plantation/Pompano	June 10–13, 2013
Hurricane Safety Community Event, Boynton Beach Mall	June 15, 2013
FAU Student Orientation, Davie	June 18, 2013

Meetings and Presentations

During the development of ***SFRTA Forward***, several presentations were made to the SFRTA's Planning Technical Advisory Committee (PTAC), which serves as the External Review Committee (ERC) for SFRTA Forward, as well as to the SFRTA Governing Board, the boards and committees of the Palm Beach, Broward, and Miami-Dade MPOs, and other organizations. A list of each meeting attended and where a presentation was made is provided in Table 4-7. A brief summary and assessment of each meeting is provided in Appendix C: Public Involvement Detail.

Table 4-7: Meetings and Presentations Summary

Meeting	Date	Participation
External Review Committee/PTAC	February 19, 2013	20
External Review Committee/PTAC	April 10, 2013	34
SFRTA Governing Board	April 26, 2013	19
Palm Beach MPO – Technical Advisory Committee (TAC)	May 1, 2013	18
Palm Beach MPO – Citizen's Advisory Committee (CAC)	May 1, 2013	12
Miami-Dade MPO – Transportation Planning Technical Advisory Committee (TPTAC)	May 1, 2013	14
Citizen's Independent Transportation Trust (CITT)	May 9, 2013	26
Miami-Dade MPO – Citizen's Transportation Advisory Committee(CTAC)	May 22, 2013	20
PTAC	June 12, 2013	24
Broward MPO – Board	June 13, 2013	41
Broward MPO – Technical Coordinating Committee (TCC)	June 26, 2013	20
Broward MPO – Community Involvement Roundtable (CIR)	June 26, 2013	23
External Review Committee/PTAC*	July 22, 2013	TBD
SFRTA Governing Board*	August 23, 2013	TBD
TOTAL		**271**

TBD – To be determined when minutes of meeting are available.

*Upcoming meetings, no meeting summary available.

4.2 PUBLIC INVOLVEMENT ASSESSMENT

4.2.1: ASSESSMENT OF PUBLIC INVOLVEMENT EVALUATION MEASURES

Included in the Public Involvement Plan was a set of benchmark measures used to evaluate the success of each public involvement strategy. Each public involvement strategy and associated evaluation measures are provided in Table 4-8. An assessment of whether the target was achieved is also provided.

Table 4-8: Assessment of Public Involvement Evaluation Measures

Strategy/Evaluation Measure	Assessment
STRATEGY: Increase the number of individuals providing input and requesting information as the project progresses. **EVALUATION MEASURE:** Catalog the number of participants throughout the project.	
Metric: Catalogue number of participants through: Project website (www.sfrtafoward.com) =	 848 unique visits, 25 comments
Phone calls received (1-888-GO-SFRTA) =	5
Emails received (TDP@sfrta.fl.gov) =	23
Email campaign statistics (opens) =	1,954
On-board surveys completed =	5,175
Intercept surveys/platform interviews completed =	898
Online surveys participation =	806
Participants at stakeholder meetings/presentations =	271*
Participants at SFRTA events =	45
Target: Generate a **minimum of 5,000 participants** throughout the life of the project.	***10,050*** *= Total project participants*

* Does not include participation of upcoming meetings or where attendance lists were not available.

Strategy/Evaluation Measure	Assessment
STRATEGY: Obtain feedback from a variety of stakeholder agencies/organizations and the general public. **EVALUATION MEASURE:** Ask public outreach participants to indicate if they are from a public agency, private organization, member of the general public, etc. to determine if a variety of stakeholders is being reached and providing feedback.	
Metric: Catalogue number of persons that identify themselves as members of the general public; are considered a "member of the general public" if they identify themselves as such during the online surveyor if they provide input during the intercept survey/platform interview, on-board survey, or at SFRTA events.	"Member of the general public": • On-board survey – 5,175 out of 5,175 • Intercept survey –898 out of 898 • Online survey – 419 out of 614 • SFRTA Events – 45 out of 45
Target: Of the total participants catalogued, at least 75% should represent the general public: ***Total member of the public/Total catalogued > 75%***	Total identified as "member of the public" = 6,537 Total participants catalogued- 6,732 ***97% represent the general public.***
STRATEGY: Obtain feedback from participants throughout the tri-county region. **EVALUATION MEASURE:** Ask public outreach participants to provide their work/home ZIP codes, which will be analyzed to determine level of participation within each county and other geographic sub-areas.	
Metric: Catalogue where participants live and work based on their ZIPcode information.	Total home ZIP codes provided – 5,915*
Target: Of the participants that provide their home ZIP codeduring on-board survey, intercept survey, online survey, and SFRTA events efforts, a ***minimum of 20%*** should be from each county in the tri-county region.	• Palm Beach County – 2,457 (*42%*) • Broward County – 1,994 (*34%*) • Miami-Dade County – 1,345 (*23%*) *Remaining 1% of home ZIP codes provided are from outside the South Florida tri-county area.
STRATEGY: Reach persons of Limited English Proficiency (LEP). **EVALUATION MEASURE:** Provide language translation function on project website and answer questions/comments submitted via project website or other means in Spanish or Haitian Creole as needed.	
Metric: Track the use of alternative language surveys completed by participants.	Total survey participants – 6,879
Target: *Greater than 12%* of returned surveys are alternative language surveys.[3]	• On-board survey: 491 (472 Spanish, 19 Creole) • Intercept survey :106 (103 Spanish, 3 Creole) • Online survey: 11 Spanish ***Total returned alternatives language surveys – 608 (9%)***
Metric: Track the number of requests for translation services.	Not applicable; 0 requests for translation services received.
Target: Zero people turned away due to lack of translation services.	
Metric: Number of languages the website can be translated into. **Target:** Greater than four alternative languages.	Number of alternative languages the project website can be translated into: 65 (using Google Translate function)

[3]Per Table 3 of the SFRTA LEP Program Evaluation, dated January 31, 2007, and found in SFRTA's 2009 Title VI Report Update, 12% of the population within the tri-county region is defined as LEP persons. The target that at least 12% of returned surveys be an alternative language survey is based on this regional LEP figure.

Strategy/Evaluation Measure	Assessment
STRATEGY: Provide all citizens and interested stakeholder agency groups with clear, timely, and accurate information relating to the project as it progresses. **EVALUATION MEASURE:**Provide several outlets for information/input from the community, including opportunities for individuals who do not have access to the Internet.	
Metric: Update TDP website on regular basis. **Target:** Update TDP website more than once per month as new information/content available.	Updates to project website were performed as needed, occurring more frequently than once per monthtthroughout course of project.
Metric: Make information available to public at SFRTA administrative offices for those who do not have access to project website. **Target:** Provide printed copies of easy-to-understand newsletters, presentations, and document summaries at SFRTA administrative offices available for pick up. As an alternative, persons who are unable to go to SFRTA administrative offices may call 1-888-GO-SFRTA (467-3782), email (TDP@sfrta.fl.gov) to leave a message with their comment(s)/question(s), or ask that a written copy of requested material be mailed to them.	Printed copies of ***SFRTA Forward's*** Fact Sheet were available at SFRTA offices and were distributed at all events and presentations. **No requests** for printed copy of materials were received.
Metric: Percent of questions received via TDP website, email (TDP@sfrta.fl.gov), phone (1-888-GO-SFRTA), or comment card responded to within two business days. **Target:** ***Greater than 90%*** of questions responded to within two business days.	***100% of questions*** received via the project website, email, phone, or comment card were ***responded to within two business days*** by SFRTA TDP Project Manager.

4.2.2: COMPILATION OF CITIZEN AND STAKEHOLDER AGENCY INPUT

All comments received over the phone, via email, through the project website comment box, and via the online survey from citizens, stakeholder agencies, and others were compiled and grouped into categories. More than 300 comments were received, and the top 10 comments received are summarized below (frequency in parentheses):

1. Expansion of Tri-Rail service (53)
2. Better bus/shuttle connections to desired destinations (40)
3. Train noise/comfort (28)
4. On-time performance (26)
5. Provide Wi-Fi (20)
6. Earlier/later train service (19)
7. More frequent train service (16)
8. Improve bicycle storage on trains (13)
9. Better train tracking and real time information on platforms and mobile application

10. Ticketing/security (10)
11. Express trains (8)

These comments were reviewed during the development of the TDP, as appropriate. In instances where the question or comment pertained to or could benefit another regional planning effort, it was passed along to the appropriate agency. A summary of the comments submitted to the Project Team is provided in Appendix C: Public Involvement Detail. A comprehensive list of questions and/or comments submitted to the Project Team will be submitted in electronic format to SFRTA staff.

SECTION 5

SITUATION APPRAISAL

SFRTA
MOVING OUR REGION
FORWARD

(This page intentionally left blank.)

5.1 PLANS REVIEW

5.1.1: INTRODUCTION

In preparing the ***SFRTA Forward*** plan, a review of applicable federal, state, regional, and local plans, programs, and studies that influence SFRTA operations, infrastructure, policy, or funding were reviewed. Findings of this review have been summarized and are incorporated into the development of ***SFRTA Forward*** through the situation appraisal. A situation appraisal, which is required during a major TDP update under the TDP Rule, is an evaluation of the environment in which the transit agency operates. One of the key components of the situation appraisal is this review of relevant plans, programs, and studies in which factors and influences that will help SFRTA better understand its environment are identified.

5.1.2: PLANS REVIEW SUMMARY TABLE AND DOCUMENTATION

Each plan, program, or study reviewed for the situation appraisal has been categorized as a "primary" or "secondary" document in Table 5-1. Table 5-1 provides a summary of the key findings and considerations from the plans, programs, and studies reviewed as part of this effort. . This table provides the pertinent "take-aways" from each to be considered during the situation appraisal. A primary plan is one that directly impacts or influences SFRTA operations, infrastructure, policy, or funding programs. For primary plans, a more detailed review was completed for the situation appraisal and documented in Appendix E: Plans Review Detail. Secondary plans include regional or local planning efforts that may not directly impact SFRTA, but do influence transportation planning efforts in the greater South Florida region. These secondary plans are included in the situation appraisal since their outcomes may be considered in the broader regional context as recommendations for ***SFRTA Forward*** are developed.

(This page intentionally left blank.)

Table 5-1: Summary of Plan, Program, and Study Reviewed for the *SFRTA Forward* Situation Appraisal

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/ Partner Agencies	Overview	Key Considerations for the Situation Appraisal
FEDERAL						
Moving Ahead for Progress in the 21st Century Act (MAP 21)	Primary	Federal	Implemented July 6, 2012	FTA, FDOT	• MAP-21 extends federal highway and transit funding through federal fiscal year 2014.	• MAP-21 consolidates or eliminates a number of existing funds and provides several new funds for transit capital and operating programs, in which SFRTA may be a recipient. • New Freedom funds are combined with Section 5310 program funds, while the Job Access and Reverse Commute (JARC) program is eliminated; however, many JARC projects are now eligible for funding under 5307 and 5311 funds.
Clean Air Act of 1990	Primary	Federal	Revisions to National Ambient Air Quality (NAAQS) proposed in 2010; not yet implemented	U.S. Environmental Protection Agency (EPA)	• The Clean Air Act of 1990 and subsequent amendments determine the NAAQS for six pollutants, including carbon monoxide and ozone.	• South Florida is currently classified as an attainment area. • Enhanced transit options reduce travel by single-occupant vehicle, helping the tri-county region and greater South Florida region to remain classified as an attainment area.
Title VI and Environmental Justice (EJ) Circulars	Primary	Federal	EJ Circular, effective August 15, 2012 Title VI Circular, effective October 1, 2012	U.S. DOT, FTA	• The new EJ Circular issued by FTA provides recipients of FTA financial assistance with guidance for incorporating EJ principles into FTA-funded plans, projects, and activities. • The revised Title VI Circular removes several references to EJ, which are now incorporated into the separate EJ Circular, to better understand the distinctions between Title VI and EJ.	• SFRTA is required to submit Title VI programs every three years as a transit provider operating 50 or more fixed route vehicles in peak service and located in an urbanized area of more than 200,000 persons; SFRTA also is required to evaluate service and fare equity changes or monitor transit service for Title VI impacts. SFRTA completed its most recent Title VI Civil Rights Compliance Report to FTA in 2009. • SFRTA's public involvement plan should incorporate outreach designed to encourage meaning full participation from members of the EJ population.
DOT Livability Initiative and Federal Sustainable Communities Program	Primary	Federal	Partnership for Sustainable Communities formed in 2009	U.S. DOT, FTA, U.S. Department of Housing and Urban Development (HUD), and EPA	• The goal of this joint-initiative is to make communities throughout the United States more livable by improving access to affordable housing, providing better transportation choices, and lowering transportation costs, while at the same time protecting the environment.	• U.S. DOT and FTA support a number of policies and initiatives intended to help communities improve livability and overall quality of life, including programs to encourage Transit-Oriented Development (TOD) enhanced mobility options, etc.
STATE						
Florida Transportation Plan: Horizon 2060 (FTP)	Primary	State	2010	FDOT	• The Florida Transportation Plan (FTP) looks at a 50-year transportation planning horizon and calls for a fundamental change in how and where Florida invests in transportation.	• The FTP supports the development of state, regional, and local transit services through a series of related goals and objectives, emphasizing new and innovative approaches by all modes to meet the needs today and in the future.
State of Florida Transportation Disadvantaged (TD) Five-Year/Twenty-Year Plan	Primary	State	2005	Florida Commission for the Transportation Disadvantaged	• The State of Florida TD Plan includes the following elements: ◊ Explanation of the Florida Coordinated Transportation System ◊ Five-Year Report Card ◊ Florida Office of Program Policy Analysis and Government Accountability Review ◊ Strategic Vision/Goals, Objectives, and Measures	• Short-term strategic vision includes developing and field-testing a model community transportation system for persons who are TD. • Long-range strategic vision includes developing a universal cost-effective transportation system with a uniform funding system and services that are designed and implemented regionally throughout the state.

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/Partner Agencies	Overview	Key Considerations for the Situation Appraisal
FDOT FY 2013–2017 Work Program	Primary	State; specific project list developed for FDOT Districts Four and Six and Broward, Palm Beach, and Miami-Dade counties	February 12, 2013	FDOT	• The Five-Year Work Program is developed annually by FDOT and is a project-specific list of transportation activities and improvements developed in cooperation with the MPOs and local transportation agencies. The Work Program must be consistent, to the maximum extent feasible, with the capital improvement elements of local government comprehensive plans.	• A summary of transit projects in the adopted FY 2013–2017 Work Plan was compiled for consideration in the TDP update. Types of transit projects included in the FY 2013–2017 Work Program include continuing work on the regional fare card integration, Boynton Beach Shuttle Service, and station construction at Oakland Park Boulevard and Pompano Beach (green station), and the Miami Intermodal Center Central Station.
State Growth Management Legislation (House Bill 7207)	Primary	State	June 2, 2011	Florida Legislature and local governments	• HB 7207 repeals many of the State-mandated growth management planning laws that have governed development activities within Florida since the original Growth Management Act of 1975, including transportation concurrency.	• The repeal of state-mandated transportation concurrency provides local governments with the opportunity to develop a more localized concurrency program that aligns with the development and mobility goals of the community. • HB 7207 strengthens legislative language that supports multi-modal approaches to transportation by stating that Comprehensive Plan Transportation Elements "shall provide for a safe, convenient multi-modal transportation system."
Transit-Oriented Development (TOD) Guidelines	Primary	State	March 2011	FDOT	• FDOT developed Transit-Oriented (TOD) Guidelines to provide general parameters and strategies to local governments/agencies that promote and implement development that is transit supportive and sustainable. • The guidelines are voluntary and are intended to be used in partnership with FDOT to assist in managing congestion on state roadways, especially on the Strategic Intermodal System (SIS).	• Local governments, supported by SFRTA, can use the TOD Guidelines prepared by FDOT as a tool in developing policies and tools to support development around Tri-Rail stations and other locations that are transit-supportive.
REGIONAL						
Southeast Florida Regional 2035 Long Range Transportation Plan	Primary	Regional (Broward, Miami-Dade and Palm Beach counties)	2010 (the 2040 LRTP update is currently in progress)	Southeast Florida Regional Transportation Council (SEFTC), in cooperation with Broward, Miami-Dade, and Palm Beach MPOs	• The 2035 LRTPs prepared by Broward MPO, Palm Beach MPO, and Miami-Dade MPO were merged to develop the first Southeast Florida Regional Long Range Transportation Plan (RLRTP). The 2035 RLRTP consolidates the three LRTPs prepared in the tri-county region into one unified document. The RLRTP provides a prioritized set of regional highway and transit improvements in recognition of the regional characteristics of many travel needs.	• The 2035 RLRTP includes funded and unfunded public transportation priorities, including several that affect SFRTA service. Highlights include the Miami Intermodal Center, which will allow users to connect from Tri-Rail to the Miami International Airport via a new people mover; general funding and support for Tri-Rail, SFRTA shuttle service and park-and-ride lot improvements, and the Tri-Rail Extension /FEC Corridor proposal (listed as an unfunded priority in the 2035 RLRTP). • SFRTA will work with SEFTC in cooperation with the three MPOs to ensure that transit projects identified in this TDP update for FY 2104-2023 are incorporated into the 2040 LRTP Transit Systems and Needs Plan, as appropriate.
Tri-Rail Coastal Link (formerly known as South Florida East Coast Corridor (SFEEC) Study)	Primary	Regional	In progress	FTA, SEFTC, FDOT, SFRTA, SFRPC, TCRPC, Broward MPO, BCT, PalmTran, Palm Beach MPO, Miami-Dade MPO, Miami-Dade Transit (MDT)	• The Tri-Rail Coastal Link, formerly known as the South Florida East Coast Corridor (SFEEC) Study, proposes reintroducing passenger service by expanding Tri-Rail service onto the Florida East Coast Railway (FEC) corridor between downtown Miami and Jupiter.	• This regional corridor connects to the existing bus systems, including BCT, Palm Tran and MDT, and rail transit systems including both Tri-Rail and Metrorail. Project will expand Tri-Rail service onto the FEC tracks also integrating with the various transit systems including the new Miami Trolley, the proposed WAVE in downtown Fort Lauderdale, and the proposed Central Broward East-West Connection. • FDOT is leading the planning study until the Project Development Phase. SFRTA has been identified as the FTA Project Sponsor and designated federal grant recipient, as well as the lead agency for the project Financial Plan, Engineering, Design, Construction, and Operations Phases.

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/Partner Agencies	Overview	Key Considerations for the Situation Appraisal
All Aboard Florida	Primary	Regional	In progress	Private initiative led by Florida East Coast Industries	• All Aboard Florida is looking at the feasibility of implementing a privately owned, operated, and maintained intercity passenger rail service along a 240-mile section of the existing FEC corridor between Miami and the Space Coast and the creation of new tracks into Orlando.	• This study requires coordination between with FEC and local transit/transportation agencies (including SFRTA) regarding connecting service at proposed stations located in West Palm Beach, Fort Lauderdale, and Miami..
Regional Concept for Transportation Operations (See also 95 Express Managed Lane Expansion/95 Express Bus Service and 595 Express Bus Service)	Primary	Regional	In progress	FDOT	• FDOT is developing policies and guidelines for the implementation of a regional express lanes network in South Florida. • The recommendation is to add 186 centerline miles of express lanes network along system highways.	• Key findings from the study include: continue project funding on a corridor level basis; allow transit operations on all express lanes; identify transit champions for educational purposes on benefits of BRT in express lanes; develop proper branding; and identify need for new park-and-rides associated with express lanes.
95 Express Managed Lane Expansion (Phase 2)/ 95 Express Bus Service	Primary	Regional (Service from Miami-Dade County to Broward County)	Phase 2 95 Express managed lane expansion in progress; 95 Express bus service in operation	FDOT responsible for overseeing 95 express managed lane expansion; 95 express bus service operated by BCT and MDT	• The 95 Express operated by BCT and Route I-95 Dade-Broward Express operated by MDT provides express bus service from Downtown Miami to various locations in Broward County via a combination of HOV/express lanes along I-95. • MDT I-95 Dade-Broward Express provides connection to Tri-Rail via the Fort Lauderdale and Sheridan Street stations.	• The 95 Express routes currently travel in the I-95 express lanes from downtown Miami to Golden Glades and several locations in Broward County, traveling in the HOV managed lanes. • 95 Express Phase 2 will extend the existing express lanes north from Golden Glades interchange in Miami-Dade County to Broward Boulevard in Broward County. Extension of the 95 Express lanes to Broward Boulevard will allow BCT 95 Express and MDT Route I-95 Express to continue traveling at higher average travel speeds via uninterrupted express lanes.
595 Express Bus Service	Primary	Regional (service from Downtown Fort Lauderdale to Downtown Miami and Sunrise to Miami Civic Center)	In operation	Service operated by BCT in cooperation with FDOT and other agencies	• The 595 Express, operated by BCT, provides express bus service from downtown Fort Lauderdale to Downtown Miami/Brickell and Westgate Square Park-and-Ride to the Miami Civic Center. • Currently, buses travel in regular lanes on I-595 with mixed traffic. On I-95, the 595 Express uses the same travel lanes as the 95 Express.	• Construction of the I-595 reversible express lanes as well as the extension of the I-95 express lanes will allow BCT's 595 Express route to travel at higher average travel speeds via uninterrupted express lanes for the entire route. • The 595 Express Sunrise to Fort Lauderdale route connects to Tri-Rail at the Fort Lauderdale station, while the Westgate Square to Miami Civic Center and Sunrise to Miami/Brickell routes connect to Tri-Rail at the Fort Lauderdale Airport station.
Regional Transit Systems Plan Regional Transit Interoperability/Universal Fare Technology Study	Primary	Regional	In progress	FDOT, BCT, SFRTA, MDT, and Palm Tran	• The purpose of this study is to evaluate and implement a regional fare card using smart card technologies for BCT, SFRTA, MDT, and Palm Tran along with evaluating the business case and total cost drivers associated with realizing the technical integration solution. • SFRTA and MDT are currently utilizing EasyCard system; BCT and Palm Tran now accept SFRTA transfer ticket. • Implementation of a regional fare will allow more seamless travel by riders between systems.	The next steps for implementing a regional fare system include: • Decision-makers from transit stakeholders to draft a fare policy for multi-modal regional trips • Define limitations to accessing Easy Card encryption key • Launch pilot program to evaluate use and administrative functions • Focus to develop robust system that is extensible to emerging technologies

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/Partner Agencies	Overview	Key Considerations for the Situation Appraisal
Central Broward East-West Transit Study	Primary	Central Broward County	Locally Preferred Alternative approved in October 2012	BCT, SFRTA, Broward MPO, and FDOT	• Project goal is to develop premium transit service in central Broward County connecting the east and west parts of the county. • Study area boundaries include the central part of Broward County, located between Oakland Park Boulevard in the north, the Weston-Sawgrass area in the west, Griffin Road/Stirling Road in the south, and the Intracoastal Waterway in the east.	• The Broward MPO approved the Griffin Road Alternative as the Locally Preferred Alternative (LPA) in October 2012, which will evaluate a combination of premium bus and modern streetcar services. • Premium bus will be considered from Sunrise to the South Florida Education Center. Both premium bus and modern streetcar will be considered from the South Florida Education Center to the Griffin Road Tri-Rail Station. Under the Alternative, modern streetcar will provide service to the Fort Lauderdale-Hollywood International Airport, downtown Fort Lauderdale connecting with The WAVE and the Broward Boulevard Tri-Rail Station.
The WAVE Streetcar	Primary	Downtown Fort Lauderdale	In progress	Broward County, BCT, SFRTA, Broward MPO, FDOT, City of Fort Lauderdale, and Fort Lauderdale Downtown Development Authority (DDA)	• The WAVE is a 2.7-mile environmentally- friendly streetcar system that will serve as a local circulator in Downtown Fort Lauderdale. • The WAVE route will include 10 stations, streetscape improvements, and a traffic signalization package to help maintain headways during peak periods.	• The WAVE will connect points of interest along route to the regional transit network, including BCT routes and rail systems currently and planned in the area. • SFRTA will serve as the FTA Project Sponsor and designated federal grant recipient, as well as the lead agency for the Design, Engineering, and Construction Phases.
Broward Boulevard Corridor Transit Study	Primary	Broward Boulevard from US 1 to Pine Island Road	Final Report July 2012	FDOT, Broward MPO, BCT, SFRTA, Cities of Fort Lauderdale, Plantation, and Lauderhill	• The purpose of this study is to explore transit options for the Broward Boulevard corridor, from US 1 to Pine Island Road, to improve transit mobility, relieve congestion, and improve air quality.	• Four alternatives were evaluated, with the preferred alternative accomplishing the following: ◊ Substantially improving transit service along the corridor by providing a limited stop rapid service to the existing route with schedule adjustments. ◊ Potential access for more than 6,500 additional people (via downtown Fort Lauderdale loop). ◊ Potential for additional future improvement (Business Access and Transit—BAT lanes and transit-only lanes). ◊ Elements support other services, such as SFRTA shuttle bus service, I-95 and I-595 Express, WAVE). • Providing little impact to corridor vehicle capacity.
Oakland Park Boulevard Transit Alternatives Analysis Study	Secondary	Oakland Park Boulevard Corridor from the Sawgrass Expressway to SR A1A	In progress	BCT, SFRTA, Broward MPO, FDOT, and affected municipalities	• This is a multi-agency project to evaluate premium transit projects along the high-ridership Oakland Park Boulevard corridor from the Sawgrass Expressway to SR A1A. • Study outcomes will be to identify the most feasible and effective transit projects that will improve mobility, congestion, and better link points of connection.	• The study is currently evaluating short- and long-term transit mode alternatives and operational improvements. Alternatives being considered include BAT lane with bus or streetcar; exclusive lane with bus or streetcar; and enhanced bus service. • Selection of the Locally Preferred Alternative is anticipated to be completed by Spring 2014.
University Drive Mobility Improvements Planning Study	Secondary	University Drive Corridor, from Sample Road to NW 215th Street	In progress	BCT, SFRTA, Broward MPO, FDOT, MDT, and affected municipalities	• This study will evaluate mobility improvements and transit projects along University Drive, from Sample Road in Broward County to south of the Miramar Parkway at NW 215th Street in Miami-Dade County.	• This study is in its initial stages, but, when completed, will define the range of potential enhanced transit alternatives for the corridor, including reviews of station locations, accessibility to stations, connectivity by different modes, costs, technologies, benefits and feasibility. Selection of the Locally Preferred Alternative is anticipated to be completed by January 2014.

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/ Partner Agencies	Overview	Key Considerations for the Situation Appraisal
MIAMI-DADE COUNTY						
Miami-Dade MPO 2035 LRTP	Primary	Miami-Dade County	2009 (the 2040 LRTP update is currently in progress)	Miami-Dade MPO	• In 2009, the Miami-Dade MPO Board adopted the 2035 LRTP, identifying transit (bus/rail/trolley), intermodal, bicycle, and pedestrian improvements for Miami-Dade County thru 2035. • The 2035 Needs Plan identifies $12.1 billion in transit capacity improvements and $13.5 billion in transit operations and maintenance expenditures ($10.4 billion for operation and maintenance of the existing system and $3.51 billion for new services).	Priority I (2010-2015) Improvements: • 95 Express Lane improvements, I-95 regional express bus service between Miami-Dade and Broward counties to complement express bus service on I-95; and intermodal capacity improvements, including completion of the MIC, which will provide connections between Tri-Rail and MIA via the MIA Mover. Priority II (2015-2020): • Golden Glades Multimodal Terminal – improvements include 1,000 space deck, intermodal center with improved bus circulation and improved ADA, replacement of multiple existing pedestrian bridges with a single-level bridge • Parking expansion at Opa-Locka Tri-Rail station • SFRTA will work with the Miami-Dade MPO to ensure that transit projects identified in this TDP update for FY 2104-2023 will be incorporated into the 2040 LRTP Needs Plan, as appropriate.
Miami Intermodal Center (MIC)	Primary	Located in Miami-Dade County; regional transportation hub	In progress	FDOT, U.S. DOT, Miami-Dade County, Miami-Dade Expressway Authority (MDX), SFRTA	• Located just east of the Miami International Airport, the Miami Intermodal Center (MIC) is a massive $2 billion ground transportation hub being built by FDOT. • The MIC will serve as a centralized transportation hub that will integrate all modes of transportation, providing access to Metrobus, Metrorail, Tri-Rail, Amtrak, Greyhound, tour buses, taxicabs and rental cars. • An automated people mover connects the MIC to the Miami International Airport (MIA).	• In September 2011, Tri-Rail's Miami Airport Station temporarily closed and service has been relocated just north to the Hialeah Market Station, and a shuttle is transporting riders from the Hialeah Market Station to MIA. • The Miami Central Station (MCS) within the MIC is scheduled to open in early 2014, and will serve as Miami-Dade County's first all-inclusive ground transportation hub. Once opened, Tri-Rail will serve the MCS, allowing connections to all other modes serving the MCS, including MIA via the MIA Mover.
Miami-Dade Expressway Authority Bus Initiatives	Primary	Miami-Dade County	2006	MDX	• MDX has implemented bus on shoulders along SR 878 and SR 874 whereby the buses are allowed to use the shoulders during congested travel periods. • Enhanced stops were identified along the corridor. The intent is also to use bus on shoulder concept along SR 836.	• MDT plans articulated buses along the route. Service to be started with existing fleet and in coordination with current construction at the SR 836/SR 826 interchange. • Project goal is to facilitate movement of passengers and provide enhanced transit connection to the MIC, with connection to Tri-Rail.

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/ Partner Agencies	Overview	Key Considerations for the Situation Appraisal
Transit Options to Port of Miami Feasibility Study	Primary	Miami-Dade County at Port of Miami	In progress	Miami-Dade MPO	• The 2035 Master Plan for PortMiami forecasts the number of cruise passengers to grow from 4.6 million passengers to 6.3 million passengers. • Transit access to the Port completes the last leg of the Airport Seaport Connection.	• After a detailed examination of ridership, capital and operating costs and impacts to other operating systems the following alternatives were recommended as feasible and for further evaluation in next phases: ◊ Alternative 2: Metromover Shuttle between Overtown and the Port ◊ Alternative 4: Light Rail Shuttle between Overtown and the Port ◊ Part of new system possibilities (Baylink etc) ◊ Commuter Rail Alternative as part of new system possibilities (FEC/All Aboard Florida)
Miami-Dade MPO Sustainability and the Transportation System Study	Secondary	Miami-Dade County	2011	Miami-Dade MPO	• In 2011, the Miami-Dade MPO commissioned a study to examine sustainable transportation strategies and their effect on travel behavior. • As part of this study, three distinct scenario concepts were evaluated and a set of strategies and performance measures evaluated for each scenario.	• The results of this study conclude that affecting Vehicle Miles of Travel (VMT), Vehicle Hours of Travel (VHT) and transit ridership on a countywide basis is difficult using one approach. For example, the Linkages Scenario provides the greatest reduction in VMT but that the Multimodal Scenario provides the greatest increase in transit mode split.
Implementation Plan for Enhanced Bus Service Along Biscayne Boulevard	Secondary	Miami-Dade County along Biscayne Boulevard	In progress	Miami-Dade MPO	• Biscayne Boulevard is one of several corridors that were identified in the People's Transportation Plan (PTP) for the implementation of Premium Transit. • Until such time that the County can afford to implement rail or BRT in the PTP Corridors, incremental improvements will be made to the bus service.	• Project goal is to decrease crowding on buses, improve travel speeds, improve travel time reliability, and reduce the amount of time the bus spends at the bus stop. • 19 potential park and ride sites were identified and prioritized but no sites were selected for acquisition. The projects should improve travel time by 20 percent and increase ridership by 10-20 percent. The total cost of the corridor improvements is $32 million.
Miami-Dade County Comprehensive Development Master Plan	Secondary	Miami-Dade County	October 2011	Miami-Dade County	• The Miami-Dade County Comprehensive Plan is the primary policy document concerning land use, transportation, and other planning matters for unincorporated Miami-Dade County and also identifies areas of countywide jurisdictional responsibility.	• The Comprehensive Plan Land Use Element identifies parameters for land use designations that promote or enhance transit, such as Mixed-Use Development, Urban Centers, Transit Corridors, Intermodal Centers, and Station Ares. The Land Use Element contains policies that require new development and redevelopment in these designated areas to be planned and designed to promoted TOD and transit use. • Within the Urban Development Boundary (UDB), Miami-Dade County has allowed the road level of service to reflect higher allowable levels of traffic congestion, depending on the frequency of transit service available and whether the location falls within the Urban Infill Area (UIA), a sub-area within the UDB.

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/ Partner Agencies	Overview	Key Considerations for the Situation Appraisal
PALM BEACH COUNTY						
Palm Beach MPO 2035 LRTP	Primary	Palm Beach County	2009 (2040 LRTP update currently in progress)	Palm Beach MPO	• In 2009, the Palm Beach MPO Board adopted the 2030 LRTP, focusing on integrating all modes of transportation, including Palm Tran and Tri-Rail. • The Palm Beach MPO recently began the process of updating its LRTP that will identify transit needs and cost feasible transit projects out to the 2040 planning horizon.	• The transit component of the 2035 LRTP Needs Plan identifies significant expansion of Tri-Rail service in Palm Beach County, including new service to the north from downtown West Palm Beach along the FEC corridor to Jupiter. There is also a proposed rail service extension from the current Tri-Rail along SR 710 to Indiantown in Martin County, along with proposed new Tri-Rail stations to serve the service extension. • The transit component of the 2035 LRTP Cost Feasible Plan includes a new proposed Tri-Rail station just south of Glades Road, proposed BRT routes on Glades Road and SR 7 (PD&E studies to evaluate premium transit options currently underway), and two new park-and-ride facilities. • SFRTA will work with the Palm Beach MPO to ensure that transit projects identified in this TDP update for FY 2104-2023 will be incorporated into the 2040 LRTP Needs Plan, as appropriate.
Palm Beach County Comprehensive Plan	Secondary	Palm Beach County	October 2012	Palm Beach County	• The Palm Beach County Comprehensive Plan is the primary policy document concerning land use, transportation, and other planning matters for unincorporated Palm Beach County.	• The Comprehensive Plan Land Use Element identifies parameters for land use designations that promote or enhance transit, such as Mixed-Use Planned Development, Transit-Oriented Developments. Palm Beach County has designated SR 7 (from the Broward County line to Glades Road) as a Transit-Oriented Corridor. • The County does have an auto-based level of service; however, County policy recognizes transit in that a level of service shall be maintained, for the purpose of concurrency management that requires mass transit services to be available to accommodate a minimum of ½ percent of the total trip demands. • Within the West Palm Transportation Concurrency Exception Area (TCEA), certain criteria must be met to achieve concurrency exemption; including providing provisions for Tri-Rail or Palm Tran infrastructure and employee transit subsidies, depending on the project size and location.
Glades Road PD&E Study	Primary	Palm Beach County on SR 808/Glades Road from US 441/SR 7 to US 1/SR 5	In progress	FDOT	• FDOT is conducting a PD&E Study on SR 808/Glades Road corridor from US 441/SR 7 to US 1/SR 5 in Palm Beach County. • The purpose of this study is to address roadway capacity improvements and multi-modal premium transit alternatives along this 7.6 mile corridor, as well as bicycle and pedestrian improvements.	• Glades Road has been identified as a proposed BRT Route in the transit component of the Palm Beach MPO's 2035 LRTP Cost Feasible Plan. • Future Tri-Rail station around Glades Road identified in the Palm Beach County 2035 LRTP.

Plan/Program/Study Reviewed	Plan Type	Geographic Applicability	Most Recent Update/Timeframe	Responsible/ Partner Agencies	Overview	Key Considerations for the Situation Appraisal
SFRTA PROJECTS						
New Northern Layover and Light Maintenance Facility	Primary	Palm Beach County	In progress	SFRTA, FDOT, and Palm Beach MPO	• SFRTA is planning for the development of a new Northern Layover and Light Maintenance Facility that would provide midday and overnight train storage for up to 9 five-car train sets, as well as service, inspection, fueling and cleaning activities.	• SFRTA needs a new Northern Layover and Light Maintenance Facility that will improve the efficiency of current Tri-Rail operations, as well as facilitate further system enhancements and expansion. • The proposed facility is being planned with capacity to meet the need for 9 five-car train sets, with hopes of facilitating and accelerating development of the Tri-Rail Coastal Link project.
Miami River Intermodal Center Capacity Improvement Study	Primary	Miami-Dade County	In progress	FDOT, U.S. DOT, SFRTA	• The Miami River Intermodal Center Capacity Improvement Study (MR-MICCI) project will evaluate improved track connections across the Miami River, including bridge, track, and signal upgrades. • The project will add rail capacity across the Miami River and the last 1.25 miles of the SFRC and will greatly improve access and connectivity to the Miami Intermodal Center (MIC).	• The MR-MICCI project will improve SFRC capacity for Tri-Rail and freight trains, potentially accommodate new Amtrak intercity rail service accessing the MIC, and improve connections between rail and air travel. • The project s in the PD&E phase, which is scheduled to be completed in January 2015. A timeline for design and construction timeline has not been completed. It will be determined during the PD&E phase.

5.2 SITUATION APPRAISAL

5.2.1: INTRODUCTION

The requirements for a TDP Major Update include the need for a situation appraisal of the environment in which a transit agency operates. The purpose of this situation appraisal is to help develop an understanding of the SFRTA transit operating environment in the context of the following major elements:

- Regional transportation issues
- Plans and policies
- Organizational issues
- Funding sources
- Socioeconomic trends
- Travel behavior
- Land use
- Public Involvement
- Technology

A review and assessment of these major elements resulted in the identification of possible implications for SFRTA. The assessment and resulting implications are drawn from the following sources:

- Review of relevant plans, studies, and programs prepared at all levels of government
- Results of technical evaluation performed as part of the transit development planning process
- Outcomes of discussions with SFRTA staff and administration
- Input gathered through public involvement activities

Issues and/or trends and implications are summarized for each of the major elements in the remainder of this section.

5.2.2: REGIONAL TRANSPORTATION ISSUES

Premium Regional Transit Connections

SFRTA has been an active player in several past and current initiatives to increase the amount of premium transit connections available in the South Florida region and provide greater mobility within the region. In the last two years, momentum increased to bring commuter rail service to the FEC tracks (refer to the South Florida East Coast Corridor [SEFCC] Study), and a

A MOU has been adopted that establishes clear roles and responsibilities for the project going forward for all the agencies involved—SFRTA, FDOT, the region's MPOs, and RPCs in the planning, design, and construction of the expansion of existing Tri-Rail service onto FEC tracks, known as the Tri-Rail Coastal Link. As part of the MOU, SFRTA has been identified as the FTA Project Sponsor and designated federal grant recipient, as well as the lead agency for the project financial plan, engineering, design, construction, and operations.

FEC Industries (FECI)'s announcement of its plans to introduce intercity passenger service on the FEC tracks connecting Miami to Orlando with limited stop service as soon as 2015, known as All Aboard Florida, makes having commuter rail service on the same tracks a high priority. Commuter rail on the FEC tracks would serve as a local transit connection, bringing passengers to the All Aboard intercity service. Additional premium regional transit connection initiatives in the region include the expansion of express commuter buses between counties; implementation of The WAVE, a modern streetcar circulator in downtown Fort Lauderdale; and completion of several transit corridor projects within each county to improve the transit connections available in the region.

Regional Park-and-Ride Facilities

With the plans for expanded commuter rail service and the implementation of the I-95 and I-595 express buses connecting South Florida, there is a greater need for the development of regional park-and-ride facilities that encourage single-occupancy vehicle (SOV) drivers or carpoolers to leave their cars behind and ride regional premium transit services. Currently, some express bus services stop at Tri-Rail stations, providing a multimodal connection within the region. Expanding the parking capacity and circulation at some Tri-Rail stations also is needed to facilitate park-and-ride connections with transit and shuttle bus services. In addition, rising gas prices have encouraged regional commuters to switch from driving to riding Tri-Rail, thus increasing the need for more parking capacity at its stations. As the expansion of premium transit in the region continues and Tri-Rail ridership continues to increase, more regional park-and-ride facilities are needed to provide a true seamless intermodal system with access to all travel modes.

Managed Lanes Network

The Regional Concept of Transportation Operations (RCTO) currently being developed calls for the implementation of an express or managed lanes network on major highways in the South Florida region. These highways will allow transit to operate on its express lanes. Therefore, the expansion of the I-95 Express/High Occupancy Toll (HOT) lanes to Broward and Palm Beach counties, as well as the planned managed lanes on I-595 and I-75, present an opportunity to explore new inter-county limited-stop bus service connections in the region. The toll revenue generated by the expanded HOT lanes network also provides an opportunity to financially subsidize the expected transit operations on the lanes.

However, the expansion to the north of the managed lanes network on I-95 parallel to the Tri-Rail corridor could present direct competition to Tri-Rail service; some commuters may prefer to stay in their vehicles to complete their regional trips or use new direct express bus service.

This presents a challenge to Tri-Rail ridership that should be considered. Making sure transit premium services complement each other rather than compete with each other should be a regional priority.

Regional Fare Integration

Currently, only SFRTA/Tri-Rail and Miami-Dade Transit have an integrated smartcard fare system; both use the EASY Card, allowing for seamless travel and fare integration between the two systems. BCT and Palm Tran fare collection systems accept only magnetic strip fare cards and do not yet accept smartcard technology, thus hindering efforts to fully integrate all three systems with the same fare media. The administrative and technological issues among the fare collection systems of all four transit systems need to be reconciled to implement a regional fare that will allow more seamless travel by transit riders among systems throughout the region.

Implications

- SFRTA has the opportunity to play a leadership role in coordinating, developing, implementing, and operating regional premium transit services to provide greater mobility in South Florida.
- SFRTA has the opportunity to lead coordination efforts to create true intermodal transfer facilities in the region with sufficient park-and-ride capacity. Potential candidates for park-and-ride expansion/improvements are the Golden Glades, Fort Lauderdale, and West Palm Beach stations.
- SFRTA has the opportunity to provide "last-mile" transit connections from its stations to more destinations in the region using the expanded network of managed lanes and potentially receiving toll revenue to subsidize future transit operations in the network.
- SFRTA should continue to work with all three county operators on the implementation of a regional fare card, working through administrative and technological issues to allow seamless transfers among all transit systems in the region.

5.2.3: PLANS AND POLICIES

Federal

MAP-21, the new federal transportation legislation, consolidated or eliminated several funding programs from which SFRTA benefitted, such as the JARC and New Freedom programs, which now have been combined with other programs or involve changed eligibility under a different funding program. SFRTA is currently the designated recipient of JARC and New Freedom funds for the Miami Urbanized area and has been managing the grant selection process for the last five years.

In addition, MAP-21 places a greater emphasis on performance measures and tracking of level of service, which makes regular monitoring of system performance much more important. The U.S.

Department of Transportation's Livability Initiative, with support from the U.S. Department of Housing and Urban Development and the U.S. Environmental Protection Agency, continues to direct policy discussions at the federal level on transportation investments, ensuring that transit project goals are to improve livability and the overall quality of life, which has encouraged more transit-oriented and joint development projects around transit stations.

State

One of the goals of the adopted Florida Transportation Plan (FTP), which has a 50-year planning horizon, is to improve mobility and connectivity for people and freight by expanding and integrating regional public transit systems in Florida's urban areas. The FTP's state goal/objective sets the policy framework at the regional and local levels.

In 2010, the Florida Strategic Intermodal System (SIS) designation criteria were updated to include "urban fixed guideway transit corridors (i.e., connecting multiple urbanized area counties and serving a regionally significant facility within a single economic region" (i.e., commuter rail) as well as "urban fixed guideway system stations" meeting the established designation criteria. As a result, SFRTA's commuter rail service, Tri-Rail, is now included in the SIS plan by their own merit, not because its corridor also served intercity passenger service, Amtrak.

Regional

As part of the 2040 update of the Regional Long Range Transportation Plan (RLRTP), a regional transit systems plan is being developed that will assess the region's travel demand and identify the potential transit demand. It will also prioritize transportation improvement projects to meet the regional travel demand, including premium transit projects such as the Tri-Rail expansion to FEC, which was included in the 2035 LRTP as an unfunded project.

At the same time, the Seven50: Southeast Prosperity Plan is developing a blueprint of how the seven-county South Florida region wants to grow over the next 50 years. Under the Infrastructure and Growth Leadership working groups, the Seven50 plan identified the need to develop and maintain a multimodal, interconnected transportation system to make the region more economically competitive.

Implications

- Given the MAP-21 changes to the New Freedom and JARC programs, SFRTA will need to look into redefining its role as grant manager of these funds or assist area transit agencies in the continuation of these programs at their local/transit agency level.
- State and regional goals support the SFRTA initiative of expanding premium transit service on FEC tracks and in other parts of the region, presenting the opportunity to lead and coordinate these efforts to meet FTP, RLRTP, and Seven50 goals. The SIS update recognizes urban fixed-guideway stations as SIS passenger terminals (if criteria are met), which could result in

additional state funding for Tri-Rail stations and the designation of SIS connectors to those stations.

5.2.4: ORGANIZATIONAL ISSUES

SFRTA Identity and Mission

SFRTA's mission is "to coordinate, develop, and implement a viable regional transportation system in South Florida that endeavors to meet the desires and needs for the movement of people, goods and services." In the last five years, that mission has expanded from operating Tri-Rail and its shuttle buses to a more prominent role in the facilitation of regional transportation projects such as the plans to extend Tri-Rail service to FEC tracks (Tri-Rail Coastal Link), the design and construction of The WAVE, the expansion of parking capacity at Tri-Rail stations, and a more active role in promoting transit-supportive development around its stations. SFRTA's goal with this Major TDP update is to increase public awareness of the expanded mission of the agency beyond the operation of Tri-Rail; nearly one out of four online survey respondents indicated they are not aware of SFRTA and its role or have never heard of SFRTA.

Corridor Dispatch and Maintenance Agreement

In March 2013, SFRTA executed an agreement to transfer to SFRTA the majority of the State's responsibilities under the South Florida Operating and Maintenance Agreement (SFOMA). Under this new SFOMA, SFRTA's responsibilities include the management, operations, maintenance and dispatch of the SFRC. In addition, SFRTA responsibilities include SFRTA as the "Host Railroad" for PTC purposes as well as provide oversight and management of the Hialeah Yard and provide all flagging services on the corridor.

The WAVE

SFRTA has partnered with the Fort Lauderdale Downtown Development Authority (DDA), the Broward MPO, Broward County, BCT, the City of Fort Lauderdale, and FDOT to bring The WAVE modern streetcar project to Downtown Fort Lauderdale. As the FTA Project Sponsor, SFRTA will oversee and lead the planning, environmental review, design, vehicle procurement, and construction of the planned streetcar system. SFRTA will administer the $18 million grant awarded to the SFRTA through FTA's TIGER program and will also sponsor an application for additional capital funds under the FTA's Small Starts Discretionary Grant Program.

Tri-Rail Coastal Link

The Tri-Rail Coastal Link will bring commuter rail passenger service onto the FEC tracks. The regional partnership has agreed on established roles and responsibilities to move the project from the planning phase into the development/implementation phase. SFRTA has been identified as the FTA Project

Sponsor and designated as the federal grant recipient and lead agency for the project financial plan, engineering, design, construction, and operations.

Intergovernmental Coordination and Partnerships

SFRTA continues to participate in and contribute to transit studies across the South Florida region. It is currently collaborating with regional partners to move forward several efforts to implement transit improvements and set transit priorities in the region. As the coordinator and host of the PTAC that brings together the different entities that are responsible for transportation decisions in the region (MPOs, RPCs, FDOT, and county transit agencies), its role as facilitator of the regional transportation discussions among all partners is of significant importance to the future of public transportation in the region.

Implications

- SFRTA has the opportunity to reinvigorate its mission with this TDP and should take every opportunity to promote the regional projects and initiatives currently under way that support its mission.
- SFRTA's new dispatch and maintenance responsibilities with the SFRC will result in more reliable commutes for Tri-Rail riders, as it will control not only Tri-Rail's movement but also CSXT freight trains and Amtrak. The financial agreement with the State (dedicated funding and cost-sharing agreement) will assist SFRTA with the additional operating and maintenance costs that may result from its new role as dispatcher of trains on the SFRC.
- With the design and construction of The WAVE in the next two years and the proposed design, construction, and operations of the planned expansion of Tri-Rail service onto FEC tracks, SFRTA should continue to establish its role as the leading implementer of premium transit in the region.
- Participating in regional transit studies and facilitating regional partnerships and discussions to implement transit projects in the region should continue to be part of SFRTA's goals.

5.2.5: FUNDING SOURCES

State Funding Levels

In 2012, the Florida legislature passed HB 599, which will end State operating funding assistance to Tri-Rail in seven years (2019).[1] This is consistent with the agreement for operations funding for SunRail in Orlando, in which the State committed in 2009 to subsidize its operations for the first seven years (thereafter to be funded by the seven counties and municipalities it will serve).

[1] http://www.palmbeachpost.com/news/news/state-regional/bill-cuts-tri-rails-state-funding-by-2019-but-pr-1/nLhgm/

As the agency responsible for the financial plan for the Tri-Rail Coastal Link, SFRTA has been conducting outreach and engaging with the municipalities along the corridor to discuss local operating funding opportunities. It recently published the first station area market and economic analysis that quantifies the direct project benefits to the cities proposed to be served by the Tri-Rail Coastal Link. Initial financial plan discussions assumed that each municipality with a proposed station would be expected to contribute an annual station premium towards the operating cost of the new Tri-Rail Coastal Link service. This concept will continue to be explored, along with many other funding options now being evaluated by the Tri-Rail Coastal Link Finance Subcommittee.

Implications

- SFRTA will need to identify a sustainable funding source to replace the operating funding from the State, which will end in 2019. Non-traditional funding sources such as advertising, sponsorships, etc., will need to be assessed as potential new funding sources for the system.
- SFRTA should continue to work toward establishing a long-term partnership with each municipality proposed to be served by the expansion of Tri-Rail service onto the FEC in order to establish a local operating funding source to cover operating and maintenance costs for the new expanded service.

5.2.6: SOCIOECONOMIC TRENDS

Population and Employment Densities

The highest existing and future population densities in the South Florida region are found in Miami-Dade County, particularly in the southern (e.g., Kendall) and western (e.g., Doral) parts of the county as well as around downtown Miami. Notable increases in population densities are projected to occur in central Broward County, with smaller concentrations of population increases projected in the coastal cities of Palm Beach County—West Palm Beach, Boynton Beach, Delray Beach, and Boca Raton.

The highest concentrations of existing and future employment densities in the region are also in Miami-Dade County, specifically in downtown Miami and around the Miami International Airport, with some increases in smaller geographic areas in Broward and Palm Beach counties. These areas all qualify as transit-supportive in terms of very high population and employment densities.

Socioeconomic Characteristics

Counties in the South Florida region have a similar distribution of persons under age 18 (youth). Palm Beach County has a higher concentration of persons over age 65 (older adults) than either Miami-Dade or Broward counties. Miami-Dade County has a slightly higher percentage of households below the poverty line, a lower average income, and the highest percentage of households with zero vehicles available compared to both Broward and Palm Beach counties.

Implications

The socioeconomic profile of the South Florida region identifies areas with a high orientation to use transit, either due to a high concentration of high population and employment densities and/or a high proportion of transit-dependent populations (older adults, youth, low-income, and no or limited vehicle). These areas include the area north-northwest of the Palm Beach International Airport, selected locations in central Broward County, and areas in and around downtown Miami and the Miami International Airport. These high transit orientation areas should continue to be the transit emphasis areas in the future, and SFRTA should look into expanding its shuttle and rail service to better serve them.

5.2.7: TRAVEL BEHAVIOR

Commuting Flows

Analysis of the commuter flows for workers in the tri-county South Florida region indicate that larger percentages of residents in Broward (38%) and Palm Beach (34%) counties travel outside their county of residence for work than residents of Miami-Dade County (22%).

Major Activity Centers and Destinations

Major trip generators in Palm Beach, Broward, and Miami-Dade counties include large public and private employers, corporate centers, educational institutions, hospitals, shopping centers, and recreational attractions, as well as the major airports/seaports (one in each county). These locations represent travel destinations in the region that employees, students, and visitors will access via transit if the service is competitive with the automobile in terms of travel time, convenience, or cost.

Ridership Trends

Ridership trends for Tri-Rail and its shuttle buses have been positive in the last five years. Tri-Rail ridership reached its maximum levels in 2008 (4.4 million passengers) when gas prices increased dramatically, but once the economic recession hit in 2009, ridership levels suffered or decreased until 2010, when ridership levels began to increase again. This trend has continued, with the number of Tri-Rail passengers in 2012 reaching more than 4 million passengers. Shuttle bus ridership has more than doubled since 2010, growing from nearly 400,000 to more than 1 million passengers by the end of 2012. The productivity of shuttle buses has increased as well, with the number of passengers per hour reaching its highest levels in 2012 (15+ passengers per hour, well above the minimum requirement of 7 passengers per hour).

These recent ridership trends are encouraging and indicate that the demand for SFRTA/Tri-Rail's services is increasing. Once the Tri-Rail Coastal link is implemented and shuttle service is expanded, the demand for SFRTA rail and shuttle services is expected to continue to increase. However, recent ridership trends

also indicate that shuttle passenger levels (as with many transit services in the nation) are directly related to economic cycles and gas price levels.

Implications

- SFRTA should continue to target discretionary and traditional transit markets, with a particular emphasis on providing a convenient, reliable, and time-competitive travel option to regional/inter-county commuters.
- SFRTA should assess how to better provide the "last-mile connection" to major activity centers and destinations in the region, connecting from its current and future rail service.
- Recent ridership trends are positive and encouraging for Tri-Rail and its shuttle buses. This positive and growing trend is expected to continue as Tri-Coastal Link rail service is implemented and the shuttle program is expanded to serve Tri-Rail's existing line as well as its coastal line in the near future.

5.2.8: LAND USE

Existing Land Use

Much of the current land use throughout southeast Florida is sprawling and not transit-supportive. The predominance of low-density single-family development and highway commercial development serves to encourage a dependency on personal automobile travel while hindering the delivery of traditional fixed-route mass transit services in these areas. Furthermore, adequate pedestrian facilities, such as paths within parking areas leading to buildings and connections from bus stops to sidewalks, are often lacking. It is especially difficult for older and physically-impaired individuals to travel from buses through parking areas to nearby buildings without adequate pedestrian facilities.

Future Land Use

Each county in the South Florida region has future land use designations that are considered transit-supportive and will encourage mixed-use development, intermodal facilities, and improved pedestrian and bicycle accommodations. Examples of future transit-supportive land use policies and designations in the region included in Future Land Use Maps include mixed-use planned developments, regional and local activity centers, urban and intermodal centers, transit-oriented corridors, and transit-oriented developments in Palm Beach, Broward, and Miami-Dade counties.

Pedestrian and Bicycle Access to Stations

Safe and comfortable pedestrian and bicycle facilities to access transit services continue to be a challenge. SFRTA has invested in bike lockers and bike accommodations inside train cars for passengers who travel with their bikes to their final destinations.

Implications

With the expansion of Tri-Rail service onto FEC tracks to serve and connect the coastal cities in the region, there will many opportunities for redevelopment and transit-oriented development around the proposed new station areas. SFRTA will continue to work with local jurisdictions to facilitate redevelopment around current and future Tri-Rail stations, particularly the proposed new Tri-Rail Coastal Link station areas in the urban core of the coastal cities on its alignment. There is potential to create true transit-oriented development with the new transit line (Tri-Rail Coastal Link), and this potential should be seized by SFRTA and the local jurisdictions.

5.2.9 PUBLIC INVOLVEMENT

On-Board Survey

An on-board survey of SFRTA passengers was conducted in February 2013 to collect input on current satisfaction levels with Tri-Rail's service. Satisfaction levels related to station conditions were highest for parking availability and lowest for station announcements and cleanliness. For train conditions, the highest marks were for on-board safety/security and air conditioning and lowest for on-board restroom conditions. For service performance, the highest satisfaction was with on-board train crews followed by station staff; the lowest satisfaction was with train reliability.

External Review Committee Input

In February, the ***SFRTA Forward*** ERC participated in an interactive exercise in which each member selected his/her top three priorities for SFRTA in the next 10 years. Composition of the ERC includes the PTAC plus representatives from the workforce development boards from each of the three counties. The top five ERC priorities for SFRTA include:

1. Expand Tri-Rail service to the coastal FEC tracks.
2. Support transit-oriented development (TOD) initiatives (redevelopment/mixed-used) around stations.
3. Provide real-time train arrival information on Tri-Rail mobile applications and on train platforms.
4. Implement better connections to final destinations.
5. Improve bicycle and pedestrian access to stations.

Platform/Intercept Surveys

Interviews with riders at Tri-Rail platforms were completed in late March and early April 2013, with 898 responses collected. Riders were asked which improvements they consider to be priorities in the next 1–2 years (short-term), 3–5 years (mid-term), and 6–10 years (long-term). In the short term, more frequent service, Wi-Fi availability and more power plugs on trains were indicated by about 50 percent of riders. In the mid-term, more than half indicated they would like to see Tri-Rail service expansion

onto the FEC tracks. In the long term, nearly half would like to see service expanded further north into Martin/St. Lucie counties, further south into Homestead and Monroe County, and to the west.

Online Survey

An online survey was launched in mid-March 2013, and more than 770 surveys were collected by the end of May 2013. Although the majority of online survey respondents were Tri-Rail riders (73%), many were non-transit riders (16%), providing an important look into the perspectives and opinions of those who do not regularly use public transportation in the region. Results from the online survey were consistent with the Tri-Rail rider priorities for the next 10 years in the intercept survey results. However, high-priority improvements varied slightly between Tri-Rail riders and non-riders. Tri-Rail riders in the short-term want more frequent service, technology improvements on trains and platforms (Wi-Fi, power plugs, train tracking/real-time information), and better shuttle/bus connections. For non-riders (those who have not used Tri-Rail or public transportation over the last year), better connections to final destinations, further expansion of regional park-and-ride lots, more frequent service with technology improvements (Wi-Fi, train tracking, etc.), and expansion of service to downtown Fort Lauderdale and downtown Miami (further north, south, and west) were the highest priorities.

Implications

SFRTA should prioritize its improvements and initiatives through more public involvement activities. Implementing more frequent and reliable service with technology improvements such as Wi-Fi service and real-time train tracking, better shuttle/bus connections to final destinations in the short-term, expansion of Tri-Rail service onto FEC tracks in the mid-term, and expansion of the system further north, south and west, including building urban streetcar systems, in the long-term, should be goals for SFRTA.

5.2.10 TECHNOLOGY

During the public outreach activities conducted for the ***SFRTA Forward*** plan, one of the top improvements Tri-Rail riders and non-riders would like to see implemented is technology upgrades that will improve their travel experience, making it more efficient, productive, and reliable. Some of the technology improvements riders and non-riders would like to see in the next 10 years include:

- EASY Card online reloading capabilities
- Real-time customer information and Train/Shuttle bus tracking system
- On-board and platform Wi-Fi service
- Improved on-board and platform announcement system
- Mobile ticketing system

Implications

SFRTA should continue to emphasize technology improvements and future initiatives to enhance the passenger experience, increase rider loyalty, and encourage ridership.

SECTION 6

GOALS & OBJECTIVES

SFRTA
MOVING OUR REGION FORWARD

(This page intentionally left blank.)

6. GOALS & OBJECTIVES

INTRODUCTION

The SFRTA was created with a vision "to coordinate, develop, and implement, in cooperation with other government agencies and the community, a viable transportation system in South Florida that improves quality of life and promotes sustainable growth for future generations." ***SFRTA Forward*** is a strategic plan that reflects the vision of SFRTA to promote transit growth and improvement over the next decade (FY 2014–2023). ***SFRTA Forward*** presents a great opportunity for SFRTA to reassess its mission and reinvigorate its identity, address the mobility needs of a growing and dynamic region, and continue building partnerships to move transportation projects forward in South Florida. The SFRTA Goals and Objectives presented below reflect the internal and external strategies and initiatives that SFRTA is committing to pursue to achieve its vision.

SFRTA GOALS AND OBJECTIVES

The Goals and Objectives presented below summarize SFRTA's vision to promote transit growth and improvement over the next decade. The Goals and Objectives were developed by SFRTA staff in response to (1) communication with each department of SFRTA, (2) input from the ERC and numerous public outreach efforts, and (3) input from regional stakeholders, including the local workforce board representatives.

VISION

1. **Goal 1: Take an active leadership role in expanding premium transit in the region.**

    1.1. Continue successful track record of attracting competitive federal funding grants and awards.

    1.2. Take necessary actions to implement and operate Tri-Rail Coastal Link (fully integrated Tri-Rail expansion onto the Florida East Coast Railway).

    1.3. Serve as lead agency and FTA project sponsor for all future studies of Tri-Rail expansion.

    1.4. Continue as project management lead and FTA project sponsor for development and implementation of The WAVE (Downtown Fort Lauderdale Modern Streetcar).

1.5. Serve as coordinating agency and FTA project sponsor for development and implementation of future phases and extensions of the WAVE streetcar.

1.6. Build upon WAVE experience and expertise to encourage development of new, additional streetcar and light rail projects throughout the region.

1.7. Serve as the coordinating agency for future premium transit projects that cross county lines

1.8. Pursue development of needed new passenger rail service (commuter rail, DMU, light rail, or streetcar) on multiple rail corridors within the tri-county region.

1.9. Work with appropriate agencies in adjacent counties (i.e. Monroe, Martin, and St. Lucie) to investigate new premium transit services that would connect with the existing Tri-Rail system.

1.10. Coordinate with local governments and work with partner agencies to develop and apply economic development and land use initiatives to attract transit-oriented development around Tri-Rail stations.

2. Goal 2: Provide leadership in advocacy and education of the need for an expanded regional premium transit system.

2.1. Increase public awareness of current challenging and inequitable funding policies towards transit.

2.2. Educate the public on the benefit of regional premium transit on the environment.

2.3. Increase public awareness of the need for changes in the project prioritization process.

2.4. Educate general public and private developers regarding the ability of premium transit to stimulate redevelopment and mixed-use, walkable development.

2.5. Continue participation and involvement with Transportation related groups such as American Public Transportation Associations, American Planning Association, Rail-Volution, American Railway Engineering and Maintenance-of-Way Association, WTS International, American Association of Railroads, Florida Public Transportation Association, Conference of Minority Transportation Officials, and Urban Land Institute.

PARTNERSHIPS

3. Goal 3: Continue utilization of private sector contractors for majority of SFRTA services and operations.

3.1. Continue to assess the appropriate mix of public and private services to maximize efficiency.

4. Goal 4: Develop and pursue partnerships with agencies/entities in both the public and private sector.

4.1. Enhance public partnerships with the region's three metropolitan planning organizations (MPOs), the Southeast Florida Transportation Council (SEFTC), two regional planning councils (RPCs) and Florida Department of Transportation (FDOT) to expand passenger rail and premium transit.

4.1.1. Utilize the metropolitan planning process to develop effective long range plans, strategic TIPs and work programs, and logical funding priorities that reflect local desires.

4.1.2. Continue synergy and coordination between the SEFTC Regional Transportation Technical Advisory Committee (RTTAC) and SFRTA PTAC.

4.2. Develop strong partnerships with cities/towns and their community redevelopment agencies (CRAs) and downtown development authorities (DDAs).

4.2.1. Utilize the two regional planning councils and three MPOs as a vital conduit to build and further strengthen the relationship between SFRTA and local municipalities.

4.2.2. Establish service partnerships to support local circulator shuttle services that are connected to Tri-Rail.

4.2.3. Work with partner agencies to establish sustainable funding mechanisms.

4.2.4. Provide support to municipalities needing assistance in receiving FTA funds.

4.3. Develop a strong partnership with Florida East Coast (FEC) so that expanded freight activity, new passenger rail services, and real estate development opportunities along the FEC corridor can all succeed.

4.3.1. Work directly with FECI and FDOT to establish an agreed upon corridor access agreement for Tri-Rail Coastal Link service.

4.3.2. Partner with FEC to determine mutually beneficial roles that the railroad may have during the construction and operation of Tri-Rail Coastal Link.

4.3.3. Partner with FEC in the use of planned All Aboard Florida stations in the downtowns of Miami, Fort Lauderdale, and West Palm Beach.

4.4. Develop strong partnerships with the region's development community to advance transit-oriented development at existing Tri-Rail stations, future Tri-Rail Coastal Link stations, and adjacent to other future premium transit services.

4.4.1. Utilize the Urban Land Institute (ULI) Southeast Florida/Caribbean Chapter as a vital conduit between SFRTA and the region's development community and additional related private sector institutions.

4.4.2. Work to streamline and simplify the process for transit-oriented development to occur at Tri-Rail stations.

QUALITY/PERFORMANCE

5. Goal 5: Maximize the performance, reliability, efficiency and capacity of the existing SFRTA/Tri-Rail system.

5.1. Continue to improve train reliability and on-time performance.

5.1.1. Continue to exceed the Florida Transportation Commission (FTC) end-to-end on-time performance objective of 80%, with a target of 90+%.

5.2. Reduce vehicle failures/breakdowns.

5.2.1. Exceed the FTC objective of 41,863 revenue miles between vehicle failures.

5.3. Continue to assess and rehabilitate locomotives and railcars for total fleet reliability.

5.4. Directly manage dispatch and maintenance responsibilities for the South Florida Rail Corridor.

5.4.1. Procure and utilize a contractor for the maintenance of the corridor.

5.4.2. Work to establish a dispatch center by December 2014.

5.5. Make strategic capital investments to improve the existing SFRTA/Tri-Rail system.

5.5.1. Pursue implementation of new northern layover and maintenance facility at Mission Spur in Palm Beach County.

5.5.2. Pursue implementation of Miami River-Miami Intermodal Center Capacity Improvement (MR-MICCI) project.

5.5.3. Pursue additional crossovers, sidings, and other small track improvements at key locations along the rail corridor.

5.6. Expand parking structures/park-and-ride lot capacity at key locations

5.7. Pursue development of additional stations at strategic locations.

5.8. Continue to evaluate Tri-Rail train schedule for opportunities to improve service.

6. Goal 6: Improve the Tri-Rail passenger experience .

6.1. Continually provide clear and up to date information to Tri-Rail passengers.

6.1.1. Purchase and install a new passenger announcement system.

6.1.2. Provide enhanced real-time information and announcements on station platforms.

6.1.3. Upgrade and enhance the www.tri-rail.com, www.sfrta.fl.gov and www.tri-railcoastallink.com websites.

6.1.4. Further improve existing passenger outreach methods such as EDP member e-mail blasts, VIP messages, and onboard newsletter.

6.1.5. Meet and exceed FTC objective of 1 customer complaint per 5,000 boardings.

6.1.6. Meet and exceed the FTC objective of a 14-day formal response time to customer complaints.

6.2. Provide enhanced passenger amenities.

6.2.1. Pursue the feasibility of providing Wi-Fi access onboard and at stations.

6.2.2. Provide additional power outlets for customer use onboard and at stations.

6.2.3. Provide additional space for bicycles onboard trains.

6.2.4. Explore the possibility of providing concessions at stations.

6.2.5. Explore options to install additional Ticket Vending Machines on station platforms.

6.3. Improve the appearance and visibility of current and future Tri-Rail stations.

6.3.1. Continue to monitor and improve existing Tri-Rail wayfinding signage.

6.3.2. Continue to schedule heavy maintenance repairs.

6.4. Coordinate with all departments and contractors to implement an Incident Response Plan.

6.4.1. In the event of an incident, take necessary measures to improve the conditions for those onboard the train.

6.4.2. In the event of an incident, take the following measures to improve conditions for those at affected stations.

6.4.2.1. Provide accurate real-time information via platform announcements.

6.4.2.2. Create an Emergency Response Team comprised of select SFRTA personnel to be deployed to affected stations within 30 minutes of an incident to provide face-to-face customer service.

7. Goal 7: Improve connecting transit and transportation services.

7.1. Improve connections with county fixed route and fixed guideway services

7.1.1. Coordinate with county transit providers on improving the scheduling and frequency of connecting county transit fixed route and fixed guideway services.

7.1.2. Pursue station capital improvements that will enhance the efficiency, access, and circulation of connecting county bus routes.

7.1.3. Work to establish a coordinated and simplified region-wide transfer fare policy between Tri-Rail and county operated transit services.

7.1.4. Work with Miami-Dade Transit to maximize the effectiveness of Easy Card by having transfer fees (and various other steps) for non-monthly pass holders shifted to back-office calculations rather than directly to the user.

7.1.5. Work with partner agencies to implement expansion of Easy Card (or another electronic fare card system that can be fully integrated with Easy Card) to all three counties

7.2. Work with cities and towns to provide enhanced municipal shuttle connections at Tri-Rail stations.

7.2.1. Coordinate with local governments to further improve municipal shuttle services that currently connect with Tri-Rail.

7.2.2. Pursue viable extensions of existing municipal shuttle bus routes (currently not connected with Tri-Rail) to serve Tri-Rail stations.

7.2.3. Pursue partnerships with local governments on new local circulators or shuttle bus routes that would connect with Tri-Rail stations.

7.3. Assess and constantly reevaluate the connecting shuttle bus routes operated or funded by SFRTA.

7.3.1. Further improve the performance and efficiency of the existing SFRTA shuttle system.

7.3.1.1. Ensure that all shuttle routes meet or exceed the 7.0 passenger per hour standard established by SFRTA and the Planning Technical Advisory Committee (PTAC) in 2010.

7.3.1.2. Continue to update the Five-Year Shuttle Bus Service and Finance Plan on an annual basis.

7.3.1.3. Continue to utilize the SFRTA Planning Technical Advisory Committee (PTAC) as a steering and review committee for the SFRTA shuttle system.

7.3.2. Pursue new shuttle routes that would provide direct and convenient connections between Tri-Rail and major employment centers, activity centers, intermodal facilities, and educational facilities.

7.3.3. Pursue new SFRTA shuttle bus routes that will serve markets along the Florida East Coast (FEC) Railway corridor, growing ridership for future Tri-Rail Coastal Service

7.4. Maximize access and availability of alternative transportation modes at stations through the implementation of car and bicycle sharing facilities/programs and electric car charging stations.

SUSTAINABLE FUNDING

8. Goal 8: Pursue funding opportunities to support both the existing SFRTA/Tri-Rail system and expanded premium transit in the region.

8.1. Pursue and secure funding to provide SFRTA with a stable source of operating funds for existing transit services, future initiatives, and matching funds for state and federal funding programs.

8.2. Pursue participation in future local, regional, and state transit or transportation funding initiatives.

8.3. Pursue participation in state and federal funding programs, including Federal Transit Administration (FTA) New Starts, Small Starts, Discretionary Programs, TIFIA, State New Starts, SIS, and TRIP.

8.4. Seek private financing or partnerships for major expansion initiatives.

8.5. Work with local municipalities, community redevelopment agencies (CRAs), downtown development authorities (DDAs) and other entities to identify reasonable sources for additional operating funds for new and expanded premium transit services.

ECONOMIC GROWTH

9. Goal 9: Facilitate economic growth and development throughout the region.

9.1. Work with the private sector, local governments, Regional Planning Councils, and MPOs to attract and implement transit-oriented, walkable, mixed-use development around Tri-Rail stations and future Tri-Rail Coastal Link stations.

9.2. Accelerate growth and redevelopment along the FEC Railway corridor by implementing Tri-Rail Coastal Link.

9.3. Facilitate new streetcar service and its associated economic development to numerous locations throughout the region.

9.4. Minimize right-of-way acquisition or other land purchases in the development of projects, so that private sector and land owner opportunities are maximized and local tax revenue is enhanced.

9.5. Provide time savings, cost savings, and economic benefits to residents and employers that will result from an improved Tri-Rail system and a wide-reaching, expanded regional premium transit network.

9.6. Support, complement, and implement initiatives resulting from the completion of the Seven 50 Southeast Florida Prosperity Plan.

9.7. Pursue and advocate for projects on the SFRC and FEC corridors that will provide additional capacity for freight and goods movement

ENVIRONMENTAL SUSTAINABILITY

10. Goal 10: Maximize environmentally sustainable practices for both the current SFRTA/ Tri-Rail system and expanded premium services in the region.

10.1. To the extent possible, utilize sustainable design practices for all new or upgraded facilities

10.1.1. Construct the Pompano Beach Green Station Demonstration Project.

10.1.2. Install LED lighting at all stations whenever possible.

10.1.3. Install solar panels wherever feasible to take advantage of a renewable power source.

10.1.4. Implement Naturescape/xeriscape practices at all stations.

10.1.5. Install efficient water systems.

10.2. Procure new rail power and fleet vehicles that have low emission, hybrid, or alternative fuel characteristics.

10.2.1. Exceed latest EPA emission standards.

10.2.2. Utilize biodiesel as fuel for locomotives.

10.3. Increase sustainable/green practices for the agency offices/facilities.

SECTION 7

TRANSIT DEMAND AND MOBILITY NEEDS

SFRTA
MOVING OUR REGION FORWARD

(This page intentionally left blank.)

7.1 TRANSIT MARKET ASSESSMENT AND DEMAND

7.1.1: INTRODUCTION

The transit market assessment for the SFRTA service area includes an evaluation from two different perspectives: the discretionary transit market (choice riders) and the traditional transit market (transit-dependent riders). Analytical tools for conducting each market assessment include a Density Threshold Assessment (DTA) for the discretionary market and a Transit Orientation Index (TOI) for the traditional market. The two analytical tools are used to determine the extent to which these markets are served in the South Florida region. Following the market assessment results, 10-year annual projections of ridership are presented for existing and future commuter rail and shuttle bus services provided by SFRTA. The methodology used to develop these projections also is provided in this memorandum.

7.1.2: DISCRETIONARY TRANSIT MARKETS

The discretionary market refers to potential riders living in higher-density areas of the tri-county area who may choose to use transit as a commuting or transportation alternative. A DTA was conducted based on industry-standard relationships to identify those areas of the South Florida region that experience transit-supportive residential and commercial density levels in 2013. Data from the three MPOs were obtained to conduct the DTA. The following three levels of density thresholds were developed to indicate whether or not an area contains sufficient densities to sustain efficient fixed-route transit operations:

- **Minimum** – Reflects minimum population or employment densities to consider basic fixed-route transit services (i.e., fixed-route bus service).
- **High** – Reflects high population or employment densities that may be able to support higher levels of transit investment than areas that meet only the Minimum density threshold (i.e., increased frequencies).
- **Very High** – Reflects very high population or employment densities that may be able to support higher levels of transit investment than areas that meet the Minimum or High density thresholds (i.e., premium transit services, etc.).

Table 7-1 presents the density thresholds for each of the noted categories.

Table 7-1: Transit Service Density Thresholds

Transit Potential	Population Density Threshold[1]	Employment Density Threshold[2]
Minimum	4.5 – 5 dwelling units/acre	4 employees/acre
High	6 – 7 dwelling units/acre	5 – 6 employees/acre
Very High	≥=8 dwelling units/acre	≥=7 employees/acre

[1] TRB, National Research Council, TCRP Report 16, Volume 1 (1996), *Transit and Land Use Form,* November 2002, MTC Resolution 3434 TOD Policy for Regional Transit Expansion Projects.

[2] Based on a review of research on the relationship between transit technology and employment densities.

Map 7-1 illustrates the existing (2013) DTA. As shown on the map, there are many areas in the region that qualify as transit-supportive in terms of very high population and employment density. The analysis shows numerous areas in Palm Beach County with high employment density, including near the Tri-Rail stations in Boca Raton, West Palm Beach, and Mangonia Park, as well as near future Tri-Rail Coastal Link stations In Palm Beach Gardens and Riviera Beach. Most Tri-Rail stations in Broward County are located near areas of high employment density, while future Tri-Rail Coastal Link stations in Broward County will be located at or near high population and employment density areas. A significant portion of Miami-Dade County contains areas of both high population and employment density. Miami Beach, Port Miami, and the area west/northwest of Miami International Airport stand out as high employment density areas that need improved and direct access to/from the existing Tri-Rail system and future Tri-Rail Coastal Link service.

7.1.3: TRADITIONAL TRANSIT MARKETS

Transit-dependent populations refer to population segments that historically have a higher propensity to use transit and/or are dependent on public transit for their transportation needs. Transit-dependent populations generally include older adults, youths, and households that are low-income and/or do not have vehicles.

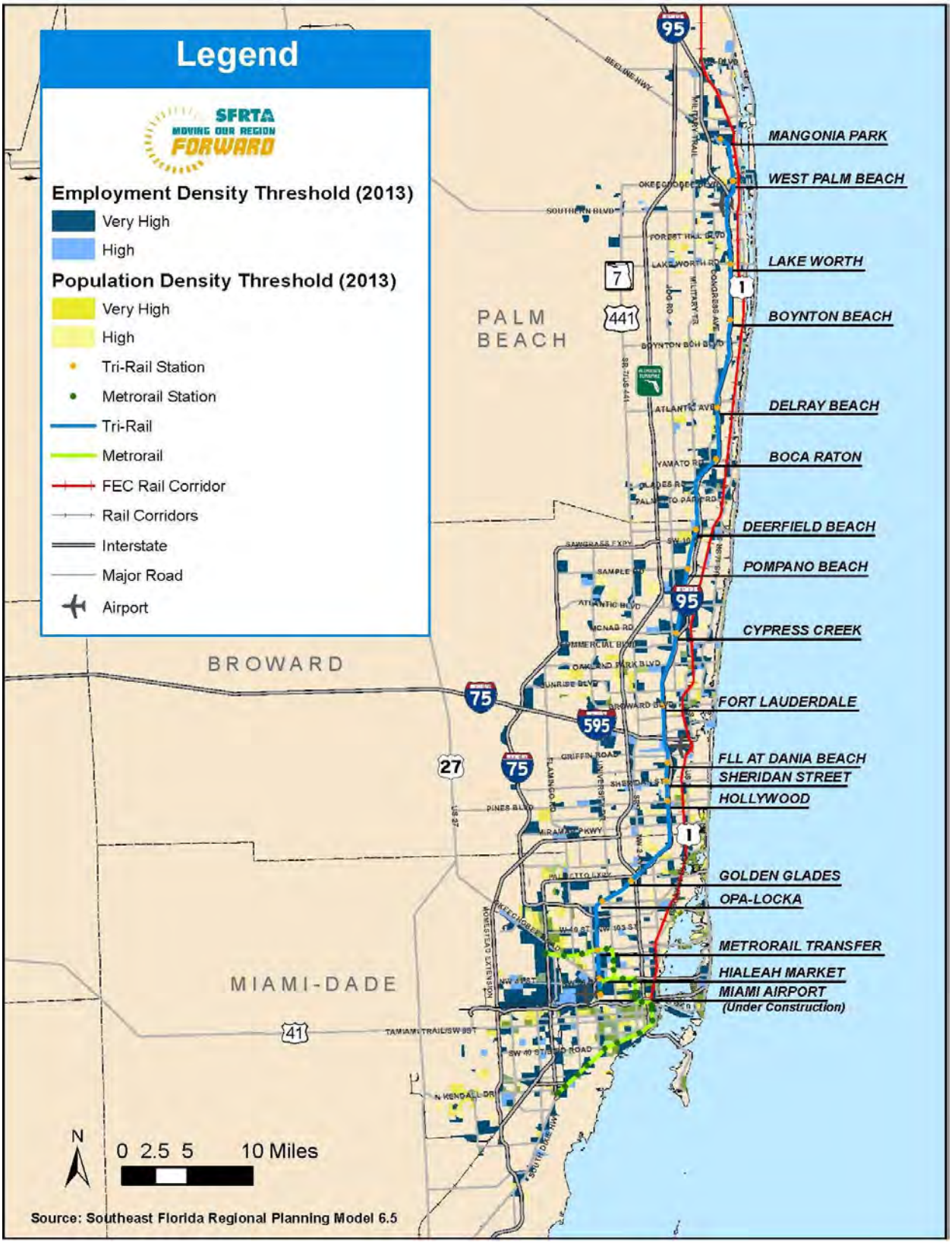
A TOI assists in identifying areas of the region where transit-dependent populations exist. Five-year (2007–2011) American Community Survey (ACS) data at the Census tract level are compiled and categorized according to each tract's relative ability to support transit based on the prevalence of specific demographic characteristics. For this analysis, five population and demographic characteristics were used to develop the TOI; each is traditionally associated with the propensity to use transit:

- Population density (persons per square mile)
- Proportion of the population age 60 and over (older adults)
- Proportion of the population under age 16 (youths)
- Proportion of the households earning less than $25,000

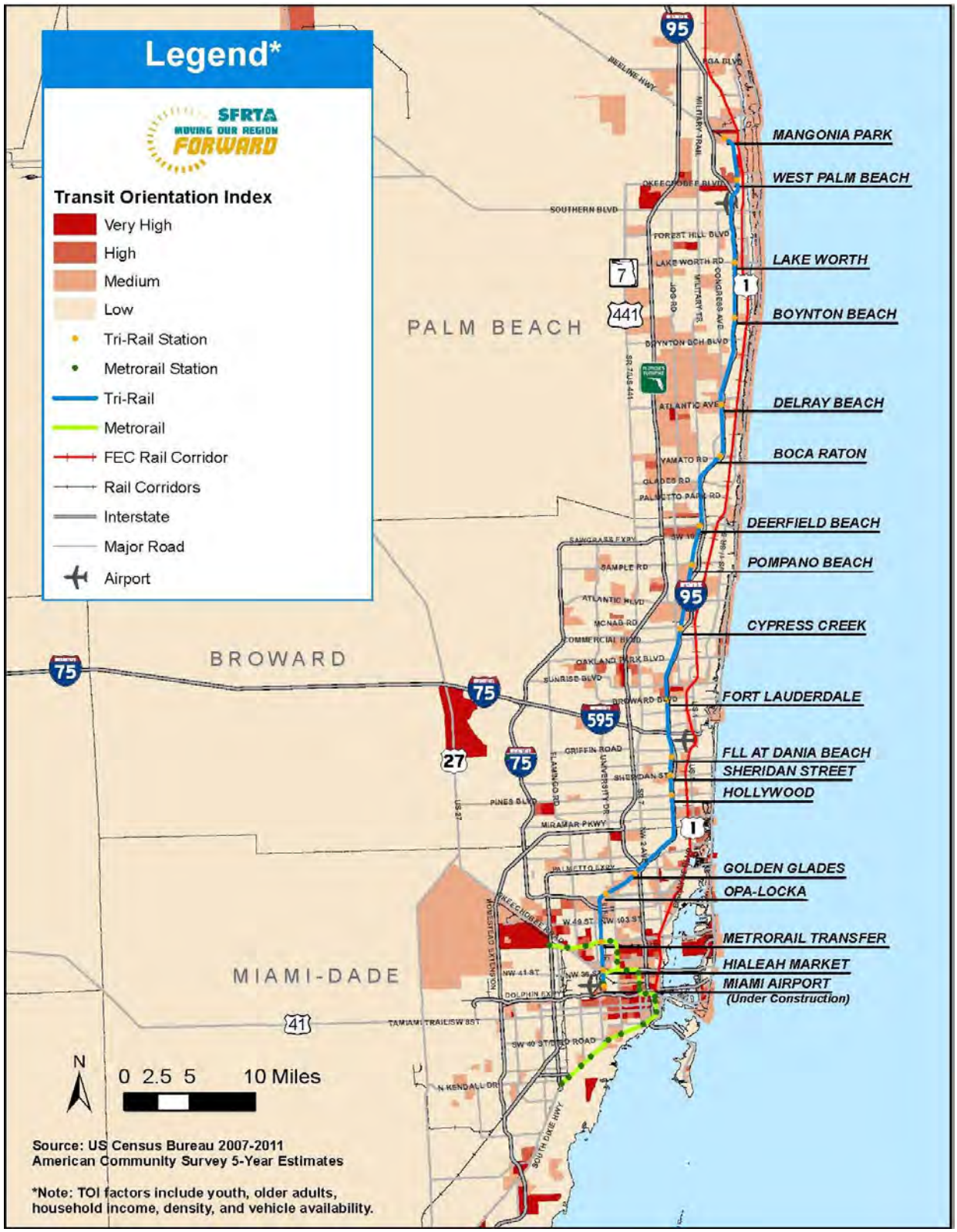
- Proportion of households with no vehicles (zero-vehicle households)

Census tracts are then rated as Very High, High, Medium, or Low in their respective levels of transit orientation, with Very High reflecting a very high transit orientation, i.e., a high proportion of transit-dependent populations. Areas with 10% or more of its land within the Everglades Water Management Conservation Area, the South Florida Water Management District (SFWMD) East Coat Buffer area, or other wetland/buffer/preservation areas as observed by aerial photographs, were not considered to be transit oriented and reclassified as having a low transit orientation index. Map 7-2 shows an overlay of the TOI on the existing Tri-Rail alignment to illustrate the extent to which SFRTA serves the areas highlighted as being transit-supportive.

Map 7-1: Discretionary Transit Market



Map 7-2: Traditional Transit Market



The 2011 TOI for the study area shows that, for the most part, block groups in portions of developed areas of the region have Low or Medium transit orientation. However, coastal areas throughout the region, along with areas west of West Palm Beach, west of Delray Beach, and throughout central Broward County show Medium or High transit orientation. Miami-Dade County stands out as having the greatest of area with High and Very High transit orientation. Various areas within the City of Miami and Miami Beach, as well as portions of southern and northwest Miami-Dade County demonstrate a High or Very High transit orientation.

7.1.4: 10-YEAR ANNUAL RIDERSHIP PROJECTIONS

The methodology used to develop 10-year annual ridership projections for commuter rail and shuttle bus services is presented below. This is followed by a summary of the results of applying the methodology. The 10-year annual ridership projections include Tri-Rail, Tri-Rail Coastal Link, and the associated existing and committed shuttle bus services.

Methodology

As indicated previously, an alternative ridership projection methodology was devised, as the standard FDOT-approved ridership forecast methodology for TDPs was deemed inappropriate for commuter rail and connecting shuttle bus services. The following steps outline the methodology for developing ridership projections to support ***SFRTA Forward***.

Step 1: Integrate existing rail ridership projections.

- Compile previously-developed commuter rail ridership projections for Tri-Rail and Tri-Rail Coastal Link and adapt these projections for use in ***SFRTA Forward***. No new commuter rail ridership projections are being developed as part of ***SFRTA Forward***.

Step 2: Develop 10-year annual ridership projections for existing shuttle bus routes.

- Initially, the methodology included considering the three-year trend in passenger trips per hour by route to develop average annual growth rates and predict future 10-year annual ridership projections for existing shuttle bus routes (assuming no change in the level of service on existing shuttle bus routes). However, recent annual growth rates have been substantial and cannot be reasonably assumed to continue in future years. For this reason, a more conservative annual growth rate of 2 percent was agreed to in cooperation with SFRTA staff to be applied to existing shuttle bus routes.

Step 3: Develop 10-year shuttle bus ridership projections for expansion of existing shuttle bus routes.

- For existing shuttle bus routes that are proposed to have an increase in the level of service (frequency, hours, service area), use a service elasticity of demand of +0.61 to develop 10-year annual ridership projections for expanding service on existing shuttle bus routes.

Step 4: Develop 10-year new shuttle bus ridership projections.

- For all existing shuttle bus routes, document the average annual shuttle bus hours of service and the overall average passenger trips per hour.
- Identify new and committed shuttle bus routes near existing and future Tri-Rail and Tri-Rail Coastal Link stations. Note that, given the location of proposed Tri-Rail Coastal Link stations allow for connections with numerous existing east-west bus routes (operated by Broward County Transit, Miami-Dade Transit, PalmTran), existing SFRTA shuttles, and existing local municipal shuttles/trolleys, the need for new Coastal Link shuttle bus services may be minimal.
- Apply the average annual hours of service and the average passenger trips per hour to develop 10-year ridership projections for new and committed shuttle bus routes, consistent with when the shuttle bus services are reflected in the 10-Year plan.
- Unfunded shuttle bus service concepts also are reflected in ***SFRTA Forward*** but, given that these services are still conceptual in nature, ridership projections were not developed. Additional analysis will occur for concepts that become more real during the 10-year planning horizon.

Step 5: Summarize the 10-year annual forecast of ridership projections for existing and future commuter rail and shuttle bus services.

Commuter Rail

Using data and information provided by SFRTA staff, an annual projection of commuter rail ridership was developed for Tri-Rail and Tri-Rail Coastal Link. Given that significant regional travel demand modeling efforts had already been undertaken in recent years, it was deemed appropriate to leverage these efforts to develop the 10-year annual projection required as part of the transit development planning process. Table 7-2 provides Tri-Rail actual average weekday ridership from 2005 to 2012 and the forecast from 2013 to 2023 for both Tri-Rail and Tri-Rail Coastal Link. Summary observations about the table include the following:

- Average weekday ridership on Tri-Rail has increased 52% from 2005 to 2012.
- Consistent with past projections conducted as part of the Tri-Rail Segment 5 Double Tracking Project, average weekday ridership on the existing Tri-Rail system is forecast to further increase to nearly 23,000 in 2023.
- Assuming an opening year of 2018, Tri-Rail Coastal Link is projected to add nearly 12,000 new incremental weekday riders to a fully integrated Tri-Rail system

- Tri-Rail Coastal Link average weekday ridership is forecast to grow from nearly 12,000 in 2018 to more than 15,000 in 2023.
- The combined ridership total for the future integrated Tri-Rail system (existing Tri-Rail and new Tri-Rail Coastal Link) is forecast to reach approximately 38,000 average weekday riders in 2023.

Table 7-2: 10-Year Annual Commuter Rail Ridership Projections (2013–2023)

Year	Average Weekday Ridership		
	Tri-Rail (existing line)	Tri-Rail Coastal Link (on FEC corridor)	Total Tri-Rail Integrated System
2005	9,158	0	9,158
2006	10,818	0	10,818
2007	11,805	0	11,805
2008	14,732	0	14,732
2009	12,880	0	12,880
2010	12,149	0	12,149
2011	13,380	0	13,380
2012	13,882	0	13,882
2013	14,605	0	14,605
2014	15,049	0	15,049
2015	15,550	0	15,550
2016	16,050	0	16,050
2017	16,885	0	16,885
2018	17,763	11,700	29,463
2019	18,687	12,308	30,995
2020	19,658	12,948	32,607
2021	20,680	13,622	34,302
2022	21,756	14,330	36,086
2023	22,887	15,075	37,962

Notes:
1. Actual Tri-Rail average weekday ridership from 2005-2012.
2. SERPM 6.7 base ridership (2010) and no-build forecast (2016) provided by SFECC Study Team.
3. Trend forecast for existing Tri-Rail (2013-2016) provided by Jacobs Engineering.
4. Annual growth rate for Tri-Rail average weekday ridership from 2005–2016 = 5.2%; applied to forecast 2017–2023.
5. Tri-Rail Coastal Link average weekday incremental ridership (full-build, opening year) developed by SFECC Study Team.
6. Annual growth rate for Coastal Link assumed to be 5.2% (to match existing Tri-Rail).

Shuttle Bus

Using the methodology described previously in this section, shuttle bus ridership projections were developed for three basic categories:

- Existing Shuttle Bus Routes (assumes existing service characteristics)
- Expansion of Existing Shuttle Bus Routes (incremental increase in ridership due to added service)
- New Shuttle Bus Routes – Committed (2014–2018)

The 10-year shuttle bus ridership projections are provided in Tables 7-3, 7-4, and 7-5. Note the following key observations:

- Shuttle bus ridership on existing routes (with existing service levels) is projected to increase from 1.12 million in 2014 to 1.34 million in 2023.
- Adding extra service on two heavily-used shuttle bus routes will increase ridership by 62,003 in 2014 and by 74,099 in 2023. These routes include Fort Lauderdale International Airport Shuttle on weekends and the Downtown Fort Lauderdale Shuttle.
- Implementing the committed new shuttle bus routes is projected to achieve additional ridership of 235,430 in 2014 and increasing to 281,365 in 2023.
- New but unfunded shuttle bus concepts are presented in Section 3 of this report; however, the planning for these concepts is not detailed enough to allow for ridership projections as part of ***SFRTA Forward***. These concepts will undergo additional planning and analysis as part of SFRTA's future annual updates of its Five-Year Shuttle Bus Service and Financial Plan.
- If all of the above existing and committed shuttle bus improvements are implemented, the grand total shuttle bus ridership is projected to increase from 1.42 million in 2014 to 1.69 million in 2023.

(This page intentionally left blank.)

Table 7-3: Recent Ridership and 10-Year Annual Ridership Projections of Existing Shuttle Bus Routes (2011–2023)

Existing Shuttle Bus Routes	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Lake Worth 1	9,782	26,704	27,238	27,783	28,338	28,905	29,483	30,073	30,675	31,288	31,914	32,552	33,203
Boca Raton 1	21,254	28,373	28,940	29,519	30,110	30,712	31,326	31,953	32,592	33,243	33,908	34,587	35,278
APOC East		22,957	23,416	23,884	24,362	24,849	25,346	25,853	26,370	26,898	27,436	27,984	28,544
APOC West		31,026	31,647	32,279	32,925	33,584	34,255	34,940	35,639	36,352	37,079	37,821	38,577
Deerfield Beach 1	23,585	32,380	33,028	33,688	34,362	35,049	35,750	36,465	37,194	37,938	38,697	39,471	40,260
Deerfield Beach 2	21,520	19,580	19,972	20,371	20,778	21,194	21,618	22,050	22,491	22,941	23,400	23,868	24,345
Pompano Beach 1	20,671	22,384	22,832	23,288	23,754	24,229	24,714	25,208	25,712	26,226	26,751	27,286	27,832
Cypress Creek 1	25,548	31,568	32,199	32,843	33,500	34,170	34,854	35,551	36,262	36,987	37,727	38,481	39,251
Cypress Creek 2	44,923	52,727	53,782	54,857	55,954	57,073	58,215	59,379	60,567	61,778	63,014	64,274	65,559
Cypress Creek 3	29,337	35,801	36,517	37,247	37,992	38,752	39,527	40,318	41,124	41,947	42,786	43,641	44,514
FL-1	82,663	109,414	111,602	113,834	116,111	118,433	120,802	123,218	125,682	128,196	130,760	133,375	136,043
FL-2	18,249	24,707	25,201	25,705	26,219	26,744	27,279	27,824	28,381	28,948	29,527	30,118	30,720
FL-3 (weekend only)	11,762	17,161	17,504	17,854	18,211	18,576	18,947	19,326	19,713	20,107	20,509	20,919	21,338
Fort Laud. Intl. Airport Shuttles	285,683	349,598	356,590	363,722	370,996	378,416	385,984	393,704	401,578	409,610	417,802	426,158	434,681
SS-1	16,933	15,518	15,828	16,145	16,468	16,797	17,133	17,476	17,825	18,182	18,545	18,916	19,295
NW Community Link	66,735	100,166	102,169	104,213	106,297	108,423	110,591	112,803	115,059	117,360	119,708	122,102	124,544
Opa-Locka North	30,750	51,481	52,511	53,561	54,632	55,725	56,839	57,976	59,135	60,318	61,525	62,755	64,010
Opa-Locka South	44,091	105,556	107,667	109,820	112,017	114,257	116,542	118,873	121,251	123,676	126,149	128,672	131,246
TOTAL	**753,486**	**1,077,101**	**1,098,643**	**1,120,616**	**1,143,028**	**1,165,889**	**1,189,207**	**1,212,991**	**1,237,250**	**1,261,995**	**1,287,235**	**1,312,980**	**1,339,240**

Table 7-4: 10-Year Annual Incremental Ridership Projections of Existing Shuttle Bus Routes Expansion (2014–2023)

Existing Shuttle Bus Routes	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Lake Worth 1										
Boca Raton 1										
APOC East										
APOC West										
Deerfield Beach 1										
Deerfield Beach 2										
Pompano Beach 1										
Cypress Creek 1										
Cypress Creek 2										
Cypress Creek 3										
FL-1 (add service)	23,720	24,195	24,679	25,172	25,676	26,189	26,713	27,247	27,792	28,348
FL-2										
FL-3 (weekend only)										
Fort Laud. Int. Airport (add service)	38,283	39,048	39,829	40,626	41,439	42,267	43,113	43,975	44,854	45,751
FLA-2										
SS-1										
NW Community Link										
Opa-Locka North										
Opa-Locka South										
TOTAL	**62,003**	**63,243**	**64,508**	**65,798**	**67,114**	**68,456**	**69,826**	**71,222**	**72,647**	**74,099**

Table 7-5: 10-Year Annual Ridership Projections of New Committed Shuttle Bus Routes (2014–2023)

New Shuttle Bus Routes - Committed (2014-2018)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Delray Beach	159,909	163,108	166,370	169,697	173,091	176,553	180,084	183,686	187,359	191,107
Boynton Beach	75,524	77,035	78,576	80,147	81,750	83,385	85,053	86,754	88,489	90,259
TOTAL	**235,434**	**240,143**	**244,945**	**249,844**	**254,841**	**259,938**	**265,137**	**270,440**	**275,848**	**281,365**

Table 7-6: Recent Ridership and 10-Year Annual Ridership Projections of Existing and New Committed Shuttle Bus Routes (2011–2023)

Summary Totals	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Existing Shuttle Bus Routes	753,486	1,077,101	1,098,643	1,120,616	1,143,028	1,165,889	1,189,207	1,212,991	1,237,250	1,261,995	1,287,235	1,312,980	1,339,240
Expansion of Existing Shuttle Bus Routes				62,003	63,243	64,508	65,798	67,114	68,456	69,826	71,222	72,647	74,099
New Shuttle Bus Routes Committed (2014-2018)				235,434	240,143	244,945	249,844	254,841	259,938	265,137	270,440	275,848	281,365
GRAND TOTAL	**753,486**	**1,077,101**	**1,098,643**	**1,418,053**	**1,446,414**	**1,475,342**	**1,504,849**	**1,534,946**	**1,565,645**	**1,596,958**	**1,628,897**	**1,661,475**	**1,694,705**

(This page is intentionally left blank)

7.1.5: SUMMARY/CONCLUSIONS

In summary, discretionary and traditional transit market assessments were conducted to confirm which areas of the county are characterized by demographics that are generally more conducive to transit use. These areas were then reviewed to confirm that existing and future commuter rail and shuttle bus services are serving these markets to the maximum extent possible. In addition, the major trip generators and attractors depicted previously in the "Baseline Conditions" technical memorandum were used to identify and confirm future opportunities for shuttle bus service connections. The new unfunded shuttle bus concepts will be investigated as part of SFRTA's annual update of its Five-Year Shuttle Bus Service and Financial Plan.

Given SFRTA's current transit service with Tri-Rail, its future service expansion with Tri-Rail Coastal Link, and recent and planned growth in its shuttle bus connections, it can be concluded that SFRTA is reaching the appropriate geographic markets.

In addition to the transit market assessment, 10-year annual ridership projections were prepared for existing and future commuter rail and shuttle bus services, consistent with the requirements of the transit development planning process. This analysis leveraged existing Tri-Rail and Tri-Rail Coastal Link projections, with application of growth rates that reflect recent trends in commuter rail and shuttle bus ridership. The projections indicate promising growth for the future Tri-Rail integrated commuter rail system and its connecting shuttle bus services.

(This page intentionally left blank.)

7.2 MOBILITY NEEDS, ALTERNATIVES & INITIATIVES

7.2.1: MOBILITY NEEDS

Many of the mobility needs of the South Florida region are being addressed by SFRTA through existing and future commuter rail and shuttle bus services, as well as connections to other initiatives in the region. Major efforts include the Tri-Rail Coastal Link, All Aboard Florida, and the SFRTA Shuttle Bus System. These are highlighted below.

Tri-Rail Coastal Link

Existing Tri-Rail service runs along the South Florida Rail Corridor (SFRC, also known as the CSX and former Seaboard Railroad tracks), which generally runs parallel to Interstate 95 and is located to the west of the region's core urban areas. Tri-Rail Coastal Link is the plan to fully integrate and extend the existing Tri-Rail system onto the Florida East Coast (FEC) Railway corridor, which will allow for direct service to the region's largest downtowns and other major destinations. The goal of the Tri-Rail Coastal Link is to improve north-south mobility, encourage stronger east-west connections, promote redevelopment and revitalization, and enhance freight movement. Map 7-3 illustrates the future Coastal Link services and integrated Tri-Rail system. The specific operating plan, as well as the exact number and location of stations will be determined as part of further analysis scheduled to take place in 2014 and 2015.

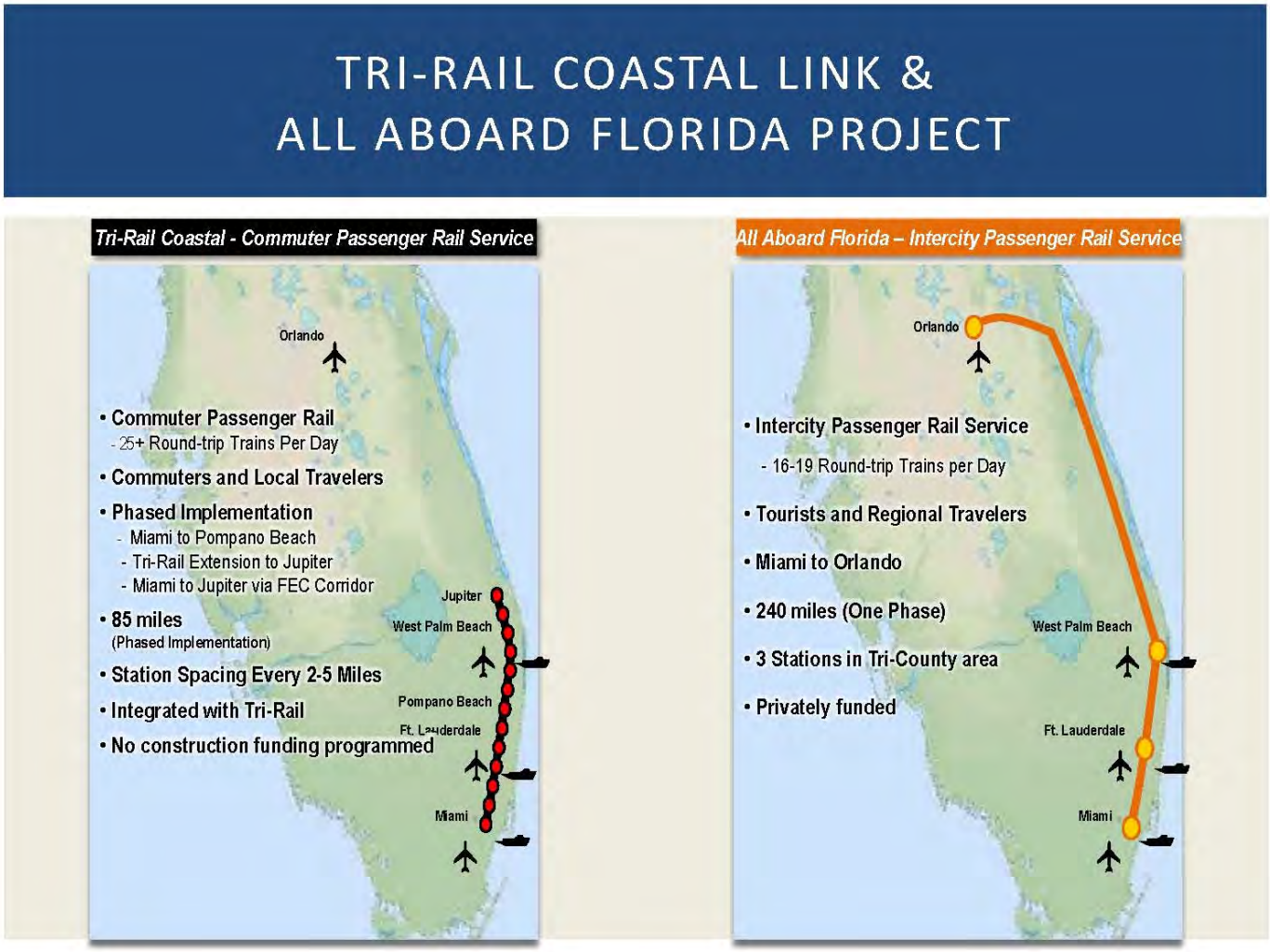
All Aboard Florida

All Aboard Florida is an initiative to provide intercity passenger rail service that is privately owned, operated, and maintained by Florida East Coast Industries (FECI). The proposed 240-mile route will feature passenger service along the existing FEC corridor between Miami and the Space Coast and the creation of new tracks into Orlando. The route will include stations in downtown Miami and Orlando, with intermediate stops in downtown Fort Lauderdale and downtown West Palm Beach. Stations will provide access to international airports, seaports, and transit systems, including the existing Tri-Rail service and proposed Tri-Rail Coastal Link. Coordination on various aspects of the All Aboard Florida project, including shared elements to be utilized by Tri-Rail Coastal Link, is occurring between SFRTA, FDOT, and FECI. Map 7-4 illustrates the relationship and markets for Tri-Rail Coastal Link and All Aboard Florida.

Map 7-3: Future Integrated Tri-Rail System

Note: Operating plan and final stations on FEC to be determined during upcoming Tri-Rail Coastal Link Project Development phase.

Map 7-4: Tri-Rail Coastal Link and All Aboard Florida Project



Source: Florida Department of Transportation, District 4

Shuttle Bus System

A top priority derived from the public outreach process is to improve connections to major destinations near Tri-Rail stations. With this in mind, the SFRTA will continue to coordinate and evaluate its Shuttle Bus System. This system has experienced substantial growth in recent years, and as such, opportunities for its expansion regularly arise.

SFRTA develops and adopts a Five-Year Shuttle Bus Service and Financial Plan on an annual basis, which is conservative and cost-constrained. Based on public input, SFRTA staff direction, and the results of technical analysis and demand projections, a series of additional new shuttle bus route concepts have been developed as part of ***SFRTA Forward***. These new shuttle bus route concepts are unfunded and assumed to have the potential to occur during the second five years of the ***SFRTA Forward*** plan.

Table 7-7 provides a summary of committed shuttle bus routes and unfunded shuttle bus route concepts. The two committed shuttle bus routes (Delray Beach and Boynton Beach) are funded for implementation in 2014. However, additional investigation and analysis of the unfunded shuttle bus concepts will occur as part of SFRTA's annual update of its Five-Year Shuttle Bus Service and Financial Plan.

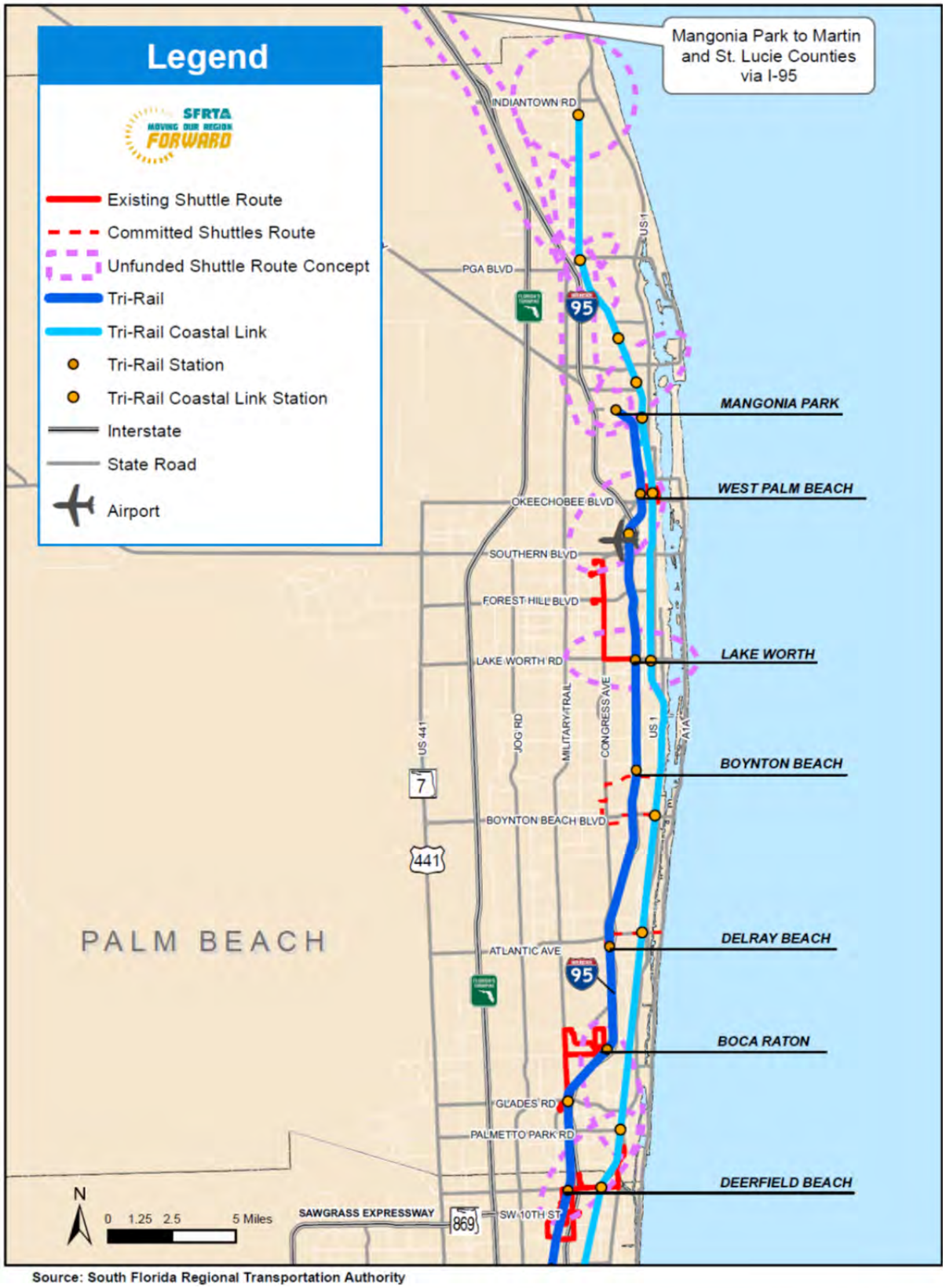
The new SFRTA shuttle bus concepts are illustrated in Map 7-5 (Palm Beach County), Map 7-6 (Broward County), and Map 7-7 (Miami-Dade County). These maps depict existing SFRTA shuttle bus routes, committed SFRTA shuttle bus improvements in the next five years, and proposed new shuttle bus concepts for the second five years of ***SFRTA Forward***.

Table 7-7: SFRTA Shuttle Bus 10-Year Improvement Program (Committed and Unfunded)

Priority	Funding Status	Outlook: 5-Yr or 10-Yr?	Shuttle Bus Route	Station	Key Coverage Area	Est. Annual Oper. Cost	Notes
1	Committed	5 Year	Delray Beach	Delray Beach	Downtown Delray Beach, Atlantic Avenue	$75,000	Partnership with City of Delray Beach
1	Committed	5 Year	Boynton Beach	Boynton Beach	Boynton Beach circulation	TBD	Partnership with City of Boynton Beach and FDOT
1	Unfunded	10 Year	Mangonia Park- Scripps	Mangonia Park	Scripps/ FAU/ Nova	$740,000	In preliminary discussions, connect Tri-Rail with Palm Beach Gardens, Jupiter
2	Unfunded	10 Year	Aventura Mall and Hallandale Beach	Golden Glades	Aventura Mall, Hospitals, Gulfstream Park	$550,000	Strong market not currently served by Tri-Rail
3	Unfunded	10 Year	Miami Beach Express	Fort Lauderdale Airport	South Beach and employment destinations	TBD	Frequent request to SFRTA Customer Service, Possibly funded by 95 Express Tolls
3	Unfunded	10 Year	West Palm Beach -Airport	West Palm Beach Station	Palm Beach International Airport (PBI)	TBD	Frequent request to SFRTA Customer Service
3	Unfunded	10 Year	Lake Worth Downtown -Beach	Lake Worth	Lake Worth Downtown and Beach Access	TBD	Interest expressed by City of Lake Worth
3	Unfunded	10 Year	Port of Miami Route	Fort Lauderdale Airport or Golden Glades	Via I-95 to Port of Miami	TBD	Targeted to work shifts and cruise passengers, Possibly funded by 95 Express tolls
3	Unfunded	10 Year	836 Corridor to FDOT/ FHP	Miami Airport	West Miami connection	TBD	Likely covered by MDT/ 836 Express Service
3	Unfunded	10 Year	836 Corridor to FIU & Malls	Miami Airport	Florida International university	TBD	Likely covered by MDT/ 836 Express Service
3	Unfunded	10 Year	Hollywood Trolley	Hollywood	Hollywood Downtown, Beach	TBD	CRA Boundary may be an obstacle
4	Unfunded	10 Year	West Palm Beach- Jog Road	West Palm Beach Station	Palm Beach Co Admin Offices	TBD	Express Route / Proposed in 2010 FDOT shuttle study
4	Unfunded	10 Year	Boca Raton Downtown	Boca Raton	Downtown Boca Raton	TBD	Proposed in 2010 FDOT shuttle study
4	Unfunded	10 Year	Fort Lauderdale- Plantation Corridor	Fort Lauderdale Airport	Plantation	TBD	Proposed in 2010 FDOT shuttle study
5	Unfunded	10 Year	Fort Lauderdale - Hard Rock Casino	Fort Lauderdale Airport	Hard Rock Casino	TBD	FDOT Study Route 2010
5	Unfunded	10 Year	St. Lucie & Martin County Express	Either West Palm Beach or Mangonia Park	Treasure Coast commuters	TBD	Meet all peak hour trains
5	Existing	10 Year	Existing Miami Springs Route Extension	Hialeah Market	Miami Springs	TBD	Extend existing city service to Tri-Rail Station
5	Unfunded	10 Year	Fort Lauderdale Broward Mall	Fort Lauderdale	Broward Mall	TBD	Proposed in 2010 FDOT shuttle study
5	Unfunded	10 Year	Jupiter Shuttle 1	Jupiter Station (Proposed)	FAU- Jupiter	TBD	Feeder service for future Coastal Link Station
5	Unfunded	10 Year	Jupiter Shuttle 2	Jupiter Station (Proposed)	Indiantown Rd. Corridor/ Commerce Lane	TBD	Feeder service for future Coastal Link Station
5	Unfunded	10 Year	Jupiter Shuttle 3	Jupiter Station (Proposed)	Jupiter East / A1A/ US 1	TBD	Feeder service for future Coastal Link Station
5	Existing	10 Year	Existing City of Hialeah Shuttle - Marlin	Metrorail Transfer Station	Hialeah	TBD	Bring Existing Service Into Tri-Rail Station
5	Existing	10 Year	Existing City of Hialeah Shuttle - Flamingo	Metrorail Transfer Station	Hialeah	TBD	Bring Existing Service Into Tri-Rail Station
5	Unfunded	10 Year	Palm Beach Gardens – 1	Palm Beach Gardens (Proposed)	Gardens Mall – Pal Beach St. College, North County Gov. Ctr.	TBD	Feeder service for future Coastal Link Station
5	Unfunded	10 Year	Palm Beach Gardens – 2	Palm Beach Gardens (Proposed)	Northcorp. Parkway- Palm Beach Gardens Med. Ctr. – Nova Southeastern University	TBD	Feeder service for future Coastal Link Station
6	Unfunded	10 Year	Existing City of Hialeah Shuttle - Flamingo	Metrorail Transfer Station	Hialeah	TBD	Extend existing city service to Tri-Rail Station
6	Unfunded	10 Year	Miami Intermodal Center to corporate offices near airport	Miami Intermodal Center	Miami International Airport and vicinity	TBD	Improved connection to Blue Lagoon and area northwest of Miami Airport
6	Unfunded	10 Year	Mangonia Park Station Circulator	Mangonia Park	Columbia Hospital and Riviera Beach	TBD	Direct connection to Columbia Hospital and Riviera Beach
6	Unfunded	10 Year	Community Bus connections to Tri-Rail stations	As appropriate	Broward County	TBD	Coordinate with cities operating Community Bus

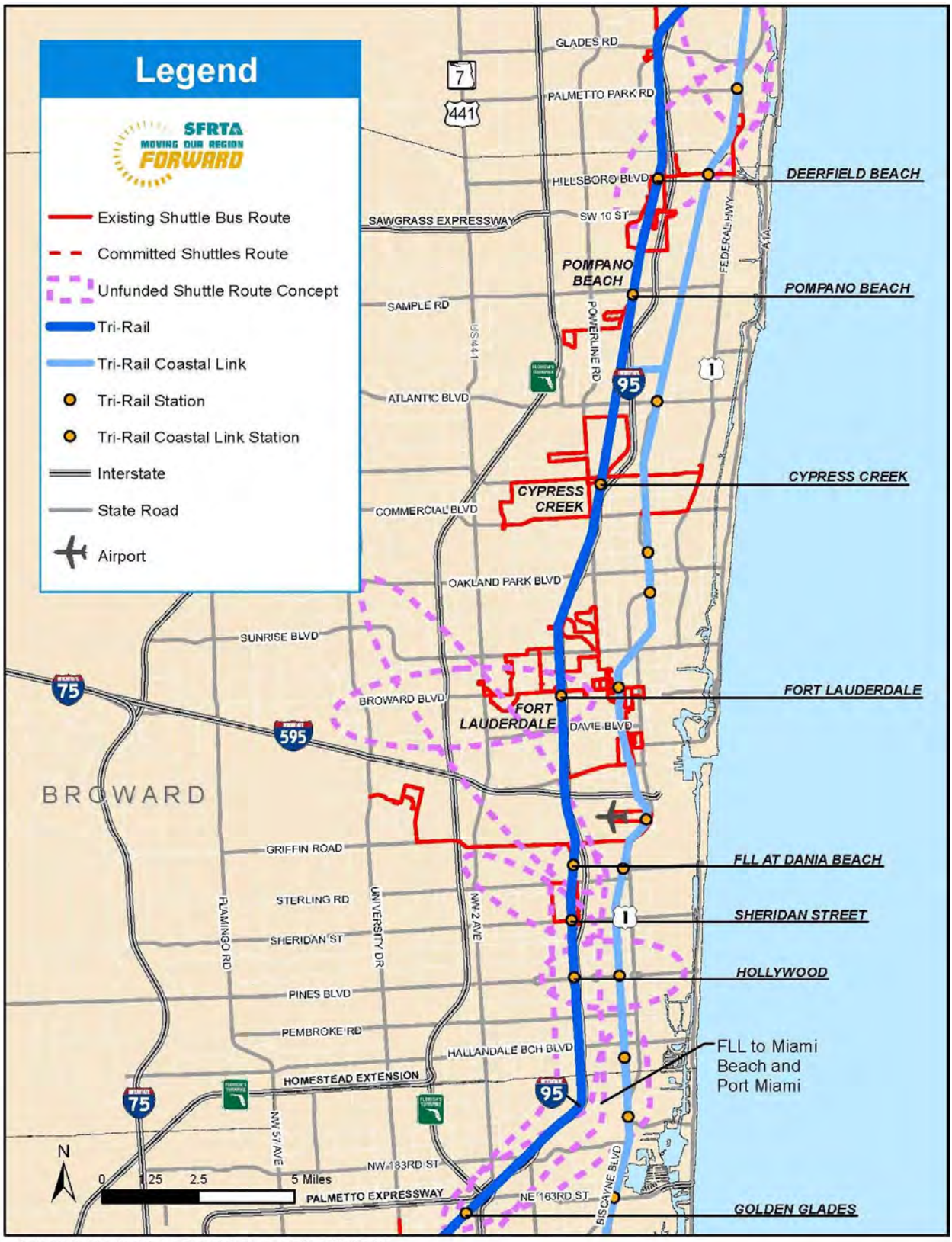
(This page intentionally left blank.)

Map 7-5: Shuttle Bus Improvement Program, Palm Beach County



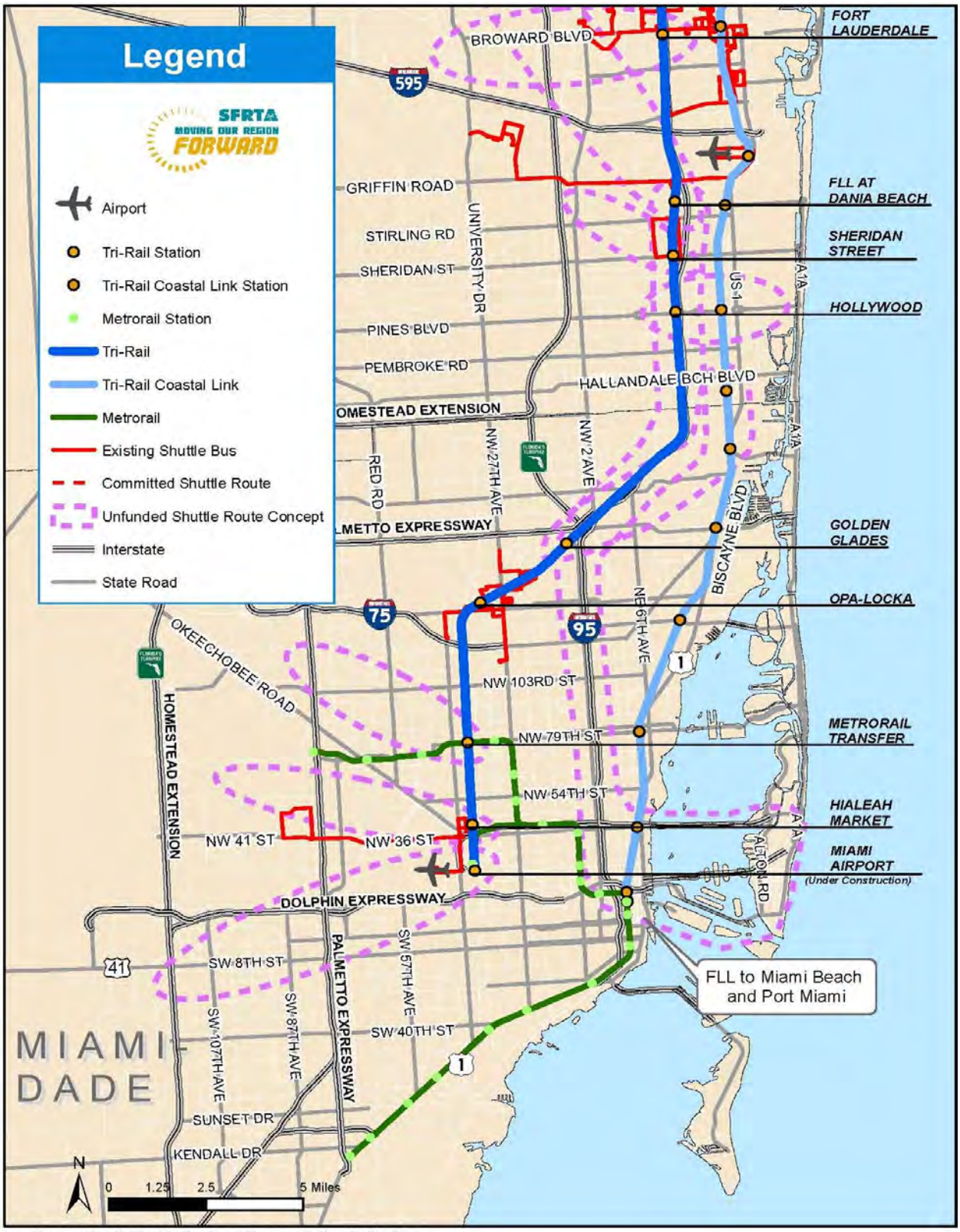
Source: South Florida Regional Transportation Authority

Map 7-6: Shuttle Bus Improvement Program, Broward County



Source: South Florida Regional Transportation Authority

Map 7-7: Shuttle Bus Improvement Program, Miami-Dade County



Source: South Florida Regional Transportation Authority

7.2.2: ALTERNATIVES AND INITIATIVES

In response to public outreach, direction from SFRTA staff, PTAC/ERC, and the SFRTA Governing Board, as well as the demand and mobility needs documented previously in this report, potential transit improvements and initiatives are documented below as candidates for funding in the ***SFRTA Forward*** plan. These improvements and initiatives essentially comprise the ***SFRTA Forward*** Needs Plan. Improvements and initiatives that can be shown geographically are illustrated in Map 7-8.

Premium Transit

1. Expanded periods of Tri-Rail20 minute headways on weekdays
2. Provide late evening service on Tri-Rail
3. Manage dispatch and maintenance of the South Florida Rail Corridor
4. Implement Tri-Rail Coastal Link service on the FEC Railway corridor (as lead agency for financial planning, design, construction, operations, and FTA project sponsor)
    - Rehabilitate older existing rolling stock and acquire some additional units to support "full build" scenario of Tri-Rail Coastal Link
5. Implement *The WAVE* modern streetcar in downtown Fort Lauderdale (as coordinating agency, FTA project sponsor, and lead of design and construction phases).
6. Coordinate streetcar feasibility studies
    - Extensions of The WAVE (south and west)
    - West Palm Beach
    - Delray Beach
    - Boca Raton
    - Miami-Dade County
7. Study future passenger rail service in Miami-Dade on underutilized freight corridors (Dolphin, Kendall, and FEC-Ludlam corridors)
8. Coordinate feasibility studies for regional premium transit connections to Monroe, Martin, and St. Lucie counties.

Shuttle Bus and Other Station Access

1. Expand existing shuttle bus routes.
    - Address capacity issues:
        - Add capacity to Fort Lauderdale International Airport Shuttle (FLA 1)
        - Add capacity to Downtown Fort Lauderdale Shuttle (FLL 1)
    - Improve shuttle bus stop infrastructure at stations
2. Pursue new shuttle bus route concepts.
    - Shuttle Bus Improvement Program (see Table 7-7)
    - Improved, direct connections to major regional destinations and employment centers, including Miami Beach, Port Miami, and Palm Beach International Airport
3. Improve bicycle and pedestrian access to stations

4. Implement car sharing program at stations.
5. Implement bike sharing program at stations.

System and Station Infrastructure

1. Plan, design, and construct new facilities.
    - Construct Pompano Beach Green Station Demonstration Project
    - Pursue new northern layover and maintenance facility at Mission Spur in Palm Beach County
    - Pursue Miami River/Miami Intermodal Center Capacity Improvement (MR-MICCI)
    - Pursue small, strategic track improvements at key locations
    - Pursue direct connection to east Tri-Rail platform at Metrorail Transfer station
    - Design and construct new Tri-Rail Coastal Link stations
    - Permanent administration building for SFRTA
2. Implement parking and circulation improvements.
    - Opa-locka Station circulation and parking project
    - West Palm Beach Station
    - Lake Worth Station (in conjunction with adjacent School Board parking)
    - Delray Beach Station
    - Boca Raton Station
    - Deerfield Beach Station
    - Work with CRAs, DDAs, and local governments to develop cost-effective shared-use parking strategies at new Tri-Rail Coastal Link stations
3. Support and/or develop inter/multimodal transfer facilities.
    - Completion/full opening of Miami Intermodal Center (MIC) at MIA
    - All Aboard Florida stations in Miami, Fort Lauderdale, and West Palm Beach
    - “Mobility Hubs” at current and future Tri-Rail stations in Broward County
4. Upgrade signage at stations.
5. Provide electric car charging stations.
6. Allow for increased bicycle capacity onboard Tri-Rail trains

Station Area Development

1. Pursue transit-oriented development (TOD) at existing stations.
2. Pursue TOD at new stations.
    - Boca Raton at Glades Road
    - Palm Beach International (PBI) Airport
    - Tri-Rail Coastal Link stations

Technology

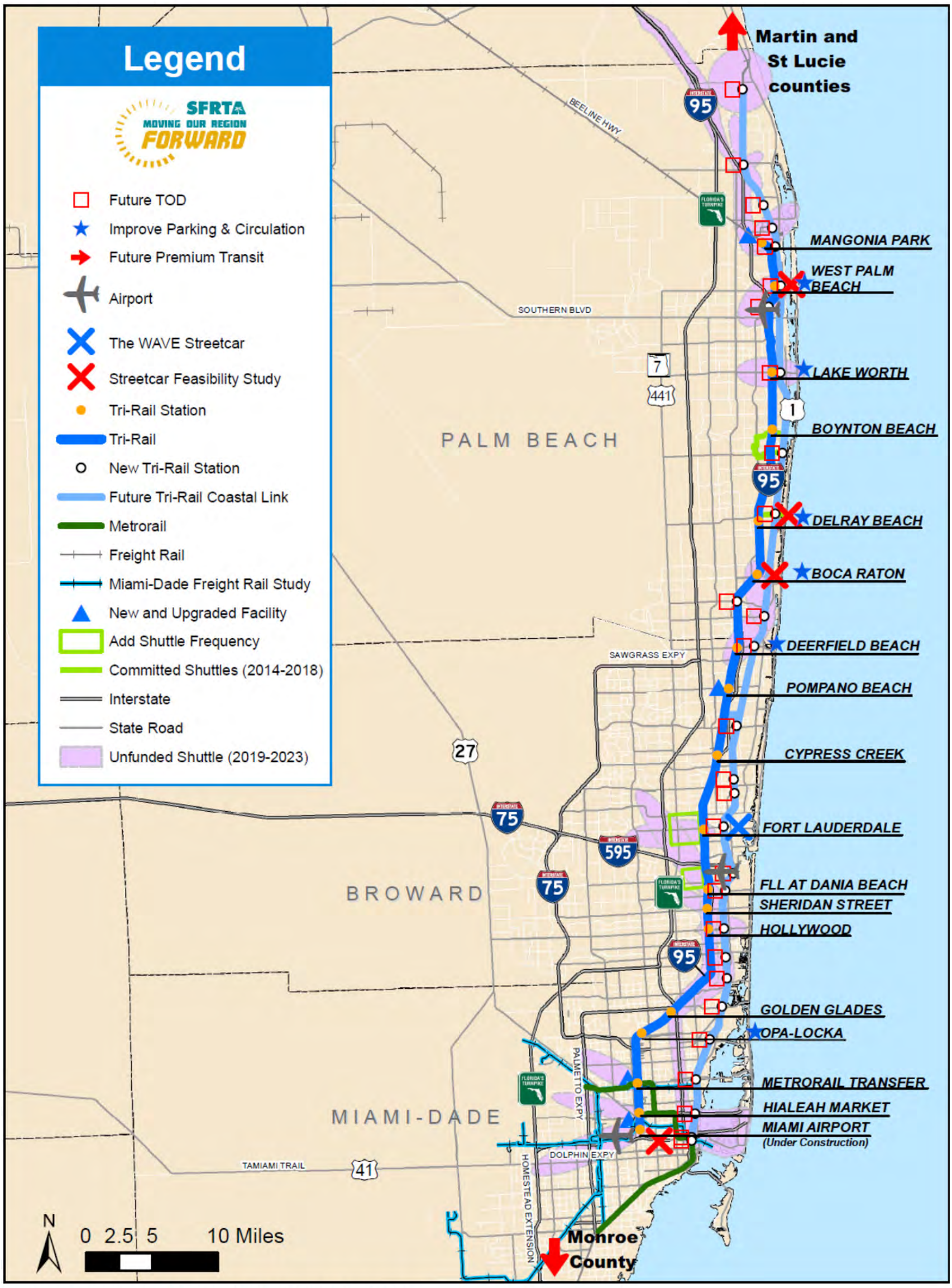
1. Pursue technologies to enhance the passenger experience and increase efficiency.
    - Provide online renewal capability to EASY card system
    - New passenger announcement system
    - Provide real-time passenger information
    - Pursue Wi-Fi and additional power outlets on-board and at stations
    - Pursue more ticket vending machines and ticket validation machines
    - Pursue enhanced regional fare integration

Service and Capital Planning

1. Perform plans and studies that support SFRTA's service and capital planning work program.
    - Develop procedures to streamline and simplify the Transit Oriented Development approval and implementation process
    - Conduct station way-finding study and implementation plan
    - Conduct streetcar feasibility studies
    - Conduct an market analysis for a new administrative building for SFRTA
    - Perform a fare study to reevaluate existing fare structure and policies
    - Conduct planning studies for new Tri-Rail stations (Boca Raton @ Glades and PBI Airport)
    - Implement demonstration project at selected stations for enhancing bicycle and pedestrian access to stations (one in each county)
    - Document the benefits of premium transit to educate citizens and elected officials (economic development, environmental, sustainability, etc.)
    - Update the Five-Year Shuttle Bus Service and Financial Plan on an annual basis
    - Perform annual progress reports for the TDP from 2014 through 2017
    - Complete major update of TDP in 2018
    - Update Tri-Rail monitoring program annually to assess performance
    - Other plans and studies as identified

These alternatives and initiatives described above essentially comprise the Needs Plan for ***SFRTA Forward*** through FY 2023. The Needs Plan is illustrated in Map 7-8.

Map 7-8: *SFRTA Forward* 10-Year Needs Plan



Source: South Florida Regional Transportation Authority

(This page intentionally left blank.)

SECTION 8

SFRTA FORWARD PLAN

SFRTA
MOVING OUR REGION
FORWARD

(This page intentionally left blank.)

8. SFRTA FORWARD PLAN

8.1 INTRODUCTION

The economic downturn in the last five years has created uncertainty regarding the funding available for public transportation at the federal, state, and local levels. The expansion of SFRTA's role and responsibilities beyond operating the existing Tri-Rail System (i.e.SFRC Dispatch, The WAVE, Tri-Rail Coastal Link, etc.) will require additional capital and operating funds to fully implement these initiatives. Existing operating and capital revenues are not sufficient to meet the ***SFRTA Forward*** Needs Plan summarized in Section 7 of this report.

SFRTA is committed to expanding Tri-Rail service to the FEC tracks with its proposed Tri-Rail Coastal Link. Per the terms of the multi-party Tri-Rail Coastal Link MOU that was approved in May 2013, SFRTA is tasked with the development of the project's finance plan. As part of this effort, SFRTA is leading the activities of the newly-formed Tri-Rail Coastal Link Finance Subcommittee. To date, the Finance Subcommittee has developed detailed financial models and is investigating a wide variety of funding options to cover both capital and operating and maintenance costs. The Finance Subcommittee will produce a plan to cover all costs of the future integrated Tri-Rail system.

The need for a sustainable dedicated funding source is more pressing to SFRTA now in order to fund the recommended initiatives and alternatives in the ***SFRTA Forward*** plan. A combination of federal funds, State assistance, and local contributions, particularly from partnering cities and municipalities, will be crucial to meeting the unfunded needs. FDOT and SFRTA will cooperate in identifying and implementing a dedicated local funding source before July 1, 2019 when the dedicated funding from the State to SFRTA will cease.

This section presents the 10-year implementation program and finance plan for ***SFRTA Forward*** based on current and projected operating and capital budgets. It presents a 10-year outlook of SFRTA's financial situation for programmed and planned improvements, including a summary of the assumptions used.

8.2 10-YEAR OPERATING FORECAST

Operating Costs

SFRTA's operating costs for FY 2014, based on the adopted operating budget, total $75.3 million. For the purposes of estimating the operating expenses of SFRTA in the next 10 years, service-related contract costs (operating, maintenance, feeder service, security, fuel, and personnel services) were

assumed to escalate by 2 percent annually for the 10-year projection, while other expenses were assumed to remain constant to match recent historical trends. The SFRC and New River Bridge dispatch as well as maintenance-of-way expenses for the New River Bridge were assumed to escalate by 3 percent annually, based on current contract rates. Professional fees and office rent were also assumed to escalate by 3 percent for the analysis period. Under these assumptions, operating costs in FY 2023 are estimated to reach $88.2million for the existing SFRTA/Tri-Rail system. This 10-year cost projection includes SFRTA assuming maintenance responsibilities of the SFRC in FY 2015 with an estimated annual cost of $11.5 million. This projection assumes no service improvements or enhancements to existing Tri-Rail and shuttle bus service beyond the committed enhancements to implement the Boynton Beach and Delray Beach shuttle bus routes. The ***SFRTA Forward*** Needs Plan calls for Tri-Rail service to expand the periods of 20-minute headways on weekdays and provide later evening service. In addition, it also includes numerous shuttle bus concepts to be considered for funding, but not included in this analysis. The costs for these additional improvements are to be determined by SFRTA when further study is conducted.

The expansion of the existing Tri-Rail system to the proposed Tri-Rail Coastal Link starting in FY 2019will bring SFRTA's operating costs to a total of $120.7 million by FY 2023 for its future integrated system, as shown in Figure 8-1 and Table 8-1. Tri-Rail Coastal Link's operating costs are estimated to be about $30 million for its first year and escalating about 2 percent each year thereafter.

Figure 8-1: SFRTA Projected 10-Year Operating Costs

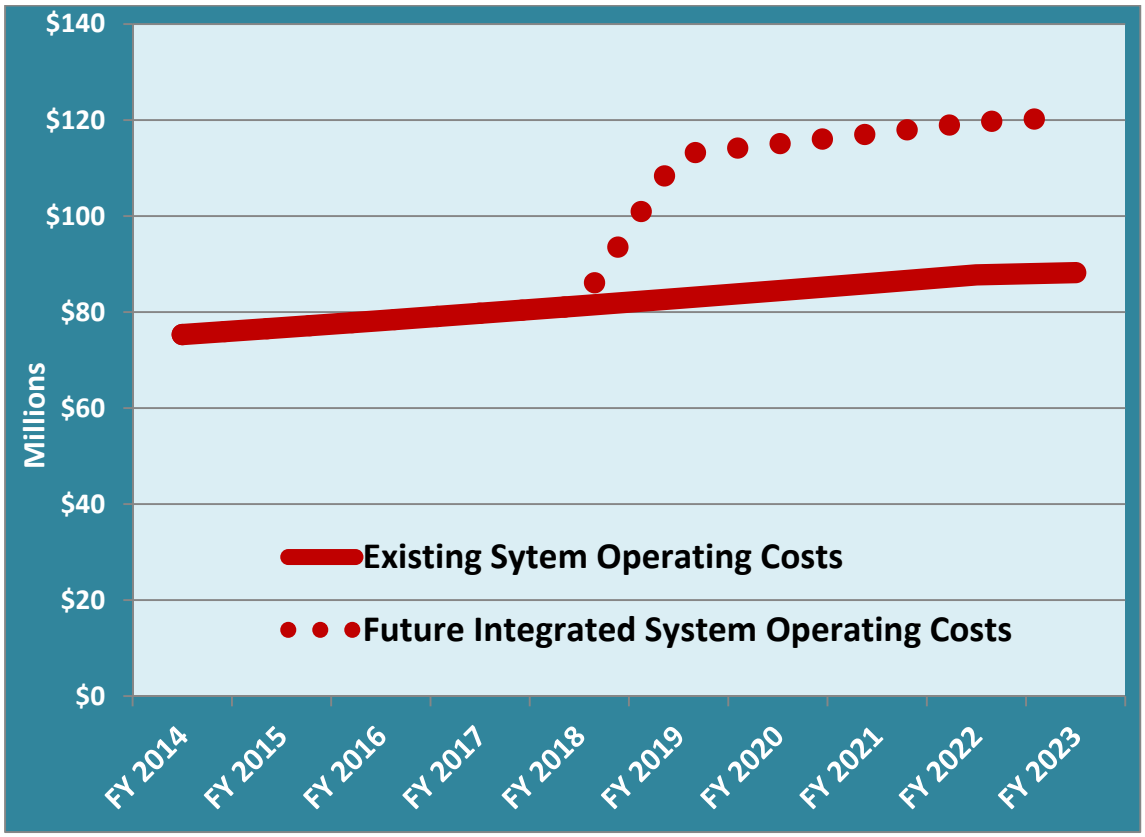


Table 8.1: *SFRTA Forward* 10-Year Operating Expenses (FY 2014 - FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
OPERATING EXPENSES											
Operating Contract	$11,356,868	$11,584,005	$11,815,685	$12,051,999	$12,293,039	$12,538,900	$12,789,678	$13,045,472	$13,306,381	$13,306,381	$124,088,408
Train Maintenance Contract	$18,406,716	$18,774,850	$19,150,347	$19,533,354	$19,924,021	$20,322,502	$20,728,952	$21,143,531	$21,566,401	$21,566,401	$201,117,077
Station Maintenance Contract	$2,393,584	$2,441,456	$2,490,285	$2,540,090	$2,590,892	$2,642,710	$2,695,564	$2,749,476	$2,804,465	$2,804,465	$26,152,988
Feeder Service Contract	$5,289,632	$5,395,425	$5,503,333	$5,613,400	$5,725,668	$5,840,181	$5,956,985	$6,076,124	$6,197,647	$6,197,647	$57,796,042
Emergency Feeder Service	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$55,000	$550,000
Security Contract	$6,089,147	$6,210,930	$6,335,149	$6,461,852	$6,591,089	$6,722,910	$6,857,369	$6,994,516	$7,134,406	$7,134,406	$66,531,773
Insurance - Liability/Property/Auto	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$2,500,000	$25,000,000
Train Fuel Contract	$9,937,500	$10,136,250	$10,338,975	$10,545,755	$10,756,670	$10,971,803	$11,191,239	$11,415,064	$11,643,365	$11,643,365	$108,579,985
SFRC Dispatch	$381,320	$392,760	$404,542	$416,679	$429,179	$442,054	$455,316	$468,976	$483,045	$497,536	$4,371,406
NRB Dispatch	$3,354,096	$3,454,719	$3,558,360	$3,665,111	$3,775,065	$3,888,317	$4,004,966	$4,125,115	$4,248,868	$4,376,335	$38,450,952
NRB Maintenenace	$550,000	$566,500	$583,495	$601,000	$619,030	$637,601	$656,729	$676,431	$696,724	$717,625	$6,305,134
Station Utilities	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$652,000	$6,520,000
Revenue Collection	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$605,000	$6,050,000
Corporate & Community Outreach	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$627,500	$6,275,000
Legal Expenses	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$843,214	$8,432,140
Personnel Services	$10,322,506	$10,528,956	$10,739,535	$10,954,326	$11,173,412	$11,396,881	$11,624,818	$11,857,315	$12,094,461	$12,336,350	$113,028,561
Office Business Expense	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$945,900	$9,459,000
Business Travel/Conferences	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$240,475	$2,404,750
Dues & Subscriptions	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$157,758	$1,577,580
General Training & Seminar	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$145,485	$1,454,850
Professional Fees	$609,500	$627,785	$646,619	$666,017	$685,998	$706,578	$727,775	$749,608	$772,096	$795,259	$6,987,234
Office Rent	$655,705	$675,376	$695,637	$716,507	$738,002	$760,142	$782,946	$806,434	$830,627	$855,546	$7,516,923
Electronic Messaging Boards	$145,500	$145,500	$145,501	$145,502	$145,503	$145,504	$145,505	$145,506	$145,507	$145,508	$1,455,036
Smart Card	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$85,000	$850,000
APTA Peer Review	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$19,000	$190,000
Alarm Systems	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$18,000	$180,000
Uniforms	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$4,000	$40,000
Reserve	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$500,000	$5,000,000
Transfer to Capital Program	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($1,575,000)	($15,750,000)
Projected Existing System Operating Costs	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$84,441,174	$86,076,899	$87,747,326	$88,200,157	$820,614,838
Tri-Rail Coastal Link Operating Costs						$30,000,000	$30,600,000	$31,212,000	$31,836,240	$32,472,965	$156,121,205
Integrated System Operating Costs	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**

(This page intentionally left blank.)

Operating Revenues

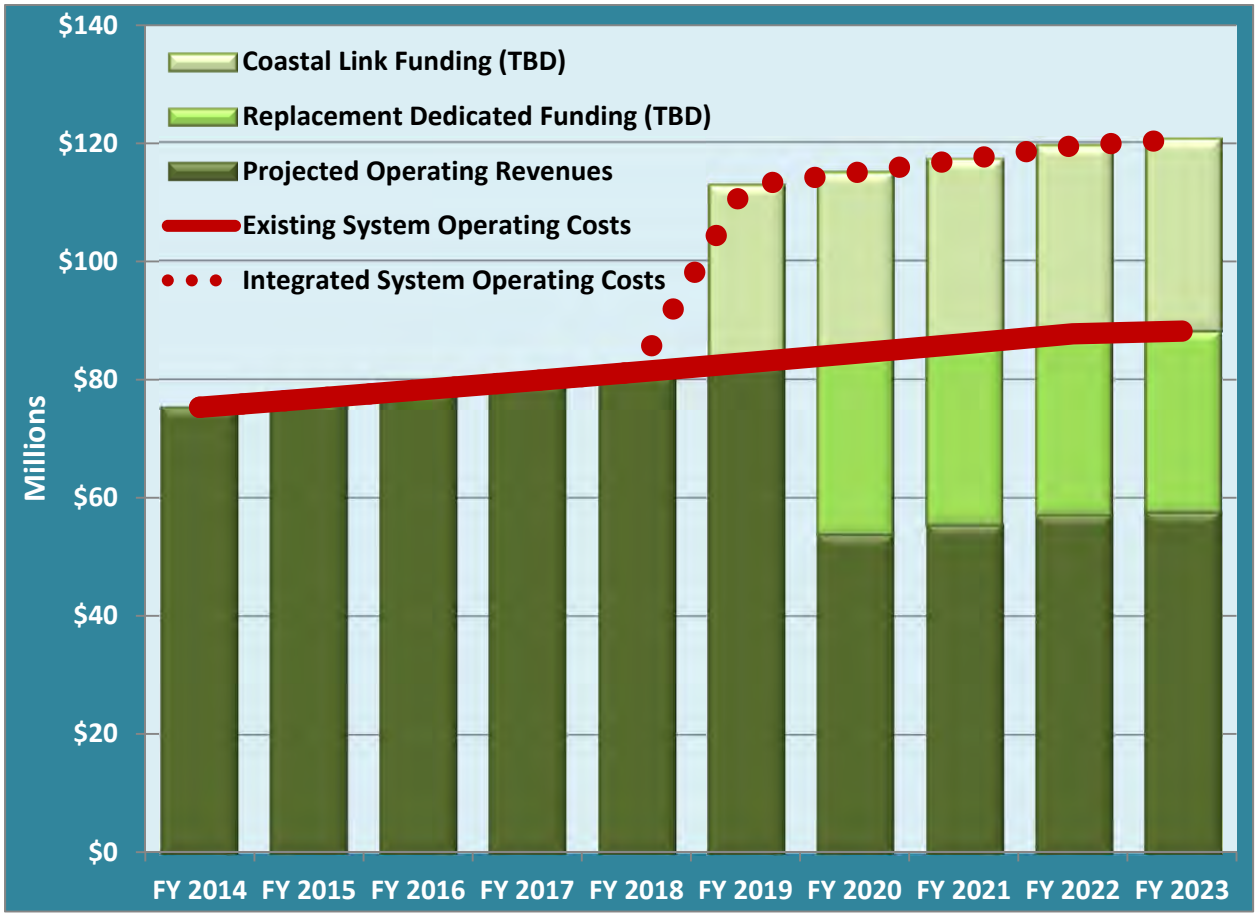
SFRTA's operating revenues for FY 2014, based on the adopted operating budget, total $75.3 million. SFRTA's operating train revenues are generated through Tri-Rail fares. The remainder of the operating revenues is a combination of federal, State, and local funds received from each of the three counties in the South Florida region (Palm Beach, Broward, and Miami-Dade).

Based on the first five-year revenue estimates for FY 2015 to FY 2019 produced by SFRTA's Finance Department and the TDP Project Team, train revenues are assumed to increase 2 percent annually. Federal funds will range between $23 and $28 million, including an increase in FTA Preventive Maintenance funds but the loss of FTA JARC/New Freedom revenues starting in FY 2017. The new transportation reauthorization, MAP-21, combined these programs with other funding programs that will be managed by local transit agencies and not SFRTA. State and local funding assistance are assumed to remain at the same levels for the first five-year estimates.

For the second five-year estimates (FY 2019 to FY 2023), the SFRTA is committed to working with FDOT and other partners to identify a new dedicated revenue source that will cover continued operations for the existing Tri-Rail system and the Coastal Link expansion on the FEC Railway. The intent is to identify and secure a new dedicated revenue source prior to FY 2019, so that Tri-Rail Coastal Link service on the FEC can be implemented in an accelerated manner. By FY 2020, the State dedicated operating assistance now received by SFRTA ($13.3 million and $17.3 million, respectively) shall cease per the terms of HB 599 (signed into law in 2012). Per HB 599, a new dedicated revenue source must replace this state statutory operating assistance by FY 2020. Therefore, for purposes of the ***SFRTA Forward*** financial plan, it is assumed that a new dedicated funding source will be identified by SFRTA, the State, and other partners to cover operating costs of both the existing system and anticipated Tri-Rail Coastal Link expansion. As shown in Figure 8-2, potential funding provided by this new dedicated funding source is first shown in FY 2019 for Coastal Link expansion and in FY 2020 to replace the current State dedicated funding.

Starting in FY 2015, SFRTA will assume the MOW of the SFRC, for which it will receive an additional $11.5 million annually of dedicated funding from the State. FDOT has agreed to a cost-sharing plan to cover MOW expenses in excess of the $11.5 million in dedicated funding. For the purposes of this financial analysis, it is assumed that this MOW dedicated funding source will remain constant for the second five-year projection period, as shown in Table 8-2. County and other local contributions are also assumed to continue through FY 2023. Under these assumptions, the ***SFRTA Forward*** 10-year plan estimated and expected operating revenues are estimated to total $120.7 million by FY 2023, as shown in Table 8-3. Table 8-4 summarizes the 10-year operating costs and revenues projections.

Figure 8-2: SFRTA Estimated Operating Revenues (FY 2014- FY 2023)



As stated earlier, SFRTA is committed to implementing the Tri-Rail Coastal Link in the near future as funding becomes available. As the leading agency of the newly formed Tri-Rail Coastal Link Finance Subcommittee, SFRTA is investigating a wide variety of funding options to cover both the incremental capital and operating and maintenance costs of the Tri-Rail Coastal Link expansion, as well as a plan to cover all costs of the future integrated Tri-Rail system.

Table 8-2: South Florida Rail Corridor (SFRC) Maintenance-of-Way (MOW) Operating Budget (FY 2014 - FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
SFRC Maintenance-of-Way (MOW)											
Statutory Operating Assistance MOW	$0	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$11,500,000	$103,500,000
SFRC MOW Expense	$0	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($11,500,000)	($103,500,000)
Total	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**

Table 8-3: *SFRTA Forward* Estimated Operating Revenues (FY 2014 - FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
OPERATING REVENUES											
Train Service Revenue	$12,289,106	$12,534,888	$12,785,586	$13,041,298	$13,302,124	$13,568,166	$13,839,529	$14,116,320	$14,398,646	$14,398,646	$134,274,309
Interest Income/Other Income	$325,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$320,000	$3,205,000
Statutory Dedicated Funding	$13,300,000	$13,300,000	$13,300,000	$13,300,000	$13,300,000	$13,300,000					$79,800,000
Statutory Operating Assistance	$17,300,000	$17,300,000	$17,300,000	$17,300,000	$17,300,000	$17,300,000					$103,800,000
FTA Planning Grant	$1,700,000	$1,300,000	$1,450,000	$1,450,000	$1,500,000	$800,000	$800,000	$800,000	$800,000	$800,000	$11,400,000
FTA Preventive Maintenance	$20,472,940	$22,222,183	$23,290,210	$24,538,626	$26,608,775	$28,611,248	$29,941,644	$31,300,579	$32,688,680	$33,141,511	$272,816,396
FTA Designated Recipient Fees	$618,000	$350,000	$350,000	$350,000	$50,000	$50,000	$50,000	$50,000	$50,000	$50,000	$1,968,000
FTA JARC/NF Program Fee	$46,897	$125,000	$125,000	$125,000							$421,897
FTA JARC/NF Program Match	$373,725	$415,773	$420,000	$420,000							$1,629,498
FHWA	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$4,000,000	$40,000,000
Miami-Dade Statutory Operating Assistance	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$15,650,000
Broward Statutory Operating Assistance	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$15,650,000
Palm Beach Statutory Operating Assistance	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$1,565,000	$15,650,000
Other Local Funding	$194,738	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$195,000	$1,949,738
Projected Operating Revenues	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$53,841,174	$55,476,899	$57,147,326	$57,600,157	$698,214,838
Projected Operating Funding Gap						($30,000,000)	($61,200,000)	($61,812,000)	($62,436,240)	($63,072,965)	($278,521,205)
Coastal Link Funding (TBD)						*$30,000,000*	*$30,600,000*	*$31,212,000*	*$31,836,240*	*$32,472,965*	*$156,121,205*
Replacement Dedicated Funding (TBD)							*$30,600,000*	*$30,600,000*	*$30,600,000*	*$30,600,000*	*$122,400,000*
Total Operating Revenues	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**

Table 8-4: *SFRTA Forward* 10-Year Operating Budget (FY 2014 - FY 2023)

	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
OPERATING EXPENSES											
Projected Existing System Operating Costs	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$84,441,174	$86,076,899	$87,747,326	$88,200,157	$820,614,838
Tri-Rail Coastal Link Operating Costs						$30,000,000	$30,600,000	$31,212,000	$31,836,240	$32,472,965	$156,121,205
Integrated System Operating Costs	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**
OPERATING REVENUES											
Projected Operating Revenues	$75,315,406	$76,757,844	$78,230,796	$79,734,923	$81,270,899	$82,839,414	$53,841,174	$55,476,899	$57,147,326	$57,600,157	$698,214,838
Projected Operating Funding Gap						($30,000,000)	($61,200,000)	($61,812,000)	($62,436,240)	($63,072,965)	($278,521,205)
Coastal Link Funding (TBD)						*$30,000,000*	*$30,600,000*	*$31,212,000*	*$31,836,240*	*$32,472,965*	*$156,121,205*
Replacement Dedicated Funding (TBD)							*$30,600,000*	*$30,600,000*	*$30,600,000*	*$30,600,000*	*$122,400,000*
Total Operating Revenues	**$75,315,406**	**$76,757,844**	**$78,230,796**	**$79,734,923**	**$81,270,899**	**$112,839,414**	**$115,041,174**	**$117,288,899**	**$119,583,566**	**$120,673,122**	**$976,736,043**

8.3 10-YEAR CAPITAL PLAN

Section 7 previously identified and summarized the potential capital transit improvements and initiatives that comprise the 10-year ***SFRTA Forward*** Needs Plan**.**This section presents the 10-year Capital Plan for ***SFRTA Forward.*** It is based on the demand and mobility needs documented previously in Section 7 and SFRTA's Adopted Capital Budget and Five-Year Plan. The improvements and initiatives identified in the Needs Plan and included in the Capital Plan are listed in Table 8-5. This table also makes reference to the capital improvement projects identified by the PTAC (External Review Committee) and the general public as priorities for SFRTA in the next ten years, as well as it relates each improvement to the SFRTA's Goals and Objectives included in Section 6.

Table 8-5: *SFRTA Forward* Capital Improvements Implementation Plan

10-Year Improvement List	Implementation Year	PTAC	Public Outreach	Goals and Objectives
Pompano Beach Green Station	Prior Allocation	√		10.1.1
Passenger Wi-Fi to Fleet	Prior Allocation	√	√	6.2.1
Passenger Information System	FY 2014	√	√	6.1.2
WAVE Streetcar (Phase 1A)	FY 2014 - FY 2015	√	√	1.4
Miami River/Miami Intermodal Center	FY 2014 - FY 2018	√	√	5.5.2
New TOD Station (Location TBD)	FY 2014 - FY 2017	√	√	9.1
Transit Oriented Development Support	FY 2014 - FY 2018	√	√	9.1
Tri-Rail/Metrorail Transfer Connection	FY 2015		√	5.5
OpaLocka Parking Lot Improvements	FY 2015		√	5.6
Miami Airport/Hialeah Station - MIC	FY 2015	√	√	5.5
Broward Mobility Hub	FY 2016	√	√	9.1
Cypress Creek Mobility Hub	FY 2018	√		9.1
Northern Layover Facility	Unfunded	•	•	5.5.1
Iris & Northwood Rail Connection (SFRTA Match)	Unfunded	√	√	5.5.3
Locomotive & Railcar Rehab	Unfunded	•	•	5.3
WAVE Streetcar(Phase 1)	Unfunded	√	√	1.5
WAVE Streetcar Extension	Unfunded	√	√	1.5
Tri-Rail Coastal Link	Unfunded	√	√	1.2
New Rolling Stock for Tri-Rail Coastal Link	Unfunded	•	•	5.3
"Mobility Hubs" at current/future stations	Unfunded	√	√	9.1
Streetcar Feasibility Studies	Unfunded	√	√	9.3
Bike Storage Cars	Unfunded	√	√	6.2.3
West Palm Beach Additional Parking (250)	Unfunded		√	5.6
Lake Worth Parking Improvements	Unfunded		√	5.6
Palm Beach Int'l Airport Station	Unfunded	√	√	5.7
Boca Raton Station @ Glades Rd.	Unfunded	√	√	5.7
Miami Freight Rail Corridors Study	Unfunded	√	√	1.8

• These items relate to the ability to increase train frequency, capacity, hours of operation, etc. to address service improvements.

Capital Expenses

For the purposes of the ***SFRTA Forward*** plan, the Capital Budget has been expanded into a Capital Program. The first five years of the Capital Program originate directly from the SFRTA FY 2014 Capital Budgetand the Five-Year Plan for FY 2015 to FY 2018. The latter years (FY 2019 to FY 2023) contain not only those projects that are anticipated to receive funding but also a list of additional projects that SFRTA has identified as priorities. While projects in this second five years are unfunded, it is anticipated that, as additional funding becomes available, projects can be programmed into the first five years.Table 8-6 summarizes the programmed and planned capital expenses for ***SFRTA Forward.***

Based on the 10-year projection of the ***SFRTA Forward*** Capital Plan summarized in Table 8-6, SFRTA would require $1.3 billion to implement its planned capital improvements in the next 10 years. The largest capital expense in the next decade will be implementing the Tri-Rail Coastal Link expansion at an estimated capital cost of $700 million in FY 2019.It is important to emphasize that the implementation schedule developed by SFRTA staff and presented in Table 8-6 does not preclude the opportunity to advance or delay any of the projects included in the ***SFRTA Forward*** 10-year Capital Plan. As capital funding opportunities become available, this capital plan should be adjusted according to SFRTA's priorities during next year's TDP Annual Progress Report.

Capital Revenues

Table 8-7 presents the capital revenues forecasted for SFRTA's FY 2014 Adopted Capital Budget and its Five-Year Plan as well as the forecasted revenues for the second five years of the 10-year Capital Plan. The first five year plan's revenue estimates present SFRTA's assumption that FTA Section 5307 Formula funds and FTA Section 5309 Rail Modernization funds will be the federal funds available for the capital plan. The majority of the State and local capital funds available in the first five years will support the development of The WAVE modern streetcar project where a multi-agency partnership agreed to share the capital costs of design and construction of its first phase. SFRTA, as the responsible party to design and construct the project, will receive capital funds from FDOT, the MPO, the City of Fort Lauderdale, and Downtown Fort Lauderdale's special taxing district in FY 2014. The capital funds assumed for the second five years of the 10-year ***SFRTA Forward*** plan are FTA Section 5307, FTA Section 5309, and County gas tax contributions. Under these assumptions, the total capital revenues expected in the 10-year period of the plan are $418 million.

Capital Funding Gap

The ***SFRTA Forward*** 10-year Capital Plan calls for $1.3 billion in investments, as presented earlier, but revenue estimates provide only $418 million, resulting in a capital funding gap of about $884.4 million for the 10-year period, as shown in Table 8-8. The Tri-Rail Coastal Link Finance Subcommittee's charge is to investigate a wide variety of funding options to cover both the capital and operating costs of the new Coastal Link service, as well as the existing Tri-Rail system. For other capital initiatives, SFRTA will continue to utilize current county capital contributions and pursue Federal and State grant opportunities (as it has successfully done in the past) to advance the implementation schedule of the capital improvements included in the ***SFRTA Forward*** Capital Plan.

Table 8-6: *SFRTA Forward* 10-Year Capital Expenses (FY 2014 - FY 2023)

	FIRST FIVE YEAR PLAN					SECOND FIVE YEAR PLAN					
	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
CAPITAL EXPENSES											
Project Support/Administration	$1,700,000	$1,300,000	$1,450,000	$1,450,000	$1,500,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$1,300,000	$13,900,000
Computer/Office Equipment/Software	$100,000	$300,000		$450,000	$275,000	$1,500,000	$150,000	$150,000	$150,000	$150,000	$3,225,000
79th Street Station - Metrorail Transfer		$2,802,000									$2,802,000
Planning & Capital Development	$2,500,000	$2,205,000	$1,500,000	$850,000	$850,000	$700,000	$700,000	$700,000	$700,000	$700,000	$11,405,000
Hialeah Yard Improvements	$205,000	$250,000	$250,000	$250,000	$250,000	$300,000	$300,000	$300,000	$300,000	$300,000	$2,705,000
Passenger Information System	$378,450										$378,450
Non-Revenue Fleet Vehicles	$75,000		$75,000		$75,000		$75,000		$75,000		$375,000
General Engineering Consultants	$1,750,000	$1,000,000	$1,000,000	$1,000,000	$840,000	$840,000	$840,000	$840,000	$840,000	$840,000	$9,790,000
New Locomotives	$6,680,000										$6,680,000
Locomotive Spare Parts		$300,000	$250,000	$500,000	$500,000	$550,000	$550,000	$550,000	$550,000	$550,000	$4,300,000
Passenger Emergency Intercom	$825,000										$825,000
Transit Oriented Development (TOD II)	$75,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$200,000	$1,875,000
Heavy Station Maintenance/Construction			$250,000	$325,000	$350,000	$350,000	$350,000	$350,000	$350,000	$350,000	$2,675,000
Station Beautification	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$135,000	$1,350,000
Opa Locka Parking Lot Improvements	$1,321,708										$1,321,708
Northern Layover Facility					$5,900,000	$28,967,890					$34,867,890
WAVE Streetcar - Phase 1A	$78,922,707	$4,277,293									$83,200,000
Broward Mobility Hub			$8,840,000								$8,840,000
Miami Airport/Hialeah Station	$336,126										$336,126
Miami River Intermodal Center (MR-MICCI)	$2,600,000	$2,000,000	$6,500,000	$6,500,000	$12,000,000						$29,600,000
Positive Train Control	$1,000,000	$2,106,000									$3,106,000
Preventive Maintenance	$10,043,292	$15,160,000	$17,390,000	$18,040,000	$18,050,000	$19,865,000	$19,865,000	$19,865,000	$19,865,000	$19,865,000	$178,008,292
New TOD Station	$1,000,000	$1,000,000	$1,000,000	$1,500,000							$4,500,000
Cypress Creek Mobility Hub	$800,000				$8,000,000						$8,800,000
Passenger Car Spare Parts	$2,460,000										$2,460,000
County Gas Tax Funds Unallocated	$521,550	$1,252,000	$10,000	$310,000	$985,000						$3,078,550
Tri-Rail Coastal Link						$700,000,000					$700,000,000
WAVE Streetcar - Phase 1						$50,000,000					$50,000,000
WAVE Streetcar Extension						$1,500,000					$1,500,000
Locomotive & Railcar Rehab						$10,000,000					$10,000,000
New Rolling Stock										$25,000,000	$25,000,000
Iris & Northwood Connections						$2,500,000					$2,500,000
Pompano Beach Mobility Hub						$2,900,000					$2,900,000
Deerfield Mobility Hub							$10,500,000				$10,500,000
Hollywood Mobility Hub								$10,500,000			$10,500,000
FLL/Dania Beach Mobility Hub									$10,500,000		$10,500,000
Sheridan Mobilty Hub										$2,900,000	$2,900,000
Hollywood Coastal Link Mobility Hub						$10,000,000					$10,000,000
Oakland Park Coastal Link Mobility Hub						$2,900,000					$2,900,000
Pompano Beach Coastal Link Mobility Hub						$2,900,000					$2,900,000
FLL Airport Coastal Link Mobility Hub						$10,500,000					$10,500,000
Bike Storage Cars						$1,000,000					$1,000,000
West Palm Beach Additional Parking (250)						$3,000,000					$3,000,000
Lake Worth Parking Improvements						$500,000					$500,000
PBI Airport Station						$1,500,000			$5,100,000		$6,600,000
Boca Raton Station @ Glades						$1,500,000		$8,500,000			$10,000,000
Miami Freight Rail Corridors						$7,500,000					$7,500,000
Streetcar Feasibility Studies						$800,000					$800,000
Total Capital Expenses	**$113,428,833**	**$34,287,293**	**$38,850,000**	**$31,510,000**	**$49,910,000**	**$863,707,890**	**$34,965,000**	**$43,390,000**	**$40,065,000**	**$52,290,000**	**$1,302,404,016**

Source: SFRTA Adopted Budget FY 2013-2014 and Five Year Plan, and TDP Analysis by SFRTA staff

Table 8-7: *SFRTA Forward* Estimated Capital Revenues (FY 2014 - FY 2023)

	FIRST FIVE YEAR PLAN					SECOND FIVE YEAR PLAN					
	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
CAPITAL REVENUES											
FTA Section 5307 - Formula Funds	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$13,000,000	$130,000,000
FTA Section 5309 - Rail Mod.	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$90,000,000
FTA - TIGER Funds	$18,000,000										$18,000,000
FDOT GMR Funds				$1,500,000	$5,900,000						$7,400,000
FDOT JPA's	$28,658,833	$4,277,293									$32,936,126
FDOT TRIP Funds	$900,000				$6,000,000						$6,900,000
MPO Funds	$8,940,000		$8,840,000		$8,000,000						$25,780,000
City of Fort Lauderdale	$10,500,000										$10,500,000
Taxing District	$13,960,000										$13,960,000
Rotem Credit	$2,460,000										$2,460,000
County Gas Tax	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$8,010,000	$80,100,000
Total Capital Revenues	**$113,428,833**	**$34,287,293**	**$38,850,000**	**$31,510,000**	**$49,910,000**	**$30,010,000**	**$30,010,000**	**$30,010,000**	**$30,010,000**	**$30,010,000**	**$418,036,126**

Source: SFRTA Adopted Budget FY 2013-2014 and Five Year Plan, and TDP Analysis by SFRTA staff.

Table 8-8: *SFRTA Forward* 10-Year Projected Funding Gap (FY 2014 - FY 2023)

	FIRST FIVE YEAR PLAN					SECOND FIVE YEAR PLAN					
	APPROVED BUDGET FY 2014	PROJECTED FY 2015	PROJECTED FY 2016	PROJECTED FY 2017	PROJECTED FY 2018	PROJECTED FY 2019	PROJECTED FY 2020	PROJECTED FY 2021	PROJECTED FY 2022	PROJECTED FY 2023	TOTAL FY 2014 - FY 2023
CAPITAL EXPENSES											
Total Capital Expenses	$113,428,833	$34,287,293	$38,850,000	$31,510,000	$49,910,000	$863,707,890	$34,965,000	$43,390,000	$40,065,000	$52,290,000	$1,302,404,016
CAPITAL REVENUES											
Total Capital Revenues	$113,428,833	$34,287,293	$38,850,000	$31,510,000	$49,910,000	$30,010,000	$30,010,000	$30,010,000	$30,010,000	$30,010,000	$418,036,126
Projected Capital Funding Gap						**($833,697,890)**	**($4,955,000)**	**($13,380,000)**	**($10,055,000)**	**($22,280,000)**	**($884,367,890)**

8.4 CONCLUSION

SFRTA's FY 2014–2023 Transit Development Plan Major Update, "SFRTA: Moving our Region Forward" documents the investments that SFRTA is committed to making over the next five years, as well as its vision for additional priorities and improvements through FY 2023.

As summarized in the ***SFRTA Forward*** Capital Plan presented earlier, many exciting transit projects and concepts are included throughout the 10-year period of ***SFRTA Forward***, including some near-term projects that are poised to have a significant positive impact in the South Florida region. These immediate improvements include the modernization and expansion of the Tri-Rail fleet, the shift of rail corridor dispatch and maintenance duties to SFRTA, and the opening of the new Miami Airport Tri-Rail Station at the MIC. SFRTA is working diligently with multiple agencies to advance other premium transit projects, such as Tri-Rail expansion onto the FEC Railway corridor (Tri-Rail Coastal Link) and The WAVE modern streetcar in downtown Fort Lauderdale, which are poised to transform the transportation landscape in the South Florida region.

SFRTA is committed to expanding premium transit in the South Florida region. As capital and operating funding opportunities become available, the ***SFRTA Forward*** Capital Plan will be adjusted and these transformational projects advanced. In conclusion, ***SFRTA Forward*** is an ambitious plan that is responsive to the project's extensive outreach activities, addresses the mobility needs of South Florida's growing and dynamic region, identifies a need for continued partnerships, and shows a commitment to expanded premium transit and associated economic dev elopement.