



Performance Measurement Evaluation

South Florida Regional Transportation Authority

August, 2007

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Executive Summary

In March 2006, South Florida Regional Transit Authority (SFRTA) increased its service frequency in the Tri-Rail corridor from 30 passenger trains per weekday to 40 passenger trains per weekday. SFRTA will further increase the number of weekday trains in 2007, once the improvements in the vicinity of the New River Bridge are complete. The completion of the double-track project and the corresponding increased service, along with the discussion of new premium transit routes throughout the South Florida region, has prompted a need to evaluate the performance of SFRTA services. The performance evaluation will serve as a base for decision making and will be integrated into SFRTA planning and operations management.

The performance measurement evaluation was conducted in two parts: a peer review based on data from the National Transit Database (NTD); and a performance assessment using Tri-Rail data. The peer review looked at seven years, 1998 to 2004—the latest date for which NTD was available for peer agencies at the time of the analysis. The performance assessment is for eight years, 2000 to 2007, and includes an analysis of the impact of the March 2006 service increase.

PEER REVIEW

Tri-Rail was compared to six other single line, diesel locomotive systems, and two larger systems that operate multiple lines.

- At just over 140 miles (approximately 70 miles in each direction) Tri-Rail is longer than the peer average.
- Tri-Rail has a longer weekday service day than the peer average, providing almost 18 hours of service daily. In addition, Tri-Rail provides weekend service. Of the six peer agencies, only three provide Saturday service and only one provides Sunday service.
- Annual ridership grew steadily from 1998 through 2004, matching the peer average in 2004.
- The average trip length on Tri-Rail was longer than for the peers, resulting in a higher level of passenger miles traveled on Tri-Rail.
- Tri-Rail provided more daily service than all of the peer agencies except one, Caltrain.
- Rides per hour of service provided (a measure of efficiency) improved steadily relative to the peer average during the reporting period (1998 to 2004).
- Tri-Rail's steady increase in ridership caused the cost per passenger trip to remain constant, while the peer average increased steadily.

Overall, Tri-Rail compares favorably to its peers and, in many instances, is strong compared to the two larger commuter rail properties. The following conclusions can be drawn:

- Tri-Rail is an efficient organization, with the lowest cost per ride and cost per hour of service of all operators evaluated.

- Tri-Rail's ridership has grown steadily when other operators have been challenged to maintain and increase their ridership. This is likely due not only to congestion in the corridor, which other operators face, but to the consistent level of service provided. Customers can count on Tri-Rail during the day, into the evening, and even on weekends.
- Tri-Rail has positioned itself to be an alternative to the automobile for all trips, not strictly the traditional "commuter hour" trips. The service day is longer, more hours of service are provided, and weekend service (including Sundays) is available, unlike virtually every other peer system.

PERFORMANCE ANALYSIS

Detailed operational data for Tri-Rail was compiled for the fiscal years 2000 through 2007. In late March 2006, Tri-Rail implemented a significant service increase. Data for fiscal years 2006 and 2007 were divided, with FY06 including the nine months up to the service increase and 2007 including the nine months following the service increase.

The performance analysis demonstrates that Tri-Rail has successfully improved and enhanced service to increase ridership, which is a benefit to the entire South Florida region.

- The area where Tri-Rail performance is lowest is service coverage through shuttle bus routes that connect Tri-Rail to the surrounding population and employment centers. Further analysis is needed inform plans for improving the connectivity from the community to Tri-Rail stations.
- In FY07, there was a 25% increase in weekday ridership over FY06, a 20% increase in Saturday ridership and an 18% increase in Sunday ridership over FY06. The rapid increase in ridership following the service improvement, especially on the weekends, demonstrates that there is strong demand for Tri-Rail service.
- Effectiveness remains high, with rides per hour for each day increasing over FY06. Usually there is a period of decline, as ridership slowly grows to meet the additional service provided. Again, this demonstrates pent-up demand for Tri-Rail service and indicates the potential for future service expansion.
- The comparatively long trip length and increasing ridership means that Tri-Rail is taking an increasing number of passenger miles off of congested freeways and the road network, which supports regional air-quality and transportation goals.
- Increasing levels of demand for park-and-ride spaces is resulting in better utilization of the existing spaces. Some areas, however, are reaching capacity and should be evaluated for additional connecting bus service to reduce demand for park and ride spaces or for an increased number of spaces, if feasible.
- When construction is complete and SFRTA has assumed responsibility for train dispatch, many of the level of service ratings should improve. Additional service is scheduled, which will improve the level of service ratings for frequency of service. This should also greatly improve on-time performance.

RECOMMENDATIONS

The performance measures have provided a picture of success, with the double-tracking and increased service resulting in strong ridership increases. The evaluation points to the following recommendations to build on these successes:

- The data for this type of evaluation should be collected monthly and reported on a regular basis, to track performance on a continuous basis. Positive changes, such as with the service increase, can be seen quickly and can be used to demonstrate the benefits of Tri-Rail to the region. Concerns, such as an increase in rides per complaint, can be quickly addressed before they result in a loss in ridership.
- Certain measures, such as the mode of access to Tri-Rail, were estimated based on park-and-ride lot counts. This only provides an estimate of mode of access. Recent on-board survey findings should be reviewed and incorporated into the evaluation to provide a more detailed profile of transit riders and how they use the system.
- Because of the limited coverage of connecting bus service, Tri-Rail depends on auto access to the station. This reduces the total air quality benefits to the region, as a car must still go through the more-polluting “cold start” phase to drive to the station. Improved service coverage for connecting bus and shuttle services is recommended, to reduce dependence on auto access and increase the air quality benefits of Tri-Rail.
- The area where Tri-Rail performance is the lowest is in service coverage, which is driven by the amount of connecting shuttle bus service. No evaluation of the shuttle service was conducted because performance data were not available for the SFRTA shuttle buses.
 - Data collection and reporting needs to be established for the shuttle buses.
 - A performance evaluation similar to this Tri-Rail performance measurement evaluation should be conducted to determine how well the shuttle buses are meeting customer needs and where service improvements are needed.
- In addition to operational performance measures, emphasis should be placed on tracking customer needs through the customer satisfaction and complaint tracking process. While on-board customer satisfaction surveys are conducted quarterly, they are not integrated into the reporting and management decision-making process. Similarly, complaints are not formally analyzed and reported for such purposes. These systems should be developed and included in the regular performance reporting to demonstrate customer focus.

Taken together, these measures will provide SFRTA with the ability to address customer needs, and the means to demonstrate value and accountability to the region.

Section 1
Commuter Rail Peer
Review

1. Commuter Rail Peer Review

1.1 INTRODUCTION

Tri-Rail operates diesel locomotives on a single route from the West Palm Beach area to the vicinity of the Miami International Airport. This service began in 1989. During the time period covered by this analysis (1998-2004), the route was mostly single-tracked and shared with freight trains. Passengers traveling to downtown Miami must transfer to Metrorail, passengers traveling to downtown Ft. Lauderdale must use a bus transfer, and passengers traveling to downtown West Palm Beach must use a bus transfer or take a long walk.

This element of the performance review looks at peer commuter rail operators throughout the country and compares them to Tri-Rail using data from the National Transit Database. These data are valuable in that they provide consistent data reporting across all operators, allowing valid comparisons of operating statistics. The peer review is broken into these sections:

- A. Introduction
- B. Peer Group Selection
- C. Peer Group Performance Evaluation
- D. Peer Group Findings

1.2 PEER GROUP SELECTION

The operators listed here were selected as Tri-Rail's peers. These operators provide service on a single route using diesel locomotives, plus one smaller two-branch system.

Altamont Commuter Express (ACE) connects Stockton and fast-growing bedroom communities in California's Central Valley to the San Jose area. The route is generally single-tracked and includes two long rural sections with grades and curves that limit trains' operating speeds. The route is shared with freight trains. The San Jose station is located west of downtown, which requires passengers traveling to downtown to transfer to a shuttle. The other two South Bay stations have timed shuttle connections; one also has a light rail connection. This service began in 1998.

Caltrain runs between San Francisco and San Jose, with peak-period trips continuing south to Gilroy. Caltrain's San Francisco station is located south of downtown, which requires passengers to transfer to bus or light rail, or take a long walk. Connections to BART, the Bay Area's heavy rail system, are available at the Millbrae station. The route is double-tracked and used exclusively by passenger trains traveling between San Francisco and San Jose. This service began in 1863; public ownership commenced in 1980.

Coaster links communities along the San Diego County coast to downtown San Diego. Light rail connections are available at the two San Diego stations and the downtown station is located within walking distance of downtown destinations. The route is double-tracked and is shared with freight and intercity passenger trains. This service began in 1985.

Sounder started operating in the Seattle area in 2000. Initially, the route ran between Seattle and Tacoma; service was extended north to Everett in 2004. The Seattle station is located south of downtown, requiring passengers to use a free bus transfer or take a long walk. The Tacoma station is connected to downtown by a short, free streetcar line. The route is double-tracked and is shared with freight and intercity passenger trains.

Trinity Railway Express (TRE) is jointly operated by the Fort Worth Transportation Authority and Dallas Area Rapid Transit. Dallas Union Station is located within walking distance of downtown destinations and has light rail connections. The two downtown Ft. Worth stations are located within walking distance of downtown destinations; one station is located at an intermodal transfer center. The route has a mix of single- and double-track and is used exclusively by passenger trains. This service began running from Dallas in 1997 and extended west over time, reaching Ft. Worth in 2001.

Virginia Railway Express (VRE) operates two branches in Northern Virginia that serve Washington, DC. Washington Union Station and five other stations have heavy rail connections. The route is multiple-track and is shared with freight and intercity passenger trains. This service started in 1992.

Two larger operators, in terms of the number of routes operated, are also shown in the graphs in this section, but are not included in the peer averages. MARC operates three routes in the Baltimore-Washington region. Metrolink operates seven routes in the greater Los Angeles area. These operators are included to provide comparative results of operators larger than Tri-Rail's current size.

1.3 PEER GROUP PERFORMANCE EVALUATION

This section defines and summarizes the performance measures used within the peer review. These measures were used:

- Route Miles
- Span of Service
- Unlinked Passenger Trips
- Passenger Miles Traveled
- Average Trip Length
- Train Revenue Miles
- Train Revenue Hours

- Passenger Trips per Revenue Hour
- Operating Cost per Passenger Trip
- Operating Cost per Train Revenue Hour
- Weekend Service Availability

Two graphs are provided for each measure:

1) a trend analysis from 1998 to 2004 showing Tri-Rail performance and the performance of the peer group mean; Tri-Rail is shown in orange and the peer group mean is shown in black; and

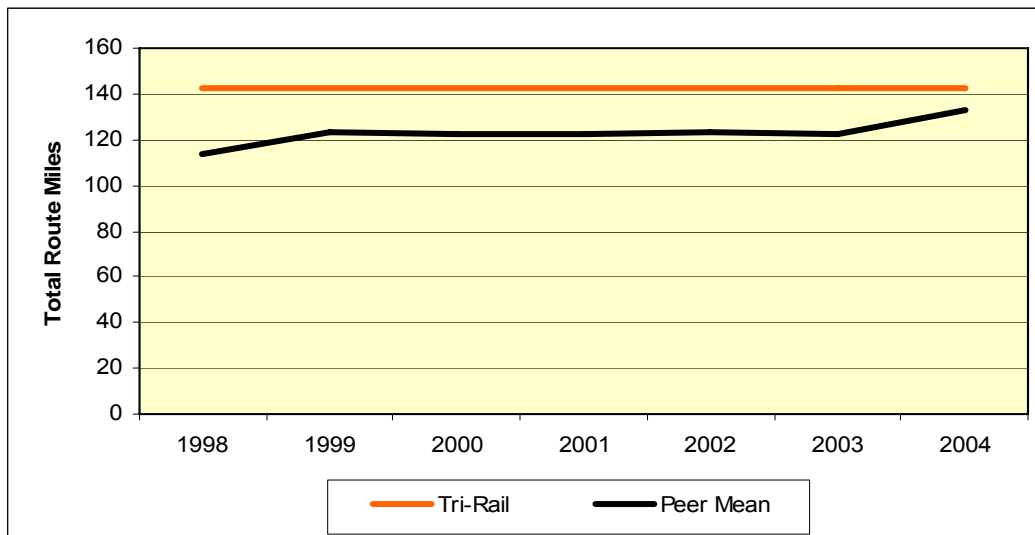
2) a 2004 comparison of SFRTA’s Tri-Rail performance to the performance of each of the peer operators, the peer mean, and the two larger commuter rail operators; Tri-Rail is shown in orange, the peer group mean is shown in black, the individual peer operators are shown in blue, and the two larger properties are shown in white.

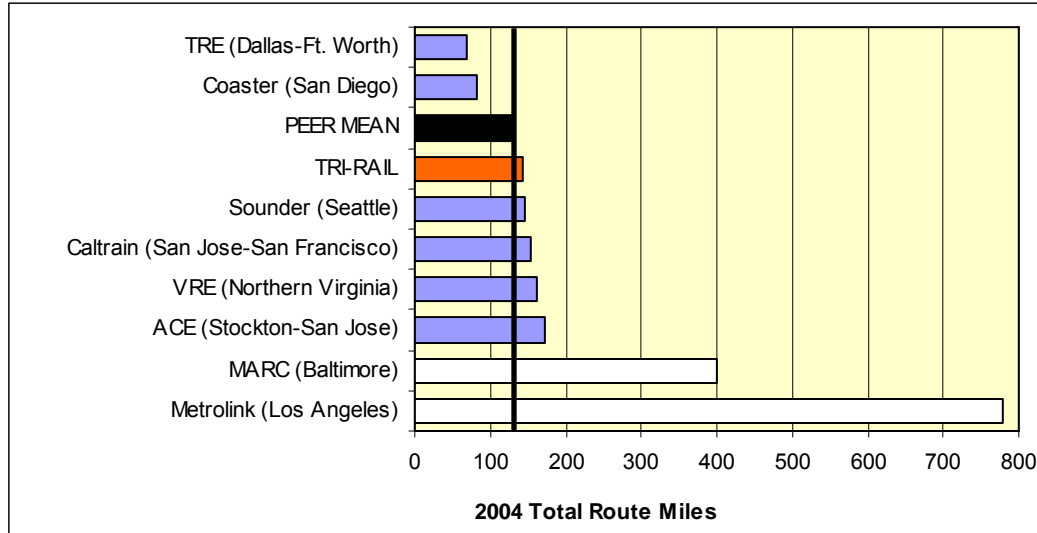
Each set of graphs is followed by an analysis of the measure. Overall findings are presented in the section following these measures.

1.3.1 Route Miles

For commuter rail, route miles represent the mileage in each direction of a route that trains operate while in service. Figure 1 presents the comparative analysis.

Figure 1 Route Miles Comparison



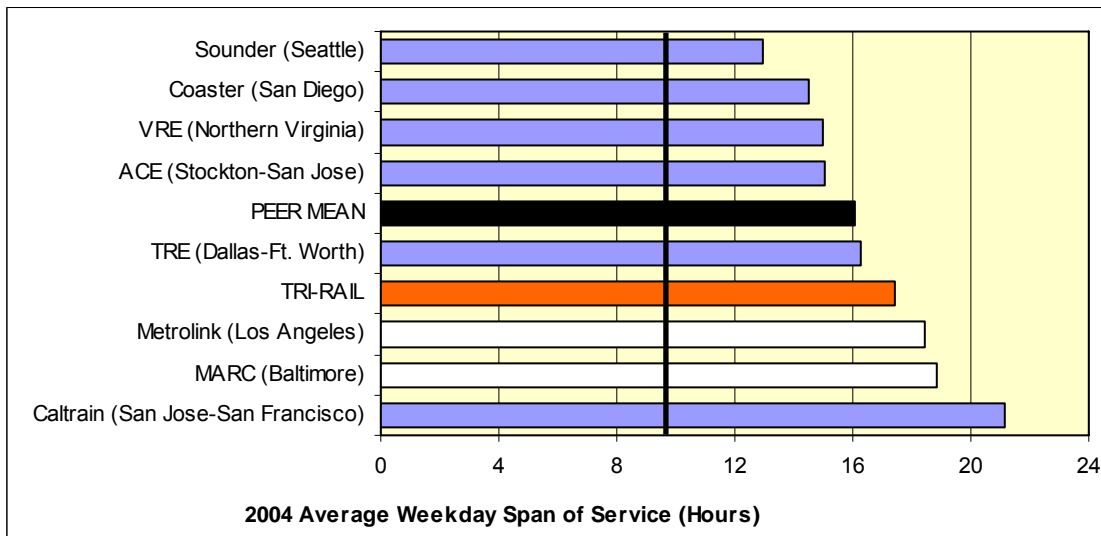
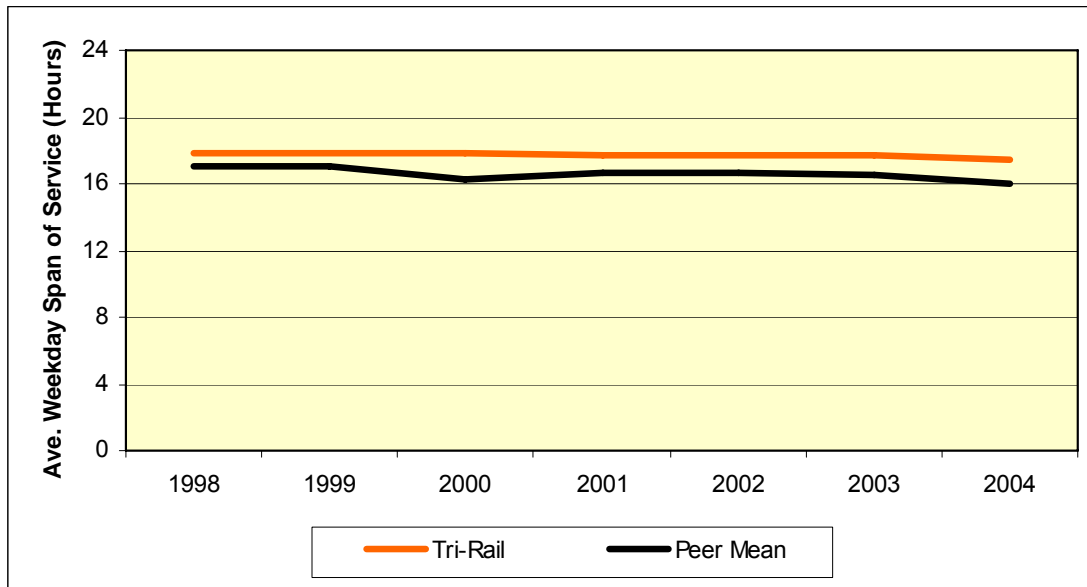


The route from West Palm Beach to Miami is about 70 miles in one direction, with total route miles twice that—just over 140 miles. Tri-Rail’s route mileage remained constant from 1998 to 2004. The increase in the peer trend seen in 1999 reflects the start of service of ACE. After the introduction of service at ACE in 1999 and Sounder in 2000, average route miles per system remained constant until Sounder added new service in 2004. Tri-Rail’s 142 route miles are about 7% higher than the peer group average.

1.3.2 Average Weekday Service Span

The NTD defines service span as the length of time between the start of service and the end of service. The measure does not represent the number of hours the train is in service, but the length of time from when train operations begin until they stop for the day. Figure 2 presents the comparative analysis.

Figure 2 Average Weekday Service Span Comparison

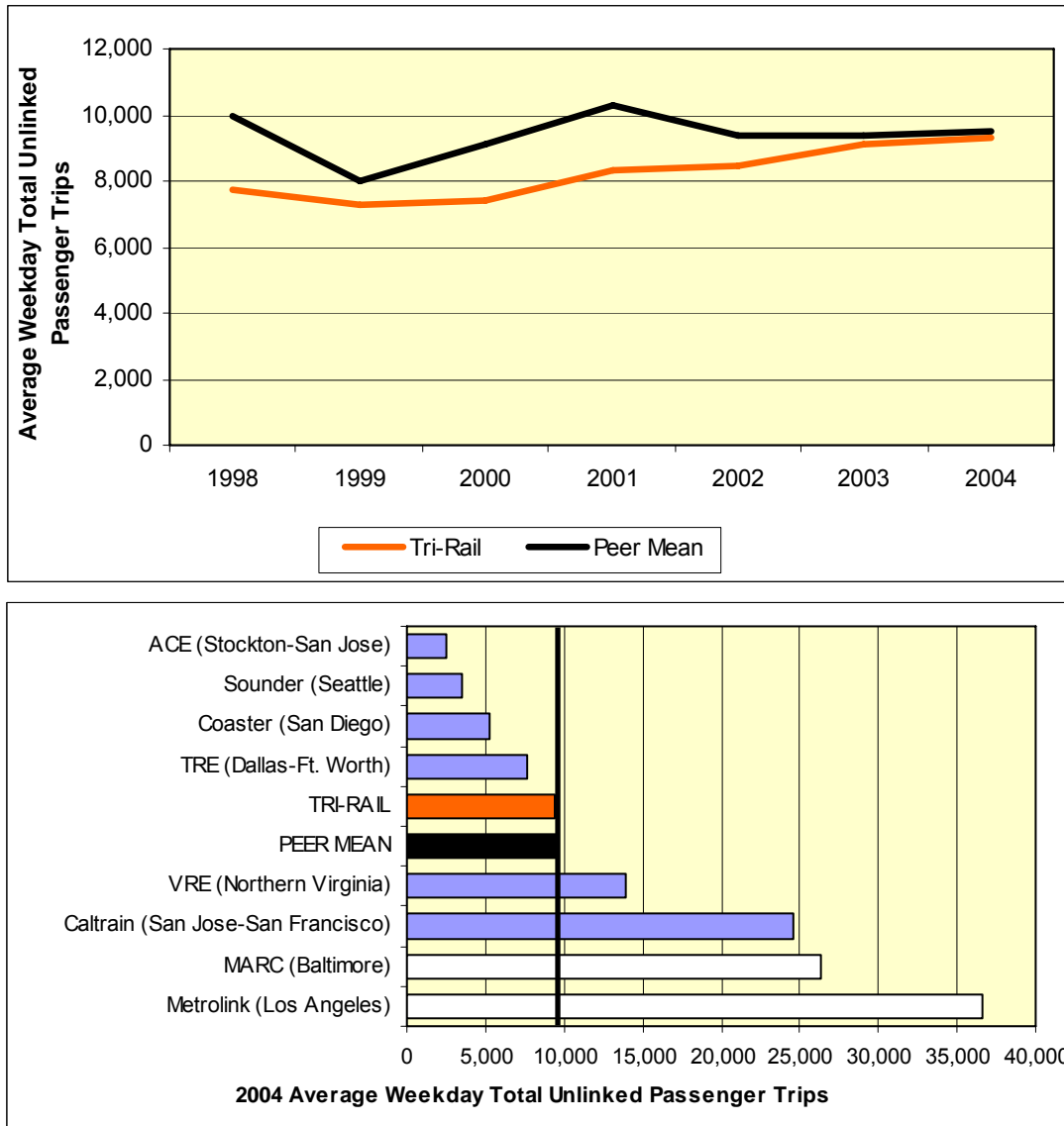


Tri-Rail’s average weekday service span has held steady at just under 18 hours per day. The peer group averages a service span of about 16 hours a day. Tri-Rail continues to provide a longer service day than any of its peers, with the exception of Caltrain, which operates service for 21 hours a day.

1.3.3 Average Weekday Unlinked Passenger Trips

An unlinked passenger trip represents one passenger boarding a vehicle. Each time a person boards a vehicle, it is counted as a separate unlinked passenger trip. Figure 3 presents the comparative analysis for an average weekday.

Figure 3 Average Weekday Unlinked Passenger Trips Comparison

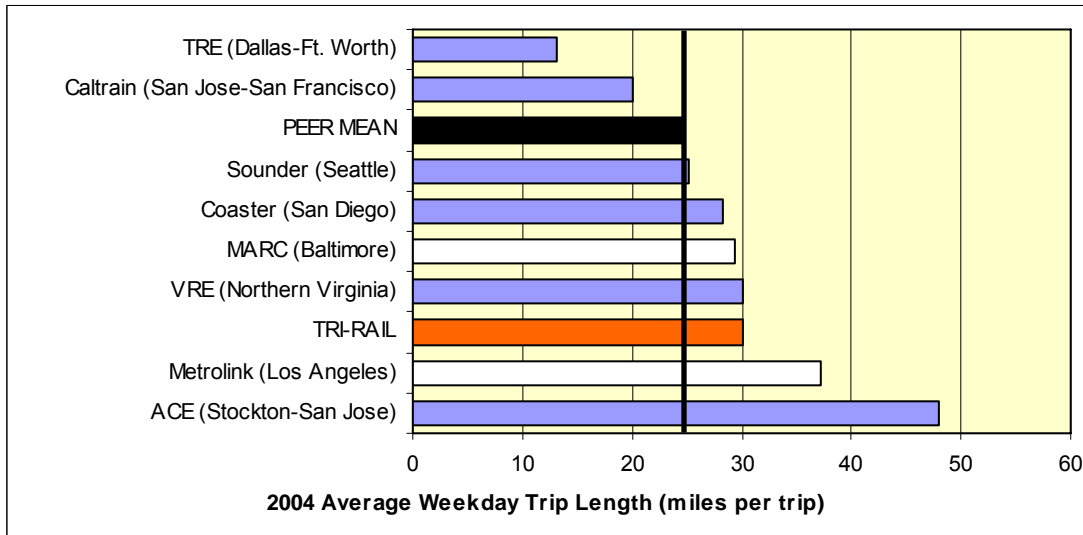
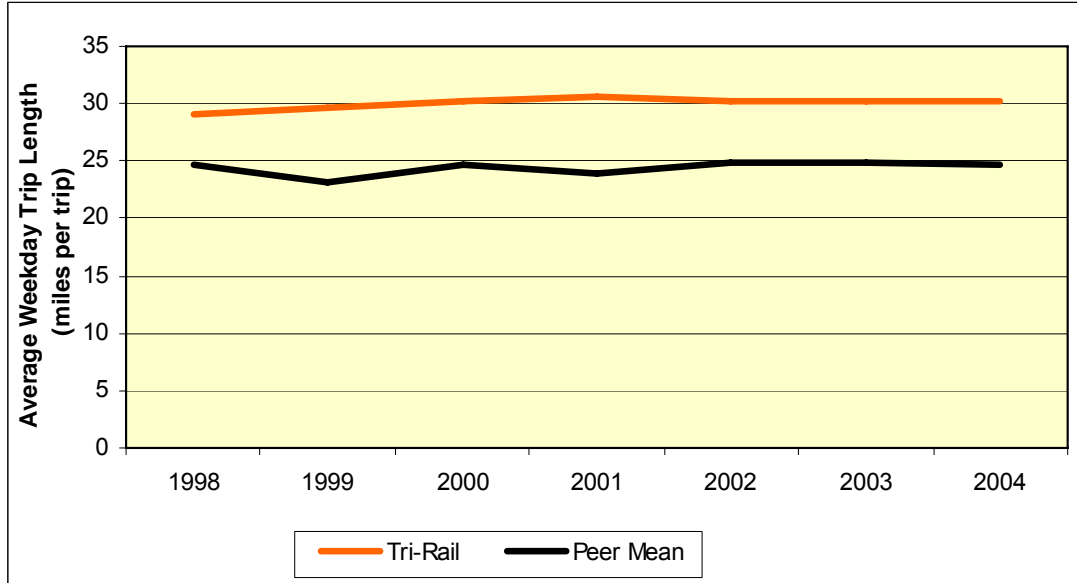


After a brief decline, Tri-Rail’s average weekday ridership has been increasing steadily since 1999. Between 1998 and 2004, it has grown 21%, where the peer system has experienced a 4% decline. Tri-Rail’s ridership is now even with the peer system average. The noticeable drop in the peer group average from 2001 to 2002 was caused by an 18% drop in Caltrain ridership, which is likely attributable to the poor economy in the San Francisco Bay Area that year.

1.3.4 Average Weekday Trip Length

Trip length is defined as the distance the average passenger travels (in miles) to make a one-way trip. Figure 4 presents the comparative analysis.

Figure 4 Average Weekday Trip Length Comparison

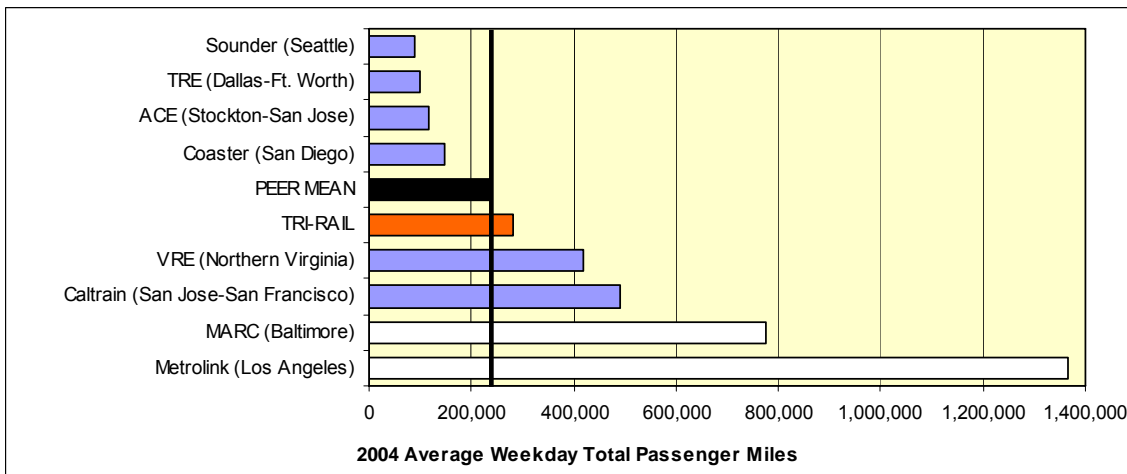
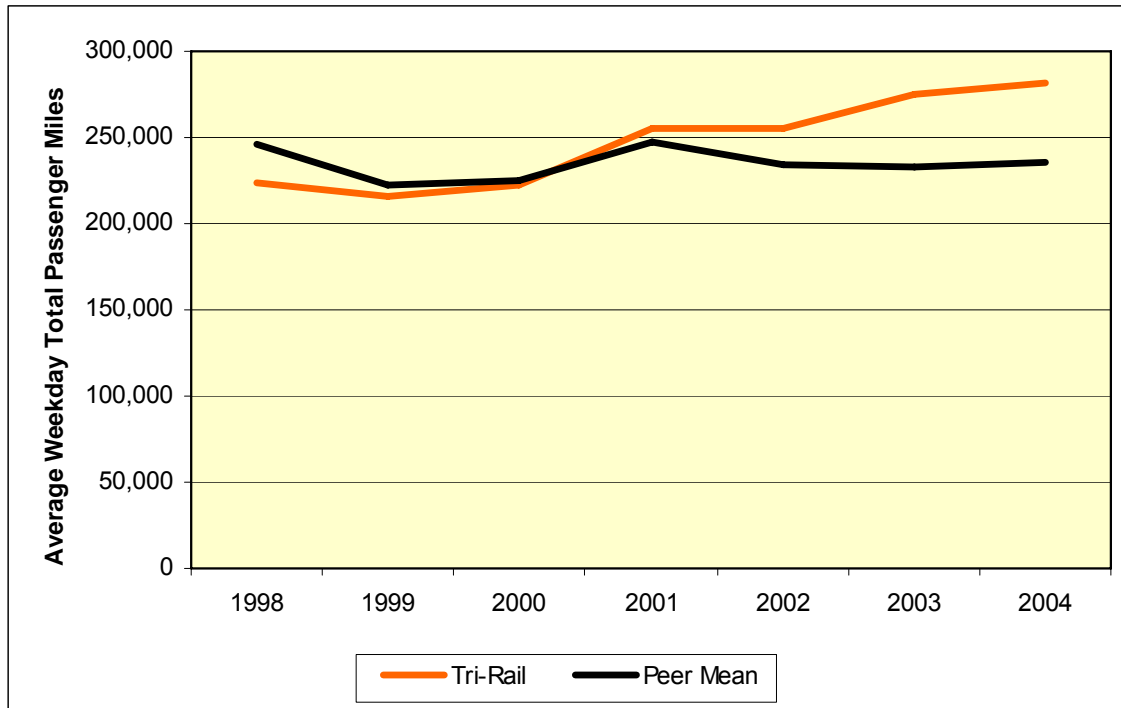


Tri-Rail’s average weekday trip length of 30 miles compares to a total route length of 71 miles, indicating that the average passenger is traveling nearly half the length of the rail line. Although the trip length is similar to several other systems, it is notable that only two systems (Metrolink and ACE) have longer average trip lengths. The peer group average has also remained fairly constant at 25 miles per trip.

1.3.5 Average Weekday Passenger Miles

Passenger miles represent the sum of miles traveled by all passengers during a given period and is calculated by multiplying the average trip length by the unlinked passenger trips. Figure 5 presents the comparative analysis for the average weekday.

Figure 5 Average Weekday Passenger Miles Comparison

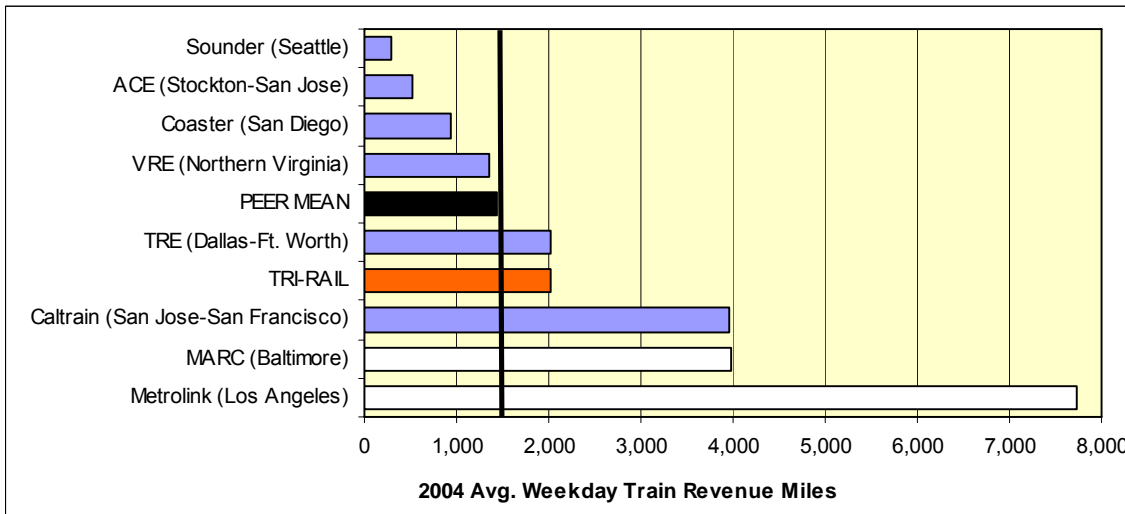
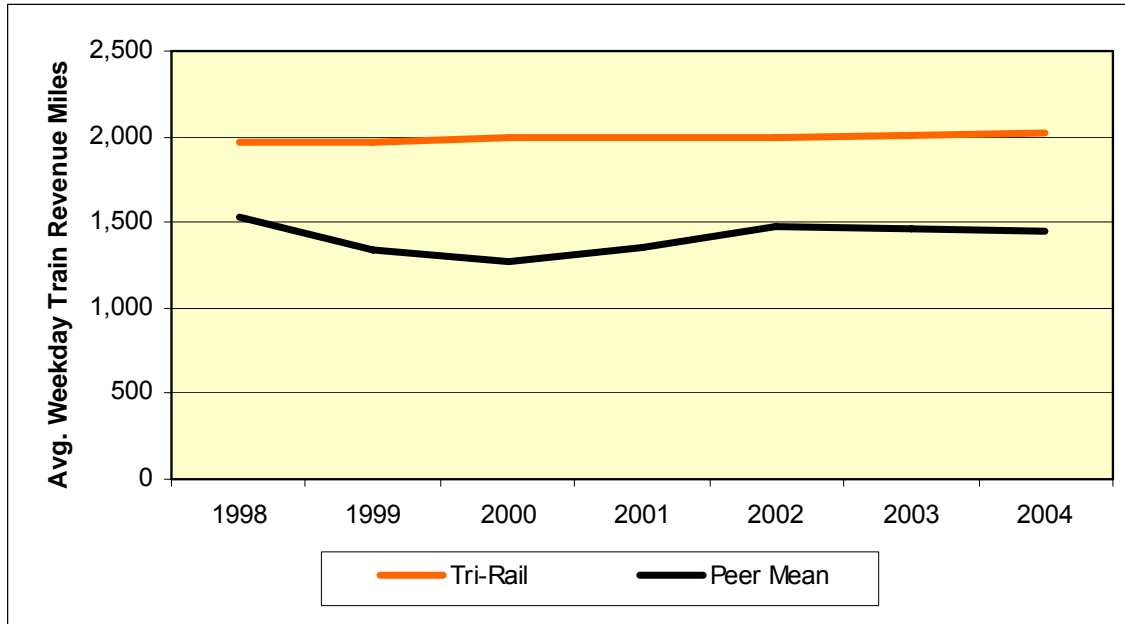


Tri-Rail’s average weekday passenger mileage mirrored the growth in ridership, increasing 26% between 1998 and 2004. The peer trend was down 4% during the same period. As a result of Tri-Rail’s ridership growth and long average trip length, Tri-Rail exceeds the peer mean for passenger miles traveled by almost 20%.

1.3.6 Average Weekday Train Revenue Miles

Train revenue miles are defined as the total number of miles traveled by trains on an average weekday while in service. The values increase as the number of trains operated increases. Figure 6 presents the comparative analysis.

Figure 6 Average Weekday Train Revenue Miles Comparison

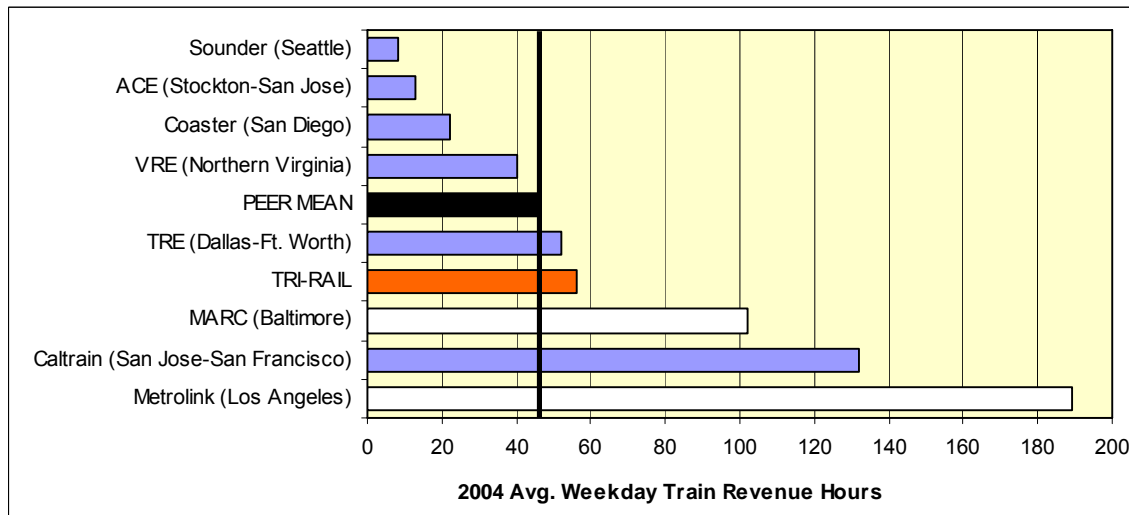
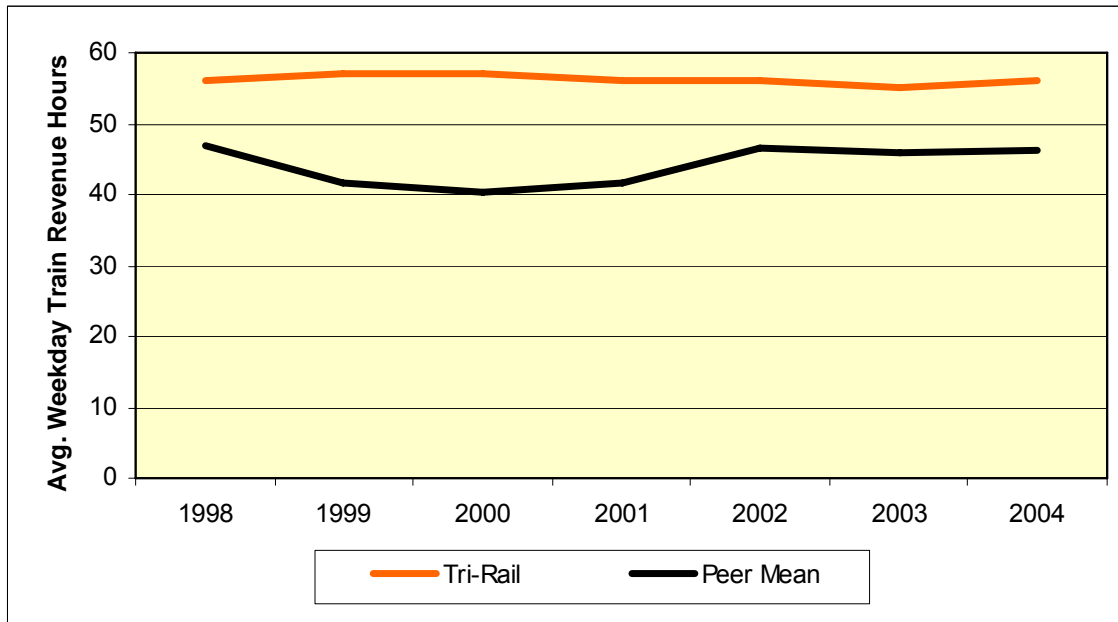


Tri-Rail’s average weekday train revenue miles have remained virtually flat since 1998, which reflects the static level of service provided while the double-tracking project was under construction. The peer group average dipped in the early 2000s as new systems came on line, only to increase to 1998 levels as systems matured and additional service was added. Tri-Rail operates more train revenue miles than any operator in its peer group except Caltrain.

1.3.7 Average Weekday Train Revenue Hours

Train revenue hours are the total number of hours operated by all trains in service. Similar to revenue miles, this measure increases as additional trains are added. Figure 7 presents the comparative analysis.

Figure 7 Average Weekday Train Revenue Hours Comparison

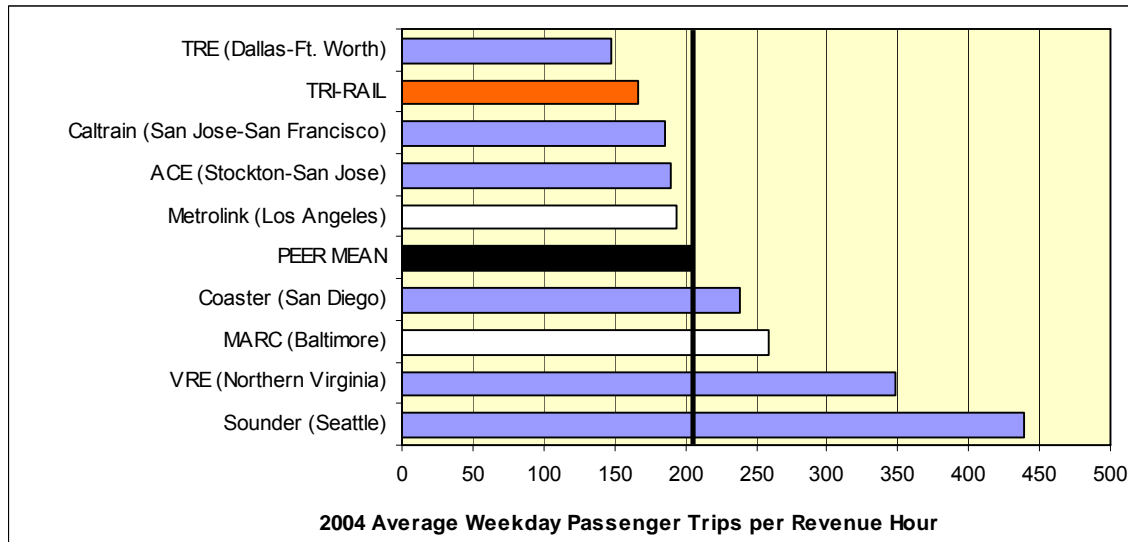
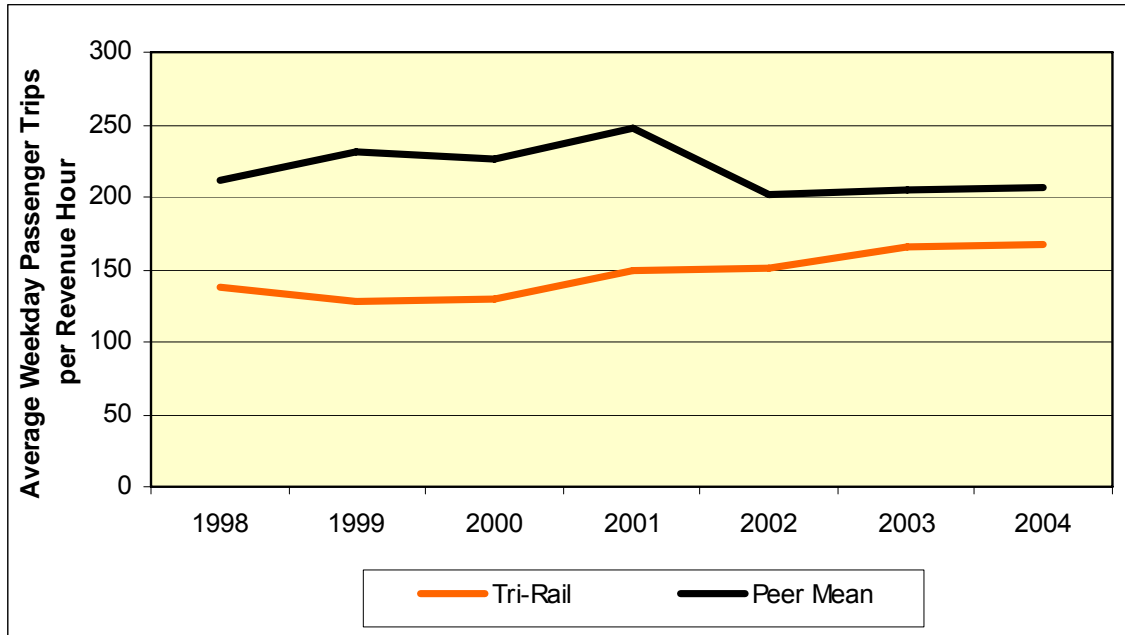


The number of average weekday revenue hours operated by Tri-Rail held steady between 1998 and 2004. The peer group average declined in the early 2000s as new systems came on line, but had increased back up to the same level as 1998 by 2004. Tri-Rail’s 56 average weekday train revenue hours were 21% higher than the 2004 peer group average. While the span of service (Graph 2) is similar between districts, Tri-Rail has significantly more service. Tri-Rail offers service most of the day, while systems such as Sounder and ACE provide primarily peak service.

1.3.8 Average Weekday Passenger Trips per Revenue Hour

Passenger trips per revenue hour is an efficiency measure: the number of people who board a train each hour it is in service. It is calculated by dividing total unlinked passenger trips by total train revenue hours. Figure 8 presents the comparative analysis.

Figure 8 Average Weekday Passenger Trips per Revenue Hour Comparison

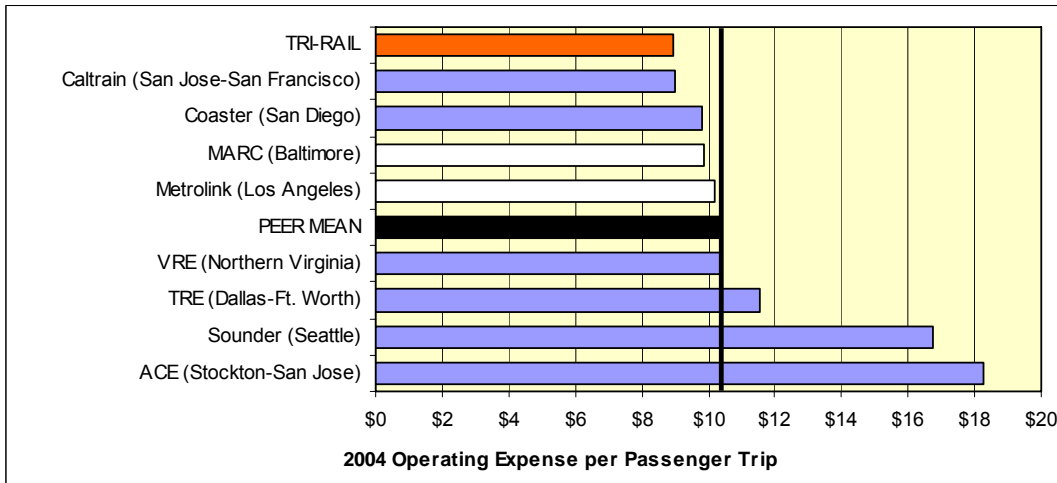
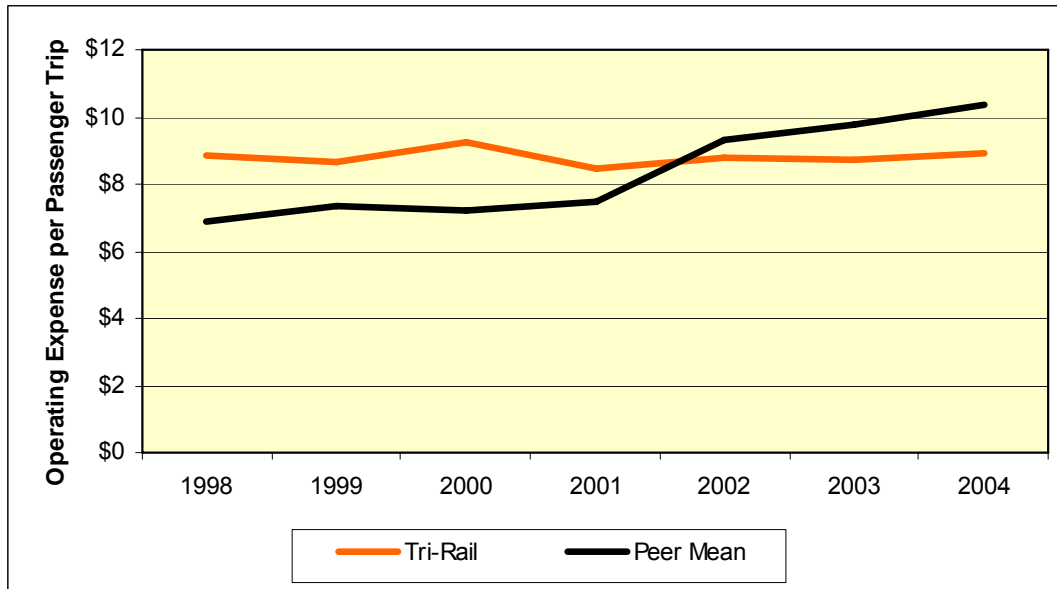


Tri-Rail average weekday passenger trips per revenue hour increased by 20% between 1998 and 2004, reflecting an increase in ridership without a commensurate increase in service. The peer group average declined by 2% over this period, reflecting the loss of ridership (Figure 3) without an equivalent decrease in service.

1.3.9 Annual Operating Cost per Passenger Trip

This cost efficiency measure looks at the cost incurred per passenger boarding. This number is determined by dividing the annual operating expenses by the annual unlinked passenger trips. Annual figures are used because weekday costs are not separated in the NTD. Figure 9 presents the comparative analysis.

Figure 9 Annual Operating Expense per Passenger Trip

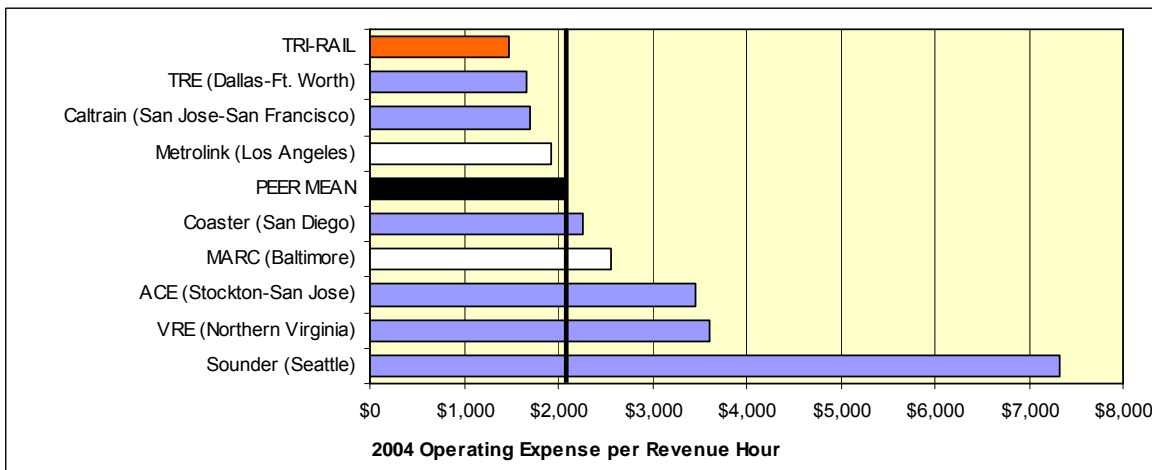
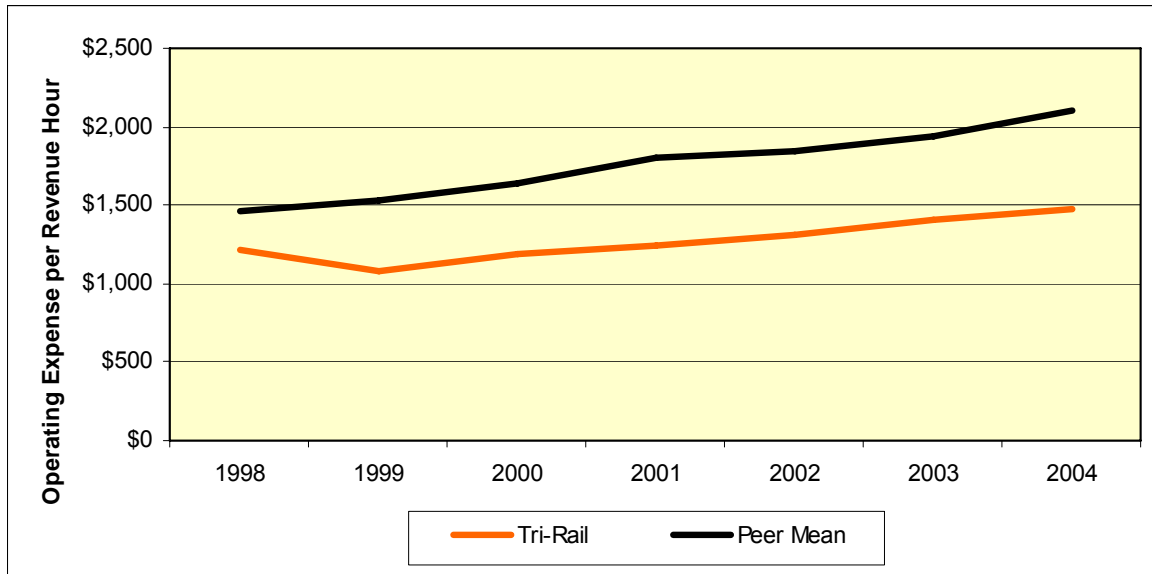


Tri-Rail’s cost per trip has fluctuated little since 1998, with ridership increasing at the same rate as costs. The peer group, however, increased 50% between 1998 and 2004, reflecting the start-up of Souder and ACE, and the increases in Metrolink’s operating costs, which were exceptionally low in the late 1990s. In 2004, Tri-Rail’s cost per trip (\$8.95) was below the peer group average (\$10.35). Tri-Rail had the lowest cost per trip in 2004 even though it provides a higher level of weekday service than its peers and also provides weekend service, which typically has lower ridership.

1.3.10 Annual Operating Cost per Train Revenue Hour

The operating cost per train revenue hour represents the cost of running the train for each hour it is in service (total costs include maintenance, fuel, operators, etc.). This is a planning measure that removes the effects of ridership and focuses on operational efficiency. Figure 10 presents the comparative analysis.

Figure 10 Annual Operating Expense per Revenue Hour Comparison



Tri-Rail's cost per hour increased 21% between 1998 and 2004, while the peer group average increased 44%. In 2004, Tri-Rail's cost per hour (\$1,470) was the lowest of all operators included in the analysis.

1.3.11 Weekend Service Availability

Commuter Rail, by definition, typically serves a weekday commute market. Table 1 provides a summary of the days that service is provided on the peer rail systems.

Table 1 Days of Service

Commuter Rail System	Weekday	Saturday	Sunday
Altamont Commuter Express (ACE)	X		
Caltrain	X	X	X
Coaster	X	X	
Sounder	X		
Trinity Railway Express (TRE)	X	X	
Tri-Rail	X	X	X
Virginia Railway Express (VRE)	X		
MARC*	X		
Metrolink*	X	X (2 lines)	X (1 line)

* Not a peer group agency

Looking at the profile of the peer operators Tri-Rail stands out as an agency that is going beyond the concept of weekday-only service. While four of the other eight systems provide some level of Saturday service, only two other systems (one of which is not a peer agency), provide Sunday service.

1.4 PEER REVIEW FINDINGS

Overall, Tri-Rail compares favorably to its peers and, in many instances, is strong compared to the two larger commuter rail properties. These items should be noted:

- Tri-Rail has positioned itself to be an alternative to the automobile for all trips, not strictly the traditional “commuter hour” trips. The service day is longer, more hours of service are provided, and weekend service (including Sundays) is available, unlike virtually every other peer system.
- Tri-Rail’s ridership has grown steadily when other operators have had challenges maintaining and increasing their ridership. This is likely due not only to congestion in the corridor, which other operators face, but to the consistent level of service provided. Customers can count on Tri-Rail during the day, into the evening, and even on weekends.
- Tri-Rail is an efficient organization, with the lowest cost per ride and cost per hour of service of all operators evaluated.

Section 2
Performance Assessment

2. Performance Assessment

2.1 INTRODUCTION

This performance assessment analyzes data by ridership and span of service, park-and-ride utilization, transportation infrastructure impacts, cost-effectiveness and level-of-service ratings in order to get a clearer picture of the quality of service being provided by Tri-Rail and the impacts of the double-tracking that occurred last year. The figures present a seven-year trend analysis, including a “before and after” analysis of the service increase. The measurements provide a compelling picture of the success of Tri-Rail’s expanded service and the opportunities for further improvement.

2.2 METHODOLOGY

2.2.1 Data Sources

The performance assessment uses data from the National Transit Database (NTD), the SFRTA Monthly Operations Reports, and other SFRTA internal data sources.

2.2.2 Fiscal Year Division

The data in the following section are presented in fiscal years, which run from July 1 through June 30. Fiscal years 2000 through 2005 are full fiscal year data. Due to the service increase that followed the completion of double-tracking in March 2006, there was a concern that using the full 2006 fiscal year data would obscure the impact of the service change. Consequently, fiscal year 2006 constitutes data collected from the nine-month period July 2005 through March 2006. The remaining three months of FY 2006 (April – June) were included in FY 2007 as part of the “after implementation” analysis. FY 2007 includes the nine-month period from April 2007 and through December 2006.

2.3 RESULTS

The results are broken down into six categories:

- Scope and Utilization
 - Service Performance
 - Parking Infrastructure
 - External Impacts
 - Cost Effectiveness
 - Level of Service Ratings
-

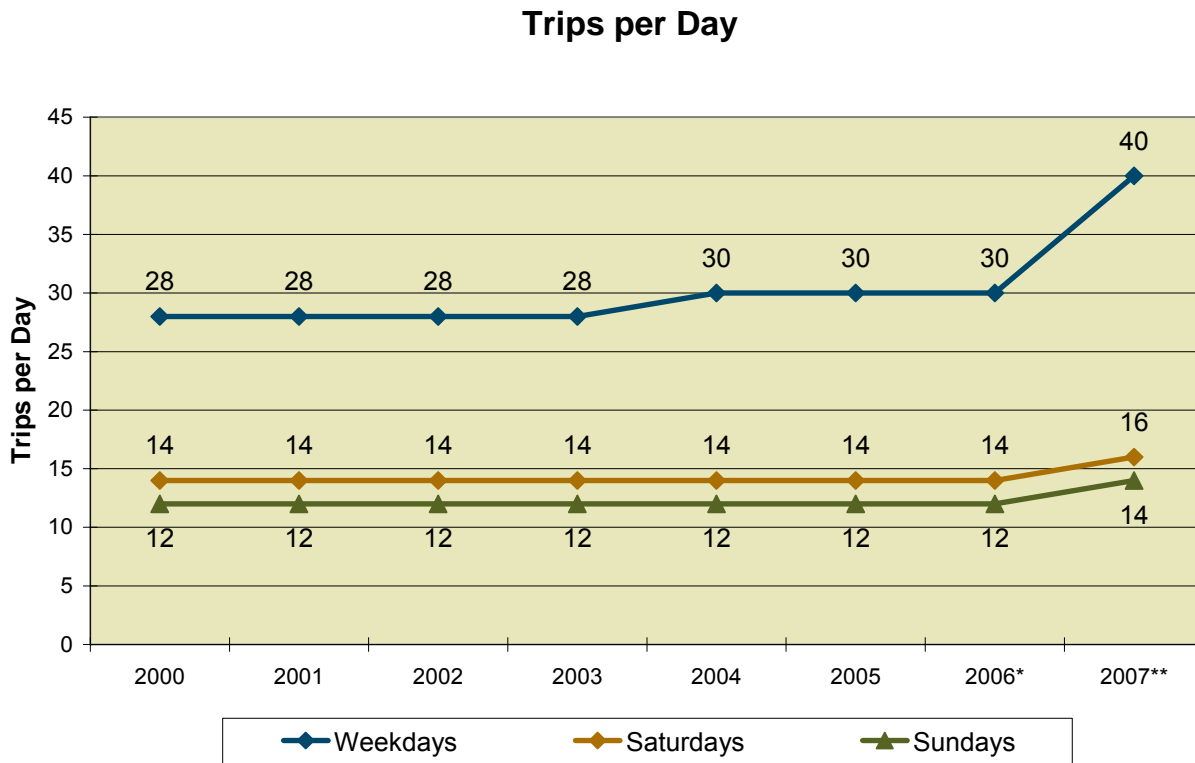
2.3.1 Scope and Utilization

This section examines the change in the scope of service provided and in passenger usage of Tri-Rail in the past eight years. Though these measurements have steadily increased over time, the improved service has had a significant positive impact on the system size and ridership on weekdays and weekends since 2006. One unique aspect of the Tri-Rail is that it provides weekend service, with the majority of commuter rails offering significantly more limited weekday service and no weekend service. The comparison of weekday to weekend service is therefore unusual.

2.3.1.1 Trips per Day

Figure 11 shows the number of train trips run in both directions over the course of a service day. Since the year 2000, weekday service has increased 43%, most of which occurred in FY 2007 when weekday service increased 33%, from 30 to 40 daily trips. Saturday service increased 14%, from 14 to 16 trips a day, and Sunday service similarly increased 17%, from 12 to 14 trips a day.

Figure 11 Trips per Day



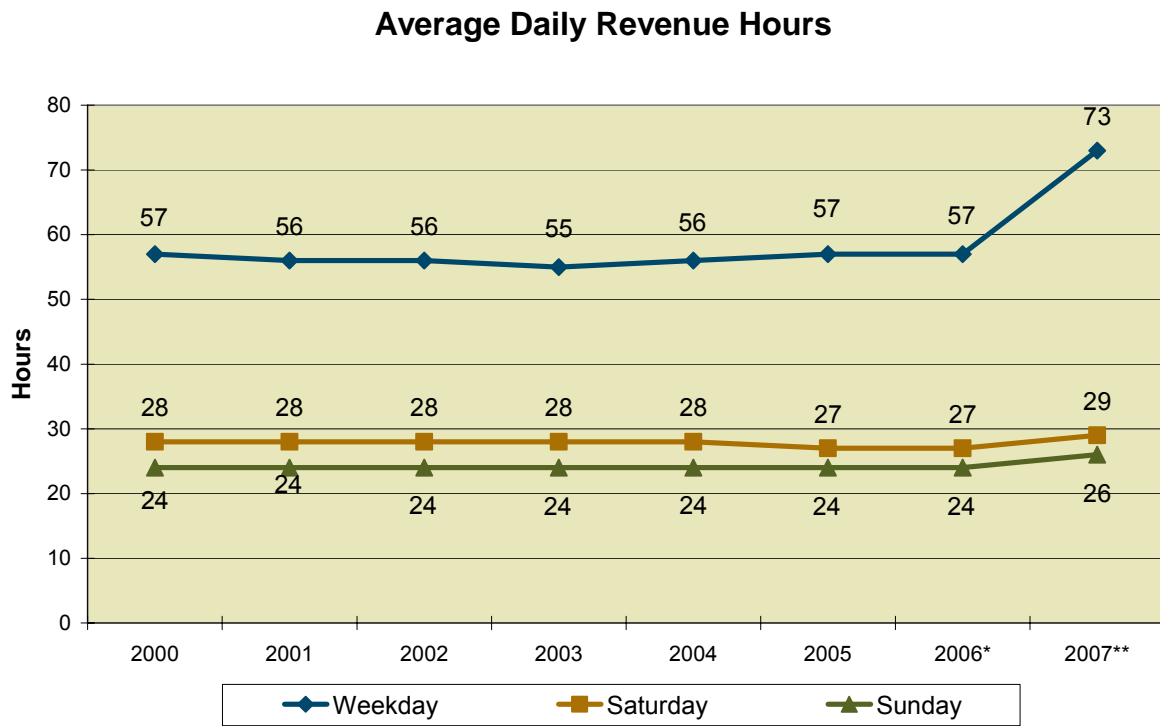
* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

2.3.1.2 Average Daily Revenue Hours

Revenue hours are defined as the amount of time the vehicle is in service, excluding travel time to and from the train yard. This is a standard measure of “service supplied,” representing the amount of time a passenger may travel on the system. Each hour a train is in service is counted as one hour of service, regardless of how many cars make up the train. Since the scheduled travel time per trip has not changed over time, the trend is the same as exhibited in Figure 11, with an increase in revenue hours based on the number of new trips added per year. Figure 12 shows there are currently 73 revenue hours of service each weekday, 29 hours on Saturday, and 26 hours on Sunday.

Figure 12 Average Daily Revenue Hours



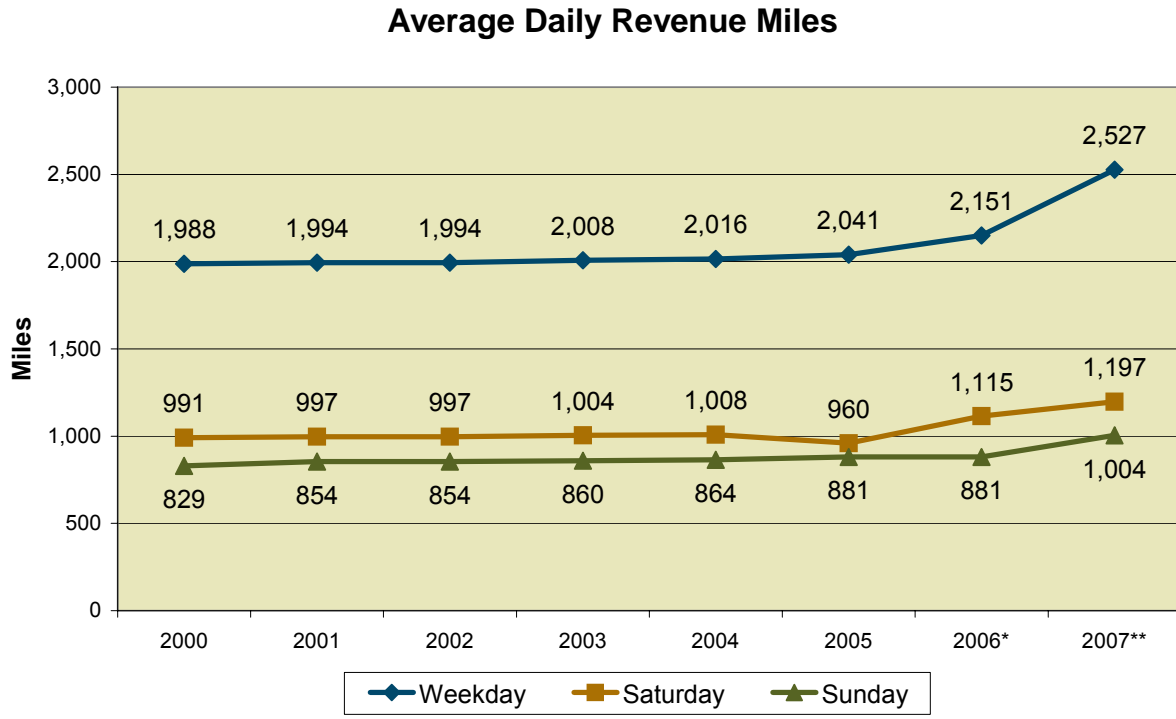
* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through September 2006

2.3.1.3 Average Daily Revenue Miles

Figure 13 shows the same trends as Figures 11 and 12, but in terms of the total miles traveled by in-service trains. Tri-Rail operates approximately 2,500 miles of service each weekday. Saturdays have about half that level of service (1,200 miles) and Sundays are slightly less (at 1,000), reflecting two fewer trips per day than Saturday.

Figure 13 Average Daily Revenue Miles



* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

2.3.1.4 Service Area Coverage

Figures 14 and 15 show the service coverage area for Tri-Rail, including service that connects directly to Tri-Rail stations. Tri-Rail stations are shown in red, Metrorail stations are in yellow, and bus routes that serve Tri-Rail stations are depicted by colored lines. The size of the stations and routes depict a 1/2 mile walk buffer around rail stations and a quarter mile buffer walk distance to bus routes.

Population and employment densities are measured on an orange to brown scale, with the darker shadings representing higher densities. Areas with fewer than three dwelling units or four jobs per acre were excluded from the analysis because they are not considered to be at a density level that will support fixed-route transit service.

Figure 14 Tri-Rail Service Coverage – Population

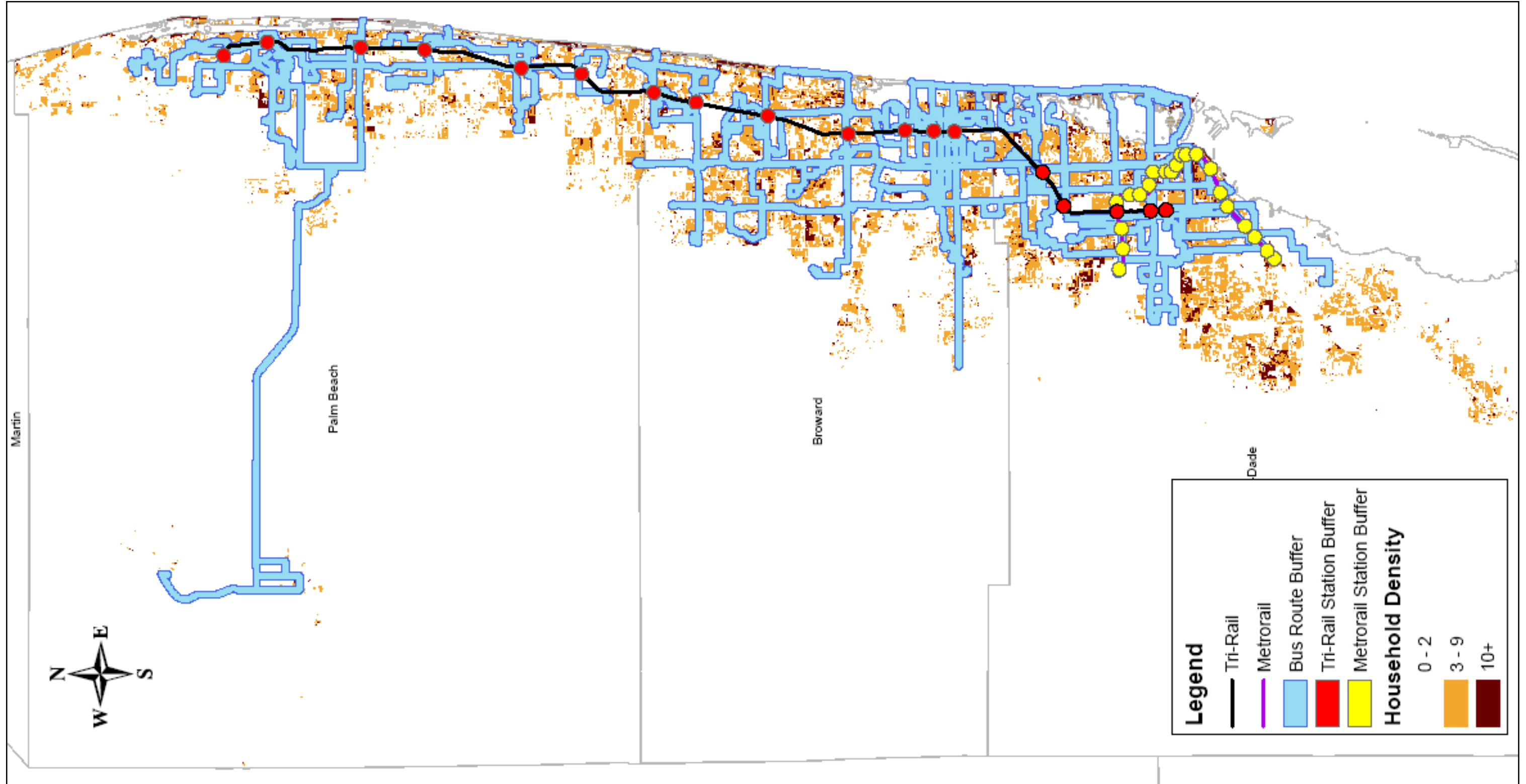
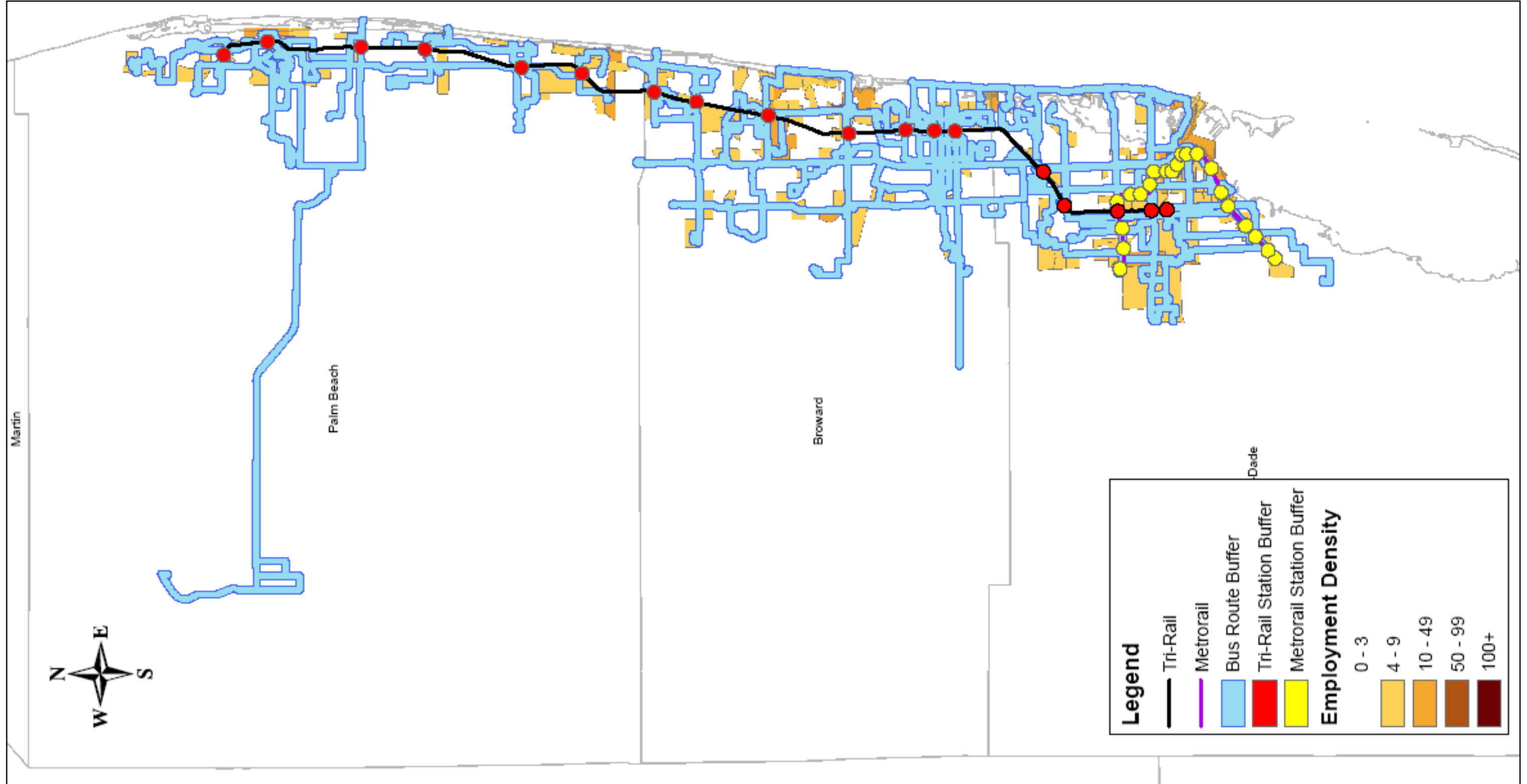


Figure 15 Tri-Rail Service Coverage - Employment

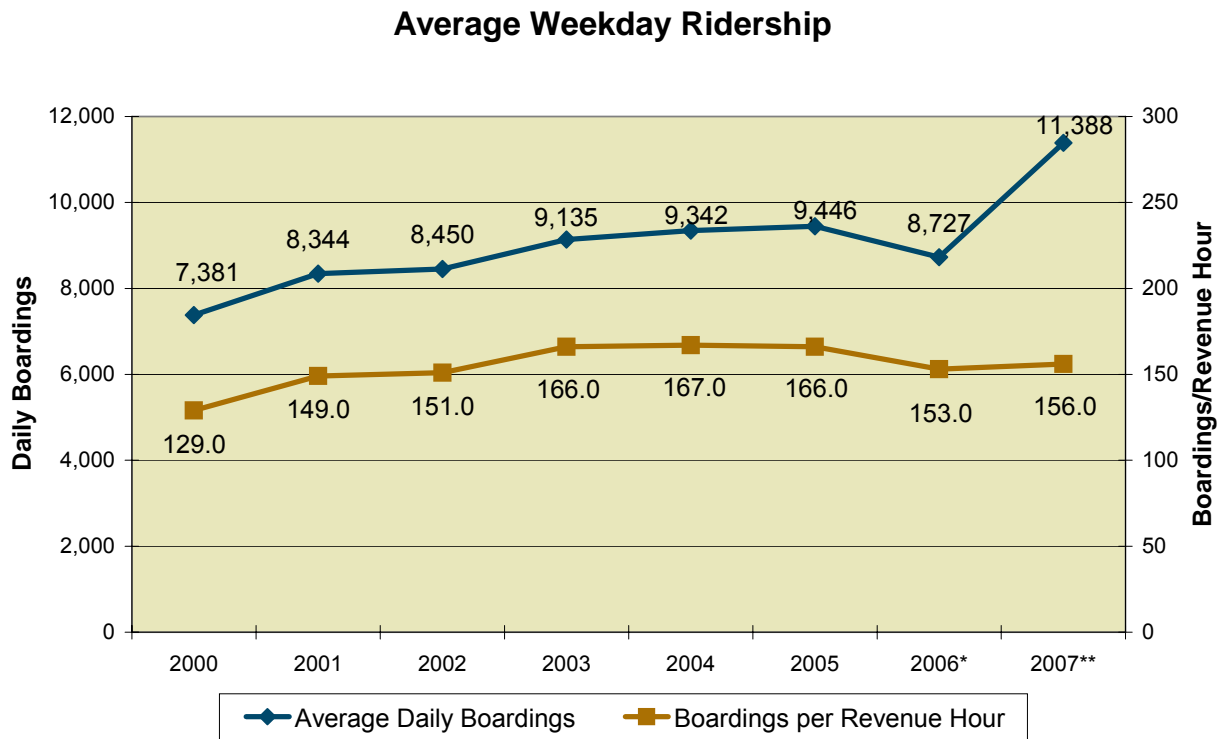


Based on these buffer zones and density levels, approximately 35% of the transit-supportive area population and 50% of transit-supportive area employment have direct access to Tri-Rail. These maps show that coverage, including connecting bus service, is very sparse. Though Tri-Rail has increased its revenue miles and revenue hours, ridership development will continue to rely heavily on auto access.

2.3.1.5 Average Weekday Ridership

Figure 16 contrasts average weekday ridership with riders per hour of service. Ridership grew slowly up through 2005, with a slight drop in FY06. This drop may be partially the result from the strong ridership months of April through June being averaged into FY07 figures, and partially from ridership loss due to operational difficulties caused by construction. This drop appears in later figures as well. However, with the service increase in late-March 2006, ridership increased by 25% over the next nine months—averaging more than 11,000 rides per weekday. Even with a 33% increase in service hours, rides per hour increased from 153 in FY06 to 156 in FY07. The magnitude of this measurement should not be underestimated; had ridership not increased with the consequent additional service, the rides per hour would have decreased to 120 rides per hour using FY06 ridership. Therefore, this effectiveness measure indicates a strong demand for Tri-Rail service.

Figure 16 Average Weekday Ridership



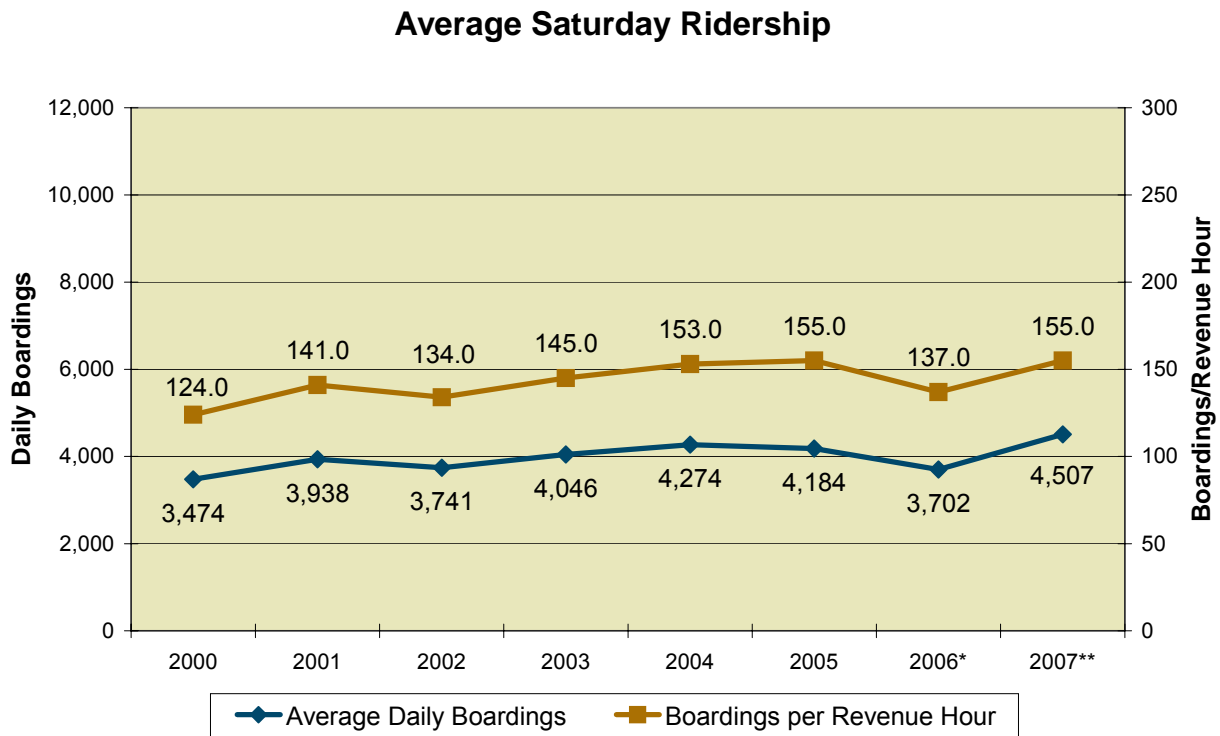
* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

2.3.1.6 Average Saturday Ridership

In Figure 17, the daily boardings are significantly fewer than weekdays, 4,500 on Saturday in FY07 compared to almost 11,400 on an average FY07 weekday, a drop that is expected given the reduced level of service. Nevertheless, ridership increased with the service improvement, and rides per hour remained equivalent to FY05. The ridership increased at the same rate as service, again indicating high demand for the service.

Figure 17 Average Saturday Ridership



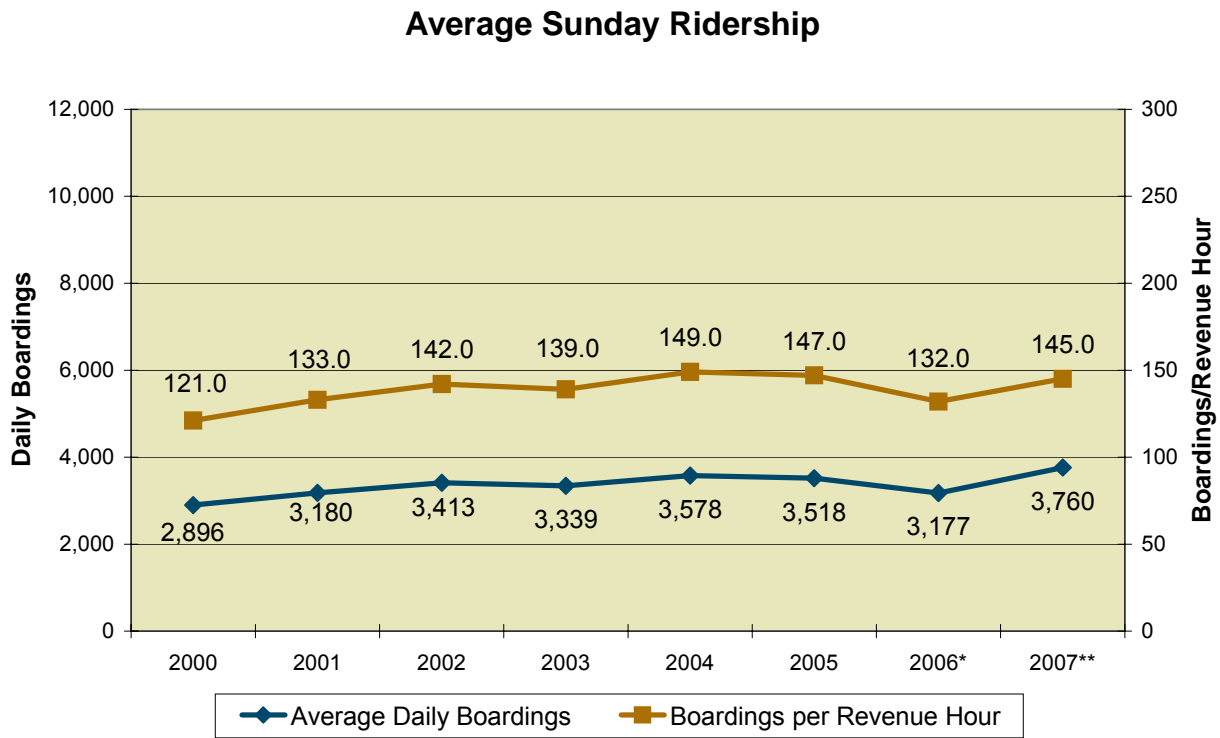
* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

2.3.1.7 Average Sunday Ridership

Sunday ridership data, seen in Figure 18, indicates the same trend in ridership. Overall, Sunday ridership is not quite as strong as Saturday service, reflecting the lower number of trips provided. However, the two additional Sunday trips in FY 2007 resulted in ridership being at its highest level ever, with 3,760 average Sunday boardings. Rides per hour lagged only slightly behind weekday and Saturday service, again showing strong demand for service.

Figure 18 Average Sunday Ridership



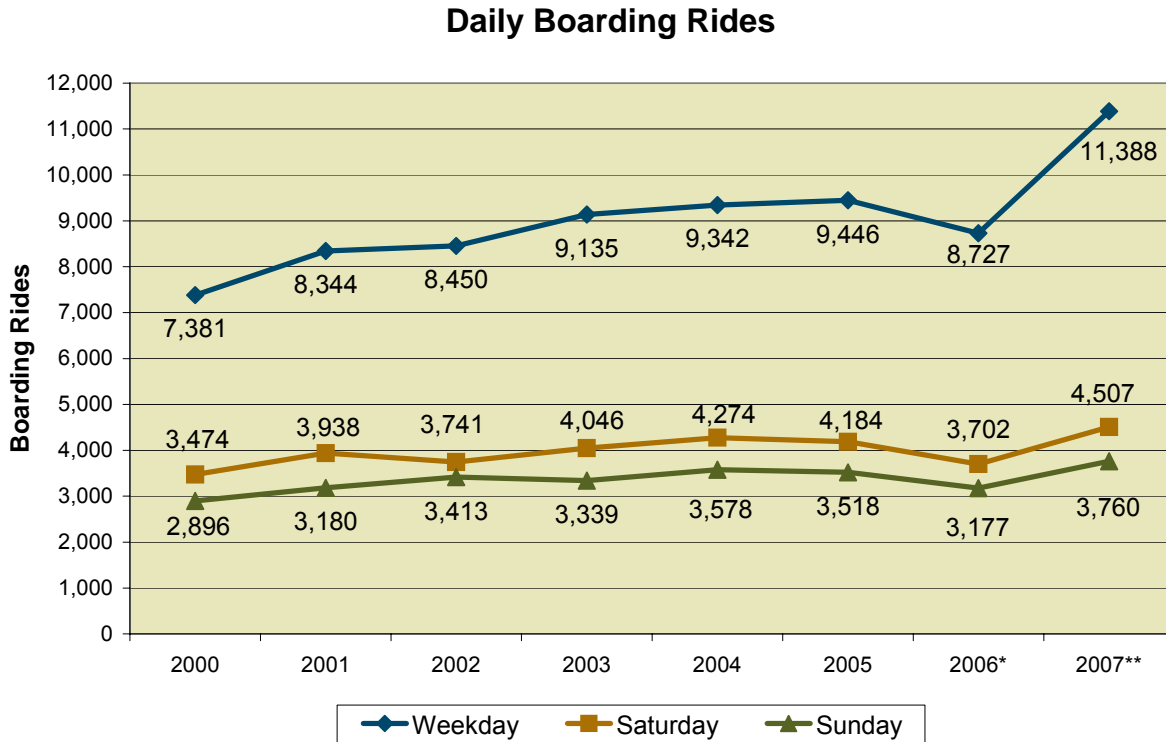
* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

2.3.1.8 Daily Boarding Rides

Figure 19 compares weekday, Saturday, and Sunday boardings. Here it is even more evident that weekday average daily boardings significantly outnumber Saturday and Sunday rides. It is important to consider that few commuter rail systems provide weekend service, and the weekend riders responded positively to the additional service in FY07.

Figure 19 Daily Boarding Rides



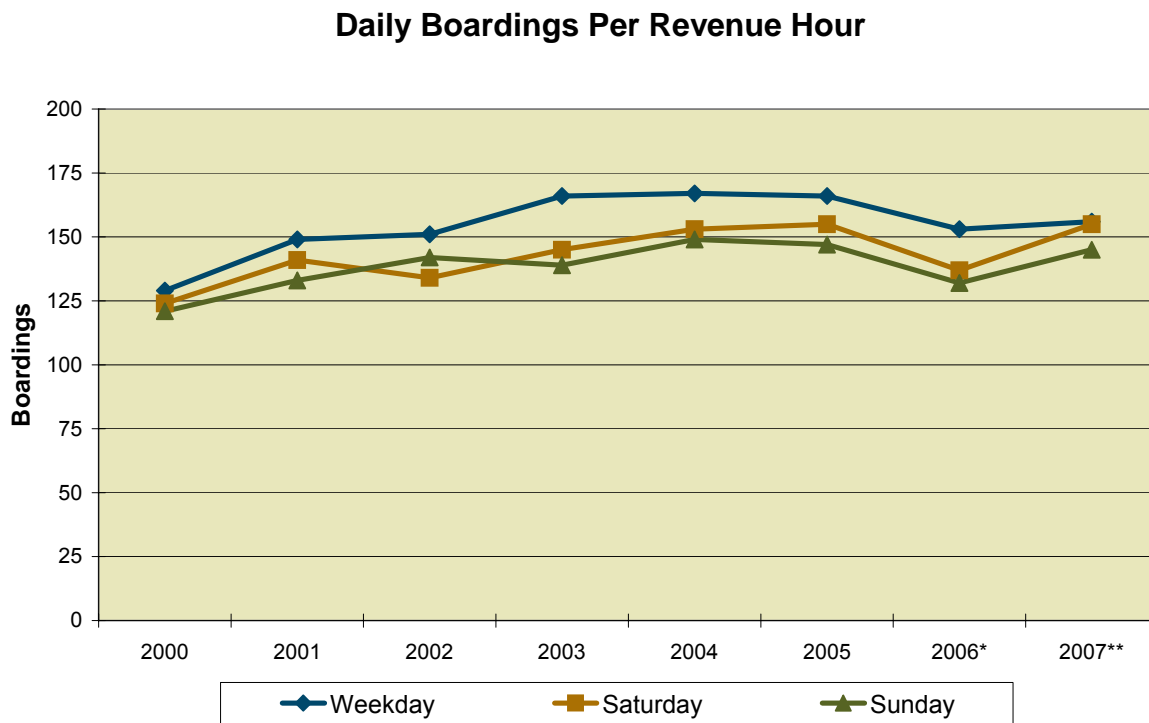
* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

2.3.1.9 Boarding Rides per Revenue Hour

Figure 20 shows that service improvements were met with commensurate ridership increases. It further demonstrates the importance of weekend service, as weekend boardings per hour are in close proximity to weekday boardings per hour. The productivity of this weekend service indicates that Tri-Rail serves much like a regional trunk line, providing all day, everyday service, as opposed to being strictly “commuter” rail. The high weekend utilization of Tri-Rail could be the result of a number of factors, including serving industries whose jobs create demand for off-peak and weekend service.

Figure 20 Daily Boardings per Revenue Hour



* 2006 data is from July 2005 through March 2006

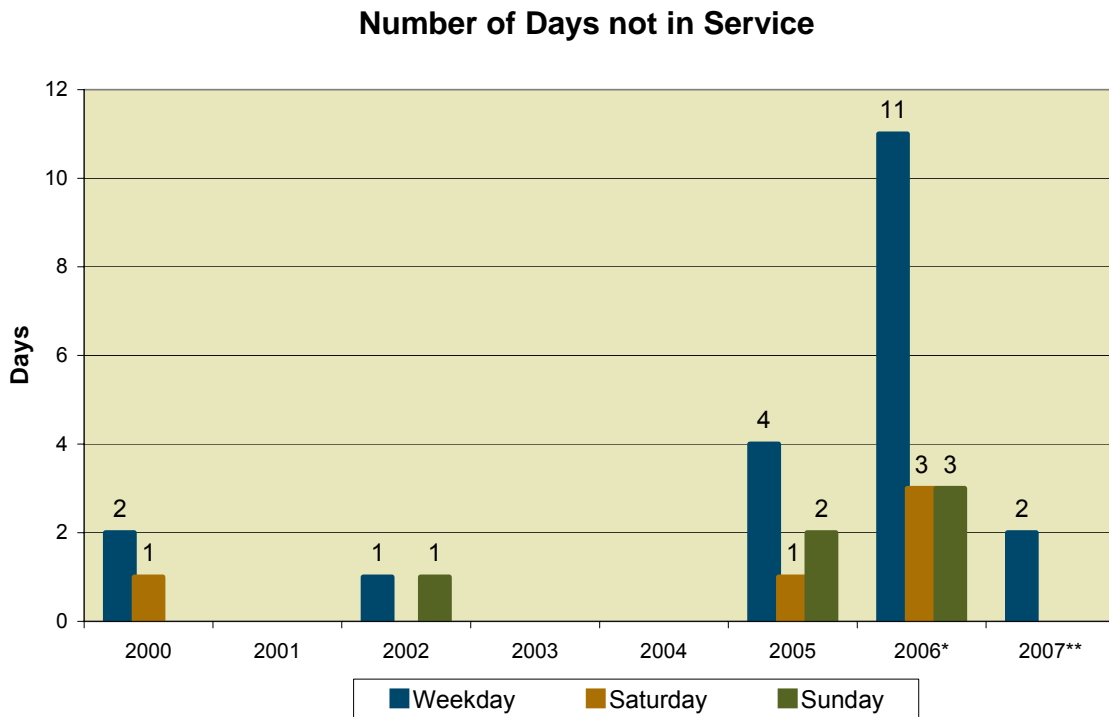
** 2007 data is from April 2006 through December 2006

2.3.2 Service Performance

The following measurements examine the service performance and customer satisfaction. Though 2006 was a difficult year, both in terms of disrupted service and on-time performance, most of the double-track construction was complete, which resulted in improved performance in 2007, and a subsequent drop in the number of rider complaints.

Figure 21 measures the impact of severe weather on Tri-Rail service. FY06 had the most significant disruption to service with eleven lost weekdays, and three lost Saturdays and Sundays. Because lost service days are not included in the average daily ridership calculations, they do not directly impact the ridership trends.

Figure 21 Number of Days not in Service

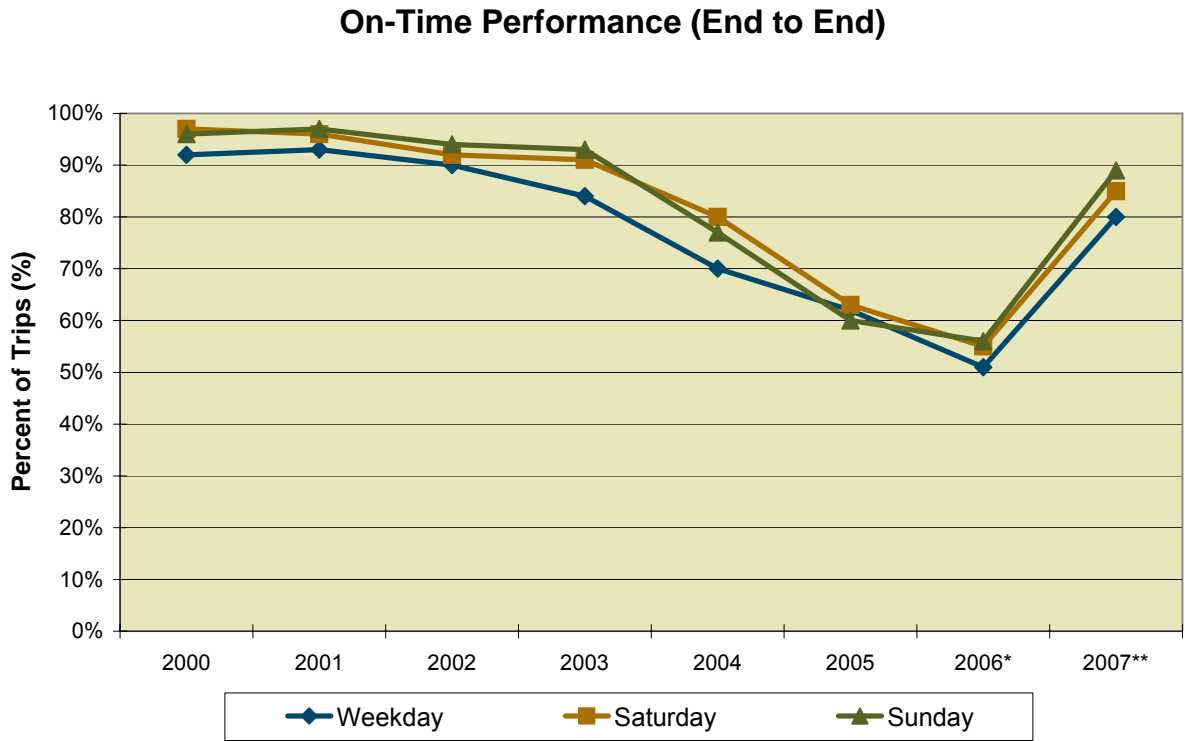


* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

SFRTA regularly reports on-time performance for service, by day of week. The impact of the Segment 5 double-tracking construction is evident in Figure 22, which shows that only 50% of trips were on-time in FY06. With the near completion of the track upgrades, on-time performance increased to the 80 to 90% range. Future performance is expected to improve when the bridge is complete and SFRTA assumes responsibility for train dispatch.

Figure 22 On-Time Performance

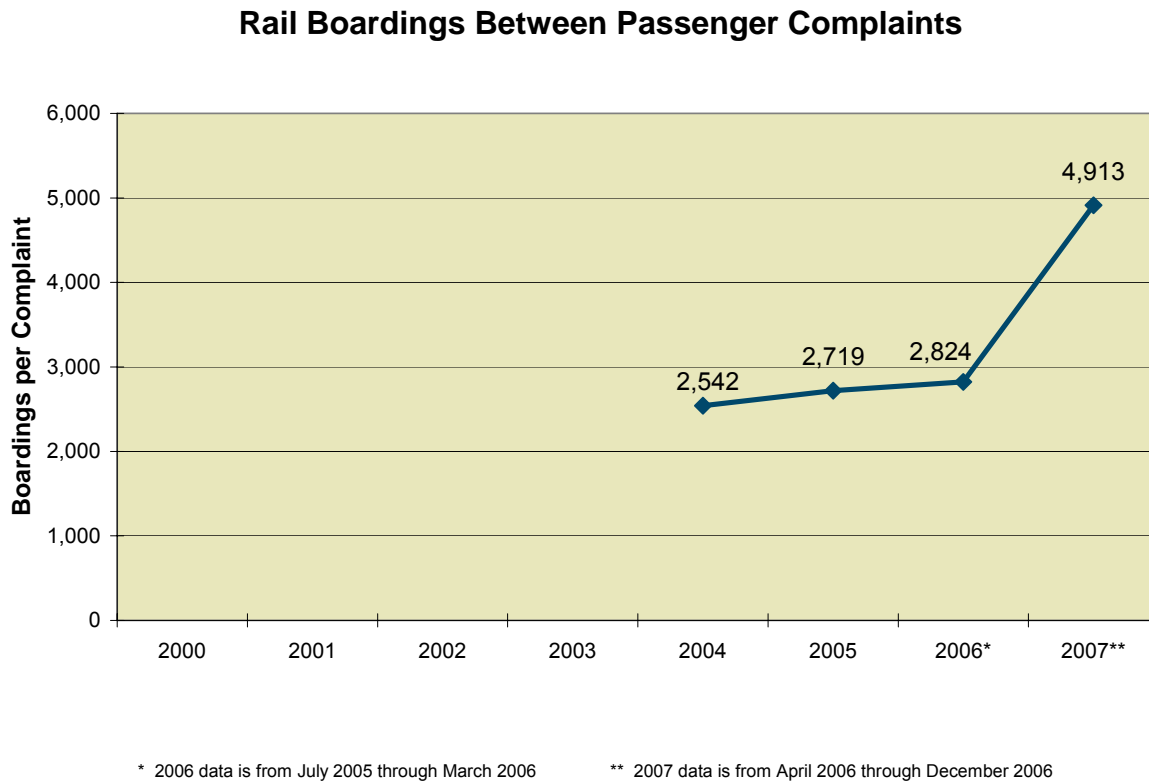


* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

Boardings between passenger complaints, seen in Figure 23, measures complaints in relation to total annual ridership. The higher the number, the more rides are provided before receiving a complaint. From 2004 (the first year for which data were available) through 2006, there was one complaint received for every 2,800 rides provided. In 2007, customer complaints dropped off significantly to 4,900 rides between each complaint. The significant improvement in 2007 coincides with the nearly complete double-track construction, suggesting that many of the complaints were as a result of construction-related issues, including on-time performance.

Figure 23 Rail Boardings between Passenger Complaints

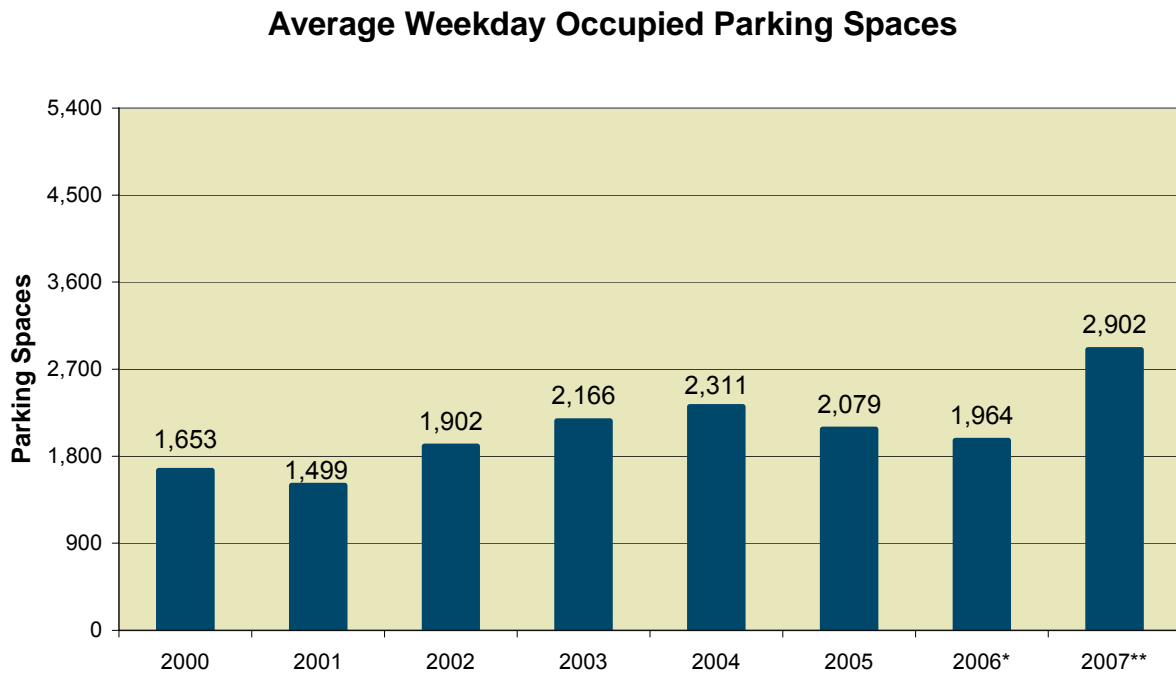


2.3.3 Parking Infrastructure

The utilization of park-and-ride lots reflects the demand, and the ability for riders to access train service. As the popularity of Tri-Rail increases, parking capacity should be monitored to ensure adequate parking is consistently available. This should not detract from the desire for users to choose primarily non-auto transportation options to access Tri-Rail, rather it will allow as many users as possible to choose to use Tri-Rail, regardless of their initial mode choice.

Figure 24 looks at the parking available at Tri-Rail stations. The top of the graph corresponds to the total number of available spaces along the route, approximately 5,400. Average weekday occupancy has fluctuated over the years, with around 2,000 spaces used each weekday through 2002 and 2006. The service increase has resulted in a large increase in park-and-ride lot usage, with 54% of the spaces now occupied on an average weekday (2,902 of the 5,400 spaces). From 2005 to 2007, there was a 40% increase in parking space usage, a dramatic increase. This is an encouraging sign in terms of Tri-Rail’s utilization of existing parking capacity at the stations.

Figure 24 Average Weekday Occupied Parking Spaces



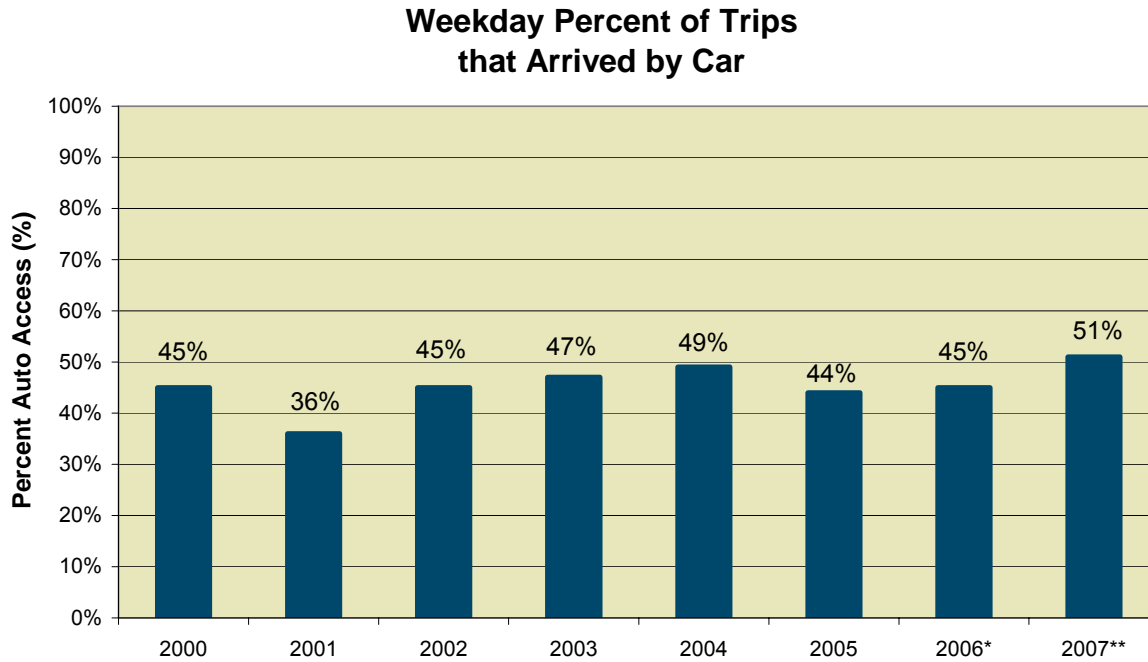
Source: FDOT

* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

Figure 25 shows the percentage of riders arriving by car. This measure is calculated from parking usage and ridership data, assuming that each car space represents two trips on Tri-Rail (inbound and outbound). Approximately 51% of the trips in FY06 were park and ride, with the remaining trips dropped off, transferring from bus or Metrorail, or walking or biking. The recent on-board survey will provide additional insight into Tri-Rail access by mode choice.

Figure 25 Weekday Percent of Trips that Arrived by Car



Calculation: weekday ridership / 2 trips per day / total occupied park and ride spaces

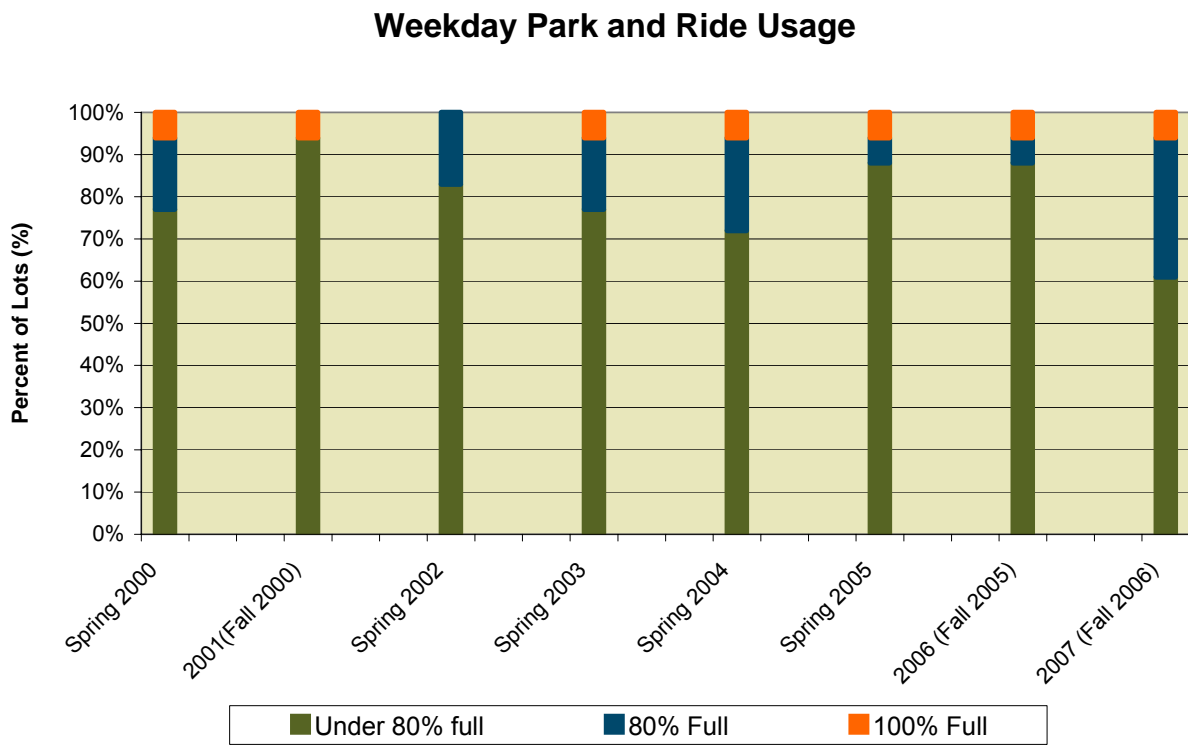
Source of park and ride lot usage data: FDOT

* 2006 data is from July 2005 through March 2006

** 2007 data is from April 2006 through December 2006

With the increase in park and ride usage, it is important to understand the distribution of cars with Tri-Rail lots, and whether or not some lots are overcrowded, with others remaining underutilized. Tri-Rail has 16 park-and-ride lots. Figure 26 shows the percent of lots that operate at capacity (100% full) in orange; the percent near capacity (80%-99% full) in blue; and the percent with significant capacity (less than 80% full) in green. With the service increase came a large increase in lots that are now about 80% full on weekdays, and warrant examination for expansion. Still, 60% of the lots have capacity. The capacity levels have fluctuated moderately over the time analyzed, and an expanded parking study would be a more effective indicator of the lots that are most used and the best way to address potential capacity issues.

Figure 26 Weekday Park and Ride Usage



Source: FDOT

2.3.4 External Impacts

Quality transit service is important for many reasons: to reduce congestion, improve air quality, and to provide residents with as many mobility choices as possible. Tri-Rail’s consistent increase in ridership has had a positive impact on congestion levels and air quality in South Florida.

Table 2 Extra Time to Use Tri-Rail (Minutes)

Segment	Auto Minus Train Minutes			
	A.M. Peak		P.M. Peak	
	North	South	North	South
Short Trips				
Boynton Beach(Gateway Blvd) - Pompano Beach(Sample Rd)	12	14	14	14
Pompano Beach(Sample Rd) - Fort Lauderdale(Broward Blvd)	2	5	6	2
Fort Lauderdale(Broward Blvd) - Fort Lauderdale Airport(Griffen/Stirling)	12	11	13	9
Fort Lauderdale Airport(Griffen/Stirling) - Golden Glades(SR 826)	8	16	11	14
Golden Glades(SR 826) - Opa-Locka(NW 79th St)	10	1	7	10
Opa-Locka(NW 79th St) - Miami Airport(SR 836)	16	8	-1	20
Long Trips				
Boynton Beach(Gateway Blvd) - Fort Lauderdale(Broward Blvd)	6	11	11	8
Boynton Beach(Gateway Blvd) - Golden Glades(SR 826)	10	22	19	15
Pompano Beach(Sample Rd) - Miami Airport(SR 836)	17	10	4	22
End to End (within data area)				
Boynton Beach(Gateway Blvd) - Miami Airport(SR 836)	21	16	10	29

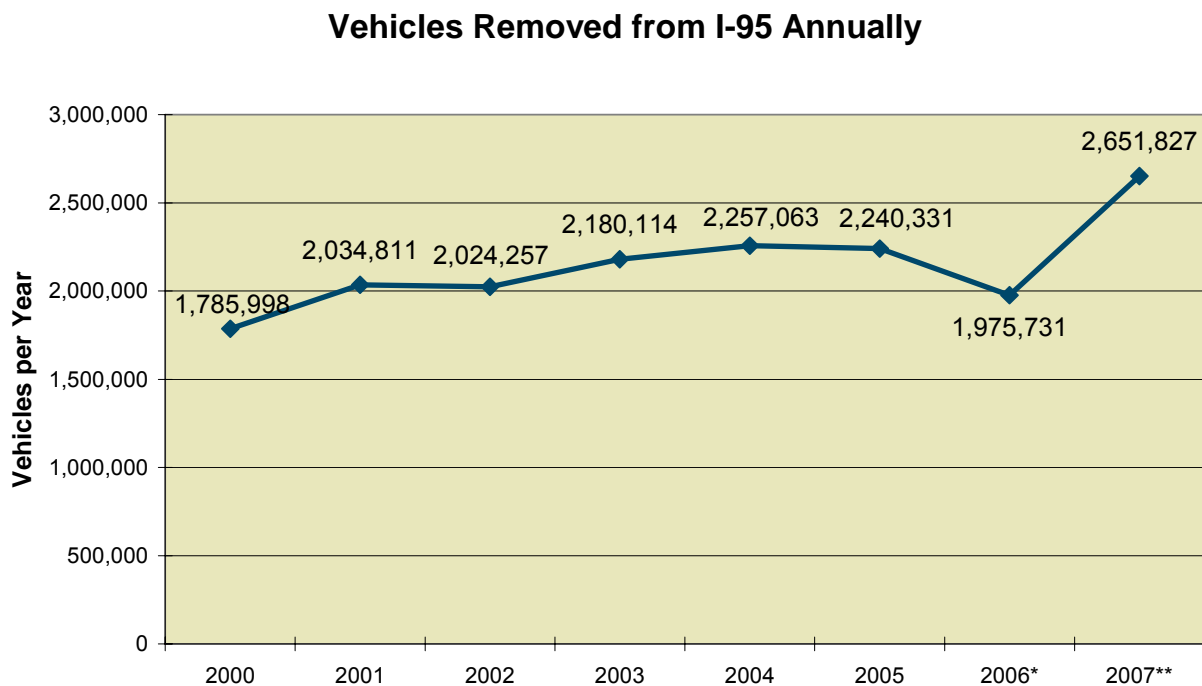
Source: FDOT I-95 Travel Time Study, 2006; Tri-Rail Timetables, Fall 2006

Table 2 compares rail travel time to auto travel time, an indicator of the quality of service and whether Tri-Rail is a time-saving substitute for a similar auto-trip. It is critical to understand that this represents the *extra* time that it would take to use the train versus the average automobile for the same trip, not simply the amount of time it takes to complete the trip. In addition, walking and waiting time is included in the Tri-Rail travel times, recognizing that this is an important component of the total travel time. For instance, Table 2 shows that it takes Tri-Rail 12 minutes longer to travel between Boynton Beach and Pompano Beach stations than the auto. The table compares short trips, long trips, and the full length of the line for which highway data is available. This analysis is limited to the rail portion of a trip and does not include the time to access the station. Data were compared for a.m. and p.m. peaks, and north and southbound directions. The peak direction for each segment (shown in tan) was established as the direction with the longer auto travel time. The shift from northbound to southbound within a peak period indicates that the 71-mile Tri-Rail line serves more than one employment center.

As Table 2 shows, one trip (from Opa Locka to Miami Airport in the evening peak) is quicker via Tri-Rail than a car. However, during peak hours, shown in tan, many of the times are within a close range of the car trip making Tri-Rail a viable alternative for I-95 trips. This analysis, however, only looks at the I-95 segment of the trip and assumes that access to the station is by auto. Given the limited coverage of connecting bus service (shown in Figures 4.1 and 4.2), a separate analysis should be conducted that examines the full trip, from home to destination.

The most significant impacts of Tri-Rail are on the greater South Florida transportation network. I-95 runs parallel to the Tri-Rail route, and it can be reasonably assumed that passengers would have used the highway were it not for Tri-Rail service. Assuming each weekday passenger would have driven, and the average auto occupancy is 1.25 persons (every fourth car has a passenger), Tri-Rail will remove almost 2 million cars trips from I-95, shown in Figure 27. (The nine months of data for 2006 and 2007 were annualized to 12 months, to provide a valid comparison with previous years.)

Figure 27 Vehicles Removed from I-95 Annually



Calculation: weekday ridership / 1.25 average auto occupancy
 * 2006 data is from July 2005 through March 2006, annualized to 12 months for comparison purposes
 ** 2007 data is from April 2006 through December 2006, annualized to 12 months for comparison purposes

Figure 28 looks at passenger miles traveled on Tri-Rail that would otherwise have been traveled on I-95. Again, the dramatic increase with the service improvement is evident, both on weekdays and on weekends. The result of the mode shift away from single-occupancy vehicles to transit has an immediate impact on the local environment, which can be measured by the reduced auto-based emissions.

Figure 28 Average Daily Passenger Miles Traveled

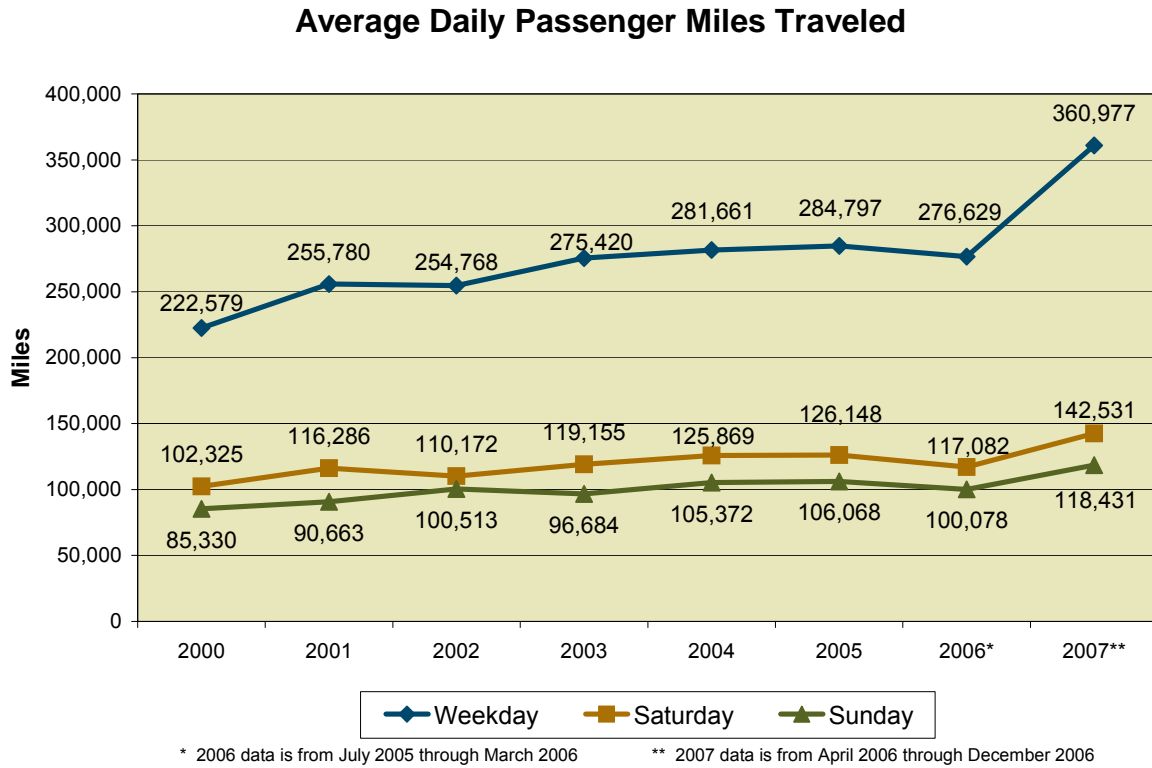
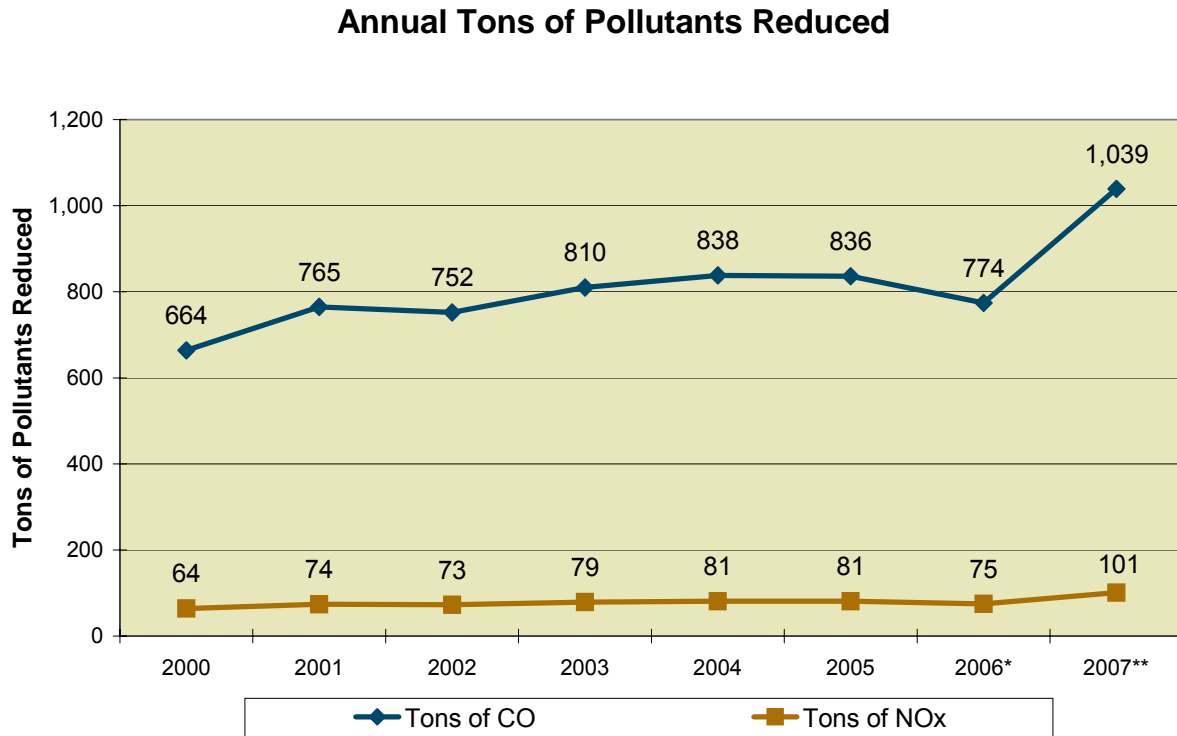


Figure 29 shows that, as of FY07, based on this presumed shift from auto to transit mode, Tri-Rail annually removes more than 1,000 tons of carbon monoxide and 100 tons of nitrous oxide from the air. The service improvement and accompanying ridership increases resulted in 25% more pollutant being removed from FY06 to FY07 alone.

Figure 29 Annual Tons of Pollutants Reduced



* 2006 data is from July 2005 through March 2006, annualized to 12 months for comparison purposes
** 2007 data is from April 2006 through December 2006, annualized to 12 months for comparison purposes

2.3.5 Cost-Effectiveness

Cost is a critical factor in assessing service quality. A cost-effective transit system is able to proportionately expand service and increase ridership to keep costs in balance. Primary sources of cost increases over time include service hours provided, the service contract agreement for service operation, and fuel costs. As with all transportation, increasing fuel costs have hit transit providers hard, resulting in quickly escalating costs which are not expected to decline appreciably in the near future.

Figure 30 Operating Cost

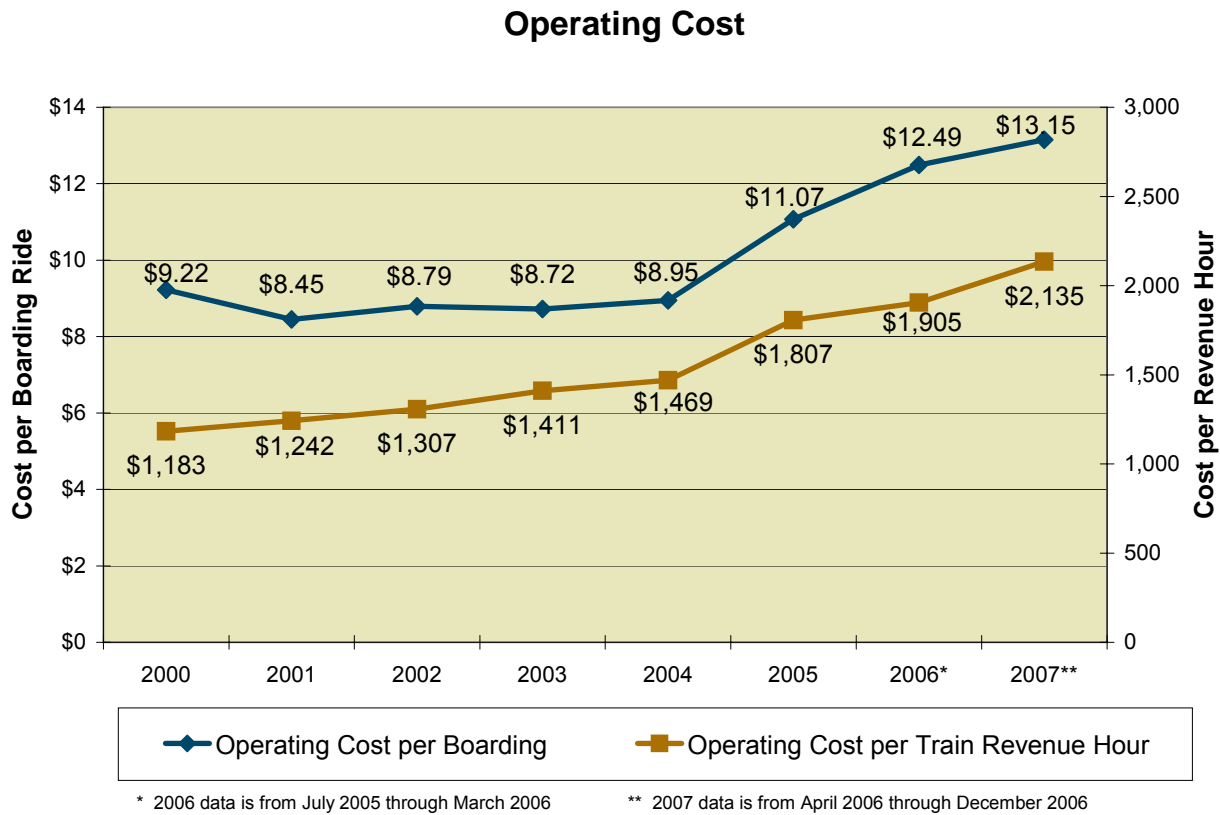


Figure 30 measures the changes in contracting environment; it contrasts the operating costs per hour of service supplied to the customer and cost per boarding. Both have been increasing over time, as would be expected with costs of living increases, fuel charges, and contractual changes. The increase of cost per revenue hour from FY06 to FY07 was 12%. The increase does not account for the increase in service hours over time because cost is normalized by service hours.

Operating costs per boarding is an indicator of SFRTA efficiency in providing service. It is impacted by not only increasing costs (e.g. the 33% service increase in FY07), but also the level of ridership. Between FY06 and FY07, the cost per ride increased just 8%. Thus, the ridership increases were able to offset much of the cost increases incurred over the same time period.

2.4 LEVEL OF SERVICE RATINGS

Benchmarks or “level of service ratings” that put these measures in context were developed and published as *TRCP Report 100: Transit Capacity and Quality of Service Manual*. There are standardized Level of Service (LOS) ratings for six Quality of Service measures: hours of service, frequency, reliability (on-time performance), service coverage, transit to auto travel time, and passenger load (see Appendix A). Tri-Rail was able to provide data for all measures except passenger loads, for which data are not available. The LOS ratings range from an A, the most desirable from a customer perspective, to an F, which is undesirable. It should be kept in mind that the higher LOS ratings are not always appropriate or feasible from the service provider’s point-of-view. Tri-Rail’s weekday ratings can be seen in Tables 3 and 4.

2.4.1 Hours of Service

Hours of service are calculated using the first and last departure times of the day. It is recognized that not all stations on the alignment may have the full hours of service. Tri-Rail has a long service day of 18 hours, with the first trip leaving at 4 a.m. and the final trip after 9 p.m. This earns a B rating, a high level of service for a commuter rail line, where a 15-hour service day is typical. (See 1.3.2, Figure 2) To obtain an A rating, at least 19 hours of service would need to be provided, a very high level of service for a commuter rail line.

2.4.2 Frequency

Frequency of service is measured in terms of the time between trips, also call the “headway.” To highlight the additional peak hour service, headways are shown for the weekday peak (peak and off-peak directions) and for the weekday off-peak. Though 20 minutes is a good headway for commuter rail, it still rates at LOS C from a customer perspective. The hourly service during off-peak hours is an E rating.

2.4.3 On-time Performance

Weekday on-time performance was 79%, rating an E, but is expected improve when the double-track project is complete and the service disruptions have been reduced. Even a slight improvement in on-time performance to 80-85% will improve this measure to a D rating, with a 90% on-time performance needed to earn a B. (See Figure 20, for details.)

2.4.4 Service Coverage

Table 3 shows that both population and employment service coverage measurements are at the lowest or next-to-lowest levels (LOS F or LOS E). The maps shown in Figures 14 and 15 indicated that the lack of service coverage is an agglomeration of many factors: dispersed employment centers, sprawling suburbs, limited bus coverage and decentralized growth throughout the

corridor. Improving connectivity to Tri-Rail through better shuttle bus service is a critical component of increasing ridership and creating smart-growth opportunities in South Florida.

2.4.5 Rail versus Auto Travel Time (Extra Time to Use Tri-Rail)

Table 3 summarizes the LOS ratings that compare Tri-Rail with auto travel time, with no segments of travel earning worse than a C rating. Table 4 provides detail for those ratings, by trip segment, to show where Tri-Rail is most competitive against the auto. The trip from Opa Locka to the Miami Airport, where the rail travel time (including walk and wait time) was equivalent or faster than the auto time, earned an A. Many Tri-Rail travel times were very close to the auto travel time. Of the 40 trip segments analyzed, 28 trip segments earned a B, where rail is “about as fast as an auto” (within 1-15 minutes). There were only 11 C’s, only 2 of which were in the peak direction, indicating that Tri-Rail is a competitive alternative to the auto for peak hour travel.

Table 3 Level of Service Ratings

Average Weekday Rail Measures		FY 2007	
		Performance	LOS ¹
1. Span of revenue service		18 hours	B
2. Frequency			
	Headway peak (peak direction)	20 minutes	C
	Headway peak (off-peak direction)	30 minutes	D
	Headway off-peak (mid-day)	60 minutes	E
3. On-time performance, end to end		79%	E
4. Service Coverage			
	% of population in service district with bus access to the station (within 1/4 mile)	35%	F
	% of employment in service district with bus access to the station (within 1/4 mile)	50%	E
5. Auto vs. rail travel time		LOS A to C	A - C

**Table 4 Rail v. Auto Travel Time (Level of Service)
(Extra Time to Use Tri-Rail)**

Segment	Level of Service Rating ¹			
	A.M. Peak		P.M. Peak	
	North	South	North	South
Short Trips				
Boynton Beach(Gateway Blvd)- Pompano Beach(Sample Rd)	B ²	B	B	B
Pompano Beach(Sample Rd) - Fort Lauderdale(Broward Blvd)	B	B	B	B
Fort Lauderdale(Broward Blvd) - Fort Lauderdale Airport(Griffen/Stirling)	B	B	B	B
Fort Lauderdale Airport(Griffen/Stirling) - Golden Glades(SR 826)	B	C	B	B
Golden Glades(SR 826) - Opa-Locka(NW 79th St)	B	B	B	B
Opa-Locka(NW 79th St) - Miami Airport(SR 836)	C	C	A	C
Long Trips				
Boynton Beach(Gateway Blvd) - Fort Lauderdale(Broward Blvd)	B	B	B	B
Boynton Beach(Gateway Blvd) - Golden Glades(SR 826)	B	C	C	B
Pompano Beach(Sample Rd) - Miami Airport(SR 836)	C	B	B	C
End to End (within data area)				
Boynton Beach(Gateway Blvd) - Miami Airport(SR 836)	C	C	B	C

¹LOS ratings are based on TCRP Report 100

²Tan shaded cells denote the peak travel direction

2.5 PERFORMANCE ASSESSMENT FINDINGS

These performance measures indicate that Tri-Rail has successfully improved and enhanced service to increase ridership, which is a benefit to the entire South Florida region.

- In FY07, there was a 25% increase in weekday ridership over FY06, a 20% increase in Saturday ridership over FY06, and an 18% increase in Sunday ridership over FY06. The rapid increase in ridership following the service improvement, especially on the weekends, demonstrates that there is strong demand for Tri-Rail service.
- Effectiveness remains high, with rides per hour for each day increasing over FY06. Usually there is a period of decline, as ridership slowly grows to meet the additional service provided. Again, the strong effectiveness measure demonstrates pent-up demand for Tri-Rail service and indicates the potential for future service expansion.
- The comparatively long trip length and increasing ridership means that Tri-Rail is taking an increasing number of passenger miles off of congested freeways and the road network, which supports regional air-quality and transportation goals.
- Increasing levels of demand for park-and-ride spaces is resulting in better utilization of the existing spaces. Some areas, however, are reaching capacity and should be evaluated for additional connecting bus service to reduce demand for park and ride spaces or for expansion of the number of spaces, if feasible.
- When construction is complete and SFRTA has assumed responsibility for train dispatch, many of the LOS ratings should improve. Additional service is scheduled, which will improve the LOS ratings for frequency of service. This should also result in greatly improved on-time performance.
- The area that is lagging is service coverage through shuttle bus routes that connect Tri-Rail to the surrounding population and employment centers. Further analysis is needed inform plans for improving the connectivity from the community to Tri-Rail stations.

Section 3
Recommendations

3. Recommendations

The performance measures have provided a picture of success, with the double-tracking and increased service resulting in strong ridership increases. The evaluation points to the following recommendations to build on these successes:

- The data for this type of evaluation should be collected monthly and reported on a regular basis to track performance on a continuous basis. Positive changes, such as with the service increase, can be seen quickly and used to demonstrate the benefits of Tri-Rail to the region. Concerns, such as an increase in rides per complaint, can be addressed quickly before they result in a loss in ridership.
- Certain measures, such as the mode of access to Tri-Rail, were estimated based on park-and-ride lot counts. This only provides an estimate of mode of access. Recent on-board surveys findings should be reviewed and incorporated into the evaluation to provide a more detailed profile of transit riders and how they use the system.
- Because of the limited coverage of connecting bus service, Tri-Rail depends on auto access to the station. This reduces the total air quality benefits to the region, as a car must still go through the more-polluting “cold start” phase to drive to the station. Improved service coverage for connecting bus and shuttle services is recommended, to reduce dependence on auto access and increase the air quality benefits of Tri-Rail.
- The area where Tri-Rail performance is the lowest is in service coverage, which is driven by the amount of connecting shuttle bus service. No evaluation of the shuttle service was conducted because performance data were not available for the SFRTA shuttle buses.
 - a. Data collection and reporting needs to be established for the shuttle buses.
 - b. A performance evaluation similar to this Tri-Rail performance measurement evaluation should be conducted to determine how well the shuttle buses are meeting customer needs, and where service improvements are needed.
- In addition to operational performance measures, emphasis should be placed on tracking customer needs through the customer satisfaction and complaint tracking process. While on-board customer satisfaction surveys are being conducted quarterly, they are not integrated into the reporting and management decision-making process. Similarly, complaints are not regularly analyzed and reported. These systems should be developed and included in the regular performance reporting to demonstrate customer focus.

Taken together, these measures will provide SFRTA with the ability to address customer needs, and the means to demonstrate value and accountability to the region.

Appendix A

Appendix A

Level of Service Measures

1. SPAN OF SERVICE REVENUE SERVICE

LOS	Hours of Service	Comments
A	19-24	Night or "owl" service provided
B	17-18	Late evening service provided
C	14-16	Early evening service provided
D	12-13	Daytime service provided
E	4-11	Peak hour service only or limited midday service
F	0-3	Very limited or no service

Source: TCRP Report 100: *Transit Capacity and Quality of Service Manual*, Exhibit 3-13: Fixed Route Hours of Service LOS.

2. FREQUENCY

LOS	Avg. Headway (min)	veh/h	Comments
A	<10	>6	Passengers do not need schedules
B	10-14	5-6	Frequent service, passengers consult schedules
C	15-20	3-4	Maximum desirable time to wait if bus/train missed
D	21-30	2	Service unattractive to choice riders
E	31-60	1	Service available during the hour
F	>60	<1	Service unattractive to all riders

Source: TCRP Report 100: *Transit Capacity and Quality of Service Manual*, Exhibit 3-12: Fixed Route Service Frequency LOS.

3. ON-TIME PERFORMANCE

LOS	On-Time Percentage	Comments*
A	95.0-100.0%	1 late transit vehicle every 2 weeks (no transfer)
B	90.0-94.9%	1 late transit vehicle every week (no transfer)
C	85.0-89.9%	3 late transit vehicles every 2 weeks (no transfer)
D	80.0-84.9%	2 late transit vehicles every week (no transfer)
E	75.0-79.9%	1 late transit vehicle every day (with a transfer)
F	<75.0%	1 late transit vehicle at least daily (with a transfer)

NOTE: Applies to routes with a published timetable, particularly to those with headways longer than 10 minutes.

"On-time" is 0 to 5 minutes late, and can be applied to either arrivals or departures, as appropriate for the situation being measured.

Early departures are considered on-time only in locations where no passengers would typically board (e.g., toward the end of a route).

*Individual's perspective, based on 5 round trips per week.

Source: TCRP Report 100: *Transit Capacity and Quality of Service Manual*, Exhibit 3-29: Fixed-Route On-Time Performance LOS.

4. SERVICE COVERAGE

LOS	% TSA Covered	Comments
A	90.0-100.0%	Virtually all major origins & destinations served
B	80.0-89.9%	Most major origins & destinations served
C	70.0-79.9%	About ¾ of higher-density areas served
D	60.0-69.9%	About two-thirds of higher-density areas served
E	50.0-59.9%	At least ½ of the higher-density areas served
F	<50.0%	Less than ½ of higher-density areas served

Source: TCRP Report 100: *Transit Capacity and Quality of Service Manual*, Exhibit 3-14: Fixed Route Service Coverage LOS.

5. RAIL V. AUTO TRAVEL TIME DIFFERENCE

(Extra Time to Use Tri-Rail, in Minutes)

LOS	Travel Time Difference (min)	Comments
A	≤0	Faster by transit than by automobile
B	1-15	About as fast by transit as by automobile
C	16-30	Tolerable for choice riders
D	31-45	Round-trip at least an hour longer by transit
E	46-60	Tedious for all riders; may be best possible in small cities
F	>60	Unacceptable to most riders

Source: TCRP Report 100: *Transit Capacity and Quality of Service Manual*, Exhibit 3-31: Fixed-Route Transit-Auto Travel Time.

Appendix B

2000 – 2007 Data

Project Title Tri-Rail Performance Reporting System

Subject Data Sources per SFRTA Performance Measure (Weekday)

NOTES:

Fiscal Year begins in July unless otherwise noted:

* Fiscal year 2006 is July 2005 through March 2006

** Fiscal year 2007 is April 2006 through YTD (December 2006)

Measure No.	Measures	Fiscal Year									
		1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**
1	Train trips per day	28	28	28	28	28	28	30	30	30	40
2	Span of revenue service	17.87	17.87	17.87	17.7	17.7	17.7	17.42	17.7	18.15	18.15
3	Span of peak service (p.m. peak)	60	60	60	60	60	60	60	60	60	60
4	Headway peak (p.m. peak direction)	30	30	30	30	30	30	30	30	30	20
5	Headway peak (p.m. off peak direction)	30	30	30	30	30	30	30	30	30	30
6	Headway off-peak (mid-day)	60	60	60	60	60	60	60	60	60	60
7	Train revenue miles	1,966	1,974	1,988	1,994	1,994	2,008	2,016	2,041	2,041	2,527
8	Train revenue hours	56	57	57	56	56	55	56	57	57	73
9	Train vehicle miles	2,029	2,031	2,374	2,061	2,061	2,092	2,105	2,115	2,115	2,665
10	Train vehicle hours	58	58	58	57	57	58	58	59	59	79
11	Route miles	142	142	142	142	142	142	142	142	142	142
12	Average daily boardings	7,735	7,269	7,381	8,344	8,450	9,135	9,342	9,446	8,727	11,388
13	Boardings per revenue hour	138	128	129	149	151	166	167	166	153	156
	Boardings (see No. 12)	7,735	7,269	7,381	8,344	8,450	9,135	9,342	9,446	8,727	11,388
	Train revenue hours (see No. 8)	56	57	57	56	56	55	56	57	57	73
14	Passenger miles traveled	224,313	215,962	222,579	255,780	254,768	275,420	281,661	284,797	276,629	360,977
15	% park-and-ride lot usage: 80% full		6%	17%	0%	17%	17%	22%	6%	6%	33%
16	% park-and-ride lot usage: 100% full		6%	6%	6%	0%	6%	6%	6%	6%	6%
17	Estimated Park and Ride Access		41%	45%	36%	45%	47%	49%	44%	45%	51%
	Occupied parking spaces		1,484	1,653	1,499	1,902	2,166	2,311	2,079	1,964	2,902
	Boardings (see No. 12)	7,735	7,269	7,381	8,344	8,450	9,135	9,342	9,446	8,727	11,388
18	On-time performance, end to end			92%	93%	90%	84%	70%	62%	61%	80%
19	% of population in service district with bus access to the station (within 1/4 mile)										35%
20	% of employment in service district with bus access to the station (within 1/4 mile)										50%
21	Number of days not in service	0	2	2	0	1	0	0	4	11	2

Project Title Tri-Rail Performance Reporting System
Subject Data Sources per SFRTA Performance Measure (Saturday)

NOTES:
 Fiscal Year begins in July unless otherwise noted:
 * Fiscal year 2006 is July 2005 through March 2006
 ** Fiscal year 2007 is April 2006 through YTD (December 2006)

Measure No.	Measures	Fiscal Year										
		1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**	
1	Train trips per day	14	14	14	14	14	14	14	14	14	14	16
2	Span of revenue service	14	14	14	14	14	14	14	14	14	14	14
6	Headway off-peak	120	120	120	120	120	120	120	120	120	120	120
7	Train revenue miles	1,074	983	991	997	997	1,004	1,008	1,004	1,004	1,004	1,197
8	Train revenue hours	31	28	28	28	28	28	28	27	27	27	29
9	Train vehicle miles	1,107	1,011	1,019	1,030	1,030	1,079	1,060	1,016	1,016	1,016	1,262
10	Train vehicle hours	32	29	29	29	29	30	29	28	28	28	32
11	Route miles	142	142	142	142	142	142	142	142	142	142	142
12	Average daily boardings	4,136	3,426	3,474	3,938	3,741	4,046	4,274	4,184	3,702	4,507	4,507
13	Boardings per revenue hour	133	122	124	141	134	145	153	155	137	155	155
	Boardings (see No.12)	4,136	3,426	3,474	3,938	3,741	4,046	4,274	4,184	3,702	4,507	4,507
	Train revenue hours (see No.8)	31	28	28	28	28	28	28	27	27	27	29
14	Passenger miles traveled	119,940	101,784	102,325	116,286	110,172	119,155	125,869	126,148	117,082	142,531	142,531
18	On-time performance, end to end			97%	96%	92%	91%	80%	63%	66%	85%	85%
21	Number of days not in service ¹	0	0	1	0	0	0	0	1	3	0	0

Project Title Tri-Rail Performance Reporting System
Subject Data Sources per SFRTA Performance Measure (Sunday)

NOTES:
 Fiscal Year begins in July unless otherwise noted:
 * Fiscal year 2006 is July 2005 through March 2006
 ** Fiscal year 2007 is April 2006 through YTD (December 2006)

Measure No.	Measures	Fiscal Year										
		1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**	
1	Train trips per day	12	12	12	12	12	12	12	12	12	12	14
2	Span of revenue service	12	12	12	12	12	12	12	12	12	12	12
6	Headway off-peak	120	120	120	120	120	120	120	120	120	120	120
7	Train revenue miles	794	849	829	854	854	860	864	881	881	881	1,004
8	Train revenue hours	23	24	24	24	24	24	24	24	24	24	26
9	Train vehicle miles	818	874	853	883	883	928	902	925	925	925	1,117
10	Train vehicle hours	24	25	25	25	25	26	25	26	26	26	28
11	Route miles	142	142	142	142	142	142	142	142	142	142	142
12	Average daily boardings	2,929	2,716	2,896	3,180	3,413	3,339	3,578	3,518	3,177	3,760	3,760
13	Boardings per revenue hour	127	113	121	133	142	139	149	147	132	145	145
	Boardings (see No. 12)	2,929	2,716	2,896	3,180	3,413	3,339	3,578	3,518	3,177	3,760	3,760
	Train revenue hours (see No. 8)	23	24	24	24	24	24	24	24	24	24	26
14	Passenger miles traveled	84,954	80,690	85,330	90,663	100,513	96,684	105,372	106,068	100,078	118,431	118,431
18	On-time performance, end to end			96%	97%	94%	93%	77%	60%	69%	89%	89%
21	Number of days not in service ¹	0	0	0	0	1	0	0	2	3	0	0

Project Title Tri-Rail Performance Reporting System
Subject Data Sources per SFRTA Performance Measure (Annual)

NOTES:
 Fiscal Year begins in July unless otherwise noted:
 * Fiscal year 2006 is July 2005 through March 2006
 ** Fiscal year 2007 is April 2006 through YTD (December 2006)

Measure No.	Measures	Fiscal Year									
		1998	1999	2000	2001	2002	2003	2004	2005	2006*	2007**
12	Total annual boardings	2,348,592	2,171,142	2,232,497	2,543,514	2,530,321	2,725,142	2,821,329	2,800,414	2,469,664	3,314,784
14	Total annual passenger miles traveled	68,109,165	64,504,376	67,099,046	77,380,434	76,014,890	81,879,635	84,761,980	84,532,159	78,237,512	105,010,849
21	Number of days not in service	0	2	3	0	2	0	0	7	17	2
22	Vehicles removed from I-95	1,878,874	1,736,914	1,785,998	2,034,811	2,024,257	2,180,114	2,257,063	2,240,331	1,975,731	2,651,827
23	23a Operating cost per boarding	\$8.87	\$8.63	\$9.22	\$8.45	\$8.79	\$8.72	\$8.95	\$11.07	\$12.49	\$13.15
	23b Total annual rail operating expenses Annual Rail Boardings (see No. 12)	\$20,835,704 2,348,592	\$18,730,142 2,171,142	\$20,572,469 2,232,497	\$21,482,783 2,543,514	\$22,232,885 2,530,321	\$23,765,286 2,725,142	\$25,244,842 2,821,329	\$31,002,757 2,800,414	\$23,134,231 1,852,248	\$32,702,404 2,486,088
24	24a Operating cost per train revenue hour	\$1,214	\$1,084	\$1,183	\$1,242	\$1,307	\$1,411	\$1,469	\$1,807	\$1,905	\$2,135
	24b Total annual actual train revenue hours	17,157	17,284	17,383	17,292	17,016	16,846	17,184	17,154	12,145	15,320
25	25a Air quality: Tons of CO reduced per year	674	638	664	765	752	810	838	836	774	1039
	25b Air quality: Tons of NOx reduced per year	65	62	64	74	73	79	81	81	100	134
	25c CO grams/mile	8.99	8.99	8.99	8.99	8.99	8.99	8.99	8.99	8.99	8.99
	25d NOx grams/mile	0.872	0.872	0.872	0.872	0.872	0.872	0.872	0.872	0.872	0.872
	Total Annual Passenger Miles Traveled (see No. 14)	68,109,165	64,504,376	67,099,046	77,380,434	76,014,890	81,879,635	84,761,980	84,532,159	78,237,512	105,010,849
27	27a Total boardings per complaint							2,542	2,719	2,824	4,913
	27b Total annual complaints received (bus + rail)							1,110	1,030	656	506
	Total annual rail boardings (see No. 12)							2,821,329	2,800,414	1,852,248	2,486,088

Project Title Tri-Rail Performance Reporting System
 Subject Park-and-Ride Lot Info
 Source SFRTA Performance Measure (Weekday)

Station	Spring 1999			Spring 2000			2001(Fall 2000)			Spring 2002			Spring 2003			Spring 2004			Spring 2005			2006 (Fall 2005)			2007 (Fall 2006)		
	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate	Spaces	Spaces Occupied	Occupancy Rate
Mangonia Park	273	44	16%	273	48	18%	273	60	22%	273	68	25%	273	75	27%	273	78	29%	273	81	30%	273	43	16%	273	130	48%
West Palm Beach	163	56	34%	163	63	39%	163	62	38%	163	86	53%	151	95	63%	153	110	72%	147	77	52%	147	61	41%	147	120	82%
Lake Worth	85	64	75%	85	73	86%	85	65	76%	85	74	87%	85	71	84%	85	80	94%	68	51	75%	68	34	50%	68	64	94%
Boynton Beach	325	41	13%	325	72	22%	325	115	35%	325	77	24%	325	126	39%	325	118	36%	332	106	32%	322	49	15%	322	150	47%
Delray Beach	105	31	30%	105	43	41%	105	28	27%	105	37	35%	105	68	65%	97	67	69%	131	52	40%	131	43	33%	130	102	78%
Boca Raton	57	52	91%	57	47	82%	57	43	75%	57	44	77%	57	50	88%	57	50	88%	49	32	65%	164	32	20%	164	94	57%
Deerfield Beach	123	71	58%	123	55	45%	123	73	59%	123	113	92%	123	96	78%	242	207	86%	235	128	54%	231	99	43%	231	127	55%
Pompano Beach	257	62	24%	257	75	29%	257	86	33%	257	73	28%	257	72	28%	257	75	29%	263	70	27%	263	60	23%	263	110	42%
Cypress Creek	556	140	25%	556	123	22%	556	70	13%	556	82	15%	556	95	17%	556	75	13%	565	72	13%	565	56	10%	565	108	19%
Ft. Lauderdale	770	115	15%	770	113	15%	770	105	14%	770	137	18%	770	174	23%	770	162	21%	817	179	22%	784	119	15%	791	200	25%
Ft. Lauderdale Airport	160	45	28%	160	77	48%	167	61	37%	170	100	59%	170	100	59%	170	123	72%	184	119	65%	185	82	44%	185	176	95%
Sheridan	871	52	6%	871	104	12%	871	120	14%	871	108	12%	871	106	12%	871	105	12%	678	109	16%	678	75	11%	727	186	26%
Hollywood	148	113	76%	148	122	82%	148	40	27%	160	111	69%	160	141	88%	160	143	89%	120	102	85%	125	71	57%	132	118	89%
Golden Glades	1000	455	46%	1000	503	50%	1000	423	42%	1036	672	65%	1036	709	68%	1036	744	72%	1036	711	69%	1036	946	91%	1036	946	91%
Opa-Locka	70	10	14%	68	9	13%	70	15	21%	63	27	43%	69	26	38%	69	24	35%	64	21	33%	64	31	48%	72	42	58%
Hialeah Tri-Rail Metrorail	65	65	100%	65	65	100%	38	38	100%	38	36	95%	43	43	100%	43	49	114%	37	41	111%	37	37	100%	41	41	100%
Hialeah Market	65	11	17%	65	4	6%	65	17	26%	67	8	12%	67	6	9%	67	9	13%	67	12	18%	67	12	18%	70	21	30%
Miami Airport	220	57	26%	220	57	26%	220	78	35%	232	49	21%	232	113	49%	220	92	42%	163	116	71%	163	114	70%	181	167	92%
Park-and-ride lots less than 80% full			16			14			17			15			14			13			16			16			11
Park-and-ride lots 80% to 100% full			1			3			0			3			4			4			1			1			6
Park-and-ride lots 100% full			1			1			1			0			1			1			1			1			1
% Park-and-ride lots less than 80% full			88%			77%			94%			83%			77%			72%			88%			88%			61%
% Park-and-ride lots 80% to 100% full			6%			17%			0%			17%			22%			22%			6%			6%			33%
% Park-and-ride lots 100% full			6%			6%			6%			0%			6%			6%			6%			6%			6%

Project Title Tri-Rail Performance Reporting System
Subject On-Time Performance, End-to-End
Source Tri-Rail Monthly Operations Report

NOTES:

- * Fiscal Year begins in July
- ** Fiscal year 2006 is July 2005 through March 2006
- *** Fiscal year 2007 is April 2006 through YTD (December 2006)

Weekday

Month	FY 2000			FY 2001			FY 2002			FY 2003			FY 2004			FY 2005			FY 2006*			FY 2007**		
	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP
July	570	46	93%	513	47	92%	547	41	93%	539	49	92%	484	132	79%	177	439	29%	211	389	35%	554	246	69%
August	547	69	89%	601	43	93%	595	49	92%	542	74	88%	380	208	65%	374	286	57%	199	401	33%	746	94	89%
September	497	35	93%	515	45	92%	487	45	92%	516	44	92%	392	196	67%	366	174	68%	403	197	67%	652	148	82%
October	544	35	94%	591	25	96%	445	199	69%	582	62	90%	458	186	71%	323	307	51%				748	132	85%
November	535	53	91%	543	45	92%	531	57	90%	493	67	88%	376	156	71%	496	134	79%	160	350	31%	644	196	77%
December	611	33	95%	541	19	97%	494	66	88%	565	23	96%	453	163	74%	471	219	68%	355	275	56%	634	166	79%
January	535	53	91%	594	22	96%	564	52	92%	532	84	86%	469	119	80%	507	123	80%	443	187	70%			
February	568	20	97%	486	74	87%	517	43	92%	446	114	80%	447	113	80%	500	100	83%	357	243	60%			
March	575	69	89%	578	26	96%	544	44	93%	483	105	82%	467	177	73%	408	282	59%						
April	529	31	94%	546	42	93%	574	42	93%	504	112	82%	451	165	73%	274	356	43%	551	249	69%			
May	564	52	92%	579	37	94%	587	57	91%	398	190	68%	344	216	61%	411	219	65%	683	197	78%			
June	568	48	92%	495	93	84%	523	37	93%	403	185	69%	293	323	48%				718	162	82%			
Total	6,643	544	92%	6,582	518	93%	6,408	732	90%	6,003	1,109	84%	5,014	2,154	70%	4,307	2,639	62%	4,080	2,650	61%	3,978	982	80%

Saturday

Month	FY 2000			FY 2001			FY 2002			FY 2003			FY 2004			FY 2005			FY 2006*			FY 2007**		
	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP
July	68	2	97%	69	1	99%	52	4	93%	70	0	100%	51	5	91%	36	34	51%				70	10	88%
August	56	0	100%	56	0	100%	54	4	93%	64	6	91%	54	16	77%	42	14	75%	2	40	5%	61	3	95%
September	56	0	100%	68	2	97%	66	4	94%	52	4	93%	47	9	84%	31	11	74%	20	36	36%	59	21	74%
October	55	1	98%	47	9	84%	47	9	84%	54	2	96%	41	15	73%	35	35	50%				47	19	71%
November	53	3	95%	53	3	95%	52	4	93%	66	4	94%	62	8	89%	30	26	54%				61	4	94%
December	42	0	100%	68	2	97%	58	12	83%	53	3	95%	46	10	82%	21	21	50%	50	20	71%	70	9	89%
January	63	7	90%	55	1	98%	49	7	88%	52	4	93%	65	5	93%	42	14	75%	52	18	74%			
February	49	7	88%	54	2	96%	54	2	96%	45	11	80%	45	11	80%	45	11	80%	32	24	57%			
March	56	0	100%	68	2	97%	69	1	99%	61	9	87%	44	12	79%	36	20	64%	37	19	66%			
April	69	1	99%	54	2	96%	54	2	96%	45	11	80%	52	4	93%	31	17	65%	70	10	88%			
May	56	0	100%	51	5	91%	49	7	88%	65	5	93%	48	22	69%	33	23	59%	57	7	89%			
June	56	0	100%	66	4	94%	66	4	94%	45	11	80%	28	28	50%				49	15	77%			
Total	679	21	97%	709	33	96%	670	60	92%	672	70	91%	583	145	80%	382	226	63%	369	189	66%	368	66	85%

Sunday

Month	FY 2000			FY 2001			FY 2002			FY 2003			FY 2004			FY 2005			FY 2006**			FY 2007***		
	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP	Trains On-Time	Trains Late	OTP
July	46	2	96%	70	2	97%	68	4	94%	59	1	98%	55	5	92%	27	21	56%				76	8	90%
August	57	3	95%	48	0	100%	45	4	92%	45	3	94%	46	14	77%	33	27	55%	1	35	3%	52	4	93%
September	60	0	100%	55	5	92%	67	5	93%	69	3	96%	53	7	88%	18	6	75%	20	40	33%	61	9	87%
October	54	2	96%	59	1	98%	40	8	83%	43	5	90%	40	8	83%	23	37	38%				65	5	93%
November	46	2	96%	59	1	98%	59	1	98%	56	4	93%	65	7	90%	38	22	63%				61	9	87%
December	45	3	94%	67	5	93%	69	3	96%	67	5	93%	48	12	80%	38	22	63%	47	13	78%	70	14	83%
January	60	0	100%	59	1	98%	53	7	88%	58	2	97%	53	7	88%	52	20	72%	39	21	65%			
February	48	0	100%	45	3	94%	46	2	96%	43	5	90%	30	30	50%	37	11	77%	33	15	69%			
March	48	0	100%	47	1	98%	59	1	98%	58	2	97%	35	13	73%	25	23	52%	34	14	71%			
April	50	10	83%	59	1	98%	47	1	98%	43	5	90%	35	13	73%	31	17	65%	62	8	89%			
May	59	1	98%	59	1	98%	48	0	100%	58	2	97%	54	18	75%	38	34	53%	64	6	91%			
June	48	0	100%	46	2	96%	55	5	92%	50	10	83%	22	26	46%				50	6	89%			
Total	621	23	96%	673	23	97%	656	41	94%	649	47	93%	536	160	77%	360	240	60%	350	158	69%	385	49	89%

Project Title: Tri-Rail Performance Reporting System
Subject: Auto Travel Time

AM	NORTHBOUND							SOUTHBOUND						
	Non HOV (Mins)							Non HOV (Mins)						
	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Avg	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Avg
Gateway Blvd - Linton Blvd	8.50	6.67	7.45	17.93	9.63	6.67	9.48	6.33	6.38	7.42	7.47	6.92	7.15	6.95
Linton Blvd - Palmetto Park Rd	6.63	7.62	4.80	10.25	7.07	6.43	7.13	6.58	5.72	7.58	6.35	5.92	7.11	6.54
Palmetto Park Rd - Sample Rd	9.10	8.73	11.08	5.95	6.22	5.98	7.84	11.25	5.18	8.27	7.47	6.50	8.57	7.87
Sample Rd - Commercial Blvd	8.17	8.72	4.85	11.40	8.10	9.90	8.52	21.63	5.60	9.33	9.48	7.08	10.31	10.57
Commercial Blvd - Broward Blvd	9.77	14.78	10.03	8.25	10.85	8.25	10.32	5.65	4.10	5.45	6.05	4.75	4.94	5.16
Broward Blvd - Griffin Rd	3.13	12.18	5.23	4.83	3.48	6.03	5.82	4.00	3.52	3.28	4.67	3.92	3.88	3.88
Griffin Rd - Ives Dairy Rd	10.08	6.63	20.02	5.92	10.83	6.53	10.00	6.15	6.08	6.85	6.67	6.35	6.42	6.42
Ives Dairy Rd - Golden Glades Interchange	3.23	4.05	3.50	4.08	2.93	11.33	4.86	2.85	3.40	3.85	3.22	3.32	3.33	3.33
Golden Glades Interchange - 125th St	2.72	2.28	2.75	2.83	3.57	2.37	2.75	8.00	7.42	20.67	16.12	10.67	12.57	12.57
125th St - SR 112 (I-195)	4.72	4.97	5.73	5.17	5.85	7.27	5.62	13.75	13.58	18.85	27.65	20.42	18.85	18.85
TOTAL	66.05	76.63	75.45	76.62	68.53	70.77	72.34	86.20	60.98	91.55	95.13	75.83	83.13	82.14

PM	NORTHBOUND							SOUTHBOUND						
	Non HOV (Mins)							Non HOV (Mins)						
	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Avg	Run 1	Run 2	Run 3	Run 4	Run 5	Run 6	Avg
Gateway Blvd - Linton Blvd	9.63	7.58	9.08	8.67	8.92	11.92	9.30	7.30	6.83	6.57	5.78	6.08	6.37	6.49
Linton Blvd - Palmetto Park Rd	7.05	6.00	10.08	9.38	6.45	7.42	7.73	9.53	6.33	7.30	6.80	6.67	7.08	7.29
Palmetto Park Rd - Sample Rd	6.27	5.25	4.83	5.47	5.00	5.42	5.37	6.85	6.58	5.47	5.12	10.08	6.70	6.80
Sample Rd - Commercial Blvd	8.50	6.50	7.17	9.15	6.38	5.17	7.14	13.09	11.67	11.60	13.09	14.83	12.73	12.84
Commercial Blvd - Broward Blvd	9.53	6.55	8.00	6.37	8.38	10.08	8.15	6.46	5.92	4.60	6.46	5.58	9.73	6.46
Broward Blvd - Griffin Rd	4.35	9.35	3.75	5.73	4.68	5.08	5.49	3.13	4.92	7.90	3.90	3.95	10.63	5.74
Griffin Rd - Ives Dairy Rd	7.25	15.60	6.08	5.10	5.38	6.17	7.60	7.53	7.50	10.28	7.52	7.32	6.83	7.83
Ives Dairy Rd - Golden Glades Interchange	4.17	5.17	4.25	2.93	4.09	3.92	4.09	5.05	3.92	3.83	3.57	4.87	5.17	4.40
Golden Glades Interchange - 125th St	6.38	6.88	6.67	2.77	5.97	7.17	5.97	3.12	3.42	4.22	2.55	7.67	2.58	3.93
125th St - SR 112 (I-195)	18.65	20.32	20.50	29.88	21.92	24.17	22.57	5.30	5.33	5.15	8.32	7.42	13.08	7.43
TOTAL	81.78	89.20	80.42	85.45	77.18	86.50	83.42	67.37	62.42	66.92	63.10	74.47	80.92	69.20

*Data obtained from I-95 HOV study

Project Title: Tri-Rail Performance Reporting System
Subject: Train Travel Time

Segment	AM Travel Time (Mins)		PM Travel Time (Mins)	
	Northbound	Southbound	Northbound	Southbound
Mangonia Park (45th St) - West Palm Beach (Okeechobee Blvd.)	9	6	9	6
West Palm Beach (Okeechobee Blvd.) - Lake Worth	10	9	10	9
Lake Worth - Boynton Beach (Gateway Blvd.)	6	5	6	5
Boynton Beach (Gateway Blvd.) - Delray Beach (Atlantic Ave)	9	9	9	9
Delray Beach (Atlantic Ave) - Boca Raton (Yamato Rd)	7	6	7	6
Boca Raton (Yamato Rd) - Deerfield Beach (Hillsboro Blvd)	7	8	7	8
Deerfield Beach (Hillsboro Blvd) - Pompano Beach (Sample Rd)	5	4	5	4
Pompano Beach (Sample Rd) - Cypress Creek	6	6	6	6
Cypress Creek - Ft Lauderdale (Broward Blvd)	7	7	7	7
Ft Lauderdale (Broward Blvd) - Ft Lauderdale Airport (Griffen/Stirling)	10	7	10	7
Ft Lauderdale Airport (Griffen/Stirling) - Sheridan	4	5	4	5
Sheridan - Hollywood	3	4	3	4
Hollywood - Golden Glades (SR 826)	8	9	8	9
Golden Glades (SR 826) - Opa-Locka	5	6	5	6
Opa Locka - Metrorail (NW 79th St)	6	7	6	7
Metrorail (NW 79th St) - Hialeah Market (NW 36th St)	6	6	6	6
Hialeah Market (NW 36th St) - Miami Airport (SR 836)	2	6	2	6
TOTAL	110	110	110	110

*Data obtained from SFRTA website Winter 2006/2007