Tri-Rail Parking and Circulation Study

2008 Update

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RTA
SOUTH FLORIDA REGIONAL TRANSPORTATION AUTHORITY

Tri-Rail Parking and Circulation Study – 2008 Update

Executive Summary

Prepared for:

South Florida Regional Transportation Authority

Prepared by:

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CAMBRIDGE SYSTEMATICS

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Introduction

The 2007 Tri-Rail Parking and Circulation Study was updated based on revised station parking demand forecast and parking improvement strategies. Volatile energy prices and Tri-Rail system improvements have resulted in a significant increase in Tri-Rail ridership, which was not anticipated to occur so rapidly when the 2007 Tri-Rail Parking and Circulation Study was performed. In particular, the demand for parking at stations has increased at a rate higher than ridership increase. As a result, additional parking capacity is needed immediately at most Tri-Rail stations. Therefore, the 2008 study revised the ridership projections and station parking requirements, identified additional on-site and remote parking facilities, and developed an implementation plan for parking improvements. Parking demand at each station extending to 2025 was estimated. The final products of this effort are a list of system-wide recommendations and a staged improvement program detailing specific projects.

The primary priorities and recommendations of this study are:

- Increase parking capacity through additional surface, structured, and remote parking
- Reduce conflicts by separating circulation and providing dedicated space to all modes
- Improve station area wayfinding, amenities, and maintenance
- Enhance access to stations and connections to surrounding uses

Data Inventory and Analysis

Station Parking Capacity and Utilization

Table ES-1 shows the percentage of parking spaces utilized at the 18 Tri-Rail stations during July 2008. As Table ES-1 indicates, the majority of stations have reached or exceeded capacity. The determination of overcapacity parking facilities was made based on utilization between 85 to 95 percent of the total parking spaces provided at a station, as recommended by the Florida Department of Transportation, to account for parking turnover.

Table ES-1: 2008 Tri-Rail Station Parking Capacity and Peak Utilization

Station	Available Tri-Rail Spaces	Vehicles Observed	Overflow And Nearby Street Parking	Total	Utilization Rate	Status
Mangonia Park	272	272	5	277	102%	Over Capacity
West Palm Beach	114	111	55	166	146%	Over Capacity
Lake Worth	225	200	6	206	92%	Over Capacity
Boynton Beach	324	288	0	288	89%	Over Capacity
Delray Beach	129	127	2	129	100%	Over Capacity
Boca Raton	159	148	0	148	93%	Over Capacity
Deerfield Beach	236	159	15	174	74%	Approaching Capacity
Pompano Beach	259	193	0	193	75%	Approaching Capacity
Cypress Creek	560	232	0	232	41%	Space Available
Fort Lauderdale	875	276	1	277	32%	Space Available
Fort Lauderdale Airport Station	183	171	0	171	93%	Over Capacity
Sheridan Street	592	412	0	412	70%	Approaching Capacity
Hollywood	150	139	0	139	93%	Over Capacity
Golden Glades	1027	1025	16	1041	101%	Over Capacity
Opa-locka	72	69	7	76	106%	Over Capacity
MetroRail Transfer	44	43	13	56	127%	Over Capacity
Hialeah Market	123	78	0	78	63%	Space Available
Miami Airport	143	125	10	135	94%	Over Capacity
Total	5487	4068			74%	Approaching Capacity

Note: parking utilization in July 2008

The rapid increase in parking utilization is evident when station parking data for 2006 and 2008 are compared. Figure ES-1 presents a comparison of parking utilization data for the month of July. As indicated in Figure ES-1, notable increase in parking utilization is noted at several stations, including Mangonia Park, West Palm Beach, Boynton Beach, Delray Beach, Boca Raton, Pompano Beach, Sheridan, and Opa-Locka.

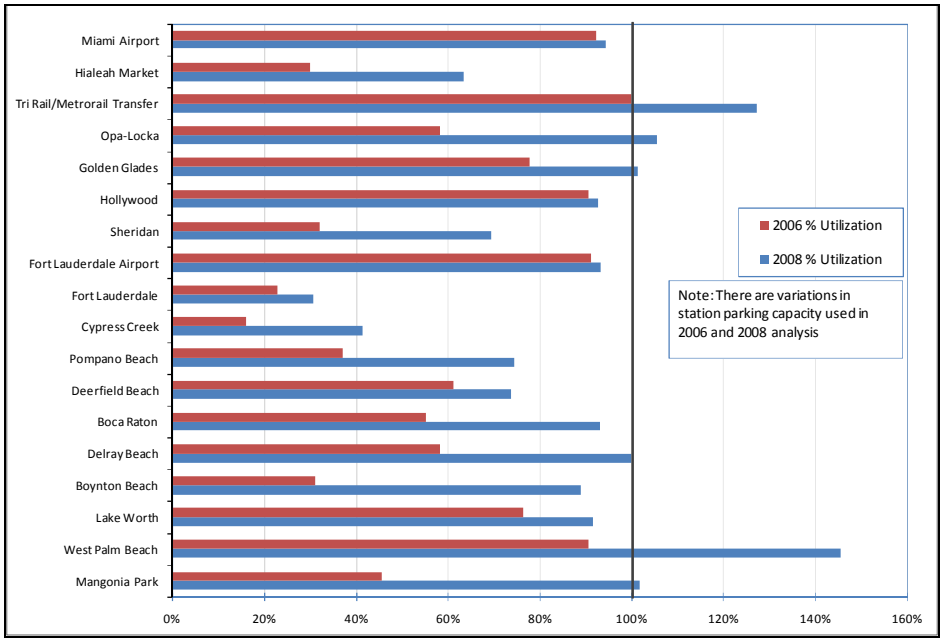

Figure ES-1: Comparison of 2006 and 2008 Station Parking Utilization

Ridership Statistics

Figure ES-2 illustrates the variation of weekday boardings between January 2007 and July 2008. As Figure ES-2 indicates, there has been a notable increase in Tri-Rail boardings. Typically, there is a slight reduction in boardings during the months of June, July, and December due to school closures and holidays. The average increase in weekday boardings in July 2008 in comparison to the corresponding time period in 2007 is 46 percent (approximately 4,800 more weekday boardings).

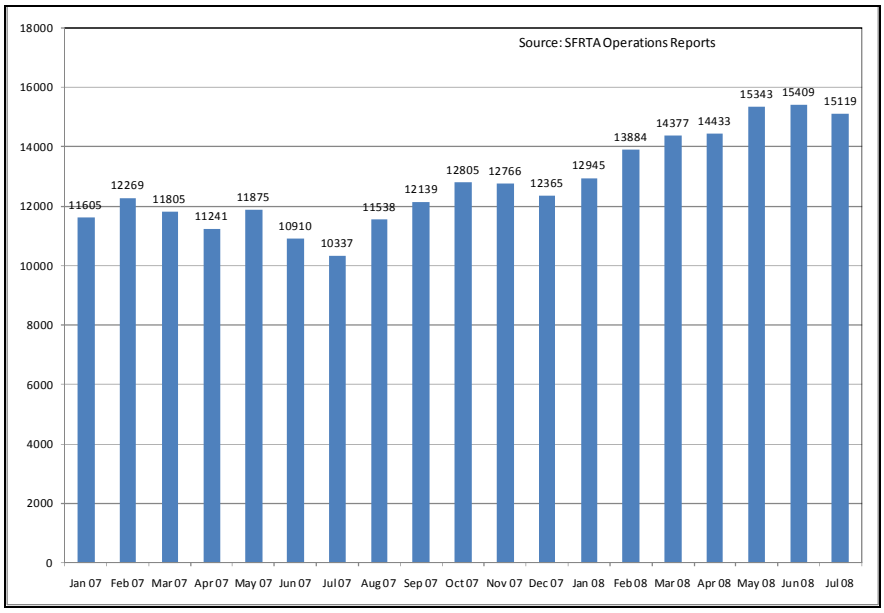

Figure ES-2: Average Weekday Boardings

Station Arrivals

Figure ES-3 below shows the breakdown of the modes used by Tri-Rail customers when arriving at stations during the AM peak period. The largest percent of arrivals per mode identified was driving to the station, parking, and then boarding the train, shown as "Park and Ride."[1]

[1] The percentage arrivals by mode above do not include Cypress Creek, Tri-Rail/Metrorail Transfer, and Lake Worth Stations where the location of the station platform in relation to the parking lot made it difficult to avoid duplication of counts between modes.

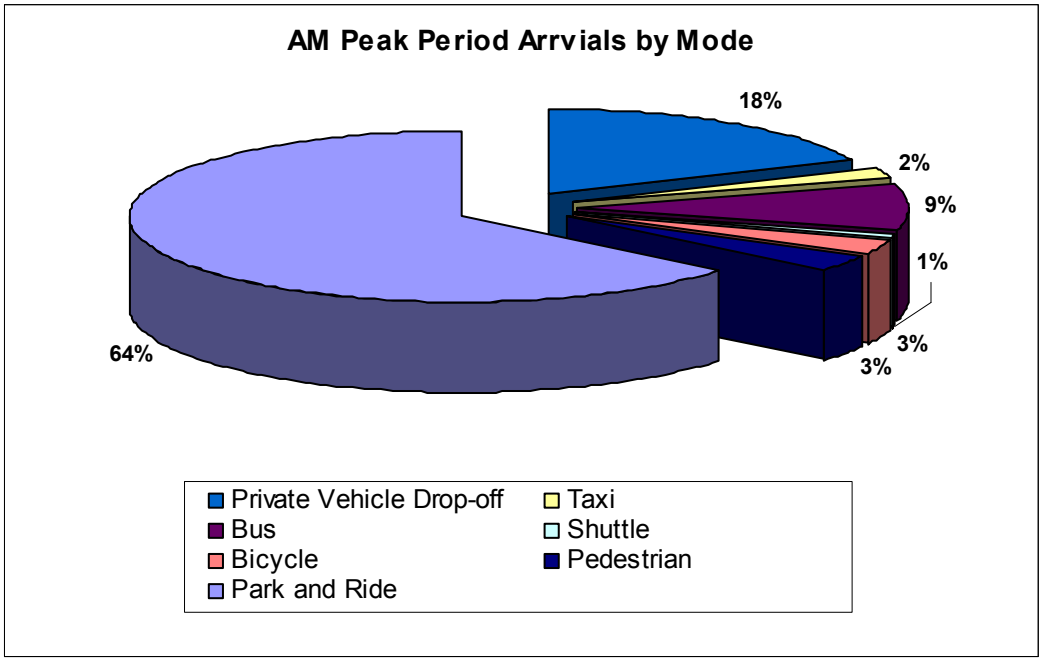

Figure ES-3: 2006 AM Peak Period Station Arrivals by Mode

Inventories

The passenger amenities inventoried at each station included bicycle racks, bus shelters, ticket machines, station crossing bridges, pedestrian signals, and passenger waiting areas. At many stations the amenities are insufficient to meet current or anticipated demand. Accessibility to each station was also noted, including the presence or absence of Tri-Rail Drop-off/Pick-up locations (sometimes referred to as "Kiss and Ride") and crosswalk, sidewalk, and pedestrian connections at each station. At certain locations, signage is deficient or misleading, critical links in the pedestrian and bicycle network are missing and other improvements are needed. The minimum and maximum walking distances from particular parking areas to the station platforms are excessive and create a barrier to Tri-Rail customers. The deficiencies identified during the field observations are summarized in the categories listed below.

- **Signage**: Missing signage including wayfinding signs, bus stop locations, and parking information is common. There is also inconsistent use of signage designating spaces and circulation system-wide.
- **Maintenance:** The majority of parking lots have faded or poor striping, which can exacerbate conflicts between modes. Several stations also have overgrowth of grass, shrubs, etc., blocking pedestrian pathways. Potholes, possibly indicating poor drainage, can be found at many stations.
- **Drop-off/pick-up areas**: Buses, cars, and taxis often attempt to utilize the same spaces to drop-off/pick-up passengers. Others lack a designated location altogether. Kiss-and-Ride designated areas are used haphazardly and are highly underutilized due to their inconvenient location or lack of signage.

- **Multi-Modal Infrastructure**: Connecting sidewalks from parking lots to the station with Americans with Disabilities Act (ADA) accessible ramps, more benches, and additional shelters with seating areas would improve the functionality of the stations. There is an inconsistent number/placement of bicycle racks except at the Boca Raton Station. Sidewalk links that could facilitate better access to the stations are sometimes missing.
- **Other Issues**: Some lots may be used for free parking by people who do not take Tri-Rail trains. This behavior is suspected at Fort Lauderdale Airport, Miami Airport and Tri-Rail/Metrorail Transfer. Further investigation is necessary to determine the level of abuse. SFRTA operations staff also indicated some customers may be leaving vehicles or bicycles parked overnight at stations.

Parking Projections

The approach taken to forecast parking demand at Tri-Rail stations is based on a review of daily train ridership, historical train station parking supply, and station area parking utilization, together with an assessment of future ridership forecasts. The future ridership forecasts reflect regional population growth based on the three local Metropolitan Planning Organizations' (MPO) long range transportation plans, as included in the Full Funding Grant Agreement (FFGA) Amendment. Two future growth scenarios were used to develop parking projections through 2025:

- Growth comparable to FFGA Amendment projections
- Growth at a rate 25 percent higher than FFGA Amendment projections

After developing future ridership forecast, parking demand was estimated using the following equation:

$$PD_{ij} = \frac{PR \times \frac{Ridership_{ij}}{2}}{(1 - R\%_j)}$$

where,

PD_{ij}	= parking demand at station j in year i,
$Ridership_{ij}$	= future ridership at station j in year i, as shown in Table ES-2, note that ridership numbers were rounded to nearest 50,
$R\%_j$	= reserve % at station j, and
PR	= 0.55, the system-wide parking ratio.

Summary of Future Parking Needs

Future parking demand and a timeline of new parking spaces needed for each station are shown in Table ES-2 using a low-high range to reflect the two ridership growth scenarios considered. The "Reserve %" is a buffer added to future parking demand in order to minimize the driver's circulation time looking for a space. This approach is consistent with parking facility design and FDOT guidance on park-n-ride facilities.

Table ES-2: Future Tri-Rail Parking Demand

Station	08 P. Supply	Parking Ratio	08 P. Demand	Reserve %	08 Proj. Parking	Future Parking Demand				New Parking Needed			
						2010	2015	2020	2025	2010	2015	2020	2025
Mangonia Park	272	0.55	277	10%	260	340 - 345	390 - 415	450 - 500	525 - 600	70 - 80	125 - 150	185 - 235	260 - 340
West Palm Beach	114	0.55	166	5%	351	430 - 445	500 - 535	580 - 640	670 - 770	320 - 335	390 - 425	470 - 535	565 - 670
Lake Worth	225	0.55	206	10%	217	280 - 290	325 - 345	375 - 420	435 - 500	60 - 65	105 - 125	155 - 200	220 - 285
Boynton Beach	324	0.55	288	10%	227	295 - 300	340 - 365	395 - 435	455 - 525	-	20 - 45	75 - 120	140 - 210
Delray Beach	129	0.55	129	10%	167	215 - 225	250 - 270	290 - 320	335 - 385	90 - 95	125 - 140	165 - 200	215 - 265
Boca Raton	159	0.55	148	10%	245	320 - 325	370 - 395	425 - 470	495 - 570	160 - 170	215 - 240	275 - 320	340 - 420
Deerfield Beach	236	0.55	174	10%	192	250 - 255	290 - 310	335 - 370	385 - 445	15 - 20	55 - 75	100 - 140	155 - 215
Pompano Beach	259	0.55	193	10%	188	245 - 250	285 - 300	325 - 360	380 - 435	-	25 - 45	70 - 110	125 - 185
Cypress Creek	560	0.55	232	10%	214	300 - 305	345 - 370	405 - 445	460 - 525	-	-	-	-
Cypress Creek - Tri-Rail					214	278 - 285	322 - 343	372 - 412	431 - 496				
Cypress Creek - P&R					20	21	24	28	33				
Fort Lauderdale	875	0.55	269	5%	293	370 - 380	430 - 455	500 - 550	575 - 660	-	-	-	-
Fort Lauderdale - Tri-Rail					293	360 - 370	417 - 444	482 - 534	559 - 643				
Fort Lauderdale - P&R					10	11	13	15	17				
Fort Lauderdale Airport	183	0.55	171	10%	161	210 - 215	240 - 260	280 - 310	325 - 370	25 - 35	60 - 80	100 - 130	145 - 195
Sheridan Street	592	0.55	412	5%	412	470 - 475	550 - 560	635 - 655	735 - 765	-	-	50 - 70	155 - 185
Sheridan - Tri-Rail					108	133 - 136	154 - 164	178 - 197	206 - 237				
Sheridan - P&R					304	339	393	456	529				
Hollywood	150	0.55	139	10%	218	285 - 290	330 - 350	380 - 420	440 - 505	135 - 145	180 - 205	235 - 275	295 - 365
Golden Glades	1027	0.55	1041	5%	1041	1180 - 1185	1370 - 1385	1585 - 1615	1840 - 1885	165 - 170	355 - 370	580 - 610	840 - 885
Golden Glades - Tri-Rail					158	194 - 199	225 - 240	260 - 289	302 - 347				
Golden Glades - P&R					883	986	1,143	1,325	1,536				
Opa Locka	72	0.55	76	15%	63	85 - 90	100 - 105	115 - 130	135 - 155	15 - 20	30 - 35	45 - 60	65 - 85
Metrorail	44	0.10	56	15%	56	150 - 155	175 - 185	200 - 220	235 - 265	60 - 60	60 - 60	60 - 60	60 - 60
Hialeah Market	123	0.55	78	15%	43	60 - 60	70 - 75	80 - 85	90 - 105	-	-	-	-
Miami Airport	143	0.55	135	10%	199	260 - 265	300 - 320	345 - 385	400 - 460	120 - 125	160 - 180	210 - 245	265 - 325
Total	5487	-	4190	0	4547	5710 - 5830	6620 - 6950	7655 - 8290	8875 - 9890	1235 - 1320	1905 - 2175	2775 - 3310	3845 - 4690

Notes:

- System-wide parking ratio was developed from July 2008 ridership and parking counts.
- Reserve % was applied to provide buffer spaces in Tri-Rail parking lot to minimize circulation time.
- Future parking demand estimated by (Parking Ratio)*(Future Ridership/2)/(1-Reserve%). Assumes 1customer makes 2 daily trips
- New Parking Needed is calculated by (Future Parking Demand - 08 Parking Supply), rounded to closest 5. "-" indicates that current supply meets future parking needs.
- 2008 parking projection was calculated by applying the parking ratio to the ridership of each station.
- For Cypress Creek, Sheridan, and Golden Glades stations, 2008 P&R parking demands were estimated as [(08 parking demand) -(08 Tri-Rail parking projection)].
- For Fort Lauderdale station, assumed there are 10 P&R users parking at the station.
- Grey cells show the separate component of Tri-Rail users and P&R users, while blue cells indicate combined demand at stations with large park-and-ride lots.
- Future parking demands are calculated assuming no constraint on parking provision (except Metrorail).

The future parking demand forecast indicates a system-wide requirement of approximately 4,700 new parking spaces by 2025. This estimate includes approximately 885 new spaces at Golden Glades, which includes both Tri-Rail and other park-and-ride demand. With the exception of the Cypress Creek and Fort Lauderdale stations, all other stations are shown to require additional parking spaces. The stations with highest demand for additional Tri-Rail parking include West Palm Beach, Boca Raton, Hollywood, and Mangonia Park. The resulting number of new parking spaces that should be provided at each station over the next 20 years is shown in Table ES-3.

Table ES-3: Tri-Rail Parking Needs

Tri-Rail Future Parking Needs					
	2025 Demand	minus	Existing	equals	Need
Mangonia Park	525 - 600	-	272	=	260 - 340
West Palm Beach	670 - 770	-	114	=	565 - 670
Lake Worth	435 - 500	-	225	=	220 - 285
Boynton Beach	455 - 525	-	324	=	140 - 210
Delray Beach	335 - 385	-	129	=	215 - 265
Boca Raton	495 - 570	-	159	=	340 - 420
Deerfield Beach	385 - 445	-	236	=	155 - 215
Pompano Beach	380 - 435	-	259	=	125 - 185
Cypress Creek**	460 - 525	-	560	=	0*
Fort Lauderdale**	575 - 660	-	875	=	0*
Fort Lauderdale/Hollywood International Airport	325 - 370	-	183	=	145 - 195
Sheridan Street**	735 - 765	-	592	=	155 - 185
Hollywood	440 - 505	-	150	=	295 - 365
Golden Glades**	1840 - 1885	-	1027	=	840 - 885
Opa-Locka	135 - 155	-	72	=	65 - 85
Tri-Rail/Metrorail Transfer	235 - 265	-	44	=	60 - 60
Hialeah Market	90 - 105	-	123	=	0*
Miami Airport	400 - 460	-	143	=	265 - 325
	8875 - 9890		5487		3845 - 4690

*Current capacity accommodates 2025 demand. Please note that the demand at these stations only represents Tri-Rail parking needs and does not include additional parking needs of carpools, bus riders, etc.

** Inlcudes both Tri-Rail and non-Tri-Rail parking demand and capacity.

Outlying Intercept Parking Opportunities

Potential outlying intercept parking locations were examined (1) to supplement the existing and proposed on-site parking facilities and (2) to serve as interim parking spaces until permanent parking facilities are constructed. SFRTA would operate shuttle bus service between remote parking lots and the stations to provide an efficient connection to Tri-Rail service. Remote lots surveyed for potential remote parking are located within a quarter-mile buffer of major corridors that provide access to the stations. Typically, sites

were identified along east-west corridors between SR 7/US 441 and US 1 with exception of Miami-Dade County, where only areas east of the stations were surveyed.

The following criteria were developed to evaluate potential remote lots and identify a shortlist of potential remote parking locations:

- Contiguous parking availability
- Distance from station
- Site location with respect to origin-destination data of Tri-Rail users
- Security and maintenance of potential site

Based on the evaluation method developed, the following shortlist of sites was identified for further consideration. Please note that the remote site selection and evaluation process did not include discussions with property owners, assessment of need for zoning amendments, or parking agreements required to secure the properties for Tri-Rail parking.

Table ES-4: Shortlist of Potential Outlying Parking Facilities

Station	Potential Site	Location	Potential Spaces
West Palm Beach	Okee Square	Northwest of I-95 and Okeechobee Boulevard	100+
Lake Worth	Albertsons	Northeast of Military Trail and Lake Worth Road	100+
Boynton Beach	Kohl's Shopping Center	Southwest of Gateway Blvd and Congress Avenue	100+
Delray Beach	St. Mary's Church	Southeast of Homewood Boulevard and Atlantic Avenue	50 - 99
Boca Raton	Spanish River Church	Southeast of St. Andrews Avenue and Yamato Road	100+
Boca Raton	T-Rex	South of Yamato Road at Blue Lake Drive	100+
Deerfield Beach	Shoppes of Hillsboro	Northeast of Deer Creek Boulevard and Hillsboro Boulevard	50-99
Deerfield Beach	Super Target	Northeast of Powerline Road and Hillsboro Boulevard	100+
Deerfield Beach	Mattress Mall	Northwest corner of Powerline Road and Hillsboro Boulevard next to Albertsons	50-99
Pompano Beach	Bed Bath and Beyond	Southwest corner of US 1 and Sample Road	100+
Cypress Creek	Commercial Boulevard Park-and-Ride Lot	Commercial Boulevard and Andrews Avenue	100+
Fort Lauderdale/ Hollywood International Airport	Sheraton Hotel	Southeast corner of Griffin Road and I-95	100+
Sheridan Street	Sheridan Plaza	Northeast of 56th Avenue and Sheridan Street	100+
Hollywood	Hollywood Plaza	Northeast of Park Road and Hollywood Boulevard	100+
Golden Glades	K-Mart	Southeast of NE 167th Street and NE 8th Avenue	100+
Golden Glades	163rd Street Mall	North side of 163rd Street and NE 15th Avenue	100+

General Recommendations and Capital Improvements Program

The following recommendations have been developed as the result of a thorough review of professional and technical publications, as well as numerous consultations between SFRTA staff, the consultant, and other interested parties. These recommendations attempt to address issues identified in this study and advance a rational approach to station area development. The implementation of the recommendations will provide for future intermodal access requirements in a way that matches and exceeds industry standards. The recommendations are presented as follows.

- System-wide policy and improvement recommendations
- Prioritized list of station improvements (Table ES-5)
- Conceptual drawings of each station illustrating prioritized improvements, which were prepared as part of the 2007 Tri-Rail Parking and Circulation Study (Appendix B). Please note that these drawings do not include any revisions to illustrate the recommended improvements made in the 2008 Update.

System-Wide Policy and Improvement Recommendations

1. Secure SFRTA ownership or long-term use rights at all current Tri-Rail parking lots.

2. Secure agreements, obtain funding, and purchase additional properties needed for parking and circulation capacity expansion.

3. Correct identified circulation problems in accordance with the priority list. Separate traffic flows. Designate areas at each station for drop-off/pick-up and waiting.

4. Correct identified signage deficiencies. A comprehensive sign inventory is required to catalog the type and position of existing assets as well as needs for the future.

5. Address identified paint and striping needs. Use colored lanes and reflectors to identify separate traffic zones (bike, bus, drop-off, taxi, etc.).

6. Address identified pavement maintenance needs.

7. Correct identified lighting deficiencies. Use lighting that is pedestrian friendly and high-efficiency, as well as conforming to dark sky guidelines where adjacent properties may be impacted by glare.

8. Coordinate with local jurisdictions and adjacent property owners to improve identified access deficiencies and pedestrian hazards.

9. Purchase and install new bicycle racks at identified locations. Assess demand and maintenance oversight issues for placement of bicycle lockers at additional stations.

10. Identify one staff person at SFRTA responsible for overseeing parking and circulation issues.

11. Where demand exceeds capacity and space is available, use temporary gravel lots until permanent parking can be constructed.

12. Incorporate minimum design standards and preference options for all parking and circulation components into SFRTA's station design guidelines.

13. Conduct nighttime counts and station surveys to observe and document overnight auto and bicycle parking activity. Develop a policy for overnight parking and security at Tri-Rail stations.

14. Designate and sign a minimum of two spaces at each station for staff and security agent use.

15. Secure long-term agreements with other entities that use station parking (Amtrak, Greyhound, FDOT, CSX, etc.).

16. Collect and review bi-annual FDOT counts of all station park and ride facilities. Recalculate parking demand projections at five-year intervals in advance of major TDP updates.

17. Ensure all joint development and TOD proposals include preservation of required parking capacity for Tri-Rail patrons, as well as efficient and safe circulation elements. Identify and pursue potential shared-use parking opportunities with off-peak uses in adjacent developments.

18. Examine potential methods to shift parking demand to alternate locations and modes.

19. Design and implement a trial program of permit-guaranteed parking or a payment system where parking is constrained or suspected of being abused.

20. Examine Intelligent Transportation Systems (ITS) applications and technology that might help customers identify available parking and reduce delays in station access. Coordinate efforts with FDOT, SFCS, and media outlets.

21. Examine the potential for installation of parking canopies on SFRTA lots that incorporate solar power equipment to provide shade while generating electricity and revenue.

22. Examine the potential for placement of short-term rental vehicles at Tri-Rail stations. Proven car-sharing and bicycle rental vendors should be invited to submit proposals.

23. Examine the potential usefulness and cost of rubber sidewalks at Tri-Rail stations.

24. Work with local jurisdictions, FDOT, and the corresponding MPOs to add designated bike lanes on roadways that approach Tri-Rail stations.

25. Work with partner agencies to obtain funding.

Table ES-5: Tri-Rail Station Parking and Circulation Improvements

Short-Term 2009 - 2015	Long-Term 2016-2025
Mangonia Park (272 Existing Spaces)	
2015 Parking Demand – 415 spaces	**2025 Parking Demand – 600 spaces**
Landscaping maintenance required	Investigate potential for drop-off/pick-up on NE side of SFRC
Acquire property or long-term lease for required circulation and station parking in 2025	Construct additional parking to provide 600 total spaces or shift demand to new stations on Blue Heron or Jupiter Extension of Tri-Rail
Improve circulation elements and parking layout to provide 415 total parking spaces	
Add bicycle racks (4) and bicycle lockers (6)	
Add benches (12) and shelters (10)	
West Palm Beach (114 Existing Spaces)	
2015 Parking Demand - 535 spaces	**2025 Parking Demand – 770 spaces**
Construct 118 parking spaces adjacent to West Palm Beach Intermodal Transfer Facility adjacent to station for 232 total parking spaces.	Construct parking garage on west parking lot to provide total of 770 parking spaces at station
Investigate potential remote parking at Okee Square (I-95 and Okeechobee Blvd)	Provide traffic signal at Datura St and Tamarind Ave
Investigate potential for short-term lease of additional parking spaces at lot along Clearwater Dr and Tamarind Ave (Reflections Office Center)	Pedestrian/bicycle overpass connection to crossing bridge from garage
Monitor "no parking" areas more frequently, discourage taxi cabs blocking drop-off and bus bays	
Add bicycle improvements including additional racks (4) and bicycle lockers (6), and restriping for bike lanes on Tamarind Ave	
Pedestrian improvements including crosswalks on Tamarind Ave, possible pedestrian countdown signal, and sidewalks improvements (including to Banyan St)	
Add shelters (13) and benches (13)	
Lake Worth (225 Existing Spaces)	
2015 Parking Demand – 345 spaces	**2025 Parking Demand - 500 spaces**
Secure long-term agreement to continue use of temporary parking lot west of station	Investigate potential for additional 160 spaces under I-95
Secure agreement with School Board to use 125 additional spaces designated for Lake Worth High School	Examine options for additional parking spaces on parcel situated between station and temporary lot. If this site is developed, work with City/County to ensure that it is a TOD
Add crosswalks and pedestrian countdown signals on Lake Worth Rd	
Add shelters (4) and benches (2)	
Add bicycle racks (4) and bicycle lockers (6)	
Boynton Beach (324 Existing Spaces)	
2015 Parking Demand - 365 spaces	**2025 Parking Demand - 525 spaces**
Additional minimum of 41 spaces in surface lot expansion for a total of at least 365 total spaces (Additional spaces can be added by extending surface parking on SFRTA owned property)	Require 525 spaces for Tri-Rail as part of joint development or add surface parking to west
Improve Kiss-and-Ride signage	Improve circulation elements as shown in conceptual plan
Add shelters (11) and benches (6)	
Add bicycle racks (4) and bicycle lockers (6)	
Delray Beach (129 Existing Spaces)	
2015 Parking Demand - 270 spaces	**2025 Parking Demand - 385 spaces**
Investigate temporary remote parking at St. Mary's Church at Homewood Blvd and Atlantic Ave	Add sidewalk from station to Congress Ave
Relocate formerly used bus shelter and add benches (7)	Work with city, county and FDOT to provide pedestrian access from east side of I-95
Improve signage to station	Improve circulation elements as shown in conceptual plan, including shelters (5)
Bicycle racks (3) and bicycle lockers (6)	Construct a parking garage with 385 spaces
Work with Palm Beach County to secure a long term lease to enable construction of a parking garage	
Boca Raton (159 Existing Spaces)	
2015 Parking Demand - 395 spaces	**2025 Parking Demand – 570 spaces**
Investigate temporary parking at T-Rex at Yamato Rd and Blue Lake Dr or Spanish River Church at Yamato Road and St. Andrews Ave	Provide total of 570 spaces at station. Spaces may be provided as part of joint development project and/or in separate parking garage.
Provide as many temporary parking spaces as possible in gravel lot up to 240 additional spaces	Monitor FDOT construction program to ensure access of bike/pedestrian and shuttles, especially from FAU (east side of station)
Designate locations for drop-offs/pick-ups by restriping/extending fire lane	Improve circulation elements as shown in conceptual plan
Correct signage for entering/exiting motorists from Congress Ave and Yamato Rd	
Add benches to existing shelters (8) and additional shelters in waiting areas (6)	
Add bicycle racks (4) and bicycle lockers (6)	
Deerfield Beach (236 Existing Spaces)	
2015 Parking Demand – 310 spaces	**2025 Parking Demand - 445 spaces**
Maintain spaces and coordinate access improvements with adjacent developments (including shared parking agreement/lease of 75 spaces at Holiday Park Hotel)	Add 265 spaces in transit oriented development as part of joint development on east side or in garage on west side vacant parcel owned by SFRTA
Construct surface parking lot on vacant parcel southwest of station owned by SFRTA	Improve circulation elements as shown in conceptual plan
Improve signage from Hillsboro Blvd	Potential crossing bridge (pedestrian/bicycle overpass) to facilitate safe movement at the south end of the platforms
Add bicycle racks (8) and bicycle lockers (6)	
Add shelters (24) and benches (16)	
Create sidewalk improvements	

Table ES-5 continued….

Short-Term 2009 - 2015	Long-Term 2016-2025
Pompano Beach (259 Existing Spaces)	
2015 Parking Demand – 300 spaces	**2025 Parking Demand – 435 spaces**
Complete SFRTA planned access and parking improvements adjacent to west platform, adding 41 additional parking spaces for 300 total spaces	Construct parking garage for total of 435 spaces at station
Complete identified sidewalk improvements around station	Improve circulation elements as shown in conceptual plan
Add bicycle racks (4) and bicycle lockers (6)	
Add benches (6) and shelters (8) in waiting areas	
Cypress Creek (560 Existing Spaces)	
2015 Parking Demand – 370 spaces	**2025 Parking Demand – 525 spaces**
Address maintenance needs in park-and-ride lot	Examine options for pedestrian underpass or overpass of Andrews Ave. (shown as Options 1 and 2 on Conceptual Drawings)
Improve pedestrian crossing of Andrews Ave with striping, signage, pedestrian countdown signal and refuge island	Maintain parking east of the station
Improve signage to better identify existing drop-off/pick-up area and disabled parking	Add shelters (11) and benches (4)
Construct sidewalk to Cypress Creek Rd on west side of SFRC (does not include curb/gutter)	Add bicycle racks (4) and bicycle lockers (6)
Create 358 additional surface parking spaces and circulation elements on SFRTA owned land to the west of the station with access to Powerline Rd, and maintain existing number of parking spaces on east side of station	Examine use of Commercial Blvd park-and-ride lot for remote parking, if needed
Fort Lauderdale (875 Existing Spaces)	
2015 Parking Demand – 455 spaces	**2025 Parking Demand – 660 spaces**
Improve pedestrian crosswalk to remote lot	Maintain parking spaces to meet demand and monitor progress of FDOT joint development plans and Central Broward E-W premium transit project
Improve signage directing traffic movements	
Add stop sign at station entrance at south end of lot	
Improve circulation elements as shown in conceptual plan, including shelters (9)	
Add bicycle racks (4) and bicycle lockers (6)	
Fort Lauderdale Airport at Dania Beach (183 Existing Spaces)	
2015 Parking Demand – 260 spaces	**2025 Parking Demand – 370 spaces**
Purchase IGFA property east of station and construct additional surface parking for at least 260 total parking spaces	Construct parking garage (provide at least 370 total spaces) and maintain circulation underneath garage and add crossing bridge from parking garage to east platform
Investigate short-term parking at Sheraton Hotel (I-95 and Griffin Road)	Potential for pay or permit parking for Tri-Rail customers
Improve signage directing people to station and east parking lot	Improve circulation elements as shown in conceptual plan
Improve pedestrian crossing at Griffin Rd and I-95	Negotiate with Bass Pro Shops and/or other nearby sites for interim parking during parking garage construction
Provide benches (4) and shelters (8) in waiting areas	
Add bicycle racks (4) and bicycle lockers (6)	
Create pedestrian crosswalks on Gulfstream Way	
Sheridan Street (592 Existing Spaces)	
2015 Parking Demand – 560 spaces	**2025 Parking Demand – 765 spaces**
Address maintenance issues identified	Monitor situation for an opportunity to provide access on west side of SFRC
Improve signage	Investigate potential remote parking at Sheridan Plaza (56th Ave and Sheridan St)
Maintain parking to meet projected demand and coordinate circulation improvements with FDOT and developer of adjacent park-and-ride lot	
Pedestrian connection to west platform	
Hollywood (150 Existing Spaces)	
2015 Parking Demand – 350 spaces	**2025 Parking Demand – 505 spaces**
Investigate potential remote lot at Hollywood Plaza (Park Rd and Hollywood Blvd)	Work with city, county and FDOT to create an intermodal center with parking garage containing 355 spaces on FDOT property east of I-95 for a total of 505 spaces with a possible pedestrian crossing bridge to connect with Tri-Rail station
Improve signage directing people to station	Improve circulation elements as shown in conceptual plan
Provide pedestrian crosswalk and pedestrian countdown signals at Hollywood Blvd and I-95 ramps	
Provide benches (4) and shelters (8) in waiting areas	
Add bicycle racks (4) and bicycle lockers (6)	
Work with FDOT to build a surface lot east of I-95	
Golden Glades (1027 Existing Spaces)	
2015 Parking Demand – 1385 spaces	**2025 Parking Demand – 1885 spaces**
Improve vacant east lot to provide additional surface parking and pedestrian enhancements	Monitor FDOT joint development progress and maintain space for projected parking levels, including possible garage to provide a total of 350 spaces for Tri-Rail riders
Address identified maintenance needs	Improve circulation elements as shown in conceptual plan
Improve signage	Acquire property to provide potential parking facilities on west side of SFRC and connect with a crossing linked to the existing pedestrian bridge
Add bicycle racks (4) and bicycle lockers (6)	Add pedestrian/bicycle crossing bridge to gain access on west side of SFRC
Add shelters with seating (11)	Add sidewalk connections to provide access on west side of SFRC

Table ES-5 continued….

Short-Term 2009 - 2015	Long-Term 2016-2025
Opa-Locka (72 Existing Spaces)	
2015 Parking Demand – 105 spaces	**2025 Parking Demand – 155 spaces**
Secure shared parking agreement with museum, for a minimum of 33 spaces, resulting in a total of 105 parking spaces	Look for opportunities to provide surface parking nearby
Build 75 surface parking spaces on land adjacent to existing parking	Improve circulation elements as shown in conceptual plan
Add bicycle racks (4) and bicycle lockers (6)	Work with city to create bike/pedestrian path on SE side of SFRC
Provide benches (4) and shelters (9) in waiting areas	
Improve signage and directions on website	
Tri-Rail / Metrorail Transfer (44 Existing Spaces)	
2015 Parking Demand – 185 spaces	**2025 Parking Demand – 265 spaces**
Add 40 parking spaces on SW lot owned by SFRTA for 84 total spaces and implement gated access for Tri-Rail passengers only	Improve circulation elements as shown in conceptual plan including east side access, drop-off/pick-up area, and 37 additional surface parking spaces on land owned by SFRTA on east side of station
Encourage parking at Metrorail Stations to access Tri-Rail	Provide benches (4) and shelters (9) in waiting areas
Encourage city to construct sidewalks between station and nearby residential areas	Add bicycle racks (6) and bicycle lockers (6)
Improve nearby crosswalks and transfer connectivity of stations	
Coordinate with Miami-Dade Transit and FDOT on potential bus transfer facility adjacent to station	
Investigate potential surface lot on vacant parcel northeast of station owned by SFRTA	
Hialeah Market (123 Existing Spaces)	
2015 Parking Demand – 75 spaces	**2025 Parking Demand – 105 spaces**
Improve signage	Provide pedestrian access and station crossing bridge from the east side of SFRC
Improve pavement striping and address other identified maintenance needs	Improve circulation elements as shown in conceptual plan
Provide more frequent monitoring by security personnel	
Negotiate short term lease with adjacent Home Depot to accommodate potential shift of demand during MIC construction	
Provide benches (4) and shelters (9) in waiting areas	
Add bicycle racks (6) and bicycle lockers (6)	
Miami Airport (143 Existing Spaces)	
2015 Parking Demand – 320 spaces	**2025 Parking Demand – 460 spaces**
Secure a commitment from FDOT to provide required parking at MIC and designate Tri-Rail spaces separately from Metrorail, Bus, Amtrak, and Greyhound	Monitor progress of MIC and preserve parking spaces
Restripe disabled spaces	Potential for pay or permit parking for Tri-Rail customers
Install fencing to prohibit pedestrian crossing of SFRC	
Pedestrian crosswalk	